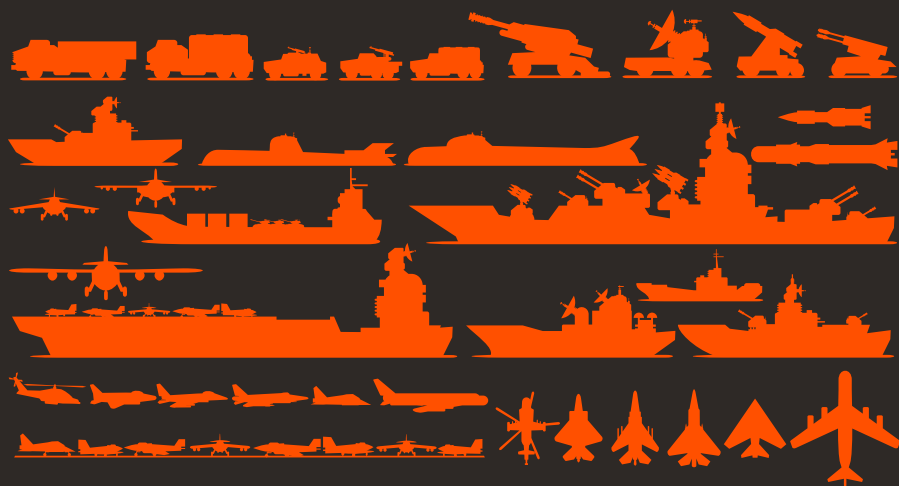




A HARD LOOK AT HARD POWER

**ASSESSING THE DEFENSE CAPABILITIES OF
KEY US ALLIES AND SECURITY PARTNERS**

SECOND EDITION

GARY J. SCHMITT
EDITOR

U.S. ARMY WAR COLLEGE

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**A HARD LOOK AT HARD POWER:
ASSESSING THE DEFENSE CAPABILITIES OF
KEY US ALLIES AND SECURITY PARTNERS**

Second Edition

**Gary J. Schmitt
Editor**

October 2020

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FOREWORD

After World War II, facing an assertive, ideologically competitive Soviet threat, the United States built a liberal global order that deterred the Soviet threat and created the political, diplomatic, and economic space that made for a prosperous, democratic West. Although this effort had many components, a key element was the establishment of a worldwide web of American-led alliances that helped keep another war between the great powers at bay – no small feat, given the century had been marked by two world wars with devastating costs in blood and wealth.

With the demise of the Soviet Union and China's turn from an isolated, Maoist regime to an ambitious participant in globalization, the need to sustain America's alliances was less evident to Washington and democratic capitals around the world. Part of the peace dividend resulting from victory in the Cold War was less time and attention ensuring the military capabilities of allies and partners was being sustained. The first Gulf War was fought with the legacy forces of the Cold War, and, since then, conflicts have been fought with militaries that appeared at times undersized and not fully equipped. Efforts to address these shortfalls have been complicated by the Great Recession of 2008–09 and the domestic policy demands Western democracies have prioritized.

Those complications continue to exist, even as the global security environment has grown more difficult. Strong alliances with partner and allied militaries that are sufficiently equipped, trained, and ready are a growing strategic requirement; collective defense will be even more important if the various and

serious global security challenges are to be met. This second edition of *A Hard Look at Hard Power* makes an important contribution to understanding the status of the contributions key American allies and partners can make to collective defense.

DR. GARY J. SCHMITT
Editor

SUMMARY

In a world where the United States faces two major revisionist powers—Russia and China—and additional security threats from Iran, North Korea, and jihadist terrorists, a critical edge for the United States is its global network of allies and strategic partners. As the 2018 *National Defense Strategy* notes, “Alliances and partnerships are crucial to our strategy, providing a durable asymmetric strategic advantage that no competitor or rival can match.”

Having allies and partners is both an advantage and a real need. Taking a step back, one must remember that, in January 2012, at President Obama’s direction, the Pentagon issued a new defense guidance, *Sustaining Global Leadership: Priorities for 21st Century Defense*. The guidance admitted the future US Joint Force would be “smaller and leaner.” The headline from the guidance was the DoD’s intent to prioritize the Asia-Pacific region. The guidance also noted the administration believed Europe was, in security terms, stable and peaceful and a leaner footprint in the Middle East was possible. Underlying the guidance was the Pentagon’s judgment neither prospective defense budgets nor the size of the active-duty force allowed the American military to continue being a dominant warfighting force in multiple key theaters. Flexibility and risk were now bywords for defense planners.

Arguably, the constraints of budget and the size of the force remain. While Europe is no longer seen as pacific, Iran and jihadists continue to require the Pentagon’s attention, and, if anything, the difficulties posed by China’s military in Asia have grown. Although the US defense budget was increased over

a two-year period (fiscal years 2018 and 2019) by some \$90 billion, the increase only brought the total up to where the defense budget was projected to be in the last budget (fiscal year 2012) put forward before the 2011 Budget Control Act caps came into effect. And this increase may be as good as it gets for the time being. According to the current administration's proposals for future budgets, the top line will flatten and, in real terms, slightly decrease. Given the current fiscal trend, the new (or current) administration will most likely not reverse course. As a result, any increase in spending would likely be less than the 3- to 5-percent annual real increase senior defense officials have said is necessary to carry out the current national defense strategy. And though the American military has begun to adapt to this new environment and modernize its forces in select areas, the overall capacity of the American military is largely the same as it was a decade ago and, indeed, is smaller when considering land forces.

The strategic requirement for allies and partners is greater now than at any time since the end of the Cold War. This need, however, must be filled by allies and partners who can pull their weight militarily if the United States is going to be able to defend the American homeland, protect vital interests abroad, and maintain a favorable balance of power in critical regions of the world.

Although the United States' economic and military power—its cumulative hard power—is not as dominant globally as it was in the wake of World War II or the end of the Cold War, the country accounts for roughly a quarter of the world economy. Indeed, when one marshals together the economies of the United States and its allies and security partners,

the scale of the dominance remains substantial—over half the world’s total GDP. As a matter of sheer potential, the United States and its allies should not have to concede spheres of influence to the likes of Russia and China.

That said, translating American and allied economic power into military preeminence and maintaining it globally has been difficult. Fatigue from decades of the Cold War, expanding domestic agendas, a significant recession in 2008, and less-than-satisfactory campaigns in the Middle East and Central Asia have made increasing defense spending a heavy lift—a fact compounded no doubt by the pandemic of 2020. Regenerating the capital expenditures necessary to bolster regional security in Europe and Asia while continuing to deal with instability and terrorism in the Middle East and Africa will be an uphill political battle. Assessing where our cumulative military capacity stands in this environment is both timely and necessary.

A Hard Look at Hard Power surveys the hard-power capabilities of key US allies and partners and the United States’ most significant multilateral alliance, NATO. The chapters on specific countries examine the countries’ defense budgets, programs, research and development efforts, doctrinal updates, strategic guidance documents, and defense “white papers.” Accounting for these elements of hard power sheds light on the ability—and, indirectly, the will and intention—of US allies and partners to use force independently or in concert with the United States and other allies to address current threats and sustain global or regional peace and stability. The allied countries covered in Europe include France, Germany, Poland, and the United Kingdom. The allied countries

covered in Asia include Australia, Japan, and South Korea.

In addition, the volume has chapters on key frontline states India, Sweden, and Taiwan. Finally, the chapter on NATO analyzes its current capabilities, policies, and reform efforts. Among the notable scholars contributing to this volume are: Bruce Bennett of RAND, former NATO Assistant Secretary General Lieutenant General (retired) Heinrich Brauss, Olivier Schmitt of the University of Southern Denmark, Ashley Tellis of the Carnegie Endowment for International Peace, and Toshi Yoshihara of the Center for Strategic and Budgetary Assessments.

As British Prime Minister Winston Churchill remarked toward the end of World War II, “There is only one thing worse than fighting with allies, and that is fighting without them.” And as long as this quote is true, having an honest assessment of allies’ strengths and weaknesses is a matter of strategic priority.

1. INTRODUCTION

Gary J. Schmitt

The first edition of *A Hard Look at Hard Power: Assessing the Defense Capabilities of Key U.S. Allies and Security Partners* was published in 2015 by the Strategic Studies Institute. Why a second edition?

The quick answer is surveys of this kind, although valuable just as they are, are even more useful when looked at again in time. Noting the capabilities that have remained the same as well as the capabilities that have changed indicates whether an ally or partner is addressing the changing security environment. The second edition of this volume follows the first edition in examining key allies in Europe (France, Germany, Poland, and the United Kingdom), key allies in Asia (Australia, Japan, and South Korea), and NATO. Thus, although the chapters in this volume should be read for their perspectives and the information they provide at the moment, they can be compared usefully with the chapters published half a decade earlier.

For the second edition, chapters on Sweden and India have replaced those on the Netherlands and Italy. Combined with an updated chapter on Taiwan, these chapters provide interesting examples of frontline countries in various states of partnership with the United States.

Another reason for a second edition is the changed security environment. The circumstances that were becoming evident in 2015 have now largely been accepted as fact. The unipolar moment of the post-Cold War period has ended, and the challenges posed by the revisionist powers of China, Russia, and Iran

are more firmly fixed key elements of the geopolitical environment.

A driving factor in the 2015 edition of *A Hard Look at Hard Power* was the sense the security environment was evolving, and the US military was not keeping up with the geopolitical changes. The importance of understanding the military capabilities allies and security partners could bring to the table had grown, and this importance remains high.

In January 2012 at President Obama's direction, the Pentagon issued new defense guidance, *Sustaining US Global Leadership: Priorities for 21st Century Defense*.¹ Up front, the guidance admitted the future US Joint Force would be, in the words of Secretary of Defense Leon Panetta, "smaller and leaner."² The headline from the guidance was the DoD's intent to prioritize the Asia-Pacific region and the department's belief Europe was, in security terms, stable and peaceful, and a leaner footprint in the Middle East was possible. Underlying the guidance was the Pentagon's judgment neither prospective defense budgets nor the size of the active-duty force allowed the American military to continue being a dominant warfighting force in multiple key theaters. Flexibility and risk had become bywords for defense planners.

Arguably, the budget constraints and the force size remain. Even though Europe is no longer seen as pacific, the Middle East continues to require the Pentagon's attention, and, if anything, the difficulties posed by China's military in Asia have grown. Although the US defense budget was increased over

1. Leon Panetta, *Sustaining US Global Leadership: Priorities for 21st Century Defense* (Washington, DC: DoD, January 2012).

2. Panetta, *Sustaining US Global Leadership*.

a two-year period (fiscal years 2018 and 2019) by some \$90 billion, the increase only brought the total up to where the defense budget was projected to be in the last budget (fiscal year 2012) before the Budget Control Act caps came into effect.³ According to the current administration's proposals for future budgets, the top line will flatten and, in real terms, slightly decrease.⁴ This top line, of course, is less than the minimum annual real increase in spending of 3 to 5 percent former Chairman of the Joint Chiefs of Staff General Joseph Dunford said was necessary to carry out the current National Defense Strategy.⁵

Given the cuts in military spending in the aftermath of the Great Recession of 2008–09 and the enactment of the 2011 Budget Control Act, the size of the active-duty force is not substantially different from its size at the time of the 2012 defense guidance. The total active-duty force in 2012 was 1.399 million; in 2019, that figure was 1.333.⁶ The Navy has grown slightly since 2012, Air Force manning has remained virtually the same, and the US Marines Corps numbers have dropped. The

3. "Office of Management and Budget Historical Tables," The White House, accessed February 2020, <https://www.whitehouse.gov/omb/historical-tables/>.

4. Congressional Budget Office, *Long-Term Implications of the 2020 Future Years Defense Program* (Washington, DC: Congressional Budget Office, August 2019); and Todd Harrison and Seamus P. Daniels, *Analysis of the FY 2020 Defense Budget and Its Implications for FY 2021 and Beyond* (Washington, DC: Center for Strategic and International Studies, February 2020).

5. Joseph F. Dunford, interview by Michael O'Hanlon, Brookings, Washington, DC, May 29, 2019.

6. Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2020* (Washington, DC: Office of the Under Secretary of Defense [Comptroller], May 2019), 262.

Army has lost the most active-duty personnel since 2012.⁷ Although the Army's authorized numbers have increased recently, the added soldiers have been used primarily to fill out existing units. In 2013, the active-component Army was 550,000 strong, with 45 brigade combat teams; at the start of 2020, the authorized end strength was 480,000, with 31 brigade combat teams.⁸ As for the active-duty Air Force, the total number of aircraft today is slightly below the total number in 2012, with fewer bombers (139 in 2019 and 144 in 2012) and more active-duty fighter/attack aircraft (1,332 in 2019 and 1,289 in 2012).⁹ Meanwhile, the Navy's active battle fleet increased from 287 ships in 2012 to just short of 300 in 2020.¹⁰ In terms of core capacity, the American military is, with the exception of the Army, largely the same as it was nearly a decade ago.

But qualitative improvements have occurred in some areas because of the introduction of some newer platforms, upgrades to others, and a renewed emphasis

7. Office of the Under Secretary of Defense (Comptroller), *Budget Estimates*.

8. Andrew Feikert, *Army Drawdown and Restructuring: Background and Issues for Congress*, R42493 (Washington, DC: Congressional Research Service, January 3, 2013); and Mark F. Cancian, *US Military Forces in FY 2020: Army* (Washington, DC: Center for Strategic and International Studies, October 15, 2019).

9. Adam J. Hebert, ed., "The Air Force in Facts and Figures: 2013 USAF Almanac," *Air Force Magazine*, May 2013, 45; and Tobias Naegele, ed., "USAF 2019 Almanac," *Air Force Magazine*, June 2019, 56.

10. "US Ship Force Levels: 1886 to Present," US Naval History and Heritage Command, November 17, 2017, <https://www.history.navy.mil/research/histories/ship-histories/us-ship-force-levels.html>; and "Status of the Navy," US Navy, June 24, 2020, https://www.navy.mil/navydata/nav_legacy.asp?id=146 (site discontinued).

on readiness and training. But scale matters, especially when the three theaters that have historically mattered to the United States—Europe, Asia, and the Middle East—continue to be strategic concerns and, given the current administration’s national security strategy, require the American military to have a global capacity for reasons of presence; deterrence; and, potentially, warfighting.¹¹ Hence, the leadership of both the Navy and the Air Force arguing in the wake of the release of the National Defense Strategy that, to carry it out confidently, their respective services’ force structures must expand substantially is no surprise.¹²

Such aspirations are notable for outlining the gap between resources and strategy and the broad strategic risk such a gap entails. But the aspirations also put in sharp relief the US need for military allies and strategic partners. As the National Defense Strategy summarily notes, “Alliances and partnerships are crucial to our strategy, providing a durable, asymmetric strategic

11. Donald J. Trump, *National Security Strategy of the United States of America* (Washington, DC: The White House, 2017).

12. Jim Mattis, *Summary of the 2018 National Defense Strategy of the United States of America* (Washington, DC: Office of the Secretary of Defense, January 2018); Caitlin M. Kenney, “Acting Navy Secretary Says Service Wants to Increase Fleet to About 390 Ships,” *Stars and Stripes*, February 28, 2020, <https://www.stripes.com/acting-navy-secretary-says-service-wants-to-increase-fleet-to-about-390-ships-1.620732>; and Oriana Pawlyk, “Air Force Wants to Surge Growth by More Than 70 New Squadrons,” September 17, 2018, *Military.com*, <https://www.military.com/daily-news/2018/09/17/air-force-wants-surge-growth-more-70-new-squadrons.html>.

advantage that no competitor or rival can match.”¹³ Or, as Winston Churchill famously remarked toward the end of World War II, “There is only one thing worse than fighting with allies, and that is fighting without them.”¹⁴ Thus, understanding the military capabilities allies and prospective partners can provide, the military capabilities they cannot provide, their future plans, and their strategic imperatives is of increased importance to American security. Though the US military is the preeminent military in the world, it is not necessarily globally dominant.

Dependence on allies and alliances appears at first glance to run headlong into George Washington’s advice in his presidential farewell address that, with “regard to foreign nations,” the best policy for the young United States was “to have with them as little political connection as possible.”¹⁵ Yet the key here is Washington’s understanding of the United States as young: The country’s institutions were not fully settled, and its power was still nascent. He continues, “The period is not far off . . . when we may choose peace or war, as our interest, guided by justice, shall counsel.”¹⁶ Perhaps if Washington were here today, he

13. Mattis, *Summary of the 2018 National Defense Strategy*. For broader accounts of the benefits the United States gains from its system of allies and partners, see Hal Brands and Peter D. Feaver, “What Are America’s Alliances Good for?,” *Parameters* 47, no. 2 (Summer 2017): 15–30; and Michael J. Green, ed., *Ironclad: Forging a New Future for America’s Alliances* (Lanham, MD: Roman & Littlefield, 2019).

14. Arthur Bryant, *Triumph in the West, 1943–1946* (London: Grafton Books, 1986), 445.

15. George Washington, “Farewell Address 1796” (speech, Congress Hall, Philadelphia, PA, September 17, 1796), https://avalon.law.yale.edu/18th_century/washing.asp.

16. Washington, “Farewell Address 1796.”

might determine working with allies is in the United States' power and interest. A not-so-powerful young republic that needed to keep its distance from the monarchical and authoritarian maneuvers that then defined all of Europe and Asia is quite different from a powerful, well-established democracy in a world in which most other major powers in Europe and Asia are allied democracies.

Interestingly, although two successive US presidents have been more hesitant to exercise American hard power globally than their predecessors and, with that reluctance, seemingly less interested in America's system of allies and partners, the American public remains firm in its view these alliances matter. In a 2019 Chicago Council on Global Affairs opinion survey, 74 percent responded they wanted to preserve America's alliances, and an even higher percentage thought the United States should maintain or increase the country's commitment to NATO.¹⁷ The latter viewpoint is consistent with Gallup's findings in an opinion poll taken in 2019: Seventy-seven percent of the Americans sampled say the transatlantic alliance should be maintained.¹⁸ Although this percentage dropped to the low 60s in the immediate aftermath of the Cold War, the percentage is now back at levels not seen since the Cold War. More broadly, according to the findings of the Chicago Council on Global Affairs, Americans support a more forward-leaning role in the world, with 70 percent favoring the stationing of US

17. Dina Smeltz et al., *Rejecting Retreat: Americans Support US Engagement in Global Affairs* (Chicago: Chicago Council on Global Affairs, September 9, 2019).

18. R. J. Reinhart, "Majorities of Americans See the Need for NATO and the UN," Gallup, March 4, 2019, <https://news.gallup.com/poll/247190/majorities-americans-need-nato.aspx>.

troops in allied countries and 81 percent favoring the use of troops to defend allies.¹⁹ Indeed, even though the defense burdens of two key allies—Germany and Japan—are well below 2 percent of gross domestic product, the council found three-quarters of respondents believe ties with both countries strengthen US national security.²⁰

In short, both policy makers and the public believe the United States is better off working with allies and partners than not. Rather than thinking of it as a matter of temporary convenience, policy makers and the public believe having allies and partners that bring hard military power to the table is a foundational element of shaping the international environment. The goals of this interlocking system of allies and partners are to keep adversaries' ambitions in check, reassure partner states others have their backs, and, in turn, lessen the likelihood of regional competition and nuclear proliferation. As originally understood, this system of ties was not designed to entangle us in needless conflicts; rather, the system was designed to prevent conflicts from breaking out in the first place in areas believed to be of critical interest to the United States. As Hal Brands and Peter Feaver note, "Alliances do not cause US entanglements overseas; entanglements cause alliances."²¹ Arguably, this viewpoint holds true today. Although not the Land of Oz envisioned in the post-Cold War unipolar moment, the American system of alliances and partnerships has kept things from becoming the Wild West.

19. Smeltz et al., *Rejecting Retreat*.

20. Smeltz et al., *Rejecting Retreat*.

21. Brands and Feaver, "America's Alliances," 18.

Hard power is, of course, meant to stand in contrast to the notion of soft power—the ability to co-opt or attract another country into doing something rather than coercing them. The line between the two concepts is clear enough, but they are not totally independent of one another. Among the attributes of soft power that reinforce hard power is the sense the more powerful state is acting both out of its own interests and with broader common concerns in mind. In turn, political will among allies, manifested in such hard-power matters as defense budgets and Joint exercises, is ultimately tied to whether the security goals being laid out by the leading power are consonant with the goals the lesser powers view as legitimate. Allies do not have to be fully in sync. States often differ on the priorities they give their goals, but the soft-power tissue that supports hard-power capacity will certainly fray unless the leading power clarifies it has a larger strategic perspective in mind—one that contributes to the peace and stability of the leading power's allies and partners. As former Secretary of State George Shultz remarked about alliance relations, they need regular “gardening.”²²

The ability of the United States to maintain, and even grow, its global network of allies and partners throughout the Cold War and the era since is a testament to both America's hard-power capacity and the country's ability to package that power in a manner others see as beneficial. But, from Washington's point of view, the United States may be providing too much benefit and not receiving enough in return. With safety in numbers and absent the traditional multistate

22. George P. Shultz, “Allies and Friends in Europe,” in *Turmoil and Triumph* (New York: Scribner's, 1993).

competitions that have defined regions historically, allies and partners' inequitable sharing of the military burden is perhaps inevitable. In a March 2020 poll released by the Pew Research Center, the headline number was "Americans and Germans take opposing views on Article 5 obligations under NATO," with 60 percent of US respondents saying their country should step in and defend an ally being attacked by Russia, while only 34 percent of Germans held the same view. Yet the same poll showed a higher majority of Germans had a favorable view of NATO than Americans had of the organization.²³ But, carried too far, this behavior can undermine the attractiveness of those alliances and partnerships on the American side. Tangible signs of commitment to hard power from strategic partners are a necessity if, over the longer term, the legitimacy and utility of the partnership is to be sustained from Washington's end.

Although the economic and military power of the United States—its cumulative hard power—is not as dominant globally as it was in the wake of World War II or after the Cold War, the country accounts for roughly a quarter of the world economy, and its per-capita income far outstrips that of the next largest economy, China.²⁴ Indeed, when one marshals together the economies of the United States and its

23. Jacob Poushter and Mara Mordecai, "Americans and Germans Differ in Their Views of Each Other and the World," March 9, 2020, <https://www.pewresearch.org/global/2020/03/09/americans-and-germans-differ-in-their-views-of-each-other-and-the-world/>.

24. "Gross Domestic Product 2018," World Bank World Development Indicators Database, accessed December 23, 2019, <https://databank.worldbank.org/data/download/GDP.pdf>; and "GDP Per Capita (Current US\$)," World Bank Open Data, n.d., <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.

allies and security partners, the scale of the dominance remains substantial: The United States generates over half the world's total gross domestic product. As a matter of sheer potential power, the United States and its allies should have no reason to concede spheres of influence to the likes of Russia and China.

Despite the economic dominance of the United States, translating American and allied economic power into military preeminence and maintaining it globally have been difficult. Fatigue from the Cold War, expanding domestic agendas, the Great Recession of 2008–09, and less-than-satisfactory campaigns in the Middle East and Central Asia have made increasing defense spending a heavy lift. Regenerating the capital expenditures necessary to bolster regional security in Europe and Asia while continuing to deal with instability and terrorism in the Middle East and Africa is an uphill political battle.

Russian and Chinese behavior, combined with the sudden and deadly rise of the Islamic State of Iraq and Syria, began to move the needle for both the United States and its allies and partners. This shift in attitude is evident from the chapters herein. But the question raised in each chapter is whether the changes being made by America's strategic partners and allies are sufficient or timely enough. As the volume's title indicates, these chapters are meant to be a hard look at allied hard power.

As a final note, each of these chapters was completed before the coronavirus disease 2019 pandemic became front-page news across the globe. The economic costs of dealing with the pandemic may lead governments to change their defense plans. After the Great Recession of 2008–09, military spending declined in the United States and either declined or

generally remained flat among allies and partners.²⁵ Looking to put their fiscal house in order or to find resources to spend domestically, elected officials in the West saw defense budgets as a ready pot from which to draw.

Economic and fiscal reasons for not cutting defense exist. In addition to keeping soldiers, airmen, and sailors employed, defense procurement can act as an immediate stimulus to most economies because production lines are open and the factories employ tens of thousands of skilled and relatively highly paid workers. Just as important, of course, are the realities of the security environment. The ambitions of Beijing, Moscow, Pyongyang, and Tehran might be trimmed by an economic downturn, but these ambitions will likely not go away. In addition, terrorist groups could benefit from recruiting the young and unemployed.²⁶

Peace did not result from either the Great Depression or the more recent Great Recession of 2008–09; quite the opposite. At a minimum, Washington and its allies and partners need to assess the very real risks of cutting defense budgets given the competitors they face. The chapters that follow provide a starting point for these assessments. The chapters also serve as a marker for gauging the

25. See country chapters on European and Asian allies in Gary J. Schmitt, ed., *A Hard Look at Hard Power: Assessing the Defense Capabilities of Key U.S. Allies and Security Partners* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2015). For analysis of US defense spending after 2008, see Thomas Donnelly et al., “Defense Spending,” in *To Rebuild America’s Military* (Washington, DC: Marilyn Ware Center for Security Studies, October 2015).

26. Jessica Trisko Darden, *Tackling Terrorists’ Exploitation of Youth* (Washington, DC: American Enterprise Institute, May 2019).

changes that might be made in the defense plans of allied and partner states in the months and years ahead. Continuing to understand, assess, and take a hard look at the capabilities allies and partners can contribute is essential if, as the National Defense Strategy says, the United States and its allies and partners are to maintain an “asymmetric strategic advantage” over their would-be adversaries.²⁷

27. Mattis, *Summary of the 2018 National Defense Strategy*.

2. AUSTRALIA: A PROBLEM OF SCALE

Stephan Frühling

KEY POINTS

- The Australian Defence Force (ADF) is arguably more capable than it has ever been, and the Australian government has reliably funded the defense investment plan.
- But Australia's strategic environment is deteriorating, and the need to prepare for the possibility of major war places significant new demands on strategic policy and the defense organization.
- Going forward, Australia's main challenge will be the need for a defense capability of high quality and in quantities that may cost more than a small population is able—or willing—to afford.

Assessing Australia's hard power in 2020 is fundamentally a question of the level of analysis. At a unit level, today's ADF is arguably more capable than it has ever been. The ADF is on par with equivalent US formations and, considering the largely fifth-generation fleet of the Royal Australian Air Force (RAAF), has one of the most modern air forces in the world. But the rise of China's People's Liberation Army (PLA) creates the prospect of a direct major-power threat to Australia of a kind the country has not had to face since the fall of Singapore in 1942. Hence, if one defines power as, in Lawrence Freedman's words, the "capacity to produce effects that are more advantageous than would otherwise have been the

case,” the sufficiency of the hard power Australia is planning to generate and its ability to generate sufficient hard power are more questionable than ever.¹ In the past, Australia has been able to address strategic demands by focusing on either the quantity or quality of its defense capability. Going forward, Australia’s main challenge will be meeting the need for a defense capability that will perhaps cost more than the country’s small population is able—or willing—to afford.

GEOGRAPHY AND DEMOGRAPHY

In assessing Australian hard power, understanding the ways in which geography and demography are fundamental to Australia’s strategic situation is important. Separated from the Eurasian landmass by the archipelago of Southeast Asia, the Australian mainland is about the same size as the continental United States. But most of Australia’s population is concentrated in a handful of major cities in the southeast and southwest of what is otherwise, in large parts, a climatically inhospitable continent.

Relative to the size of the country and its northern neighbors, Australia’s population remains very small. After World War II, Australia realized defending the country with a population of only 7.5 million people would be impossible and embarked on a major immigration program. As of the end of 2019, Australia’s population stands at 25.5 million—a

1. Lawrence Freedman, “Strategic Studies and the Problem of Power,” in *Strategic Studies: A Reader*, ed. Thomas G. Mahnken and Joseph A. Maiolo (Abingdon, UK: Routledge 2008), 30.

25-percent increase since the turn of the millennium.² Australia's population is larger than the population of either Romania or the Netherlands, but considerably less than Poland's, less than half of Italy's, and merely a tenth of Indonesia's. Hence, defense considerations continue to be a major part of Australia's immigration debate. For example, in 2009 the Australian Labor Party-led government under Prime Minister Kevin Rudd called for a population of 35 million by 2050 under the administration's "big Australia" policy.³ More recently, Rudd even called for Australia to aim for a population of 50 million so it could "fund independently the defence and intelligence assets necessary to defend our territorial integrity and maintain our political sovereignty" in the face of a more assertive China and a United States that is overstretched militarily and ambivalent about its global leadership role.⁴

2. Australian Bureau of Statistics, "Table 1.1 Population (a) (b)(c) by Sex, States and Territories, 31 December, 1788 Onwards," in *Australian Historical Population Statistics, 2019* (Canberra, AU: Australian Bureau of Statistics, April 18, 2019); and "Australian Demographic Statistics, Dec 2019," Australian Bureau of Statistics, June 18, 2020, <https://www.abs.gov.au/ausstats/abs@.nsf/0/D56C4A3E41586764CA2581A70015893E?Opendocument>. For the postwar immigration program's defining contribution to modern Australia, see "Postwar Immigration Drive," National Museum Australia, updated March 25, 2020, <https://www.nma.gov.au/defining-moments/resources/postwar-immigration-drive>.

3. "Rudd Welcomes 'Big Australia,'" ABC News, October 22, 2009, <https://www.abc.net.au/news/2009-10-23/rudd-welcomes-big-australia/1113752>.

4. Kirsten Lawson, "Rudd Wants Immigration Boost to Combat China," *Canberra Times*, November 26, 2019, <https://www.canberratimes.com.au/story/6512525/rudd-wants-immigration-boost-to-combat-china/#gsc.tab=0>.

The underlying unease these calls display about the ability of Australia to generate the hard power necessary for its survival date as far back as 1788, when the first fleet of British convicts encountered a French naval squadron within days of arriving at Botany Bay.⁵ The perceived indifference in London to Australian concerns about German, French, and American expansion in the South Pacific was a major argument for the establishment of the federated Commonwealth of Australia in 1901. One of the new commonwealth's first decisions was to establish the Australian Navy, and the government's first major defense debate concerned whether to use the navy for the defense of Australian waters or as an ancillary to the Royal Navy's main fleet elsewhere.

This historical debate points to an underlying paradox of Australian defense policy: Because its ability to generate the hard power necessary to defend itself is so constrained and its natural allies are so far away, Australia's best defense arguably lies in helping to stop threats to the global order wherever they arise and before they can directly touch the remote Australian continent. Hence, the young Australia made major contributions to the imperial war effort in the Middle East and on the Western Front during World War I and sent considerable air and land forces to Europe and the Middle East in World War II. Indeed, Australia has fought alongside US forces in all major conflicts in the twentieth and twenty-first centuries: the Battle of Hamel in 1918, World War II,

5. Stephan Frühling, "Australian Strategy and Strategic Policy," in *Australia's Defence: Towards a New Era?*, ed. Peter Dean, Stephan Frühling, and Brendan Taylor (Melbourne: Melbourne University Press, 2014), 184–205.

the Korean War, the Vietnam War, the Iraq War, and the Afghanistan War.

But whether to devote limited defense resources to operations that ultimately reflected allied priorities or to the defense of the continent itself remained an enduring tension in Australian defense policy. An iconic moment in Australia's emancipation from Britain was the recall of its divisions from the Middle East in 1941 against the express wishes of British Prime Minister Winston Churchill so the divisions could instead be used to defend Australia's own approaches in Southeast Asia against Japan.⁶ The decision is commemorated to this day by the display of the original telegraphs in the meeting room of the Australian Department of Defence's most senior committee.

In the 1950s and 1960s, Australia continued to focus on the defense of Southeast Asia alongside its British and American allies. After the Vietnam War, however, the United States accepted Australia's focus on the defense of Australia itself against a possible threat from Indonesia rather than expecting the country to continue making major contributions to the Cold War. From the 1970s to the 1990s, Australian debates about defense policy largely centered on questions of the level of sophistication sought in ADF capability. In a regional context, Australian hard power of the 1980s and 1990s remained considerable: The ADF would have been able to dominate any air or maritime forces that existed in Southeast Asia at the time. But the ADF was far more limited in its ability to support US operations against more technically capable forces in

6. "Curtin Brings Home Troops," National Museum Australia, updated April 15, 2020, <https://www.nma.gov.au/defining-moments/resources/curtin-brings-home-troops>.

the 1990–91 Gulf War, the 1995–96 Taiwan Strait crisis, or the 1998 Operation Desert Fox.

Beginning with the conservative coalition government's 1997 *Australia's Strategic Policy* review, Australia began to rebuild the ADF into an instrument of global hard power that could make a meaningful combat contribution in conflicts alongside US forces – from the Middle East to northeast Asia. Today, the need for Australian forces to be interoperable and able to survive against the sophisticated capabilities of possible adversaries in the Middle East and wider Indo-Pacific region has become almost universally accepted. Instead, Australia's defense debate of the 2000s and 2010s focused on the types of capability the country should prioritize. Under the conservative government of Prime Minister John Howard, the ADF saw considerable increases in the size of its army, amphibious special operations forces, and strategic airlift capabilities – all of which reflected the demands of major operations in the Middle East, the South Pacific, and East Timor.

In contrast, the government that followed, the Australian Labor Party's Rudd government, sought to draw a line under the ADF's operations in Iraq and Afghanistan and instead focused Australia's defense policy on the risk arising from China's military buildup. The signature commitment of the Department of Defence's 2009 white paper was the doubling of Australia's submarine fleet from six boats to 12, all of which were to be built in Australia.⁷ Within days of its publication, however, the white paper's budget assumptions fell victim to the global financial

7. For the text of Australia's defense white papers since 1976, see "Links and Downloads," Department of Defence, n.d., <https://www.defence.gov.au/WhitePaper/Links.asp>.

crisis. The gap between Australia's strategic ambition and the country's resources was further exacerbated by the cuts to defense expenditures under the prime ministership of Julia Gillard in an (ultimately unsuccessful) quest for a budget surplus.

In the 2013 defense white paper, the Gillard government softened the rhetoric on China and put forward a policy focusing on regional partnerships more in tune with the United States' pivot to Asia, which the government also supported by opening Australia to a rotational US Marine Corps presence at Darwin on Australia's northern coast. But although this white paper added new off-the-shelf capability to the ADF, notably 12 EA-18G Growler electronic attack aircraft, the white paper did little to address the underlying fiscal fiction of the defense capability plan. Despite the policy focus on recapitalizing the navy, neither the Rudd nor the Gillard governments placed a single contract for a new naval ship during their collective six years in office. By 2012, Australia's defense spending had dropped to 1.56 percent of gross domestic product (GDP). Highlighting this level of spending was the lowest since 1938, the conservative opposition made a return to 2 percent of GDP a prominent element of its 2013 election campaign.⁸ Moreover, the emphasis of Australian Labor Party-led governments under Prime Ministers Rudd and Gillard on Australian self-reliance in defense matters sat uneasily with increasingly close alliance cooperation in the Asia-Pacific region – a dissonance also highlighted

8. Andrew Carr and Peter Dean, "The Funding Illusion: The 2% of GDP Furphy in Australia's Defence Debate," *Security Challenges* 9, no. 4 (2013): 65–86.

by conservatives and a sign the enduring tensions of Australian defense policy remained unchanged.⁹

THE 2016 WHITE PAPERS AND AUSTRALIA'S MARITIME FOCUS

The center-right coalition returned to government in 2013 and was confronted with a distinct sense of drift in Australian defense policy.¹⁰ The main challenges were to reset an underfunded defense capability plan, to address the hollowing out of enabling capabilities in the defense organization, and to define a coherent set of strategic priorities that reflected the governing coalition's traditional support for global operations alongside the United States as well as the regional consequences of a rising China. Domestic political instability drove a significant policy change. Instead of preferring to acquire new naval vessels from overseas, the government moved to create a permanent domestic shipbuilding program. The period was also marked by a change in prime minister from Tony Abbott to Malcolm Turnbull before the *2016 Defence White Paper* was published.

9. Jim Molan, "Defence Policy: Self-Reliant or Self-Deluded?," *Interpreter* (blog), Lowy Institute, June 14, 2013, <https://www.lowyinstitute.org/the-interpreter/defence-policy-self-reliant-or-self-deluded>; Dan Fortune, "Self-Reliance: An Outdated and Unaffordable Concept for the ADF," *Australian Defence Force Journal* 193 (2014): 5-19; and Stephan Frühling, "Australian Defence Policy and the Concept of Self-Reliance," *Australian Journal of International Affairs* 68, no. 5 (2014): 531-47.

10. Andrew Shearer, "Australian Defense in the Era of Austerity: Mind the Expectation Gap," in *A Hard Look at Hard Power*, ed. Gary J. Schmitt (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2015), 35-66; and James Brown and Rory Medcalf, *Fixing Australia's Incredible Defence Policy* (Sydney: Lowy Institute, October 2013).

The white paper's gestation was particularly prolonged. The main policy contours of the white paper had been set down as early as 2014, arguably too early to take full account of the geostrategic implications of the Ukraine crisis and China's island building in the South China Sea. Australia's defense policy has been stable since then because of three main aspects of the 2016 *Defence White Paper*—each of which presents particular challenges for the future. First, the white paper lays out a strategic policy setting that is flexible (or undefined) enough for proponents of various policies to project their preference onto the document, but the paper does not account for increasing doubts about the reliability of the United States as an ally. Second, the white paper sets out a stable defense investment plan the government has reliably funded, but the plan will only deliver significant growth to critical ADF capabilities in the late 2020s at the earliest. Third, the paper lays down a permanent shipbuilding program, but the benefits of this program—efficiency and strategic agility—will only be realized in future decades, if at all. The program has already cost considerable sums.¹¹

In the strategic policy section of the white paper, the government skirts the major policy debates of earlier years, when defense white papers gave equal priority to the defense of Australia and its approaches and support for establishing security in Australia's immediate neighborhood and sustaining a stable Indo-Pacific and global rules-based order. Though the 2016 *Defence White Paper* was the first not to prioritize

11. For a discussion of Australian defense funding and acquisition against the white paper plans, see Marcus Hellyer, *The Cost of Defence. ASPI Defence Budget Brief 2019–20* (Canberra, AU: Australian Strategic Policy Institute, 2019).

the defense of Australia, it acknowledges the practical challenges such a strategy entails. Although the paper is vague on the definition of a rules-based order, it makes clear Australia would consider supporting international coalition operations across the globe. And in giving a central place to the concept of the Indo-Pacific, the white paper acknowledges the major strategic challenge posed by the rise of China. Eschewing the politically charged term “self-reliance,” the paper emphasizes the need for Australian forces to be able to operate independently instead.¹² As a result, the white paper was unusually well received across the defense community, including by the Australian Labor Party opposition.¹³ Indeed, despite changes to the global landscape, defense policy was largely absent from the 2019 election campaign; the Australian Labor Party’s few specific commitments focused on programmatic details and were largely consonant with existing government policy.¹⁴

One reason for the relative lack of criticism of the white paper was it did not designate many internal losers, given the growing funding envelope. In a remarkable act of self-commitment, the government converted the goal of 2 percent of the GDP for fiscal year (FY) 2020–21 into an absolute figure for defense expenditure for all years up to FY 2025–26.

12. Department of Defence, *2016 Defence White Paper* (Canberra, AU: Department of Defence, 2016), 67–78.

13. Andrew Carr, “The Politics of the 2016 Defence White Paper,” *Security Challenges* 12, no. 1 (2016): 1–17.

14. Stephen Kuper, “Opposition Brings the Fight to Defence Debate as Election Race Tightens,” DefenceConnect, May 3, 2019, <https://www.defenceconnect.com.au/key-enablers/3973-opposition-brings-the-fight-to-defence-debate-as-election-race-tightens>.

The government published this commitment in the white paper, regardless of potential future variations in the GDP. Defense expenditure would rise from A\$32.4 billion in FY 2016–17 to A\$42.4 billion in FY 2020–21 and A\$58.7 billion in FY 2025–26. Over this time, the share of the defense budget going to capital investment would rise from 29 percent to 39 percent, and to sustainment, from 25 percent to 28 percent, with modest growth in military and civilian personnel to round out hollow capabilities.¹⁵

Although the 2016 *Defence White Paper* does not explicitly prioritize among defense objectives, acquisition plans in the white paper are heavily tilted toward a capability for independent, high-intensity maritime operations—consistent with the Australian Labor Party’s 2009 and 2013 defense white papers. The 10-year investment program devoted 26 percent to key enablers such as basing and ranges, logistics, communications, etc.; 25 percent to maritime and antisubmarine warfare (ASW); 18 percent to land combat and amphibious warfare; and 17 percent to strike and air combat. The program also allotted 9 percent to intelligence, surveillance, and reconnaissance; electronic warfare; space; and cyber capabilities. Finally, 6 percent was appropriated for airlift and sealift.¹⁶ The government confirmed the submarine fleet would double in size—from the existing six *Collins*-class submarines to 12 “regionally superior” boats equipped with AN/BYG-1 combat control systems and Mark 48 Mod 7 heavyweight torpedoes entering service between the early 2030s

15. Department of Defence, *2016 Defence White Paper*, 177–82.

16. Department of Defence, *2016 Defence White Paper*, 85.

and 2050.¹⁷ In addition, nine new ASW frigates would replace the existing eight *Anzac*-class frigates starting in the late 2020s. Twelve new and larger offshore patrol vessels would replace the *Armidale*-class patrol boats by 2030, and the existing oiler and replenishment vessels would be replaced by two new replenishment vessels, with a third to be acquired in the late 2020s.¹⁸

The maritime patrol fleet would also grow significantly. The 19 AP-3C Orion airframes would be replaced by a combination of 15 Boeing P-8A Poseidons (split between the early and late 2020s), seven MQ-4C Tritons, and four dedicated long-range electronic warfare support aircraft.¹⁹ Two additional KC-30A refueling aircraft would bring the fleet to a total of seven, with acquisition of an additional two foreshadowed once the fleet of P-8A Poseidons reaches its intended size. The 12 EA-18 Growler aircraft would be kept at the same standard as those of the US Navy. The outdated RBS-70 short-range air defense system would be replaced, and a new midrange, ground-based air defense capability would be acquired in the mid-2020s. Investment in the joint sensor and command and control systems for air defense would form the basis for possible future integrated air and missile defense systems. With the acquisition of surface-to-surface ballistic missiles and land-based antiship cruise missiles, the ADF would

17. Department of Defence, *2016 Defence White Paper*, 91.

18. Department of Defence, *2016 Defence White Paper*, 89–93, 108.

19. Andrew Davies, *ADF Capability Snapshot 2015: Part 1 – RAAF*, Strategic Insights 97 (Canberra, AU: Australian Strategic Policy Institute, November 2015), 6.

acquire completely new capabilities starting in the late 2020s.²⁰

In addition, the government confirmed its intent to replace the army's aging reconnaissance vehicles and decided to reestablish a riverine patrol boat capability; to acquire a new, armed, medium-altitude, unmanned aircraft and three new, heavy-lift special operations forces helicopters; and to replace its 22 Tiger armed reconnaissance helicopters. But the army did not receive new tanks, nor did the government expand the capacity of Australia's amphibious fleet or acquire the vertical-landing F-35B as had been mooted during the white-paper process.²¹ Rounding out the investment plan was funding for bases, including improvements to airfields in northern Australia and the Cocos (Keeling) Islands to enable P-8 operations for improvements to training ranges, and information-technology and logistics infrastructure.²²

The government sought to strengthen the Australian defense industry through recognizing it as one of the "fundamental inputs to capability" and revising innovation and export support arrangements. None of these initiatives were as consequential as the decision to establish a permanent domestic shipbuilding program, comprising separate streams for submarines, major surface combatants, and minor

20. Department of Defence, *2016 Defence White Paper*, 94–97.

21. Department of Defence, *2016 Defence White Paper*, 97–100, 107; and John Kerin, "PM's Floating Fighter Plan Quietly Sunk by Defence," *Australian Financial Review*, July 7, 2015, <https://www.afr.com/politics/pms-floating-fighter-jet-plan-quietly-sunk-by-defence-20150707-gi6qxj>.

22. Department of Defence, *2016 Defence White Paper*, 100–106.

combatants.²³ In 2017 the government published a *Naval Shipbuilding Plan* that laid out time lines for the acquisition of various classes of vessels, new infrastructure investment in shipyards, and the establishment of a Naval Shipbuilding College to create a sustainable shipbuilding workforce.²⁴ Given the regional economic importance of the new shipbuilding industry being created in southern and western Australia, the electoral fortunes of the current and future governments will now strongly depend on the continuing recapitalization of the Royal Australian Navy (RAN).

RECAPITALIZING THE FORCE: PROGRESS SINCE 2016

How did Australia progress with the implementation of these ambitious capability plans? During the four years since the white paper, defense budgets have closely followed the commitments laid out in 2016. Because of GDP growth that has been slower than anticipated, Australia's defense expenditure will reach 2 percent of GDP in FY 2020–21 and then rise to 2.2 percent of GDP by the middle of the decade. But signs indicate the Department of Defence is struggling to implement the planned increase in investment: Capital spending is about A\$5 billion below the white paper's predictions. Achieving even moderate personnel growth has also been a problem; for example, the navy had to dock a refurbished frigate

23. Department of Defence, *2016 Defence White Paper*, 108–15; Department of Defence, *2016 Defence Industry Policy Statement* (Canberra, AU: Department of Defence, 2016).

24. Department of Defence, *Naval Shipbuilding Plan* (Canberra, AU: Department of Defence, 2017).

for two years in the absence of a crew. And the true operating cost of the F-35A Lightning II Joint Strike Fighter (JSF) remains a major uncertainty.²⁵

Nonetheless, the modernization of the ADF is proceeding apace. Of the three services, the RAAF is the most advanced in its recapitalization. The RAAF is aiming for initial operating capability of the first squadron of its 72 JSFs by December 2020 and has begun divesting legacy FA-18s. In the meantime, 24 FA-18 Super Hornets and 11 surviving EA-18 Growlers are providing for Australia's frontline fighter capability.²⁶ In early 2020, Australia also announced new plans to acquire up to 200 AGM-158C Long Range Anti-Ship Missiles for its F-18 fleet.²⁷ The strike aircrafts are supported by seven KC-30A tankers as well as six updated E-7A Wedgetail airborne warning and control aircraft.²⁸ Australia placed an order for the four electronic warfare support aircraft in 2019, choosing Gulfstream G550 airframes equipped with signals intelligence and communications suites.²⁹

25. Hellyer, *Cost of Defence*, 6–8.

26. Department of Defence, *Defence Annual Report 2018–19* (Canberra, AU: Department of Defence, 2019), 36–37; and Jordan Chong, “RAAF Declares Growler IOC,” *Australian Defence Business Review*, May 3, 2019, <https://adbr.com.au/raaf-declares-growler-ioc/>.

27. Defense Security Cooperation Agency, “Australia—Long Range Anti-Ship Missiles (LRASMs),” Transmittal no. 20-02, February 7, 2020, <https://dsca.mil/major-arms-sales/australia-long-range-anti-ship-missiles-lrasms>.

28. Department of Defence, *Defence Annual Report 2018–19*, 36–37.

29. “G550 EW Aircraft Buy Clarified for RAAF,” *Australian Defence Magazine*, March 18, 2019, <https://www.australiandefence.com.au/defence/air/g550-ew-aircraft-buy-clarified-for-raaf>.

Twelve P-8As have replaced the P-3C Orion maritime patrol fleet; the first of six MQ-4C Triton unmanned aerial vehicles on order will be delivered to the RAAF in 2023.³⁰ Strategic and tactical fixed lift is provided by eight C-17A Globemaster IIIs, 12 C-130J Hercules, and 10 C-27J Spartans.³¹

In contrast, the recapitalization of the army is in its early stages. Acquisition of new trucks, trailers, and light armored vehicles is underway, and 211 Rheinmetall Boxer combat reconnaissance vehicles will replace the much smaller Australian light armoured vehicles that have been run down by extensive service in Iraq and Afghanistan. The most expensive army program, however, will be the procurement of up to 450 infantry fighting vehicles, which the government intends to order in 2022. The infantry fighting vehicles are a replacement for the Vietnam War-era M113 armored personnel carriers, which have not been fit for combat operations for many years.³² Hence, the acquisition of large numbers of a modern infantry fighting vehicle significantly increases the protection and firepower of the army's infantry battalions. The first stage will consist of a purchase of 117 vehicles, the design for which has yet to be chosen, including 67 turreted versions as well as

30. Nigel Pittaway, "Northrop to Deliver Triton Drone to Australia in 2023, Says Air Force Official," *Defense News*, February 27, 2019, <https://www.defensenews.com/digital-show-dailies/avalon/2019/02/27/northrop-to-deliver-triton-drone-to-australia-in-2023-says-air-force-official/>.

31. Department of Defence, *Defence Annual Report 2018–19*, 37.

32. "Land Combat Vehicle System," Department of Defence, n.d., <https://www.defence.gov.au/CASG/EquippingDefence/Land%20400.asp>.

mortar and logistics versions.³³ Although the army's tank fleet remains limited to 59 Abrams M1A1-AIMs, one of the surprises of the 2019 election campaign was the announcement 30 self-propelled howitzers would be built in Australia; in 2012, plans to acquire self-propelled artillery were dropped to eliminate costs and to recapitalize all artillery with 54 M177A2 howitzers.³⁴

Hence, a retired general's sardonic assessment the army will remain "a 'protected' Army with very limited combat capability" will perhaps be somewhat less true in the future than it has been in the past.³⁵ The army's main combat force is organized into three multirole combat brigades whose maneuver elements consist of two infantry regiments and one armored cavalry regiment operating a mix of M-1A tanks and Australian light armored vehicles. Although the current structure is designed to ensure one brigade is at high readiness for operations overseas, important medical, signals, helicopter, engineering, logistics, and air defense enablers continue to exist in single sets.³⁶ In contrast with the army's vehicles, its rotary fleet remains relatively young, consisting of 10 Boeing

33. DJAC [pseud.], "A Closer Look at Land 400 Phase 3 and Land 8116," *Australian Defence Magazine*, September 16, 2019, <https://www.australiandefence.com.au/news/a-closer-look-at-land-400-phase-3-and-land-8116>.

34. "Self-Propelled Howitzers Back on the Cards," *Australian Defence Magazine*, May 14, 2019, <https://www.australiandefence.com.au/defence/land/self-propelled-howitzers-back-on-the-cards>; and Andrew Davies, *ADF Capability Snapshot 2015: Part 3 – Army*, Strategic Insights 100 (Canberra, AU: Australian Strategic Policy Institute, November 2015).

35. Michael Clifford, "The 2016 Defence White Paper – The Land Perspective," *Security Challenges* 12, no. 1 (2016): 88.

36. Davies, *Part 3 – Army*.

CH-47F Chinooks, 34 Blackhawks, 47 MRH-90 Taipans (shared with the navy), and 22 ARH Tigers.³⁷ A decision on the acquisition of new special operations forces support helicopters for Special Air Service and Commando Regiments is expected in 2020, and the government will decide whether to acquire 12 to 16 MQ-9B Sky Guardian armed drones in 2021–22.³⁸ Given the surface-to-surface and land-based antiship missile capabilities foreshadowed in the white paper, the ADF undoubtedly closely observed the operation of US Army and Marine Corps high-mobility artillery rocket systems in the 2019 Exercise Talisman Saber wargames.³⁹ But the new Raytheon and Kongsberg Defense and Aerospace National Advanced Surface-to-Air Missile System remains the army's only toehold in the guided missile age so far.⁴⁰

Australia does not have a marine force, and its army is relatively new to large-scale amphibious

37. Department of Defence, *Defence Annual Report 2018–19*, 36.

38. Ewen Levick, "MQ-9B Sky Guardian Chosen over Reaper," *Australian Defence Magazine*, November 28, 2019, <https://www.australiandefence.com.au/news/mq-9b-sky-guardian-chosen-over-reaper>; and "The RAAF to Get MALE—Reaper UAS Acquisition Confirmed," *Australian Aviation*, November 16, 2018, <https://australianaviation.com.au/2018/11/the-raaf-to-get-male-reaper-uas-acquisition-confirmed/>.

39. Allen Cone, "US, Australian Military Hold HIMARS Training for Talisman Sabre," *Defense News*, July 9, 2019, <https://www.upi.com/Defense-News/2019/07/09/US-Australian-military-hold-HIMARS-training-for-Talisman-Sabre/8021562674222/>.

40. "ADF's New Air Defences Pass Gate 2 Milestone," *Australian Defence Magazine*, March 25, 2019, <https://www.australiandefence.com.au/defence/joint/adf-s-new-air-defences-pass-gate-2-milestone>.

operations. The 2nd Battalion, Royal Australian Regiment, is dedicated to amphibious operations, but its primary functions are to develop operational concepts, support training, and provide a small prelanding reconnaissance force. The ADF's amphibious lift capability, which is based on two *Canberra*-class landing helicopter docks and the landing ship dock HMAS *Choules*, achieved full operating capability in 2019. The rest of the navy, however, is only at the beginning of its recapitalization. Two new replenishment ships were launched in Spain in 2019 and will deliver a significant improvement in sustainment capability.⁴¹ The third and last of the new *Hobart*-class air defense destroyers, equipped with the Aegis combat system, towed array, SM-2 missiles, SPY-1D radar, and cooperative engagement capability, was also commissioned in 2019. Although the *Hobart* class finally brings back the fleet air defense capability lost with the retirement of the *Charles F. Adams*-class destroyers in 2001, the former only carries half (48) of the Mark 41 Vertical Launch System cells that are on the latest of the US Navy's *Arleigh Burke*-class destroyers, and its offensive armament remains limited to the aging Harpoon missile.⁴²

All other new classes of vessels are now managed as part of the domestic shipbuilding program. Before the new submarines or frigates achieve initial operating capability, Australia will have already spent at least A\$20 billion on those two projects alone—in addition to recently investing significantly in new

41. "Navy Welcomes NUSHIP *Stalwart*," *Defence News*, August 31, 2019, <https://news.defence.gov.au/media/media-releases/navy-welcomes-nuship-stalwart>.

42. "HMAS *Hobart* (III)," Royal Australian Navy (RAN), n.d., <https://www.navy.gov.au/hmas-hobart-iii>.

shipyard capacities to build the new frigates and a (virtual) Naval Shipbuilding College.⁴³ Despite such staggering costs, this approach to shipbuilding is starting to promise greater interoperability and long-term efficiency. From now on, all major combatants will be equipped with the Aegis combat system and a Saab Australia tactical interface, and all minor vessels will use a Saab 9LV system.⁴⁴ On the other hand, now that the government has committed to building ships domestically, it has also accepted a perpetually slow delivery schedule for major vessels: a frigate and a submarine will be launched every two years.

The most prominent of these vessels will be the *Attack*-class conventional submarine, for which Australia engaged France's Naval Group as the lead designer. Despite some delays in the signing of the partnership agreement, the Department of Defence insists work remains on schedule. Nevertheless, the first boat will not be handed over to the navy before 2035. For the next two decades, the RAN's submarine capability will continue to rest on the six existing *Collins*-class submarines. After a major revision to the navy's sustainment system, the submarine fleet is now meeting (or exceeding) international benchmarks of availability. The *Collins*-class submarines are also receiving updates, especially to their sonar system; a future life-extension program will keep them as

43. Hellyer, *Cost of Defence*, 82.

44. Christopher Pyne, "New Approach to Naval Combat Systems," October 3, 2017, <https://www.minister.defence.gov.au/minister/christopher-pyne/media-releases/new-approach-naval-combat-systems>.

capable and survivable as possible, given they have a 1980s hull design.⁴⁵

The *Attack*-class submarine will be the world's largest conventional submarine and the first nonnuclear submarine to feature pump-jet propulsion. To minimize design and construction risk, the government has decided to limit the new-boat requirements to the *Collins*-class submarines. At least the first three boats of the *Attack*-class submarines will therefore have neither lithium-ion batteries nor a dedicated launch facility for unmanned vehicles—choices that continue to be the subject of debate in Australian defense circles.⁴⁶

The new *Hunter*-class frigates, although optimized for ASW, will also make a significant contribution to fleet air defense. Based on BAE Systems' Type 26 destroyer design, and with even greater total displacement than the *Hobart* class (8,800 versus 7,000 tons at full load), the *Hunter*-class frigates will carry 32 Mark 41 Vertical Launch System cells and be equipped with the Aegis combat system, Australia's own CEAFAR2 radar, SM-2 missiles, and offensive antiship

45. Hellyer, *Cost of Defence*, 66–67, 75–77; and Marcus Hellyer, "The Government Must Create a Single Australian Submarine Enterprise," *Strategist* (blog), Australian Strategic Policy Institute, September 5, 2019, <https://www.aspistrategist.org.au/the-government-must-create-a-single-australian-submarine-enterprise/>.

46. Hellyer, *Cost of Defence*, 92; and Paul Greenfield, "The Attack-Class Submarine Battery Debate: Science Fiction or Engineering?," *Strategist* (blog), Australian Strategic Policy Institute, August 31, 2019, <https://www.aspistrategist.org.au/the-attack-class-submarine-battery-debate-science-fiction-or-engineering/>.

missiles.⁴⁷ But with initial operating capability for the first ship occurring in 2029 and the last occurring in 2045 and following the retirement of the last *Oliver Hazard Perry*-class frigate, the much smaller (3,600-ton) *Anzac*-class frigates will continue to provide the bulk of the RAN's surface warfare capability in the 2020s.⁴⁸ All eight remaining ships have been upgraded to employ RIM-162 Evolved SeaSparrow Missiles and the CEAFAFAR X-band radar for improved self-defense. These ships can embark one of the RAN's 24 new MH-60R ASW helicopters and will receive further upgrades, including replacement of the long-range search radar. But the ships still lack a towed array.⁴⁹

Consequently, although the *Anzac*-class frigates will be able to contribute to coalition operations, especially in the Middle East, their lack of a long-range air defense missile and limited offensive capability is likely to restrict their employment to less-contested areas in any future Pacific conflict. This lack of capability will be addressed by the 12 new *Arafura*-class patrol vessels, which will provide a significant, near-term increase in capability as they enter service between 2021 and the end of the decade. The *Arafura*-class patrol vessels will have better endurance,

47. Nigel Pittaway, "A Quiet Hunter—Navy's Future Frigate," *Australian Defence Magazine*, October 9, 2019, <https://www.australiandefence.com.au/defence/sea/a-quiet-hunter-navy-s-future-frigate>; and Hellyer, *Cost of Defence*, 73–75.

48. "Ships, Boats & Craft," RAN, n.d., <https://www.navy.gov.au/fleet/ships-boats-craft>.

49. Marcus Hellyer, "In for the Long Haul (Part 2): Can the Anzacs Remain Relevant?," *Strategist* (blog), Australian Strategic Policy Institute, April 4, 2019, <https://www.aspistrategist.org.au/in-for-the-long-haul-part-2-can-the-anzacs-remain-relevant/>; and Department of Defence, *Defence Annual Report 2018–19*, 36.

seakeeping, and enhanced communications and sensor capabilities when compared to the patrol boats they are replacing; the class will also have a helipad. But, in the patrol vessels' initial configuration, their main armament will be limited to a 40-millimeter gun.⁵⁰ Finally, in a change from the white paper plans of 2016, the government announced in 2019 the planned life extension of the remaining four countermine warfare vessels would be scrapped in favor of two new mine warfare support vessels that will join the fleet in the mid-2020s and rely on autonomous and unmanned technologies.⁵¹

Beyond countermine operations, the RAN also operates a squadron devoted to experiments with ship-based drones, and the RAAF has provided seed support for Boeing Australia's Loyal Wingman unmanned aerial vehicle concept.⁵² Although these operations demonstrate the ADF is not blind to the future possibilities of autonomous and unmanned systems, these activities remain negligible in the context of the overall investment plan. With the exception of the multimission space in the *Hunter*-class frigates, current acquisition programs are most likely not considering the ways in which such technologies might complement, or even substitute for, the major

50. "Arafura Class OPV," RAN, n.d., <https://www.navy.gov.au/fleet/ships-boats-craft/future/opv>.

51. Marcus Hellyer, "Morrison's Shipbuilding Announcements Are about More Than Jobs," *Strategist* (blog), Australian Strategic Policy Institute, April 30, 2019, <https://www.aspistrategist.org.au/morrisons-shipbuilding-announcements-are-about-more-than-jobs/>.

52. "822X Squadron," RAN, n.d., <https://www.navy.gov.au/about/organisation/fleet-air-arm/822x-squadron>.

platforms under development.⁵³ Hence, the question is whether the dominance of decade-long acquisition programs in the 2016 *Defence White Paper* investment plan remains appropriate in light of the possible development of twenty-first-century technology.

IN SEARCH OF A STRATEGY

Overall, characterizing the future ADF as similar to the past forces would not be incorrect. Australia will continue to field a small but modern defense force that is highly interoperable with US forces. But with only two replenishment ships, three air defense destroyers, and four electronic warfare support aircraft, to name but three examples, and assuming no losses in battle have occurred, maintaining even one task force for extended periods will be a major challenge. As a result of the ADF's history, culture, and lack of mass, the forces remain most comfortable operating as part of larger US task forces or in support of diplomacy and relationship building in Australia's immediate neighborhood. Thus, one might ask if Australia's hard power is sufficient for the country to achieve its strategic objectives.

The main weakness of the 2016 *Defence White Paper* is beyond general notions working in partnership with countries close and afar would be beneficial to manage strategic risk, the paper does not clearly set out a strategy for the ADF to achieve Australia's security outcomes. The presence of the ADF and the navy in Southeast Asia, the southwest Pacific, and the wider Indo-Pacific region has increased significantly since 2016, when counterpiracy and other coalition deployments to the northern Indian Ocean

53. Hellyer, *Cost of Defence*, 90–91.

and Persian Gulf were still the main focus of RAN deployments.⁵⁴ Indeed, in the few sentences of the navy's *Plan Pelorus 2022* that address how the RAN should operate, the focus is almost exclusively on maintaining partnerships "to know and understand our region, our friends, and our threat."⁵⁵ Whereas the navies of the United Kingdom and Japan have a fairly clear, geographically grounded understanding of their strategic role in the defense of their home islands, Australia's navy still does not.

The army, too, has been trying to develop a new concept to replace the 2011 *Plan Beersheba* and the mid-2000s vision of a hardened and networked army. Both strategies resulted from the need to sustain forces for extended operations in the Middle East and remain the foundation for the army's current structure and major acquisition projects. Given Australia's geography, defining its role and mission in a regional context beyond the need for stabilization operations in the southwest Pacific has always been difficult for the army. In 2012, for example, the then-chief of army argued a heavier force was required to defeat the army of an unnamed "peer competitor."⁵⁶ Under the current chief of army, General Rick Burr, the army underwent a period of genuine reflection and analysis. The result was the 2019 *Command Statement: Army in Motion*, which highlights accelerating regional strategic change and the need for the army to be able

54. Department of Defence, *Defence Annual Report 2018–19*, 24–25.

55. RAN, *Plan Pelorus: Navy Strategy 2022* (Canberra, AU: RAN, 2019).

56. David Morrison, "Speech to the National Security Institute" (speech, National Security Institute, Canberra, Australia, October 26, 2012).

to adapt to a range of missions, geographies, and domains.⁵⁷ All in all, the command statement is a well-reasoned argument that the stability and predictability on which *Plan Beersheba* was predicated no longer exist; however, the command statement does not provide a clear road map to a new structure and purpose.

At the same time, the increased operational tempo for regional engagement is not letting up. The government is looking for contributions from the ADF and the Department of Defence to the Pacific Step-Up—a government initiative that comprises increased investment in infrastructure, aid, labor mobility, diplomatic engagement, security, and people-to-people links with the countries of the South Pacific, with the thinly veiled intention to push back against increasing Chinese political and economic influence in Australia’s backyard.⁵⁸ New defense initiatives include Australian support to regional peacekeeping training at Blackrock Camp in Fiji; the redevelopment of the naval base on Manus Island in Papua New Guinea (in conjunction with the United States); the creation of a permanent South Pacific mobile training team operating from Brisbane; and a new ship originally billed as a “large-hulled humanitarian and disaster relief vessel that would operate semi-permanently . . .

57. Rick Burr, *Command Statement: Army in Motion* (Canberra, AU: Australian Army, 2019).

58. “Strengthening Our Pacific Partnerships,” Department of Foreign Affairs and Trade, n.d., <https://dfat.gov.au/geo/pacific/engagement/Pages/strengthening-our-pacific-partnerships.aspx>.

in the south west Pacific,” but which may well turn into a full-fledged, armed, fourth amphibious vessel.⁵⁹

Hence, the ADF of today also remains a force focused on strategic demands that are essentially the same as those it prepared for in the past. Sustaining the assumption the force is sufficient to deal with the risks from an increasingly assertive China, especially if the United States is no longer a reliable ally, will be difficult. On this latter point, in 2019, Hugh White, a former defense official and now a professor at the Australian National University, caused a major debate across the nation’s newspapers and blogosphere with his book *How to Defend Australia*, in which he argued Australia could not rely on US support. He called for Australia to develop a significantly larger ADF to defend the continent, including, in extremis, considering the acquisition of nuclear weapons.⁶⁰ White’s confidence about the end of the alliance is, however, not yet widely shared in defense and political circles or public opinion. According to the 2019 Lowy Institute Poll, 73 percent of Australians still

59. Paul Osborne, “Australia Creating Pacific Support Force,” *Canberra Times*, July 23, 2019, <https://www.canberratimes.com.au/story/6287473/australia-creating-pacific-support-force/?cs=14231>; David Wroe, “Christopher Pyne Promises New Ship in ‘Pivot’ to the South Pacific,” *Sydney Morning Herald*, November 9, 2018, <https://www.smh.com.au/politics/federal/christopher-pyne-promises-new-ship-in-pivot-to-the-south-pacific-20181108-p50es8.html>; and Xavier Vavasseur, “PACIFIC 2019: Navantia Australia Unveils Joint Support Ship Design,” *Naval News*, October 13, 2019, <https://www.navalnews.com/event-news/pacific-2019/2019/10/pacific-2019-navantia-australia-unveils-joint-support-ship-design/>.

60. Hugh White, *How to Defend Australia* (Carlton, AU: La Trobe University Press and Black Inc., 2019).

expect the United States to come to Australia's aid if the country is threatened.⁶¹

Australia has also been comfortable with the rather slow pace with which the presence of US forces has increased since the initial 2011 agreement to rotate US Marines through Darwin for training. After US Secretary of Defense Mark Esper stated on his way to Australia in 2019 the United States would like to deploy new, land-based, intermediate-range missiles in Asia "sooner rather than later," the Scott Morrison-led government quickly emphasized the United States had not made a formal request to host new capabilities.⁶² But Australia's reluctance to contemplate more extensive arrangements for the operation of significant US long-range air and naval forces from the Australian continent has become increasingly difficult to reconcile with the country's desire to support the US military position in the Indo-Pacific vis-à-vis China's growing military reach and capabilities. Given the infrastructure and host-nation support that would be required to sustain such operations at scale and the need that would arise to provide far more extensive logistics, base, and air defense capabilities in the north of the continent, the consequences of such a step-up in alliance cooperation for Australia's force structure

61. Natasha Kassam, *Lowy Institute Poll 2019* (Sydney: Lowy Institute, June 26, 2019), 10.

62. Thomas Gibbons-Neff, "Pentagon Chief in Favor of Deploying US Missiles to Asia," *New York Times*, August 3, 2019, <https://www.nytimes.com/2019/08/03/world/asia/us-missiles-asia-esper.html>; and Jane Norman, "Defence Minister Says US Hasn't Asked to Base Missiles in Australia to Counter China's Strategic Ambitions," ABC News, August 4, 2019, <https://www.abc.net.au/news/2019-08-05/defence-minister-linda-reynolds-rules-out-us-darwin-missiles/11382852>.

and investment plans would be considerable.⁶³ In February 2020, the government announced a step in this direction, with an additional investment of A\$1.1 billion at RAAF Base Tindal south of Darwin to enable the operation of RAAF tankers and US long-range bombers from that airfield.⁶⁴

Reports China was seeking military access to a base in Vanuatu in 2018 and in the Solomon Islands in 2019 point to a future development that would seriously deteriorate Australia's strategic situation.⁶⁵ Given the scale of Chinese deployments to Djibouti and the artificial islands in the South China Sea, a South Pacific base would likely be garrisoned to the point of making an amphibious dislodgement a highly problematic proposition. At a relatively small cost for China, the PLA would be able to tie up most of the ADF's current air and naval forces in a long-term campaign to isolate and slowly attrit such a base. In such a campaign, the lack of a successor to the RAAF's F-111 medium-range bombers, which were retired in 2010, would be particularly felt because no good options to extend the

63. Stephan Frühling, "Is ANZUS Really an Alliance? Aligning the US and Australia," *Survival* 60, no. 5 (2018): 199–218.

64. Matthew Doran, "Federal Government Spends \$1.1 Billion on Northern Territory Air Base, Expanding Reach into the Indo-Pacific," ABC News, February 20, 2020, <https://www.abc.net.au/news/2020-02-21/federal-government-spends-1.1-billion-on-top-end-air-base/11986904>.

65. Ben Smee and Dan McGarry, "'Impossible': China Denies Planning Military Base in Vanuatu," *Guardian*, April 10, 2018, <https://www.theguardian.com/world/2018/apr/10/concerns-china-in-talks-with-vanuatu-about-south-pacific-military-base>; and Alan Tidwell, "The Tulagi Turning Point," *Strategist* (blog), Australian Strategic Policy Institute, October 28, 2019, <https://www.aspistrategist.org.au/the-tulagi-turning-point/>.

range of the JSF and achieve comparable mass exist.⁶⁶ Hence, in 2019 the two most recent retired chiefs of air force called for Australia to acquire a new strategic bomber, for which the new B-21 Raider would be the only real candidate.⁶⁷

Overall, calls from the country's defense community to revisit the defense policy settings and investment priorities of the 2016 *Defence White Paper*

66. Marcus Heller, "Projecting Power with the F-35 (Part 1): How Far Can It Go?," *Strategist* (blog), Australian Strategic Policy Institute, September 27, 2019, <https://www.aspistrategist.org.au/projecting-power-with-the-f-35-part-1-how-far-can-it-go/>; Marcus Heller, "Projecting Power with the F-35 (Part 2): Going Further," *Strategist* (blog), Australian Strategic Policy Institute, October 3, 2019, <https://www.aspistrategist.org.au/projecting-power-with-the-f-35-part-2-going-further/>; Marcus Heller, "Projecting Power with the F-35 (Part 3): Operational Implications," *Strategist* (blog), Australian Strategic Policy Institute, October 10, 2019, <https://www.aspistrategist.org.au/projecting-power-with-the-f-35-part-3-operational-implications/>; Marcus Heller, "Projecting Power with the F-35 (Part 4): Offshore Bases," *Strategist* (blog), Australian Strategic Policy Institute, October 21, 2019, <https://www.aspistrategist.org.au/projecting-power-with-the-f-35-part-3-operational-implications/>; and Marcus Hellyer, "Projecting Power with the F-35 (Part 5): Can a B Set You Free?," *Strategist* (blog), Australian Strategic Policy Institute, October 30, 2019, <https://www.aspistrategist.org.au/projecting-power-with-the-f-35-part-5-can-a-b-set-you-free>.

67. "Ex-RAAF Chiefs Call for More Strike Power," *Canberra Times*, November 5, 2019, <https://www.canberratimes.com.au/story/6474754/ex-raaf-chiefs-call-for-more-strike-power/?cs=14231>.

have increased.⁶⁸ Although specific concerns and proposals vary, the underlying theme is the concern Australia is not sufficiently prepared for the demands of a major war in its own region, even before doubts about the extent of US assistance are taken into account. Australia does not have the residual Cold War memory of developing deterrence and defense against a great-power adversary that the United States, NATO, and Japan increasingly fall back on in competing with Russia and China. Australia's Department of Defence has been struggling in recent years to develop a mobilization concept, but one is needed; supplies of certain munitions ran low even for the relatively small coalition campaign in Syria, and Australia's defense industry is not ready to deal with a disruption in supplies.⁶⁹ The country has few oil tankers or freighters that could be used for

68. Richard Brabin-Smith, "Cracks in Australian Defence Policy Can't Be Papered Over," East Asia Forum, September 5, 2019, <https://www.eastasiaforum.org/2019/09/05/cracks-in-australian-defence-policy-cant-be-papered-over/>; and Peter Jennings, "The Case for a New Defence White Paper," *Strategist* (blog), Australian Strategic Policy Institute, June 18, 2019, <https://www.aspistrategist.org.au/the-case-for-a-new-defence-white-paper/>.

69. Brendan Thomas-Noone, "Change ITAR for Aussies & Brits: It's Overdue," *Breaking Defense*, December 29, 2019, <https://breakingdefense.com/2019/12/change-itar-for-aussies-brits-its-overdue/>; and David Harvey and Graeme Dunk, "Australia's Defence Industry Policy Needs a Reboot," *Strategist* (blog), Australian Strategic Policy Institute, October 17, 2019, <https://www.aspistrategist.org.au/australias-defence-industry-policy-needs-a-reboot/>.

strategic resupply in a crisis or conflict.⁷⁰ Nor does Australia maintain a strategic petroleum reserve equal to 90 days' worth of fuel, which is prescribed by the International Energy Agency—a reserve one would expect a government to hold if it were planning for potential disruptions in supplies.⁷¹

THE PROBLEM OF SCALE

Compared to countries like France and Israel, Australia seems rather poor at converting financial resources into defense capability.⁷² Recent government attempts to suppress the auditor-general of Australia's findings on the decision to develop and build light armored vehicles domestically indicate the political and economic impediments to achieving greater efficiency in defense acquisition remain deep-seated.⁷³ These impediments leave additional expenditure as the most likely source of any new capability. Despite the low threat to the country in the mid-1980s, Australia

70. Sam Bateman, "Does Australia Need a Merchant Shipping Fleet?," *Strategist* (blog), Australian Strategic Policy Institute, March 4, 2019, <https://www.aspistrategist.org.au/does-australia-need-a-merchant-shipping-fleet/>.

71. Bevan Shields, "Australia Negotiating with Trump Administration to Buy Emergency Oil Supplies," *Sydney Morning Herald*, August 4, 2019, <https://www.smh.com.au/politics/federal/australia-negotiating-with-trump-administration-to-buy-emergency-oil-supplies-20190801-p52cti.html>.

72. White, *How to Defend Australia*, 276–81.

73. Christopher Knaus, "Coalition Suppressed Auditor's Finding that \$1.3bn Thales Arms Deal Could Have Cost Half with US," *Guardian*, October 22, 2018, <https://www.theguardian.com/australia-news/2018/oct/22/coalition-suppressed-auditors-finding-that-13bn-thales-arms-deal-could-have-cost-half-with-us>.

spent more on defense (2.5 percent of GDP) than the country does today. The obstacle to spending 3 percent of GDP, for example, would be political rather than economic.⁷⁴ Until the coronavirus disease 2019 pandemic, Australia had avoided a recession for three decades, and though its economy is not advancing as it has in the past, fiscal pressures are not the primary cause for Australia lessening defense as a government priority. In public opinion polling, support for defense spending has declined since 2000. But the perception of China as a growing threat as the country advances militarily and politically in the South Pacific may well become the external impetus that leads to significant and rapid changes in Australian public opinion on defense matters.⁷⁵

What could additional funding do to strengthen Australia's hard power? Bringing forward the frigate or submarine replacement programs by a few years would not cause a significant change for the ADF of the 2020s, and the RAAF is already on track to fully divest of its third-generation F-18s. But even within the broad outlines of the force structure laid out in the 2016 *Defence White Paper*, Australia could make significant improvements focused on the possibility of a major war during the 2020s. In particular, the government should consider

- making Australia's existing air combat capability more resilient through the acquisition of

74. Mark Thomson, "Funding Australian Defence," in *Australia's Defence*, 257–69.

75. Danielle Chubb and Ian McAllister, "Public Attitudes towards the Future Defence of Australia," in *After American Primacy: Imagining the Future of Australia's Defence*, ed. Peter Dean, Stephan Frühling, and Brendan Taylor (Melbourne: Melbourne University Press, 2019), 28–43.

additional KC-30A tankers; increasing munitions stocks and resupply capability; integrating the Kongsberg Naval Strike Missile onto the JSF; reviewing the number of pilots, base support personnel, and battle damage repair capabilities required to maintain high tempos of operation, including possible dispersal of operations from civilian airfields; and improving fuel stock and resupply infrastructure at air bases across the north of the continent.

- strengthening the ADF's ability to protect sea lanes across the Pacific and Indian Oceans against PLA long-range submarine operations by acquiring additional Boeing P-8A Poseidons and fitting towed arrays to the *Anzac*-class frigates. Australia needs to ensure the availability of sonobuoys for periods of large-scale, extended use. If equipped with towed arrays and a rudimentary self-defense capability, the new offshore patrol vessels should also be able to make a meaningful contribution to ASW operations in areas of limited threat from an adversary's air force. If the offshore patrol vessels were capable of supporting cooperative security location operations of the MH-60R, additional ASW helicopters would also be worth considering.
- accelerating the acquisition of land-based antiship cruise missiles, additional short-range air defense systems, and a medium-range air defense capability. In addition, the ADF should consider establishing a permanent army garrison on the Cocos (Keeling) Islands, which lie close to areas through which PLA forces now regularly transit, but which would be very

difficult to reinforce, let alone retake, from the location of mainland Australia should the PLA occupy them.

- acquiring new long-range antiship missiles for the navy's *Hobart*-class destroyers and *Anzac*-class frigates.
- increasing funding for autonomous and unmanned air and naval capabilities that have the potential to complement existing major platforms within a time frame of five to 10 years.
- funding improvements to the intelligence, surveillance, and reconnaissance and battle management systems for long-range targeting in Australia's neighborhood and beginning to harden or provide redundancy for critical Australian command and control nodes at risk from submarine-launched land-attack cruise missiles.
- exploring with the United States the acquisition of the B-21 Raider for the RAAF.
- strengthening the ability of ADF and coalition forces to perform battle damage repair to aircraft and naval vessels and limiting the need for resupply from the United States.

Increased investment of this kind may make China more cautious of initiating a conflict involving Australia, but such investment would not tip the scales of the Indo-Pacific balance of power. As excellent as the ADF will continue to be at the unit level, Australia's hard power overall will remain constrained by the absolute scale a country of its small size and geographic position can generate and the increasing demands placed upon it by strategic trends in Asia.

CONCLUSION

Three years after the publication of the 2016 *Defence White Paper*, the government announced it had commenced a review of defense policy guidance.⁷⁶ With relations with China at their most tense since 1989, Prime Minister Morrison launched the 2020 *Defence Strategic Update* and 2020 *Force Structure Plan* on July 1, 2020, with foreboding remarks:

We have been a favoured isle, with many natural advantages for many decades . . . But we have not seen the conflation of global economic and strategic uncertainty now being experienced here in Australia, in our region, since the existential threat we faced when the global and regional order collapsed in the 1930s and 1940s . . . That period of the 1930s has been something I have been revisiting on a very regular basis, and when you connect both the economic challenges and the global uncertainty, it can be very haunting.⁷⁷

The 2020 *Defence Strategic Update* walks back the global ambitions of the 2016 *Defence White Paper* and firmly establishes Southeast Asia and the South Pacific as the focus for Australian defense planning. Within this region, shaping the strategic environment, deterring actions against Australia's interests, and responding with credible military force are the new

76. Linda Reynolds, "Speech at Royal Australian Navy Sea Power Conference" (speech, RAN Sea Power Conference, International Convention Centre, Sydney, Australia, October 8, 2019), <https://www.minister.defence.gov.au/minister/lreynolds/speeches/royal-australian-navy-sea-power-conference-international-convention>.

77. Peter Hartcher, "Scott Morrison Is Not Going to Duck This Crisis," *Sydney Morning Herald*, July 4, 2020, <https://www.smh.com.au/national/scott-morrison-is-not-going-to-duck-this-crisis-20200703-p558w5.html>.

strategic objectives for the ADF. The policy document once more places emphasis on the need for increased self-reliance. This emphasis is partially for practical reasons: “In the event of a high-intensity conflict that engages the ADF, we need to have depth for sustaining key capabilities and materiel, especially munitions.” But the document also states “it is the Government’s intent that Australia take greater responsibility for our own security. It is therefore essential that the ADF grow its self-reliant ability to deliver deterrent effects.”⁷⁸

The need for increased offensive capability at a longer range and for greater resilience of the ADF in a major conflict against a peer competitor (almost certainly the PLA) are thus driving the additional investments in the strategic update, which does not change the large procurement programs of the *2016 Defence White Paper* (including new frigates, submarines, offshore patrol vessels, JSFs, and infantry fighting vehicles). In addition to 200 long-range antiship missiles, Australia will acquire modern smart sea mines and the high-mobility artillery rocket systems foreshadowed in the *2016 Defence White Paper*. Aircraft shelters and deployable aircraft repair kits will prepare the air force for combat operations from improvised bases; a salvage and repair vessel capable of recovering destroyer-size ships will be procured; and increased fuel and munitions stockpiles will increase the resilience of the ADF in a major conflict. The expansion of the Jindalee Operational Radar Network to cover Australia’s eastern approaches, a new medium-range air defense capability, up to A\$7.4

78. Department of Defence, *2020 Defence Strategic Update* (Canberra, AU: Department of Defence, July 1, 2020), 21–30.

billion for an undersea surveillance system, and up to eight new hydrographic and mine countermeasure vessels (which will reestablish an atrophied capability) will increase the ADF's ability to defend the Australian continent.⁷⁹

Like it did in the 2016 *Defence White Paper*, the Australian government again published a 10-year funding plan that is decoupled from the growth of Australia's GDP. Despite the economic uncertainty caused by trade tensions and the recession caused by the coronavirus disease 2019 pandemic in early 2020, the funding plan confirmed the white-paper funding profile that sees defense expenditure grow from A\$42 billion in FY 2020–21 to A\$58 billion in FY 2025–26 and committed further growth to A\$73 billion by FY 2029–30.⁸⁰ Australia will continue to spend more than 2 percent of GDP on defense and, depending on the uncertain future of the economy, may spend much closer to 3 percent within the decade.

And yet, the capabilities that were altered from the 2016 *Defence White Paper* plans—mainly, some unarmored vehicles for the army and two tanker aircraft—project savings that are insufficient to cover the additional funding required for the plans of the strategic update over the next five years. Increasing the preparedness for major conflict in this time will thus require other major procurement programs to stretch beyond the 2016 *Defence White Paper* schedule. Most likely, these additional programs will mean

79. Department of Defence, *2020 Force Structure Plan* (Canberra, AU: Department of Defence, July 1, 2020).

80. Marcus Hellyer, "Is the Money for Defence's New Force Structure Old or New?," *Strategist* (blog), Australian Strategic Policy Institute, July 2, 2020, <https://www.aspistrategist.org.au/is-the-money-for-defences-new-force-structure-old-or-new/>.

reductions or delays in the acquisition of the army's new infantry fighting vehicle—a program that is both less relevant for the ADF's new priorities and more flexible than the shipbuilding program or transition to the JSF. Australia would be a lucky country indeed if the main concession it had to make to prepare for the most challenging circumstances since the 1930s were the delayed acquisition of a few hundred armored vehicles. More likely, the need for scale in Australia's defense effort will mean additional demands for even greater defense expenditure soon.

3. FRANCE: BETWEEN AUTONOMY AND ALLIES

Olivier Schmitt

KEY POINTS

- France is currently modernizing its armed forces to maintain a military that can support Paris's current and future regional and global ambitions.
- French policy makers perceive an overall degradation of the international security system, with new threats emerging while older threats (terrorism) remain.
- In recent years, France has invested in its military relations with the United States and the United Kingdom. Although this investment has paid off in the short term through the development of strong military partnerships, the rise of national populism in the two countries may force Paris to change its strategic outlook.

Over the past 15 years, France has regularly updated its core strategic documents, publishing a *White Paper on Defense and National Security* in 2008 (following Nicolas Sarkozy's election) and in 2013 (following François Hollande's election). After Emmanuel Macron was elected in May 2017, he decided to avoid the lengthy committee process that had led to the two previous white papers. Instead, he tasked Arnaud Danjean, a member of the European Parliament widely respected for his expertise on defense issues, to author a new strategic review with support from the Ministry of the Armed Forces. Published in 2017, the *Strategic Review of Defense and*

National Security lays out the threats France faces and provides a guideline for the transformation of the armed forces.¹

In military terms, the strategic review identifies multiple threats and notes the increasing intensity of conflict across the whole spectrum of warfare. First, jihadi terrorism is identified as the most immediate and enduring threat because of its direct challenge to the safety of French citizens on French territory. The jihadi threat is understood as a long-term security problem because none of the factors underpinning its development, such as social inequalities and ideological evangelization, are receding. Jihadist terrorism being a key issue for French policy makers should come as no surprise. In 2013, the French intervened in Mali (Operation Serval) to prevent jihadist groups from taking control of Bamako, Mali's capital and largest city. This operation was followed by the Paris attacks of 2015 against the weekly magazine *Charlie Hebdo* and the Hypercacher kosher supermarket in January and several other places, including the Bataclan concert hall, in November. These attacks were stark reminders of the reality of the jihadist threat. Since the attacks, the French Armed Forces have been engaged on several fronts in the fight against terrorism: in the Sahel; in Iraq and Syria (in support of the anti-Islamic State of Iraq and Syria coalition); and at home, patrolling and securing public areas under the framework of Operation Sentinel. This use of the armed forces to fight terrorism has been a characteristic of Western warfare since 9/11, and France has not been an exception. For example, the

1. Arnaud Danjean, *Revue stratégique de défense et de sécurité nationale 2017* (Paris: The Strategic Review Committee, 2017).

2008 white paper identified a continuum containing both security and defense issues.²

Second, the strategic review is concerned with the threats posed by proliferation in all threat domains, including the following.

- **Conventional**—The spread of advanced weapons, platforms, and sensors will likely make the future battlefield a more lethal space characterized by high-speed tactical operations. The spread of such equipment also allows an increasing number of actors, including nonstate actors, to compete on almost equal terms with Western forces.
- **Chemical and biological**—The use of chemical and biological weapons in Syria has not resulted in commensurate sanctions for violating international law, which suggests they are more likely to be used in future conflicts.
- **Nuclear**—Cognizant of the numerous difficulties associated with sustaining the Joint Comprehensive Plan of Action with Iran, containing North Korea's nuclear program, addressing Pakistan's acquisition of tactical nuclear capabilities, and preventing the gradual erosion of the main arms control treaties, the strategic review coins the term "nuclear multipolarity" to describe an environment in which assessments of the nuclear balance are more difficult to make and deterrence more complicated to maintain.³

2. Jean-Claude Mallet, *Livre blanc sur la défense et la sécurité nationale* (Paris: White Paper Commission, 2008).

3. Danjean, *Revue stratégique*, 41.

Third, the strategic review notes the return of the use of military power in world politics, notably by Russia and China, and the competition across domains: sea, air, space, and cyberspace. In addition, states have more opportunities to conduct aggressive actions with a veneer of plausible deniability and technological capabilities with which to conduct them. These capabilities have improved the ability of states to craft more comprehensive and integrated strategies of coercion. As a result of this improved ability and the *durcissement* (gradual hardening) of warfare, the strategic review concludes, the risk of conflict escalation has now increased—a problem compounded by the growing fragmentation of the international system.⁴ The return of strategic competition among major powers and the heightened risk of high-intensity conflict are taken seriously by high-ranking French military actors. As the French chief of the defence staff, General François Lecointre, has succinctly put it: “We need to be ready to engage in a potential ‘conflict of survival,’ alone or in a coalition, quickly and in the long term.”⁵

In addition to the trends noted above, multiple other challenges are identified in the strategic review — notably, the migration crisis, persistent security problems arising from the Sahel-Sahara region, and the enduring instability in the Middle East. Each, to varying degrees, is seen as challenging the cohesiveness of the EU, thus further complicating the French security environment. All of these developments are taking

4. Danjean, *Revue stratégique*.

5. Laurent Lagneau, “Général Lecointre: ‘Il faut être prêt à s’engager pour un conflit de survie,’” *Zone Militaire*, July 26, 2019, <http://www.opex360.com/2019/07/26/general-lecointre-il-faut-etre-pret-a-sengager-pour-un-conflit-de-survie/>.

place in the context of disillusionment with the use of multilateral mechanisms to address problems and a gradual redistribution of power in the international system. These circumstances have led some countries (for example, Russia and China) to be more assertive in challenging existing security architectures. And although France is primarily concerned with security issues at home, in Europe, and in neighboring regions, Paris is also troubled by rising tensions in Asia, which could call into question established diplomatic partnerships and freedom of navigation.⁶

The strategic review mentions the notion of the “hardening” of warfare, but other documents more fully describe how the French Armed Forces perceive the evolving nature of military conflict.⁷ In 2016, the French Army published its vision of the future operational environment in which it identified eight “factors of operational superiority” deemed necessary to succeed on the battlefields of the future.⁸ The eight factors are understanding, cooperation, agility, mass, endurance, moral strength, influence, and command performance. Understanding is defined as one step further than knowledge and is a combination of intellectual skills and data acquisition. The army believes artificial intelligence (AI) will help sort and organize incoming data, facilitate monitoring of the battlefield, and enhance the effectiveness of early warning systems. Though it looks to AI to enhance

6. Danjean, *Revue stratégique*, 26–27.

7. Danjean, *Revue stratégique*.

8. French Army Staff, *Action terrestre future: Demain se gagne aujourd'hui* (Paris: French Army, September 2016).

understanding, the document notes human analytical skills will remain critical.⁹

Cooperation involves both the joint operations of French forces and operations with allies. Here again, technologies are intended to help integrate command and control systems and thus facilitate cooperation. Agility relates to adaptation, innovation, and learning, particularly in the context of an accelerated pace to warfare. Mass will still be necessary for operating in environments such as megacities or for generating credible conventional deterrence against state adversaries. Mindful of the political and budgetary constraints, the army considers generating mass will be achieved through partnerships with local forces, coalitions of aligned states, and the use of private security companies.

Endurance, or the capacity for sustaining an operation, will also likely be necessary in future conflicts. To enhance that capability, the army will need to improve its logistical systems, replace individual laborers with robots and automation where feasible, and possibly distribute performance-enhancing drugs to military personnel once on the battlefield.¹⁰ Moral force—critical for battlefield cohesion—will be achieved by giving greater attention to the status of the military in French society and, more narrowly, by emphasizing traditional unit cohesion within the military's structure.

Influence, defined as the ability to shape an adversary's perceptions, is seen as a critical factor for the future battlefield, as is the ability to impose an overall narrative on the character of the conflict.

9. French Army Staff, *Action terrestre*, 57.

10. French Army Staff, *Action terrestre*, 44.

Finally, enhanced command performance will be reinforced through a tactical cloud—that is, the optimization of command and control networks and the integration of AI.

A ROAD MAP FOR MODERNIZING FRENCH FORCES

To meet the more challenging security environment, the French government has put in place plans to modernize its armed forces—a decision supported by President Macron’s decision to increase the defense budget. In France, the legal instrument defining the defense budget is a *loi de programmation militaire* (military planning law). Once adopted by the parliament, the law is intended to guide overall planning and budgeting for the force for a specific period. The latest law adopted for the 2019–25 period sets a goal of spending 2 percent of gross domestic product on defense by 2025. Funding for defense between 2019 and 2025 will amount to €295 billion, of which €198 billion is currently allocated through 2023. If these budgetary plans do not change, the defense budget will amount to 1.91 percent of gross domestic product in 2023 and climb to 2 percent in 2025.¹¹ But the lack of secured funding for the 2023–25 period means an important share of the increase (€97 billion) comes during the last two years of the military planning law—not so coincidentally after the 2022 presidential elections. A change in political priorities brought about by a change in administration could certainly affect the French defense effort. Moreover, the unpredictable economic consequences of the

11. The National Assembly, *Military Programming Act 2019–2025*, Act No. 2018-607 (Paris: The National Assembly, 2018).

coronavirus disease 2019 pandemic could negatively affect the planned increase.

As figure 3-1 illustrates, France has been in a recapitalization phase since 2014, when defense budgets started increasing for the first time since the financial crisis of 2007–08, and did not reach precrisis funding levels until 2017.¹²

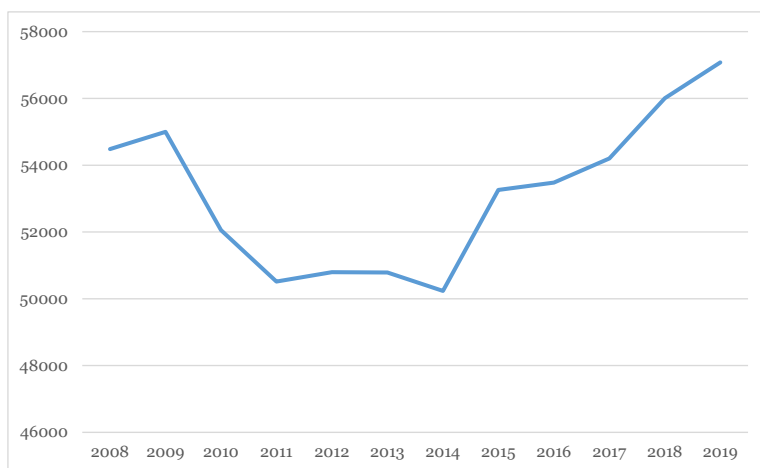


Figure 3-1. French defense budget (US\$ constant 2010)

Data from International Institute for Strategic Studies, *The Military Balance 2008–2017* (London: International Institute for Strategic Studies, 2008–2017).

According to NATO figures, France consistently spends about 47 percent of its defense budget in personnel costs (salaries and pensions), but the share devoted to equipment fell from 30 percent in 2010

12. International Institute for Strategic Studies, *The Military Balance 2008–2017* (London: International Institute for Strategic Studies, 2008–2017).

to 24 percent in 2017.¹³ The upward trajectory that has occurred since 2014 was necessary to ensure the cohesiveness of the French Armed Forces and will need to continue to fund the modernization efforts.

Potentially complicating the budgetary picture is the cost of modernizing the French nuclear arsenal. According to current estimates, the cost for doing so will jump from €3.9 billion in 2017 to €6 billion per year between 2020 and 2025.¹⁴ Paying for nuclear modernization will come at the expense of improvements in France's conventional forces. The key determinant will be the consistency and durability of the political commitment to increased defense spending. Combined with the modernization effort described below, the projected trajectory should allow the French Armed Forces to recapitalize and increase their firepower. But changes in political priorities or unexpected contingencies leading to the mobilization of important resources are almost certain to have major consequences for France's ability to participate in high-intensity operations or to conduct simultaneous, smaller-scale interventions. According to Lecointre, in 2025 the French Armed Forces will "no longer be exhausted," but they will still be geared for "peaceful times," and more efforts will be necessary to create resilient armed forces in case of a high-intensity

13. NATO Public Diplomacy Division, *Defence Expenditure of NATO Countries (2010–2017)* (Brussels: NATO Public Diplomacy Division, June 29, 2017).

14. Corentin Brustlein, "Forces nucléaires françaises: Quel renouvellement?," *Politique étrangère* 82, no. 3 (September 5, 2017), 113–24.

conflict.¹⁵ The French Armed Forces can undoubtedly pack a powerful punch if needed, but if they are to last a full round, they will need time and sustained political support for increased budgets. The situation is far from being as dramatic as in other European countries (such as Germany), but sustained efforts will be required nonetheless.

Having seen declining defense budgets for most of the post-Cold War era, the French military has welcomed plans to increase defense spending and modernize the force. An important part of this effort is captured in the innovation strategy initiated by Minister of the Armed Forces Florence Parly in 2017. In France, defense innovation is traditionally defined as the maintenance of technological superiority over potential adversaries through the indigenous development (as was the case with the multirole fighter Dassault Rafale) or quasi-indigenous development (*Frégate Européenne Multi-Mission* frigates and Leclerc main battle tank) of advanced combat platforms.¹⁶ This policy is related to the French strategic interest in maintaining a strong defense industrial base, one of the key components of a foreign policy historically emphasizing strategic autonomy.

In the past, defense innovation has largely been managed by the French *Direction Générale de l'Armement* (DGA) (Directorate General of Armaments)

15. Nathalie Guibert, "Le Général Lecointre: 'Nous resterons une armée de temps de paix,'" *Le Monde*, September 7, 2018, https://www.lemonde.fr/international/article/2018/09/07/le-general-lecointre-il-faut-reaffirmer-les-principes-de-l-efficacite-des-armees_5351509_3210.html.

16. Samuel Faure, *Avec ou sans l'Europe. Le dilemme de la politique française d'armement* (Brussels: Éditions de l'Université de Bruxelles, 2020).

in cooperation with France's defense industry. This approach to defense innovation is reflected in the 2017 strategic review, which only discusses innovation in the context of maintaining technological superiority.¹⁷ But managing innovation in this manner has tended to frustrate the military services, which believe defense procurement is not always aligned with their operational requirements. The innovation strategy developed by Parly tries to overcome this problem both by introducing new procedural efficiencies within the DGA and by making provisions for greater input from the armed services on programs.¹⁸

To address this issue, one of the major institutional changes initiated by Parly has been the creation of the *Agence de l'Innovation de Défense* (AID) (Defense Innovation Agency). The main responsibility of the AID is to identify, stimulate, and support innovation in the armed forces and within the ministry.¹⁹ Although AID is formally placed under the administrative responsibility of the head of the DGA, AID has a large degree of autonomy. The creation of the AID has taken power away from the DGA in two ways. First, the director of the AID comes from the private sector, rather than the DGA. Second, the AID has replaced the DGA in executing the part of the military planning law dedicated to assessing specific future defense needs. In the past, the DGA implemented this part of the law by providing subsidies to the defense industry to conduct exploratory technological studies but did not

17. Danjean, *Revue stratégique*.

18. Ministry of the Armed Forces, *Document d'orientation de l'innovation de défense* (Paris: Ministry of the Armed Forces, July 25, 2019).

19. Ministry of the Armed Forces, *Document d'orientation*.

solicit much input or oversight from the armed forces. In contrast, the AID carries out this responsibility with the assistance of a dozen high-level military officers detailed from the French Joint staff to AID.

In the meantime, France's joint staff has adopted a hands-off approach, refraining from dictating how each service defines its own approach to defense innovation. The consensus is to ensure the military's ownership of innovation policy, initiatives should come from the bottom up rather than from the top down. As a result, the ways in which the individual services have approached the topic doctrinally and organizationally have been diverse. Of course, the services sprinkling the term "innovation" on any new initiative to attract funding is a risk. But, so far, this new approach to military innovation has been one of the most interesting elements of France's plans to transform its military for future warfare.

NEW WEAPONS, NEW PLATFORMS

The services of the French Armed Forces are currently implementing key modernization programs. If the modernization program is fully carried out, the result will be a dramatically changed French military within the next 15 years. The following sections give an overview of the various programs currently being developed or implemented in the services.

The French Army

For the army, the key program is *Synergie du Contact Renforcée par la Polyvalence et l'Infovalorisation* (SCORPION), which involves acquiring a new generation of land vehicles and a massive networking and digitalization effort aimed at facilitating platform

and unit integration.²⁰ In other words, the SCORPION program is network-centric warfare for the twenty-first century, with a French flavor. The program will be different from the US model because French forces will be considerably smaller and will emphasize the robustness of the platforms in their ability to fight even when networks fail. The program is organized around the progressive acquisition of new equipment, particularly a new generation of armored personnel carriers – the VBMR Griffon and the LIV (SO) Serval – as well as the ongoing acquisition of a new armored reconnaissance and combat vehicle, the EBRC Jaguar, which started being delivered in 2019–20. The ambition is to procure 1,872 Griffons, 978 Servals, and 300 Jaguars, half of which should be delivered by 2025.²¹

The goal is to be able to deploy the first joint battle group of 4,000 soldiers with enhanced networking capabilities and new ground vehicles by 2022.²² The French Army then expects, with four years of lessons learned from this initial deployment, it will be in good shape to integrate these new capabilities fully by 2025, when half of the equipment will have been delivered. An additional program goal is to be able to conduct joint operations at the tactical level – notably, through the development of a tactical data link connecting the

20. Amaël Cattaruzza and Stéphane Taillat, “Les enjeux de la numérisation du champ de bataille,” *Dynamiques Internationales* 13 (June 2018): 1–19.

21. “SCORPION,” Ministry of the Armed Forces, accessed July 18, 2020, <https://www.defense.gouv.fr/terre/equipements/vehicules/scorpion/scorpion/scorpion2/presentation2>.

22. Nathalie Guibert, “Le programme ‘Scorpion’ pour une guerre robotisée,” *Le Monde*, June 17, 2020, https://www.lemonde.fr/international/article/2020/06/17/le-programme-scorpion-pour-une-guerre-robotisee_6043165_3210.html.

army, the air force, and the navy by 2023. The French military's ambition is to integrate and concentrate fires simultaneously and more effectively, regardless of the delivery platform, and facilitate the adoption of swarming tactics as part of the military's plans for maneuver warfare. The developments made under the SCORPION program would also enable better integration with like-minded, similarly equipped allies (such as the United States) in Joint operations.²³

In mid-2016, the army consolidated its brigades into a division structure and slimmed down the corresponding command structure. The purpose of this reorganization was in part to take the greatest possible advantage of SCORPION technologies, respond to a punishing tempo of expeditionary operations, and strengthen the army's contribution to homeland security.²⁴ Today, the main land forces are organized into two divisions of three brigades each: the 1st division (which also comprises the Franco-German brigade) headquartered in Besançon and the 3rd division in Marseille. In addition, the army has opened a new homeland security command headquartered in Paris which has 10,000 troops assigned to it in addition to army reserves.

Following the end of the Cold War, the French government reduced the size of the army, and the government ended conscription in 1996. A reserve force

23. Olivier Schmitt, *Allies That Count: Junior Partners in Coalition Warfare* (Washington, DC: Georgetown University Press, 2018).

24. "Au Contact, la nouvelle offre stratégique de l'Armée de Terre," Ministry of the Armed Forces, July 22, 2016, <https://www.defense.gouv.fr/terre/thematiques-terre/archives2/modele-au-contact/au-contact-la-nouvelle-offre-strategique-de-l-armee-de-terre>.

was established to meet unforeseen contingencies. The current aim of the reserve force is to increase its size to 40,000 personnel. In addition to contributing to homeland security on a day-to-day basis at the level of 10,000 troops, the army's operational goals remain as outlined in the 2013 white paper: maintain a national emergency force of 4,000 soldiers out of a total force of 5,000. This force includes a more immediate reaction force of 2,300, of which the army will deliver 1,500 soldiers. In addition, the army must have the capacity to deploy and sustain 6,000 to 7,000 troops for three simultaneous crisis management operations and the capacity to generate a force of 15,000 troops for a major, coalition-aligned combat operation. In recent years, the army has consistently had a high tempo of deployments, resulting in a yearly deployment of some 30,000 troops.²⁵

The French Air Force

The French Air Force's key program is the *Système de Combat Aérien du Futur* (Future Combat Air System) being developed in partnership with Germany and Spain. The purpose of the system is to enable networked collaborative air combat. The system will consist of a core platform (a jet fighter with stealth features) working in combination with secondary platforms (such as drones) that could serve as sensors or logistics airframes. In an increasingly contested environment—due to the development of advanced anti-access/area denial defense systems by potential adversaries—these secondary platforms could help conduct tasks such as electronic warfare

25. Elie Tenenbaum, "Le rôle stratégique des forces terrestres," *Focus Stratégique* 78 (February 2018).

and precision targeting. The French Air Force is particularly interested in the development of AI to help pilots effectively use the various platforms and to avoid cognitive overload from the large amounts of data constantly being fed into the cockpit by onboard and network sensors. An AI-assisted virtual assistant would act as an analyst, fusing data to provide the pilot with a tactical overview; an adviser, suggesting solutions to flight or combat situations; a delegate, handling logistical or less pressing tasks; and a “guardian angel,” taking over from the pilot in life-threatening situations, such as when a pilot is incapacitated. Some of the technological components of the system are currently being developed and should be in place in the next upgrades of the Rafale.²⁶

Tactical airlift is also in transition with the introduction of the Airbus A400M Atlas and the gradual decommissioning of the venerable Transall C-160, which is more than 50 years old. The fleet also consists of multiple Lockheed C-130 Hercules. With the procurement of the A400M Atlases, French tactical airlift capability will certainly be improved. But the timing of the decommissioning of the C-130s Hercules and the gradual introduction of the A400M Atlases may lead to short-term gaps in capabilities. More broadly, the French military’s airlift capability is insufficient to meet current and potential deployment requirements, making France dependent either on allies or leasing from private companies.

26. Ministry of the Armed Forces officials, interview by the author, October 2019.

The French Navy

The French Navy is organized around four main commands: The *Force d'Action Navale* (the Naval Action Force), *Forces Sous-Marines* (the Submarine Force), *Aéronautique Navale* (French Naval Aviation), and *Force Maritime des Fusiliers Marins et Commandos* (the Commandos Marine).

The main capability at the disposal of the French Navy is the carrier strike group, which is organized around the aircraft carrier *Charles de Gaulle*. The strike group comprises the carrier, one attack submarine, four destroyers (two specialized in air defense and two specialized in antisubmarine defense), and one frigate acting as a scout. The French Navy can also mount an amphibious group organized around one of the three helicopter carrier assault ships of the *Mistral* class. Unlike the United States, France does not have a coast guard; therefore, the navy is also tasked with assisting in the protection of French territorial waters from risks such as pollution, accidents, trafficking, and smuggling. This mission covers 25 percent of the navy's activities.²⁷

The French fleet principally consists of 10 submarines—four nuclear-powered ballistic missile submarines and six nuclear-powered attack submarines—and 23 major surface combatants in addition to the *Charles de Gaulle* and the three *Mistral*-class amphibious assault ships. The rest of the fleet is composed of mine warfare ships, landing craft, logistics ships, and coastal patrol boats. No longer a

27. Didier Migaud, *Le rôle de la marine nationale dans l'action de l'état en mer*, reference no. S2019-0539 (Paris: Cour des Comptes, March 28, 2019).

navy of the first rank, the French Navy nevertheless retains significant blue-water capabilities.²⁸

The navy is in the process of modernizing key elements of its fleet as well. A new class of nuclear-powered attack submarines, the *Barracuda* class, is gradually replacing the *Saphirs*. (In 2015, a *Saphir* was responsible for virtually sinking the USS *Theodore Roosevelt* during a bilateral US-French naval training exercise.) In addition, the French Navy will be adding a new class of multimission frigates. From 2021 onwards, the multimission frigates will be equipped with enhanced networking capabilities comparable to the French Army's SCORPION. One of the main topics of discussion in the coming years will be the size and features of the aircraft carrier replacing the *Charles de Gaulle*, which will be decommissioned between 2030 and 2040. Plans for its replacement have started, but final design and program decisions have not been made.²⁹

Nuclear deterrence has been the cornerstone of French defense policy since Charles de Gaulle was president. The French doctrine is based on the concept of strict sufficiency. In the French view, nuclear weapons are political weapons and cannot be used for something other than deterrence and the protection of vital interests. Since the end of the Cold War, the

28. Jeremy Stöhs, *The Decline of European Naval Forces. Challenges to Sea Power in an Age of Fiscal Austerity and Political Uncertainty* (Annapolis, MD: US Naval Institute Press, 2018).

29. Yan Gauchard, "Chantiers de l'atlantique: Florence Parly annonce la construction d'un nouveau porte-avions," *Le Monde*, May 19, 2020, https://www.lemonde.fr/economie/article/2020/05/19/chantiers-de-l-atlantique-florence-parly-annonce-la-construction-d-un-nouveau-porte-avions_6040105_3234.html.

French deterrent capability has had two legs—one sea-based and one air-based. The future challenge will be to update the means of delivery to maintain the credibility of the French deterrent. Between now and 2030, important decisions will have to be made on a new generation of nuclear-powered ballistic missile submarines. The modernization of the French cruise missile *Air-Sol Moyenne Portée* includes the replacement of the missile with a new-generation one and upgrades to the French nuclear simulation program. In addition, Paris has announced the development of a Mach 5-plus hypervelocity glide vehicle. A hypervelocity glide vehicle demonstrator is scheduled for its first flight in 2021.³⁰ Broadly speaking, the operational challenge will be to develop capabilities sufficient to convince potential adversaries the French nuclear payloads could reach their targets, regardless of the increased anti-access/area denial capabilities of potential adversaries.

The goal of these programs is to ensure “France remains a committed and significant military power in terms of the robustness of its executive chain of command, the breadth of military capabilities it maintains, and the range of operations it undertakes” and to make it the major military power in Europe.³¹ Undoubtedly, the modernization program puts French forces on an upward trajectory in terms of capabilities compared to the cuts in forces and resources that marked the post-Cold War era. But, although the French Armed Forces are gradually getting ready for

30. Brustlein, “Forces nucléaires françaises.”

31. Olivier Schmitt and Sten Rynning, “France,” in *The Oxford Handbook of European Defence Policies and Armed Forces*, ed. Hugo Meijer and Marco Wyss (Oxford, UK: Oxford University Press, 2018), 49.

high-intensity conflict, they are not there yet. Civilian and military decision makers will need to sustain both planned defense budget increases and reforms to the defense innovation process if the military's modernization program is to be implemented successfully.

NEW DOMAINS: SPACE AND CYBERSPACE

Although France has been a space power since the early 1960s, a formal military space strategy was not released until 2019. Previously, discussion of space assets having military utility was minimal. Indeed, discussion was minimal even when, in 1984, France put its first communications satellite, Télécom 1A, a satellite equipped with a military capability, into orbit. Strategic thinking about space began with a reaction to President Ronald Reagan's Strategic Defense Initiative, which made French decision makers realize space assets might become vulnerable to attacks.³² In the 1980s, France commenced multiple diplomatic initiatives to prevent the deployment of antisatellite weapons. With the publication of the defense white paper in 1994 and the launch of the first French reconnaissance satellite, Helios 1, in 1995, space surveillance and an arms race in space were recognized as possibilities. But the threat of an arms race was not perceived as particularly imminent, and, after having been active in arms control, French diplomacy became relatively silent on the issue from the mid-1990s onward.

The Chinese antisatellite test in 2007 was a game-changing shock that impacted how space was treated

32. Guilhem Penent, *L'Europe spatiale: Le déclin ou le sursaut* (Paris: Argos, 2014).

in subsequent defense white papers and culminated in the 2019 *Space Defence Strategy*.³³ In substance, “the space strategy sets a two-fold ambition. The first goal is to provide better space situational awareness in support of national decision making. The second goal is to improve the protection of national and key European space assets, including the possible provision of onboard lasers for satellite defense. Underpinning both is the intent to sustain and support national and European space industrial bases.”³⁴

Space-based assets are now seen as a critical supporting element to France’s nuclear deterrent capability. Other aspects of the strategy include a rebranding of the French Air Force, which will now be called the Air and Space Force. The transition included the establishment of a Space Command in charge of all military space-related units as of September 1, 2019.³⁵ The establishment of this command reflects the changing perception of space as an operational domain. France is particularly interested in developing measures to protect its satellites, including onboard cameras and greater maneuverability in space. France is also looking at the development of nanosatellites to serve as a redundant capability to provide resilience in case of a successful attack on major satellite assets.

33. Ministry of the Armed Forces, *Stratégie spatiale de défense* (Paris: Ministry of the Armed Forces, 2019).

34. Arthur Laudrain, “France’s ‘Strategic Autonomy’ Takes to Space,” *Military Balance Blog*, August 14, 2019, www.iiss.org/blogs/military-balance/2019/08/france-space-strategy.

35. Nathalie Guibert, “La France va préciser sa nouvelle stratégie spatiale militaire,” *Le Monde*, July 15, 2019, https://www.lemonde.fr/international/article/2019/07/15/la-france-va-preciser-sa-nouvelle-strategie-spatiale-militaire_5489589_3210.html.

These initiatives are understood as staying within the bounds of self-defense because France is adamant in emphasizing its compliance with international law. In total, France is allocating €700 million from 2019 to 2025 in support of its space ambitions.³⁶

The first *Strategic Review of Cyber Defence* was issued in 2018.³⁷ The French approach to cybersecurity differs from that of the United States and the United Kingdom in the sense “France assumes a clear separation between offensive and defensive cyber operations and actors. This means that, contrary to the National Security Agency or the UK’s Government Communications Headquarters, France’s leading agency for cybersecurity is not part of the intelligence community.”³⁸ The rationale for keeping offensive and defensive cyber operations separate is private companies and government bodies not associated with national security are likely more willing to cooperate with the *Agence Nationale de la Sécurité des Systèmes d’Information* (the National Cybersecurity Agency of France), which is tasked with network protection and cyber defense, if it is not associated with the militarized use of cyberspace. Keeping the two realms separate lessens the perceived reputational costs of working with the military.

In January 2019, France released a doctrine for offensive cyber operations and established a Cyber Defence Command aimed at coordinating cyber

36. Laudrain, “France’s ‘Strategic Autonomy.’”

37. Louis Gautier, *Revue stratégique de cyberdéfense* (Paris: Secrétariat-General for National Defence and Security, February 12, 2018).

38. Arthur Laudrain, “France’s New Offensive Cyber Doctrine,” *Lawfare* (blog), February 26, 2019, <https://www.iiss.org/blogs/military-balance/2019/08/france-space-strategy>.

activities within the armed forces.³⁹ The government's acknowledgment of an offensive cyber doctrine is part of a declaratory posture aimed at establishing deterrence in cyberspace. Minister of the Armed Forces Parly stated France has the means to identify perpetrators and would not refrain from retaliating if needed.⁴⁰ Unlike some allies, France has been reluctant to attribute cyberattacks to particular state actors publicly and seems more inclined to address these issues bilaterally and in closed discussions.⁴¹ In the French perspective, cyber capabilities can have a tremendous multiplier effect on the conduct of military operations, and offensive cyber operations have three main goals: intelligence gathering, neutralization of an adversary's capabilities, and deception.⁴²

The publication of the doctrine signals the growing maturity of French cybersecurity architecture. This domain is clearly important for the Ministry of the Armed Forces, as illustrated by Military Planning Law 2019-25, which dedicates an extra €1.6 billion to cyber operations and authorizes an additional 1,500

39. Cyber Defence Command, *Éléments publics de doctrine militaire de lutte informatique offensive* (Paris: Cyber Defence Command, 2019).

40. Florence Parly, "Stratégie cyber des armées" (speech, Hexagone Balard, Paris, France, January 18, 2019).

41. François Delerue, Alix Desforges, and Aude Géry, "A Close Look at France's New Military Cyber Strategy," War on the Rocks, April 23, 2019, warontherocks.com/2019/05/signaling-victory-and-strategy-in-frances-military-cyber-doctrine/.

42. Stéphane Taillat, "Signaling, Victory, and Strategy in France's Military Cyber Doctrine," War on the Rocks, May 8, 2019, <https://warontherocks.com/2019/05/signaling-victory-and-strategy-in-frances-military-cyber-doctrine/>.

additional personnel to reach a total of 4,000 cyber combatants by 2025.⁴³

FRENCH MILITARY OPERATIONS

According to RAND senior political scientist Michael Shurkin:

There is a French way of warfare that reflects the French military's lack of resources and its modest sense of what it can achieve. They specialize in carefully apportioned and usually small but lethal operations, often behind the scenes; they can go bigger if they have help from the US and other allies—which they will probably have in any case and know how to put to good use.⁴⁴

For Shurkin, the French military's sense of its relative lack of resources compared with Paris's high international ambitions has several consequences. The first consequence is an insistence on modest objectives, on strictly limiting the aims of a military intervention in line with a modest assessment of the operations the military can successfully accomplish. The French thus aim low and strive to achieve the minimum required. Another feature of the French way of war is scale. Whereas the US military tends to be maximalist—American planners arguably take for granted their ability to marshal vast resources and firepower—the French military embraces small operations. This strategy requires knowing the sufficient level of force

43. The National Assembly, *Military Programming Act*.

44. Michael Shurkin, "The French Way of War," *Politico*, November 17, 2015, <https://www.politico.com/magazine/story/2015/11/the-french-way-of-war-213372>; and Christopher Chivvis, *The French War on Al Qaeda in Africa* (Cambridge, UK: Cambridge University Press, 2016).

and accepting risks Americans would prefer not to face and do not have to face for the most part.⁴⁵

Shurkin may be slightly optimistic. The French are no strangers to mission creep. France's relative lack of resources may have some benefits, but it also represents a significant challenge.⁴⁶ Yet, recent military interventions, particularly in Mali and the Sahel, have demonstrated French forces are capable of planning and conducting effective military operations.⁴⁷ As Olivier Zajec has documented, French military interventionism has taken several forms since the 1960s: postcolonial warfare in Africa in support of regimes with which France had defense agreements, followed by participation in peacekeeping operations in the 1990s and subsequent participation in coalition warfare through NATO operations in Kosovo and Afghanistan.⁴⁸ In a sense, Operation Serval and Operation Barkhane in the Sahel represent the culmination of several trends in French warfare because they have involved robust use of force in sub-Saharan Africa, a degree of cooperation with the UN in

45. Shurkin, "The French Way of War"; and Chivvis, *French War on Al Qa'ida*.

46. Jean-Gaël Le Flem and Bertrand Oliva, *Un sentiment d'inachevé: Réflexion sur l'efficacité des opérations* (Paris: École de Guerre, 2018).

47. Pernille Rieker, *French Foreign Policy in a Changing World: Practising Grandeur* (Basingstoke, UK: Palgrave Macmillian, 2017).

48. Olivier Zajec, "French Military Operations," in *Oxford Handbook*, 797–812.

peacekeeping operations, foreign military assistance, and coalition warfare.⁴⁹

The ability to conduct military operations is an important aspect of French strategic planning in line with Paris's national ambitions and its responsibility as a permanent member of the UN Security Council. This ability is also an important element of the French military's professional identity. For this reason, the 2015 decision to deploy French troops on French territory as a surveillance mission akin to policing in response to the January terrorist attacks was not well received by soldiers. French soldiers were not thrilled to be treated like security guards, and the new domestic security mission disrupted training and recovery cycles for deploying and returning troops. To address these problems, modifications have been made to the domestic rotations; as a result, French forces have been able to refocus on Operation Barkhane in the Sahel as well as the anti-Islamic State of Iraq and Syria intervention. The refocusing on Operation Barkhane was reaffirmed in January 2020 after a minisummit between Emmanuel Macron and the heads of state of the Sahel region (Mali, Burkina Faso, Mauritania, Chad, and Niger), during which a new coalition for the Sahel was announced.⁵⁰ Paris has difficulties coordinating the different intervening forces in the

49. Tony Chafer, Gordon D. Cummings, and Roel van der Velde, "France's Interventions in Mali and the Sahel: A Historical Institutional Perspective," *Journal of Strategic Studies* 43, no. 4 (March 2020): 482–507.

50. Christophe Châtelot, "A Pau, la France et les pays du G5 lancent une nouvelle coalition antiterroriste pour le Sahel," *Le Monde*, January 14, 2020, https://www.lemonde.fr/afrique/article/2020/01/14/a-pau-la-france-et-les-pays-du-g5-lancent-une-nouvelle-coalition-antiterroriste-pour-le-sahel_6025760_3212.html.

region (the Barkhane force, the UN, and the G5 Sahel), which frustrates the counterterrorism effort.

In addition to military operations conducted against jihadist groups, French troops have been deployed to the Baltics in the framework of NATO Enhanced Forward Presence since 2017.⁵¹ The French troops were deployed to Estonia in 2017 with the United Kingdom as the framework nation for the battle group, to Lithuania in 2018 with Germany as the framework nation, and to Estonia again in 2019. In any case, Enhanced Forward Presence is a tripwire that is not guaranteed to halt the Russian invasion. Estimates of the correlation of forces assess NATO forces would take 90 days to outnumber Russian conventional forces in the area (notably because of challenges of military mobility in Europe).⁵² In this context, French engagement is modest: about 300 troops, four Leclerc main battle tanks, and 13 armored personnel carriers.⁵³ This limited commitment is the result of both operational priorities in the Sahel and French reasoning even a small tripwire from a nuclear-armed nation is enough to boost Enhanced Forward Presence's deterring effect credibly; the French commitment is then calibrated to signal commitment to the alliance.

51. Jean-Dominique Merchet, "OTAN: La France va déployer des troupes dans les pays Baltes, mais à mi-temps," *L'Opinion*, July 3, 2016, <https://www.lopinion.fr/edition/international/otan-france-va-deployer-troupes-dans-pays-baltes-a-mi-temps-106039>.

52. Interviews with experts by the author, n.d..

53. Ministry of the Armed Forces, *Dossier de presse. Mission opérationnelle Lynx* (Paris: Ministry of the Armed Forces, May 2019), 7.

The French military has experienced the whole range of modern military operations and is proven in battle. Considering the importance of military capabilities for French foreign policy in general, the traditional French emphasis on operational readiness will most likely continue in the future.

INTERNATIONAL COOPERATION AND STRATEGIC PARTNERSHIPS

Despite emphasizing strategic autonomy, France often needs to find partners in pursuit of its strategic interests. As such, “informing its choice of partners are three key lessons that France has derived from its battlefield experiences over the past decade: first, the centrality of the United States and, to a lesser extent, the United Kingdom; second, the useful but circumscribed role of regional security organizations, namely the EU and NATO; and third, the need to get European partners to engage in expeditionary missions.”⁵⁴ Some of these assumptions have been challenged in recent years because of the shifting political winds in the United States and the United Kingdom.

Although operational cooperation with the US Armed Forces has usually been described as excellent since at least 2013, the election of Donald Trump and his denigration at times of both the EU and NATO may limit the possibilities of a deeper strategic partnership. French political leaders seeking greater cooperation will face stronger headwinds because of the French population’s general antipathy toward the US president. As with many other US allies, France

54. Alice Pannier and Olivier Schmitt, “To Fight Another Day: France between the Fight against Terrorism and Future Warfare,” *International Affairs* 95, no. 4 (July 2019): 907.

has so far focused on US policy and not the president's tweets in cooperating militarily with the United States, but the evolution of the US political landscape—and its possible continuing trend in that direction—nevertheless raises questions about the durability of such an approach.

The same can be said about the United Kingdom. After establishing the grounds for close military cooperation with London through the Lancaster House Treaties of 2010, Paris has been disappointed by the lack of meaningful progress in deepening the partnership. The United Kingdom's decision to leave the EU has only further complicated efforts at building those ties. Although French leaders acknowledge the United Kingdom's desire to leave the EU, they also would like to keep the United Kingdom—a nuclear power with a powerful military by European standards—as part of key European security agreements. Nevertheless, because of the uncertainty about London's future policy direction, France has defaulted back to having Germany as its main strategic partner in Europe. But the gaps between the French and German strategic cultures make military cooperation more difficult than it is with more like-minded countries, such as the United States and the United Kingdom.

In recent years, France has also developed strategic partnerships in the Indo-Pacific region—in particular, with India and Australia through the sale of Rafale jets to India and *Barracuda*-class submarines to Australia. Paris has thus developed an Indo-Pacific strategy of its own. Having territories in the Indian Ocean (notably Mayotte and Réunion) and in the Pacific Ocean (New Caledonia, Wallis and Futuna, French Polynesia, and Clipperton Island), France cannot

simply ignore the shift in power taking place in the Pacific. The development of a strategy to address the changing security landscape in the Pacific and the security landscape's effect on the French allies—the United States and the United Kingdom—will be an important dimension of French defense policy in the years to come.

CONCLUSION

French ambitions on the global stage so far remain intact. Paris intends to keep acting as a middle power with a global reach. France's political parties agree the country should maintain an independent foreign policy, and an essential instrument for doing so is the military.

The upward trend in defense spending observed in recent years is a welcome improvement and a reflection of France's perception of a degraded security environment. But this trend will strongly depend on the country's future economic performance. Although the government has put forward reforms to improve the efficiency of the labor market and public spending, another major recession could derail France's defense plans as government resources fall flat or decline. Yet, even if a more positive economic future unfolds, France will still face the strategic problem of maintaining its global aspirations with middle-power resources—and will do so in a security environment that has grown significantly more complex and difficult.

4. GERMANY: A U-TURN ON DEFENSE

Alessandro Scheffler

KEY POINTS

- A new focus on collective defense since 2014 has led to a fundamental change in the strategic outlook of the German armed forces.
- The success of this defense policy U-turn depends on a substantial increase in financial resources and the reformation of a flawed defense procurement process.
- At the same time, a full U-turn will be difficult to reconcile with Germany's global outlook and continued interest in international crisis management.

German defense policy has been the source of both tension and ridicule in recent years. Berlin's failure to live up to NATO's 2-percent pledge has resulted in considerable frustration among allies, especially the United States. At the same time, regular reports on the poor state of the German military have led to derision both from within Germany and internationally.¹ These failures are accompanied by a German security and defense policy which is often perceived as unwilling to make any substantial commitments beyond naive policy proposals and pronouncements about the impossibility of military solutions. Looking back at

1. Ross Clark, "Germany's Military Has Become a Complete Joke," *Spectator*, August 31, 2019, <https://www.spectator.co.uk/article/germany-s-military-has-become-a-complete-joke>; and Matthew Karnitschnig, "Germany's Soldiers of Misfortune," *Politico*, February 15, 2019, <https://politi.co/2uvUoq4>.

the title of Patrick Keller's essay in the last edition of *A Hard Look at Hard Power*, one might conclude about German hard power, "There is still no there there."²

But such an assessment would miss the substantial movement that has occurred in German defense policy in recent years. As summarized by former Minister of Defence Ursula von der Leyen, Germany's military has launched a "grand, comprehensive modernization concept," a plan that will fundamentally change the German armed forces by 2031.³ Defense spending has risen by 40 percent since 2014. The size of the force is increasing, and the ministry has launched multiple major procurement projects intended to modernize the force.

2011: THE "NEW ORIENTATION"

To explain the current state of the *Bundeswehr* (the Federal Defence Forces), one must understand it has remained in a state of constant transformation since the end of the Cold War. Most reforms were driven by both the desire to cut defense budgets and changing operational requirements and threat assessments. Of the many changes made to the *Bundeswehr* since the early 1990s, the 2011 reform program was the most fundamental: With the suspension of conscription in Germany, the program marked the military's final

2. Patrick Keller, "German Hard Power: Is There a There There?," in *A Hard Look at Hard Power: Assessing the Defense Capabilities of Key U.S. Allies and Security Partners*, ed. Gary Schmitt (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2015).

3. Sebastian Sprenger, "Germany Unveils Growth Plan for the Bundeswehr," Defence News, September 5, 2018, <https://defencenews.com/#/global/europe/2018/09/05/germany-unveils-growth-plan-for-the-bundeswehr>.

passage from a large, territorial defense-focused force to an all-volunteer, professional force focused on international crisis management missions.⁴

Termed “*Neuorientierung*” (New Orientation), the reform was a belated result of the financial crisis of 2007–08 and the lessons learned from Germany’s military efforts abroad—especially Germany’s participation in NATO’s International Security Assistance Force in Afghanistan. As part of the government’s fiscal consolidation, plans called for an €8 billion cut in defense spending.⁵ A smaller force seemed inevitable. Given the security environment, a more deployable and operational force appeared more important than a large force parked in Germany. With a total of 250,000 military personnel, the *Bundeswehr* struggled to deploy even 7,000 soldiers at any given time.⁶ Instead of maintaining a large force at very low levels of readiness, the 2011 *Defence Policy Guidelines* stated “the ability to fight” was to become the “benchmark for operational readiness.”⁷ The new goal was to provide 10,000 soldiers who could be deployed simultaneously, if required, in two areas of operation. According to Ina Kraft, this goal was revolutionary for

4. Keller, “German Hard Power.”

5. These cuts were ultimately not realized, and the defense budget gradually grew in the following years. Quentin Peel and James Blitz, “Security: A German Military Overhaul,” *Financial Times*, January 31, 2011, <https://www.ft.com/content/c0fedfdc-2d6f-11e0-8f53-00144feab49a>.

6. Spencer Kimball, “German Army Falls below European Standards,” *Deutsche Welle*, July 3, 2011, <https://www.dw.com/en/german-army-falls-below-european-standards/a-15207035>; and Keller, “German Hard Power.”

7. Thomas de Maizière, *Defence Policy Guidelines* (Berlin: Federal Ministry of Defence, May 27, 2011).

a force that “for decades, had been equipped, trained, and intellectually educated to be a non-fighting deterrent force.”⁸

To find resources for this new goal, the reform reduced the force from 250,000 military and 75,000 civilian personnel to 185,000 active-duty military and 55,000 civilian employees.⁹ Capabilities judged to be of little use in crisis management operations, along with the relevant procurement and maintenance budgets, were also cut. Driven by efforts to save even more money, the ministry largely stopped buying spare parts as well.¹⁰ Finally, the reform also introduced the infamous concept of “dynamic availability management,” meaning units would only be equipped up to 70 percent, and available equipment would be pooled for use in international missions. This new policy laid the basis for “hollow structures” – that is, units which were neither designed nor equipped to be deployed as organic formations.¹¹

2014: A TURNING POINT

In 2011, the *Neuorientierung* aimed to provide more military resources for international crisis management. But Germany’s strategic outlook began to change. The *Bundeswehr*’s international engagement was approaching its limits; the German contingent in

8. Ina Kraft, “Germany,” in *The Handbook of European Defence Policies and Armed Forces*, ed. Hugo Meijer and Marco Wyss (Oxford, UK: Oxford University Press, 2018), 58.

9. Keller, “German Hard Power,” 102.

10. Keller, “German Hard Power,” 98–99.

11. Rainer L. Glatz and Martin Zapfe, *Ambitious Framework Nation: Germany in NATO* (Berlin: Stiftung Wissenschaft und Politik, September 2017).

Afghanistan peaked at 5,300 soldiers in March 2011.¹² Also in 2011, Germany abstained from a UN Security Council vote on the resolution authorizing NATO's military engagement in Libya and then proceeded to remove most of the German staff employed in NATO's Operation Unified Protector. The German minister for foreign affairs heralded a "culture of military restraint" as a trademark of German security policy.¹³ The policy direction supposedly driving the *Neuorientierung* appeared increasingly stillborn.

The restrained security policy pushed by the Free Democratic Party in the early 2010s might be thought of as the last attempt of the old German policy establishment to get Germany's (modest) military genie back into the bottle. In fact, the political backlash generated by this policy in 2011 might well have paved the way for the fundamental reconceptualization of German security policy in 2014.¹⁴ This change was propelled by two fundamental, albeit unrelated, changes that will continue to mark German security policy in the coming years: (1) a new view of Germany's role in Europe; and (2) the reappearance of a threat to Europe from the east.

12. Deutsche Welle Staff, "Germany Forces Hand over Command of Kunduz Camp to Afghans," Deutsche Welle, October 6, 2013, <https://www.dw.com/en/germany-forces-hand-over-command-of-kunduz-camp-to-afghans/a-17137807>.

13. Guido Westerwelle, interview by Winfried Dolderer, March 30, 2012.

14. Mark Leonard, "The Revenge of the German Elite," *Reuters* (blog), February 4, 2014, <http://blogs.reuters.com/mark-leonard/2014/02/04/the-revenge-of-the-german-elite/>.

GERMANY AS A LEADING EUROPEAN POWER

By the early 2010s, the financial crisis of 2007–08 had established Germany, at least in economic terms, as the leading power in Europe. As an export-oriented country, Germany was deeply integrated into the global economy and perceived itself as having benefited from a stable international order. But the supporters of this order were, at least from a German point of view, less inclined to devote the resources and attention required to maintain the order. Under President Barack Obama, the United States was attempting to focus its energies on domestic affairs and reduce involvement abroad, with less engagement in European matters as a result. At the same time, other European powers, such as the United Kingdom and France, were still dealing with the effects of the financial crisis. If Germany wanted to maintain a system that worked in its interest, the country would have to take on a greater role in international affairs.

The idea Germany needed to do more in the field of security policy, including militarily, was gaining wider acceptance among German elites. Based on a working group that included representatives from the federal government and the entire political spectrum, two of Germany's leading think tanks published the report *New Power, New Responsibility* in the autumn of 2013.¹⁵ The report, which proposed a new strategic outlook often referred to as “the Spider-Man doctrine” (“with great power comes great responsibility”), called for

15. Stiftung Wissenschaft und Politik and the German Marshall Fund of the United States, *New Power, New Responsibility: Elements of a German Foreign and Security Policy for a Changing World* (Berlin: Stiftung Wissenschaft und Politik, October 2013).

greater German engagement internationally.¹⁶ At the same time, the Federal Foreign Office started its own review to define Berlin's new, and more ambitious, global strategy.

On the basis of this growing consensus, policy makers from the governing coalition of conservative Social Democrats seized the initiative at the Munich Security Conference in early 2014. Former German President Joachim Gauck delivered a speech in which he acknowledged Germany was often perceived by other states as weak in security affairs. While reminding the audience Germany's reluctance to assume a strong role in international affairs was grounded in its history, Gauck admitted this rationale is too often used as an excuse. Accordingly, Germany had "to do more for the security it has been provided for by others for decades."¹⁷ This idea was echoed in remarks by then-Minister for Foreign Affairs Frank-Walter Steinmeier and then-Minister of Defence von der Leyen, leading to "the Munich consensus" on German foreign and defense policy.¹⁸

16. For example, see Patrick Keller and Gary Schmitt, "Germany and the Spider-Man Doctrine," *Wall Street Journal*, February 6, 2014, <https://www.wsj.com/articles/germany-and-the-spiderman-doctrine-1391720533>.

17. Joachim Gauck, "Deutschlands rolle in der welt: Anmerkungen zu verantwortung, normen und bündnissen" (speech, Munich Security Conference, Munich, DE, January 31, 2010).

18. For example, see Bastian Giegerich and Maximilian Terhalle, "The Munich Consensus and the Purpose of German Power," *Survival* 58, no. 2 (2016): 155–66.

RUSSIA AS A THREAT AND COLLECTIVE DEFENSE

This increased level of ambition was only a part of the story. Perhaps more important was the German reaction to the Ukraine crisis. When Gauck delivered his Munich speech, events in Ukraine had only just started to unfold. Gauck had attempted to justify greater German engagement within the sphere of the relative peace Germany and its neighbors had enjoyed over the years and as a result of the country's integration into the global system. Gauck's speech was a call for Germany not to become complacent in the absence of direct threats in its neighborhood.

But with the emergence of Russia as a potential military threat, Germany suddenly had to act on its new European leadership role. For policy makers, this adjustment was enormously painful. The Social Democrats, Chancellor Angela Merkel's junior coalition partners, valued former Chancellor Willy Brandt's *Ostpolitik*, which in their view led to the gradual opening and demise of the Soviet Union. In the post-Cold War era, many Social Democrats had developed ties to both Russia and the power elite under Vladimir Putin. At the same time, anti-Americanism remained strong in German public opinion and increased with the Snowden revelations in 2013.¹⁹ Working with NATO under American leadership to address the Russian problem was not going to be an easy sell for some in Germany.

19. "Spying Fallout: German Trust in United States Plummet," *Der Spiegel*, November 8, 2013, <https://www.spiegel.de/international/germany/nsa-spying-fallout-majority-of-germans-mistrust-united-states-a-932492.html>.

Despite these political headwinds, Germany took on a leadership role in building political pressure on Russia in the immediate aftermath of the Ukraine crisis. At the same time, Berlin also wanted to avoid inciting a renewed military rivalry.²⁰ A German priority was to avoid policy steps against Russia that could not be reversed if a settlement on Ukraine could be reached. Germany thus strongly opposed the permanent stationing of substantial combat forces on the territory of former Warsaw Pact allies, which would have violated the 1997 NATO-Russia Founding Act on Mutual Relations, Cooperation and Security. To preserve the act, which many Eastern European allies wanted repudiated, Germany reassured them through its support for NATO's Readiness Action Plan and by having the *Bundeswehr* play a central role in NATO's plans for the Very High Readiness Joint Task Force (VJTF) and Enhanced Forward Presence (EFP) in the Baltic region.²¹

Germany remains committed to providing reassurance and deterrence on NATO's eastern flank. Germany has led the VJTF multiple times and is the only continental European country that leads an EFP battlegroup in the Baltics (Lithuania). Germany has sponsored a new NATO command, the Joint Support Enabling Command in Ulm, and maintains

20. For example, see Aylin Matlé and Alessandro Scheffler, *After the Wales Summit: An Assessment of NATO's Strategic Agenda, Facts & Findings* no. 162 (Berlin: Konrad-Adenauer-Stiftung, November 2014).

21. For more information on NATO's Readiness Action Plan, the Very High Readiness Joint Task Force, and Enhanced Forward Presence, see "Readiness Action Plan," NATO, updated March 23, 2020, https://www.nato.int/cps/en/natohq/topics_119353.htm; and "Enhanced Forward Presence (EFP)," NATO, n.d., <https://lc.nato.int/operations/enhanced-forward-presence-efp>.

it from the German national force structure. In addition, Germany has upgraded the Headquarters Multinational Corps Northeast in Szczecin, Poland.²² Inside the alliance, Germany has sponsored the Framework Nation Concept as a means to drive both multinational capability development and the development of multinational formations.²³ Germany has also been one of the main drivers behind the new NATO Defence Planning Process. In a complementary effort, Germany has also driven significant reform in the EU's Common Security and Defence Policy.

THE DEFENSE POLICY U-TURN

Germany taking a central role in NATO's deterrence plans—a measure designed in part to control the escalation of a possible conflict between the alliance and Russia—was a political decision. But the decision was also welcomed by the German military, which had always struggled with its focus on international crisis management, stabilization operations, and counterinsurgency. The decision to return to collective defense as a mission suited the military services and sustained the possibility of generating more defense funds, a feat other missions showed little promise of accomplishing. On the basis of the new focus on collective defense, the Federal Ministry of Defence

22. For more information on the Very High Readiness Joint Task Force, Enhanced Forward Presence, and Multinational Corps Northeast, see Lewis Sanders, "How Does Germany Contribute to NATO?" Deutsche Welle, March 9, 2018, <https://www.dw.com/en/how-does-germany-contribute-to-nato/a-38033967>. For more information on the Joint Support Enabling Command in Ulm, see Philipp Lange, *A New NATO Command in Germany* (Berlin: Federal Academy for Security Policy, 2018).

23. See Glatz and Zapfe, *Ambitious Framework Nation*.

began largely reversing the priorities of the previous *Neuorientierung* of the *Bundeswehr* and the last 30 years of German defense policy more generally. Although the 2011 reforms had pushed collective defense to the margins, the U-turn reestablished collective defense as the main task of the *Bundeswehr*.

The U-turn rests on three key policy documents: *White Paper 2016 on German Security Policy* and the *Future of the Bundeswehr* (2016), *Conception of the Bundeswehr* or *Bundeswehr Concept* (2018), and *Capability Profile of the Bundeswehr* (2018).²⁴ Together, as summarized by Bastian Giegerich, these documents “lay out a strategy for building a military that can, together with France and the UK, form the central pillars of European defense in NATO and the EU.”²⁵ The white paper’s attention to collective defense required a change in the *Bundeswehr*’s level of ambition. The *Bundeswehr Concept* and the *Capability Profile of the Bundeswehr* provide, according to former Federal Ministry of Defence Director-General for Planning Erhard Bühler, “a complete turnaround from the mandates of the reorientation of 2011.”²⁶

24. Federal Ministry of Defence, *White Paper 2016 on German Security Policy and the Future of the Bundeswehr* (Berlin: Federal Ministry of Defence, 2016); Ursula von der Leyen, *Konzeption der Bundeswehr* (Berlin: Federal Ministry of Defence, July 2019); and Sprenger, “Germany Unveils Growth Plan.”

25. Bastian Giegerich, “The Long Road to Readiness,” *Berlin Policy Journal* (September/October 2018), <https://berlinpolicyjournal.com/the-long-road-to-readiness/>.

26. Erhard Bühler, “Aktuelle planung in der Bundeswehr: Anspruch und ambition,” *Deutscher BundeswehrVerband* (website), March 16, 2017, <https://www.dbwv.de/aktuelle-themen/blickpunkt/beitrag/aktuelle-planung-in-der-bundeswehr-anspruch-und-ambition/>.

The release of the *White Paper 2016 on German Security Policy and the Future of the Bundeswehr* was the closest Germany has come to issuing a national defense strategy. The white paper sets out the following tasks for the *Bundeswehr*: national and collective defense in the framework of NATO and the EU; international crisis management; homeland security; support to domestic authorities; and cooperation with partner states.²⁷ The list reflects the core tasks from NATO's 2010 Strategic Concept, the alliance's official statement of its purposes. As such, the white paper is not on its face a revolutionary document. After all, the *Bundeswehr* remains engaged in multiple noncollective defense missions outside of Germany, including in Afghanistan, Mali, the Middle East, the Balkans, and the Horn of Africa.²⁸ But the white paper is revolutionary in how it regrants national collective defense the priority it had lost in earlier documents.²⁹

The *Bundeswehr Concept* translates the political imperatives of the white paper into strategy and structure for the Federal Defence Forces. The concept

27. Federal Ministry of Defence, *White Paper 2016*, 91–93.

28. See Statista Research Department, "Number of German Soldiers Participating in International Operations, as of December 2, 2019," Statista, December 2, 2019, <https://www.statista.com/statistics/265883/number-of-soldiers-of-the-bundeswehr-abroad/>.

29. The 2011 guidelines state "the more likely tasks of international conflict prevention and crisis management determine the outline of the new *Bundeswehr* structure. Essentially, the forces available for these tasks also fulfill the requirements of territorial and collective defence as well as homeland security tasks of the *Bundeswehr*. Where core tasks of the *Bundeswehr* demand it, these forces must be supplemented by additional structural elements." de Maizière, *Defence Policy Guidelines*.

is the key document behind Germany's change in defense policy. Steered by General Erhard Bühler, the concept provides a clear description of the key challenges faced in the field of collective defense:

Potential symmetric adversaries can threaten alliance territory with large formations of conventional forces and strongly increased technological capabilities. They no longer dispose of the same quantities as during the Cold War, when they presented a simultaneous threat along the entire border of alliance territory. Much rather, they can quickly build geographical centers of gravity for military operations. At the same time, the actions of the conventional forces will be integrated in a highly agile hybrid strategy, relying in part on top-edge technology. Ultimately, the entire alliance territory can be target of adversarial action along the entire line of state and societal action in a quick sequence. This is complemented by the use of nuclear weapons, which is both doable and doctrinally established.³⁰

Based on this threat perception, the concept takes the next logical step. If all tasks are important, but collective defense is the most ambitious of the tasks, then it must define the structure of the *Bundeswehr*. Instead of the crisis management mission driving manning, readiness, and equipment requirements, this new tasking requires a force that is trained differently, equipped differently, and more fully equipped. As noted by Giegerich, these changes demand "that the material equipment required for the respective exercises be immediately available . . . to all military units."³¹ If the *Bundeswehr's* priority is building a force for collective and national defense, other missions, such as crisis management, will have to be executed

30. von der Leyen, *Konzeption der Bundeswehr*, 14.

31. Giegerich, "Long Road."

by military units that come from this new force structure and tailored as needed by specific “mission packages.”³²

NATIONAL LEVEL OF AMBITION

The 2011 *Defence Policy Guidelines* stepped up the German level of ambition. Rather than the previous target of 7,000 deployable soldiers from an overall force of 250,000, the *Bundeswehr* was now to produce 10,000 deployable soldiers from a force of just 185,000.³³ A deployment of up to 4,000 was to be sustained indefinitely—either together or in the form of two “strengthened task forces.” An additional 1,000 soldiers were to be held at readiness to respond to domestic crises. Finally, Germany had to sustain its commitments to the EU Battlegroups and the NATO Response Force.³⁴

With the 2018 *Bundeswehr Concept*, Germany’s aspirations grew once again. Instead of focusing on providing a defined number of deployable soldiers, the concept derives its new level of ambition and the resulting structure of the *Bundeswehr* from the NATO Defence Planning Process. As part of this process, member states have a traditional share of capabilities they provide. The concept’s promise resulting from the NATO Defence Planning Process is to provide three fully equipped divisions that can be mobilized in three months. German forces are to serve as a framework nation and base for Major Joint Operation Plus—a

32. von der Leyen, *Konzeption der Bundeswehr*, 44.

33. Keller, “German Hard Power,” 102.

34. Michael Shurkin, *The Abilities of the British, French, and German Armies to Generate and Sustain Armored Brigades in the Baltics* (Santa Monica, CA: RAND Corporation, 2017).

collective defense force composed of more than three army corps. As the concept states:

The Bundeswehr and its single set of forces have to be prepared for use in a collective defense scenario in all dimensions, on short notice, with comprehensive capabilities up to combat-ready large formations inside and also at the margins of alliance territory. The German armed forces provide an important and special military potential and therefore play a central role in the integration of alliance partners. On a national basis, considering its particular geographic position in NATO and EU and the resulting role as transit country, host nation and possible rear-area in a collective defense scenario, Germany has to take additional precautionary measures and make capabilities from the whole-of-government available.³⁵

To accomplish these tasks, the *Bundeswehr* aims to provide a multinational, corps-level headquarters and to contribute significant elements to two other multinational, corps-level headquarters. Three German division headquarters are to lead eight to 10 active army brigades and up to 15 mechanized brigades, including those of allies. These three fully equipped and digitalized divisions are to be combat-ready within three months. The goal of the *Luftwaffe* (German Air Force) is to be able to lead a multinational air group capable of flying 350 sorties per day, with three-quarters (260) of the sorties executed by German aircraft. The aim is to maintain command over German airspace and achieve air superiority in cooperation with allied forces in the area of operations. According to the International Institute for Strategic Studies, achieving this goal would require about 170 German combat aircraft.³⁶

35. von der Leyen, *Konzeption der Bundeswehr*.

36. Giegerich, "Long Road."

To accomplish the *Bundeswehr's* restructuring, the Federal Ministry of Defence has set three milestone dates—2023, 2027, and 2031—with 2031 being the final target date for having reached the reform goals. Until 2023, the Federal Defence Forces' focus will be on preparing to serve as a framework nation for NATO's VJTF rotation that year. This assignment will include providing the VJTF with a modernized and fully equipped brigade equivalent with corresponding air, maritime, and special forces assets. And the *Bundeswehr* is to accomplish this assignment while supporting ongoing crisis management operations as well as commitments to the Baltic states under EFP and the EU Battlegroup. For 2027, the goal for the *Bundeswehr* will be to field two additional, fully equipped, fully deployable brigades. Once this goal has been accomplished, Germany will have created a deployable division of about 20,000 soldiers that will begin to meet its common defense and national defense obligations. Finally, by 2032, the plan is for all active and inactive *Bundeswehr* formations to be fully equipped, enabling German forces to perform all of the tasks set out for it by the concept. The plan also calls for having two more divisions available for mobilization within three months.³⁷ Under Major Joint Operation Plus, the *Bundeswehr* would then provide about 10 percent of NATO's overall capabilities, as it

37. "Bundeswehr-Pläne: Heer soll drei volle divisionen bekommen," Federal Ministry of Defence, April 19, 2017, <https://www.dbwv.de/aktuelle-themen/politik-verband/beitrag/news/bundeswehr-plaene-heer-soll-drei-volle-divisionen-bekommen/>.

does today.³⁸ See figure 4-1 for a graphic overview of the new German level of ambition.³⁹

The new force structure requires additional personnel, more equipment, and the introduction of advanced cyber and digital systems.⁴⁰ Three full divisions, for example, will require additional field artillery units, engineers, and tactical air defense batteries, all of which will have to be built from scratch or provided by NATO partners. Likewise, the German Army is planning to field six armored battalions—up from four in 2015.⁴¹ Manning the 2nd and 3rd Divisions will also require a greater reliance on reserve forces, which are also set to grow. Fully equipping the entire force will mean a massive change in the *Bundeswehr's* inventory of military platforms. Estimates put the increase in the number of armored transport vehicles at about 300 percent.⁴² The number of main battle tanks is set to increase to over 300.⁴³ In the air, the *Luftwaffe* will have to replace its Panavia Tornado fighter bombers and CH-53 helicopters.

38. Peter Carstens, “Militärisches leichtgewicht,” *Frankfurter Allgemeine Zeitung*, November 21, 2019, <https://www.faz.net/aktuell/politik/inland/zustand-der-bundeswehr-militaerisches-leichtgewicht-16497005.html>.

39. Adapted from “New Capability Profile Completes the Concept for Modernizing the Bundeswehr,” Federal Ministry of Defence, April 9, 2018, <https://www.bmvg.de/de/aktuelles/neues-faehigkeitsprofil-der-bundeswehr-27550>.

40. “New Capability Profile.”

41. Thomas Wiegold, “Bundeswehr stellt weiteres panzerbataillon auf,” *Augengeradeaus!* (blog), December 6, 2018, <https://augengeradeaus.net/2018/12/bundeswehr-stellt-weiteres-panzerbataillon-auf/>.

42. “Bundeswehr-Pläne.”

43. Wiegold, “Bundeswehr stellt.”

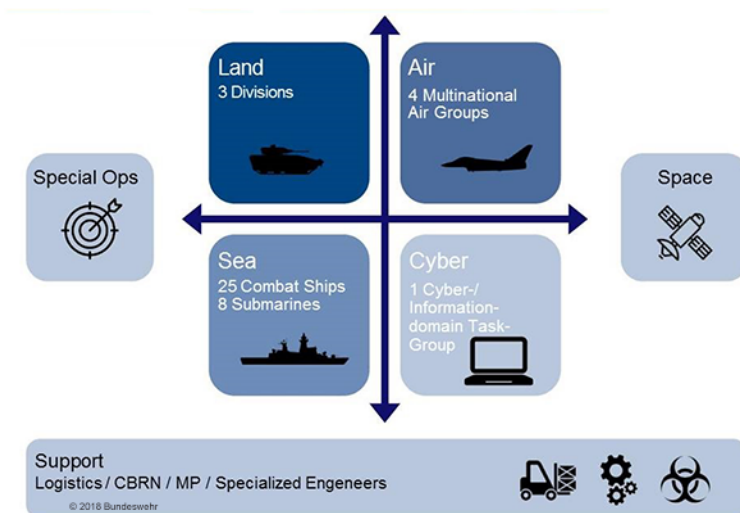


Figure 4-1. German level of ambition

Adapted and reproduced by permission from “New Capability Profile Completes the Concept for Modernizing the Bundeswehr,” Federal Ministry of Defence, April 9, 2018, <https://www.bmvg.de/de/aktuelles/neues-faehigkeitsprofil-der-bundeswehr-27550>. ©2018 by the Bundeswehr.

In addition, the *Luftwaffe* is preparing to acquire super-heavy-lift transport helicopters as a completely new capability. To reach the planned number of 25 surface combatants, the navy will have to replace six tenders, four frigates, and its antimine warfare vessels. But the *Bundeswehr* will also reacquire sets of capabilities it abandoned in the past, such as the ability to conduct air-sea operations – a capability it gave up 10 years ago when the navy retired its last Tornados.⁴⁴ See table 4-1 for a breakdown of these developments.⁴⁵

44. “Bundeswehr-Pläne.”

45. Adapted from Christian Mölling and Torben Schütz, *Responsible Defence Policy*, DGAPkompakt no. 23 (Berlin: German Council on Foreign Relations, October 2018).

Table 4-1. Development of major system numbers

Year	1985	2012	2018	2030
Phase	Cold War	Reorientation of the armed forces	Today	Planning
Battle tanks	4,200	225	244	330
Combat aircraft	875	225	222	270
Frigates	10	11	9	14

The last component of the capability goal is increasing the digitalization of the *Bundeswehr*. The new Cyber and Information Domain Service and its headquarters were set up in April 2017. The *Bundeswehr* has also launched a cyber defense research center and a cyber innovation hub. But the digitalization is not limited to cyber capabilities; greater digitalization is also intended to improve efficiency and speed both in the administration and the military sphere. The introduction of a digital battle management system, one of the key aims in the land domain, is to be accomplished for the first time for the German VJTF brigade in 2021. In addition, the experimental unit that is currently being established in Münster should lead to modernization programs for many existing assets and capabilities, such as the Puma infantry fighting vehicle.⁴⁶

46. "'System Panzergrenadier': Rheinmetall Modernizing Puma Infantry Fighting Vehicle and Other Equipment for NATO Spearhead VJTF 2023," Rheinmetall Group, July 22, 2019, https://rheinmetall.com/media/editor_media/rheinmetallag/press/pressearchiv_1/2019-07-22_Rheinmetall_Puma_System_PzGren_en.pdf.

ACHIEVING THE NEW LEVEL OF AMBITION

The Federal Ministry of Defence plans to achieve its defense policy U-turn through two main strategies: (1) an increase in personnel, materiel, and budget which was labeled *trendwenden* (trend reversals) by former Minister of Defence von der Leyen; and (2) the integration of German military efforts into Joint, multilateral formations.

Personnel

The transition from conscription to a professional, all-volunteer force included a significant reduction in the personnel strength of the *Bundeswehr*. This decision was made largely for budgetary reasons, but also for sound, practical reasons.⁴⁷ Conscripts were not going to be deployed abroad in crisis management operations. Liberated from the need to train and equip new but largely unusable recruits constantly, the *Bundeswehr* could focus on its core tasks. Yet conscription was a sacred cow in the Christian Democratic Union's platform, reflecting the party's commitment to national service. Indeed, ending conscription required the support of an enormously popular conservative politician, Karl-Theodor zu Guttenberg.⁴⁸

The end of conscription freed up resources for other tasks, but the switch to a professional force did not save as much cost as was expected. The end

47. Stephan Löwenstein, "Bauplatz Bundeswehr," *Frankfurter Allgemeine Zeitung*, February 28, 2011, <https://www.faz.net/aktuell/politik/die-guttenberg-affeere/guttenberg-und-die-reform-bauplatz-bundeswehr-1589417.html>.

48. Alan Cowell, "Draft Ends in Germany, but Questions of Identity Endure," *New York Times*, June 30, 2011, <https://www.nytimes.com/2011/07/01/world/europe/01germany.html>.

of conscription also stopped the steady influx of new recruits, who often came to enjoy military life and either prolonged their mandatory service or simply started a military career. In 2019, the *Bundeswehr* only received a little over two applications for every one open military position.⁴⁹ This figure stands in contrast to an average of 16 applications in the private sector.⁵⁰ For some officer positions, this lack of interest has been less of a problem. Nevertheless, for a force that still requires one out of every eight men and women in the available age cohorts to apply for service to meet recruiting standards and fill the ranks, this lack of interest is a major challenge in a healthy economy – perhaps less so in a declining market.⁵¹

Former Minister of Defence von der Leyen recognized this challenge when she came into office in 2013 and identified the attraction of sufficient qualified personnel as one of her key priorities.⁵² The *trendwende personal* (trend reversal in personnel) was accordingly her first major reform effort. Coming from the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth, one of von der Leyen's foremost

49. Bundestag, *Annual Report 2019 (61st Report)* (Berlin: Bundestag, January 28, 2020).

50. Tilman Steffen and Frieda Thurm, "Heute soldat zu sein heißt spezialist zu sein," *Die Zeit*, June 8, 2018, <https://www.zeit.de/gesellschaft/zeitgeschehen/2018-08/wehrpflicht-bundeswehr-personalproblem-cdu-faq>.

51. "Zu dick, zu pazifistisch, nicht deutsch: Jeder zweite schulabgänger für Bundeswehr ungeeignet," *Stern*, January 1, 2019, <https://www.stern.de/politik/deutschland/bundeswehr-hat-nachwuchsprobleme--zu-dick--zu-pazifistisch--nicht-deutsch-genug-8552990.html>.

52. Till Hoppe, "Calling in the Cavalry," *Handelsblatt*, October 31, 2014, <https://www.handelsblatt.com/english/politics/readiness-debate-calling-in-the-cavalry-/23614698.html>.

targets was to increase the *Bundeswehr's* appeal by providing an attractive and more family-friendly work environment. Nevertheless, the manpower challenge remains significant. The recent increase in the military's numbers has largely been achieved via service extensions and a later retirement age, making the *Bundeswehr* an older force.

The return of collective defense has also led Berlin to reconsider the necessary size of the *Bundeswehr*. As part of *trendwende personal*, the Federal Ministry of Defence decided in 2016 to increase the size of the *Bundeswehr* to 198,000 soldiers by 2024 (from about 184,000 today); this increase was the first since the end of the Cold War. The goal has since been bumped up to 203,000 by 2025.⁵³ To fulfill all of the tasks in the new *Bundeswehr* structure, however, even this addition will still not suffice. A ceiling of 203,000 soldiers means the Federal Ministry of Defence will have to rely more on its reserve forces as well as on civilians for the performance of tasks usually completed by military personnel.

Materiel

The parlous state of the *Bundeswehr's* materiel readiness is stark evidence of the need for more defense monies. The reports of grounded planes, broomsticks used in lieu of gun barrels, and soldiers buying their own winter clothes have slowly attracted support from politicians and the public for improving the materiel readiness of Germany's armed forces.

53. Barbara Gantenbein, "Bundeswehr soll weiter wachsen – Personalboard 2018 hat getagt," Bundesministerium der Verteidigung (website), November 29, 2018, <https://www.bmvg.de/de/aktuelles/bundeswehr-soll-weiter-wachsen-29414>.

According to the current “report on the materiel operational readiness of the *Bundeswehr*’s main weapon systems” presented by the German chief of defence to the *Bundestag* (German Federal Assembly) Defence Committee in June 2020, the readiness of the *Bundeswehr*’s most important major weapon systems lies at around 70 percent.⁵⁴ For many systems, the readiness is substantially lower: the readiness of helicopters lies at below 40 percent, and the readiness of Puma infantry fighting vehicles is at about 30 percent. The 2019 version of the report, which included specific numbers, stated only 39 of 128 Eurofighter Typhoons, 12 out of 53 Eurocopter (now Airbus Helicopters) Tigers, and 18 out of 71 NHIndustries NH90 transport helicopters were available. The German submarine fleet was entirely out of service.⁵⁵ Whenever Germany has to put together a force for an international alliance or exercise, the country often has to borrow

54. Federal Ministry of Defence, *Bericht zur materiellen einsatzbereitschaft der hauptwaffensysteme der Bundeswehr I/2020* (Berlin: Federal Ministry of Defence, June 9, 2020).

55. Deutsche Presse-Agentur, “Waffensysteme der Bundeswehr oft nicht einsatzbereit,” *Handelsblatt*, March 17, 2019, <https://www.handelsblatt.com/politik/deutschland/kampf-und-transporthubschrauber-waffensysteme-der-bundeswehr-oft-nicht-einsatzbereit/24112322.html>; and Robert Birnbaum, “Schweres gGerät der tTruppe nur bedingt einsatzbereit,” *Der Tagesspiegel*, February 27, 2019, <https://www.tagesspiegel.de/politik/bundeswehr-schweres-geraet-der-truppe-nur-bedingt-einsatzbereit/21011014.html>. Interestingly, the 2019 report was for the first time classified, suggesting the military and the ministry are sensitive about poor publicity and publicly displaying shortcomings to potential adversaries—a practice adopted earlier by then-US Secretary of Defense James Mattis. See Mackenzie Eaglen, “Mark Esper’s Biggest Challenge,” *Foreign Policy*, September 5, 2019, <https://foreignpolicy.com/2019/09/05/mark-espers-biggest-challenge>.

equipment from across the entire *Bundeswehr* to equip the participating elements. As reported by the military ombudsman in his report for 2018:

One of the main points of criticism . . . is materiel readiness. In the fifth year after the epochal year of 2014 . . . the trend reversals . . . are still largely unnoticeable. The “stop-gap” system of juggling shortfalls and shortages persists in all areas. Like the 2015 VJTF . . . the 2019 NATO VJTF is reliant on equipment being lent back and forth on a massive scale. This includes personal equipment like armoured vests or night vision equipment, too. . . . Spare parts continue to lack on a large scale; industrial maintenance and servicing is sluggish; training is suffering particularly severely in the flying units of all services, be it combat planes or helicopters, but also in the boat and ship squadrons of the Navy. All of this has already been reported in the annual reports of the previous years, as have the tank availability rates or the army’s deplorable radio equipment situation.⁵⁶

The military ombudsman’s report for 2019 was only slightly more optimistic, noting “there have to be limits to ‘pretending.’”⁵⁷

Originating in the 2011 reform, the three reasons for the lack of materiel readiness are a history of underfunding, the prioritization of crisis management operations in the last decade, and a broken procurement process. As mentioned before, the *Bundeswehr* has suffered from a lack of funding since the end of the

56. Hans-Peter Bartels, *Presentation of the 60th Annual Report of the Parliamentary Commissioner for the Armed Forces* (Berlin: Parliamentary Commissioner for the Armed Forces, January 29, 2019).

57. Hans-Peter Bartels, *Presentation of the 61st Annual Report of the Parliamentary Commissioner for the Armed Forces* (Berlin: Parliamentary Commissioner for the Armed Forces, January 28, 2020).

Cold War. As a result of attempts to balance the national budget and a very high level of mandatory spending within the defense budget (particularly for personnel), procurement and maintenance took the brunt of the hit because that funding is flexible and discretionary. New procurements were put off, existing orders were reduced, and maintenance and spare parts were cut down to a minimum. These measures had spillover effects in the defense industry: a reduction of capacity and know-how.⁵⁸

The second reason for the lack of materiel readiness is the dominance of expeditionary crisis-management missions following the end of the Cold War inevitably impacted German armament decisions.⁵⁹ Heavy (armored) units became less important, for example, and were not considered a priority or were even eliminated. The pressing needs of the soldiers deployed in crisis areas also made setting up a mechanism to acquire operationally relevant equipment as quickly as possible (the so-called Rapid Procurement Initiative) necessary.⁶⁰ Although it was in principle a good idea, this initiative also had the effect of sidelining the regular procurement process.⁶¹

The third reason for the lack of materiel readiness is the defense procurement process is dysfunctional. When former Minister of Defence von der Leyen

58. For example, see Stephen Flanagan et al., *A Diminishing Transatlantic Partnership? The Impact of the Financial Crisis on European Defense and Foreign Assistance Capabilities* (Washington, DC: Center for Strategic and International Studies Press, 2011).

59. Rainer Glatz et al., *Missions in a Changing World: The Bundeswehr and Its Operations Abroad* (Berlin: Stiftung Wissenschaft und Politik, September 2018).

60. Glatz et al., *Missions in a Changing World*.

61. Bartels, *Presentation of the 60th Annual Report*.

came into office in 2013, she appointed an experienced executive from McKinsey & Company, Katrin Suder, as the ministry's state secretary; as such, Suder was responsible for armaments. With the help of an army of consultants, Suder wanted to break up bureaucratic processes and put an end to a system that resulted in procurements arriving too late, over cost, and sometimes lacking expected or needed capabilities. The Eurofighter aircraft arrived 13 years behind schedule and at 38 percent over cost; the Puma infantry fighting vehicle arrived almost five years behind schedule and at 50 percent over cost; and the F125 *Baden-Württemberg*-class frigate arrived almost five years late and at 46 percent over cost.⁶² The *Bundesamt für Ausrüstung, Informationstechnik und Nutzung der Bundeswehr*, the 10,000-strong Federal Office of *Bundeswehr* Equipment, Information Technology, and In-Service Support, into which the separate acquisition arms of the services have been integrated is widely perceived as a model of "inefficiency, bureaucracy and, sometimes, outright incompetence and perpetually struggles to recruit and retain staff."⁶³

Although Suder left the ministry in 2018, acquisition reform remains a work in progress. Whether her initial reforms—which centered on introducing more oversight and transparency into the intraministerial planning process and improving the work of the *Bundeswehr* equipment office—will have

62. Federal Ministry of Defence, 9. *Bericht des Bundesministeriums der Verteidigung zu rüstungsangelegenheiten* (Berlin: Federal Ministry of Defence, June 2019), 51.

63. John Louth, "Germany Calling: The Bundeswehr, Acquisition and a Broken Narrative," RUSI, February 13, 2019, <https://rusi.org/commentary/germany-calling-bundeswehr-acquisition-and-broken-narrative>.

any results other than a parliamentary inquiry into the supposedly excessive use of consultants remains to be seen. Her initiative that would have had the biggest impact—an attempt to privatize at least parts of the *Bundeswehr* equipment office—has not happened. Similarly, discussions about changing the laws on tenders in the defense sector have gone nowhere. Whether new Minister of Defence Annegret Kramp-Karrenbauer, who launched her own Operational Readiness Initiative in February 2020, will be any more successful remains to be seen. Nor is everything well with the German defense industry. As summarily put by Christian Mölling, “There’s a whole generation of German engineers who haven’t worked on a major defense project. It’s not that they lost this skill; they never learned it.”⁶⁴

Finances

The third *trendwende* was to increase defense spending. The goal was €60 billion per year, which was expected to be 1.5 percent of the gross domestic product (GDP) by 2024. The *Bundeswehr* Office of Defence Planning considered this goal necessary for fulfilling all of Germany’s obligations and contributions to NATO and the EU.⁶⁵

No aspect of German defense policy has attracted more attention, and sometimes ire, from allies than

64. William Wilkes, “German Engineering Yields New Warship That Isn’t Fit for Sea,” *Wall Street Journal*, January 12, 2018, <https://www.wsj.com/articles/german-engineering-yields-new-warship-that-isnt-fit-for-sea-1515753000>.

65. Dan Krause, *Erfolg oder Fehlschlag – Wie steht es um die rendwenden der Bundeswehr?* (Bonn, DE: Europäische Sicherheit und Technik, June 6, 2019).

the level of German defense spending and its failure to meet NATO's defense spending targets. Yet, the German defense budget has grown from €32.44 billion in 2014 to €45 billion in 2020, an increase of almost 40 percent.⁶⁶ Although this level of spending remains a far cry from the €60 billion von der Leyen hoped for, a financial turnaround has undoubtedly taken place. Although the budget was expected to peak at €45 billion in 2020 and then slightly decrease to €43.97 billion by 2024, the new budget plans from March 2020 foresee a new peak of €45.64 billion in 2021, at which level spending will be maintained until 2024.⁶⁷ These new plans mean an increase of €2 billion in the financial planning at a time when almost every other ministry is experiencing budget cuts. Whether this budget plan for defense will hold in the wake of the coronavirus disease 2019 crisis is yet to be seen.⁶⁸

In NATO terms, the defense burden was supposed to reach 1.38 percent of the German GDP in 2020. This

66. "Die trendwende finanzen," Bundeswehr, n.d., <https://www.bundeswehr.de/de/ueber-die-bundeswehr/modernisierung-bundeswehr/verteidigungshaushalt-trendwende-finanzen>.

67. Thomas Wiegold, "Kabinettschließt Haushaltsentwurf: Mittelfristig sinkender Verteidigungsetat," *Augengeradeaus!* (blog), June 26, 2019, <https://augengeradeaus.net/2019/06/kabinettschliesst-haushaltsentwurf-mittelfristig-sinkender-verteidigungsetat/>.

68. Thomas Wiegold, "Verteidigungshaushalt soll stärker steigen als geplant – aber unter Corona-Vorbehalt," *Augengeradeaus!* (blog), March 16, 2020, <https://augengeradeaus.net/2020/03/verteidigungshaushalt-soll-staerker-steigen-als-geplant-aber-unter-corona-vorbehalt/>.

goal was markedly different from 1.24 percent in 2018.⁶⁹ Although Chancellor Merkel has stated her goal is to reach the interim goal of 1.5 percent by 2024, with the possibility of reaching 2 percent by 2031, her coalition partner, the Social Democrats, has not supported the increase yet.⁷⁰ The government's original budget projections even showed the defense burden, reflected as a percentage of GDP, dipping as 2024 approaches, making a jump to 1.5 percent a difficult target to meet. But a deep recession could well scramble these percentages and result in the government meeting its GDP target of 1.5 percent even sooner. See table 4-2 for a breakdown of the defense budget.⁷¹

Table 4-2. Financial outlook through 2024

2019	2020	2021	2022	2023	2024
43.23	45.20	45.64	45.64	45.64	45.64
Defense budget (billion €)					

69. NATO, "Defence Expenditure of NATO Countries (2013–2019)," PR/CP (2019)123, November 29, 2019, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_11/20191129_pr-2019-123-en.pdf.

70. "Germany's Merkel: 2% of GDP on Defense by 2031 'Realistic,'" Associated Press, November 7, 2019, <https://apnews.com/58e8073f384847a9a7627f0621215c52>.

71. Federal Ministry of Finance, "Eckwertebeschluss der bundesregierung zum regierungsentwurf des bundeshaushalts 2021 und zum finanzplan 2020 bis 2024," March 18, 2020, <https://www.bundesfinanzministerium.de/Content/DE/Pressemitteilungen/Finanzpolitik/2020/03/2020-03-18-pm-eckwertebeschluss-uebersicht.pdf>; Federal Ministry of Finance, *Finanzbericht* (Berlin: Federal Ministry of Finance, August 2019); and Federal Ministry of Defence, *11. Bericht des Bundesministeriums der Verteidigung zu rüstungsangelegenheiten, teil 1* (Berlin: Federal Ministry of Defence, June 2020).

Recent increases in funding have served to boost defense investment. In 2019, the *Bundeswehr* came close to meeting NATO's defense investment pledge of spending 20 percent of its budget on defense investment and research and development for the first time. The investment of €8.26 billion in 2019 and €9.03 billion in 2020 was clearly needed.⁷² In 2016, the Federal Ministry of Defence estimated the *Bundeswehr* required a total of €130 billion in defense investment through the year 2030 to reach the Federal Defence Forces' modernization goals. Yet, the ministry only invested €5.27 billion in 2017 and €6.06 billion in 2018.⁷³

A problem in the *Bundeswehr's* demand for more funds has been the ministry often fails to spend its investment title when projects are delayed. The investment title amounted to €2.6 billion in the 2018 budget and €1.1 billion in the 2019 budget.⁷⁴ According to Ulf von Krause, this problem cannot be fixed overnight because of current planning processes, existing defense industry capacities, and government fiscal rules. To address this problem, policy makers have created a €500 million investment reserve, allowing funds for projects to be shifted from year to year.

72. Federal Ministry of Defence, 11. *Bericht des Bundesministeriums der Verteidigung*.

73. Federal Ministry of Defence, 7. *Bericht des Bundesministeriums der Verteidigung zu rüstungsangelegenheiten, teil 1* (Berlin: Federal Ministry of Defence, March 2018); and Federal Ministry of Defence, *Vergleich verteidigungshaushalt 2019 zu 2018* (Berlin: Federal Ministry of Defence, 2019).

74. Ulf von Krause, *The 2-Percent Objective and the Bundeswehr*, Security Policy Working Paper no. 23/2018 (Berlin: Federal Academy for Security Policy, 2018).

As useful as the current increase in funding is, questions arise about whether this trend will continue through the decade as planned and whether the projected increases in resources, even if fulfilled, will be sufficient to meet the capability goals set by the ministry. In a letter to the Bundestag Defence Committee in December 2019, the ministry warned the uncertain financial outlook was putting the reform agenda and the commitments made to NATO and the EU at risk. The *Bundeswehr* will only be able to meet its goal of providing a fully equipped and digitalized brigade for NATO's VJTF in 2023 under "quantitative and qualitative limitations" and will have to borrow materiel from other units and resort to older technology.⁷⁵ Similarly, the long-term outlook has already led to changes in *Bundeswehr* planning—for example, by turning the 3rd Division of the army into a nonactive formation. Full implementation of the *Capability Profile of the Bundeswehr* depends on a budget increase to 1.5 percent of the GDP by 2024 and to 2 percent by 2032.⁷⁶

MULTINATIONAL INTEGRATION

In its attempts to build a credible collective defense, Germany counts on multinational integration at all levels. This reliance is embodied most concretely by the Framework Nation Concept. Because only a few European allies still have a broad set of capabilities or the ability to develop these

75. Mölling and Schütz, *Responsible Defence Policy*.

76. "Bundeswehr zweifelt an eigener Einsatzfähigkeit," *Der Spiegel*, December 20, 2019, <https://www.spiegel.de/politik/deutschland/bundeswehr-zweifelt-an-eigener-einsatzfaehigkeit-a-1302310.html>.

capabilities, these allied militaries will have to assume the role of anchor armies for their smaller allies. The *Bundeswehr's* role as a framework nation means it will have to have a full spectrum of capabilities, including in the domains of command and control, reconnaissance, and logistical support structures. Having a full spectrum of capabilities should enable the integration of more specialized capabilities from partner nations, capabilities Germany will not have to provide. As said in the *Bundeswehr Concept*, "The capabilities as a framework nation make it possible to flexibly and synergistically integrate and lead the force contributions of allies and partners in a multinational operation."⁷⁷

For Germany, the concept of a framework nation has very practical consequences. Three future "German" divisions will include up to 15 brigades, only eight to 10 of which will be German; the rest will be supplied by allied partners. For example, the establishment of the headquarters of 1st German Netherlands Corps has enabled Germany and the Netherlands to save structures that would otherwise likely have been disbanded. (Given the size of its armies, the Netherlands would require no corps-level headquarters, and Germany, not more than one.) Over the past few years, two-thirds of the Royal Netherlands Army has been subordinated to German division headquarters. This integration occurs at every level. For example, although the Dutch 43rd Mechanized Brigade has been assigned to the German 1st Panzer Division, the brigade includes the German 414 Tank Battalion, which in turn includes a Dutch

77. von der Leyen, *Konzeption der Bundeswehr*.

tank company.⁷⁸ The German Navy's amphibious battalion uses a Dutch transport ship, and Germany has committed to a multinational tanker fleet planned by the Netherlands and Luxembourg.

Cooperation is not limited to the Netherlands. The Czech Republic's 4th Rapid Deployment Brigade is to be assigned to the German 10th Panzer Division, and the Romanian 81st Mechanized Brigade to the German Rapid Forces Division.⁷⁹ But the Germans also integrate themselves into other commands. The German-led multinational EFP battlegroup in Lithuania is assigned to a Lithuanian brigade to facilitate Joint exercises, maneuvers, and training.⁸⁰

CONCLUSION

Since 2014, German defense policy has undergone an enormous transformation and, arguably, has put Germany on a path to being an indispensable nation for European conventional collective defense. For the United States and Europe, this development has both an upside and a downside. On the one hand, the concentration on national and collective

78. Thomas Wiegold, "Auf dem weg nach Bergen: Deutsch-Niederländisch-Geutsch-Niederländische unterstellung," *Augengeradeaus!* (blog), March 17, 2016, <https://augengeradeaus.net/2016/03/auf-dem-weg-nach-bergen-deutsch-niederlaendisch-deutsch-niederlaendische-unterstellung/>.

79. Johannes Leithäuser, "Warum die Bundeswehr so sehr auf kooperation mit anderen setzt," *Frankfurter Allgemeine Zeitung*, February 10, 2017, <https://www.faz.net/aktuell/politik/inland/was-es-mit-der-ostverschraenkung-der-bundeswehr-auf-sich-hat-14870173.html>.

80. Leithäuser, "Warum die Bundeswehr so sehr auf kooperation."

defense is politically much less controversial than the engagement in international crisis management and large stabilization missions. The new focus has thus enabled the *Bundeswehr* to obtain significant increases in defense spending. A broad consensus the *Bundeswehr* needs better capabilities and Germany should become one of the central pillars of European defense has been established. The perception of free riding on US security guarantees is decreasing, and Europeans are taking the defense of their continent more into their own hands, albeit within a NATO framework.

But this defense policy reversal comes at a cost – the *Bundeswehr* will be contributing less to international crisis management. Germany's high collective defense ambitions will leave little room for the *Bundeswehr's* significant involvement in international crisis management, and the Federal Defence Forces' mindset will gladly return to a more familiar mission and strategic outlook. This development will be reinforced by intervention fatigue and the commonly held sentiment in Germany the military should only be used as a last resort. Yet, at the same time, the reasons German policy makers deemed greater international military engagement necessary in 2014 remain valid and may have even gained more urgency. The key challenge for Berlin this decade will be how to balance the policy change toward collective defense with Germany's ambitions as expressed in the Munich consensus while maintaining the political support necessary to meet spending plans.

5. INDIA: CAPABLE BUT CONSTRAINED

Ashley J. Tellis

KEY POINTS

- The Indian Armed Forces are large and competent, but they face significant internal security challenges as well as major external dangers from China and Pakistan.
- An underperforming economy has constrained military budgets and largely confined the Indian military to ensuring internal security and protecting the country's frontiers.
- Indian policy makers have expressed an interest in the country playing a more significant role in the wider Indo-Pacific region, but they still eschew the kind of strategic partnerships that would make enhanced power projection possible.

Although India is still a developing country, it fields large and capable military forces. Today, India possesses the world's second-largest army (when measured by personnel in arms on active duty), which is complemented by arguably the world's largest paramilitary forces; the seventh-largest navy (when measured by the number of vessels); and the fourth-largest air force (when measured by the number of combat aircraft).¹ These sizeable capabilities are

1. International Institute for Strategic Studies (IISS), *The Military Balance 2018* (London: IISS, February 2018); and "Indian Air Force Fighter/Attack Aircraft," GlobalSecurity.org, updated January 13, 2020, <https://www.globalsecurity.org/military/world/india/air-force-equipment-fighter.htm>.

driven by India's difficult threat environment, which is marked by significant internal security challenges as well as by the major external dangers posed by China and Pakistan.

For most of India's postindependence history, Pakistan has constituted a major threat. The Pakistan Armed Forces are relatively large, highly professional and motivated, and—barring the Indo-Pakistani War of 1971 in the east—have proven to be effective adversaries. In recent decades, however, China has eclipsed Pakistan as the pacing threat to India. Three decades of record Chinese economic growth, coupled with comprehensive military modernization and rising strategic ambitions, have resulted in China posing new threats to India, making Pakistan pale in comparison.

As Sino-Pakistani ties have deepened over the past half-century, India has found itself confronting two major bordering adversaries. This reality has compelled India to maintain military forces capable of dealing with both threats (possibly simultaneously), to deploy these capabilities along vast and diverse fronts, and to reach for a modicum of technological and operational superiority over Pakistan while maintaining enough dissuasive power vis-à-vis China. When India's domestic security challenges are thrown into the mix, New Delhi's strategic environment appears daunting.

INDIA'S GRAND STRATEGY AND DEFENSE EXPENDITURES

Although India's aspirations for great-power status were evident from the time of its independence, its leaders recognized that realizing this ambition would

be a long-term endeavor. The two more pressing objectives involved preserving India's internal unity and territorial integrity and accelerating its economic development.

Upon independence, India found itself burdened by the difficulty of absorbing 565 princely states—which controlled 40 percent of the country's territory and 23 percent of its population—in addition to integrating an extraordinarily diverse population marked by dramatic racial, linguistic, religious, caste, and economic differences into a single polity. The objective of preserving internal unity was further complicated by India's independence materializing at the exact time of the subcontinent's partition, with the new state, Pakistan, challenging India through war over the disputed territory of Jammu and Kashmir. The problem of disputed boundaries, which initially arose in the west, spread within two decades to the north—along the Sino-Indian border—as well.

India sought to resolve the problems of internal unity by constructing a multinational state that would be governed by a liberal democratic regime to provide voice to its myriad internal constituencies.² This strategy has been largely successful (even though it is now increasingly under pressure from Hindu majoritarianism), but whenever it failed to produce satisfactory integration—for example, in the northeastern region of India over several decades, in the Punjab during the 1980s, or to this day in Jammu and Kashmir—the Indian government employed its military forces to suppress the forces

2. Ashley J. Tellis, "Completing Unfinished Business—From the Long View to the Short," in *Getting India Back on Track*, ed. Bibek Debroy, Ashley J. Tellis, and Reece Trevor (Washington, DC: Carnegie Endowment for International Peace, 2014), 1–28.

of secessionism. The problems posed by the external threats from Pakistan and China to India's frontiers had to be managed primarily by military instruments because, to this day, diplomacy has failed to resolve these disputes. As a result, India was condemned to maintain large military forces right from the moment of its modern founding because the demands of internal security and external defense proved to be significant and pressing.

Today, the Indian Armed Forces can shape political outcomes mainly within the Indian subcontinent and its immediate environs rather than in the wider arenas of the Indo-Pacific. The military would be hard-pressed to conduct significant combat operations that involve forcible entry against all but minor adversaries without extensive support from some foreign partner. Because Indian forces are highly professional and competent, they could acquire the capabilities that would enable them to prosecute major power projection missions across the wider Indo-Pacific theater if India's political leaders chose to develop such proficiencies. Despite the Indian government's periodic articulation of its interest in preserving an expansive sphere of influence that encompasses at least the entire northern Indian Ocean basin, the Indian state has confined its military spending mainly to ensuring internal security and protecting its frontiers.

India's unwillingness to commit resources to expand its influence is driven by the reality that—despite improved economic growth in recent years—India is still a poor, developing country where nearly 50 percent of its population of 1.3 billion lives on less than \$3.20 a day, the World Bank's median poverty

line.³ The Indian state has little choice but to prioritize increasing economic development over and above national defense.

India remains a robust electoral democracy, which further strengthens the priority of economic development. Since addressing bread-and-butter issues is critical to success in mass politics (as opposed to national security, which remains largely an elite interest), India's political leaders have consistently paid more attention to economic and technological development rather than expanding the country's influence through military instruments. This emphasis is reinforced by the hidden belief of the Indian political class that the country is basically secure.

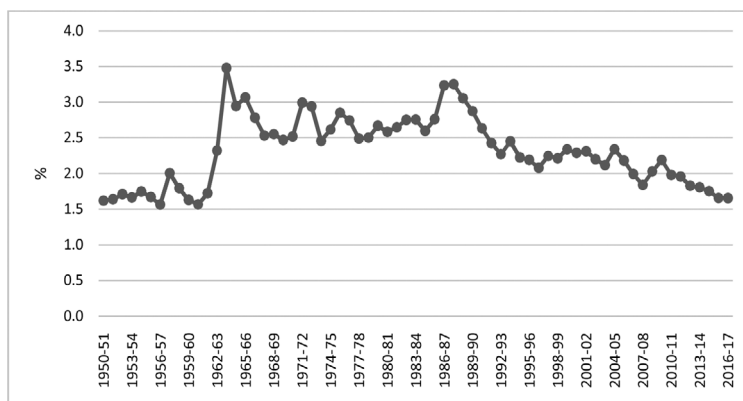
The resilience of this attitude has ensured Indian defense budgets have remained relatively modest since independence. As figure 5-1 indicates, India's defense expenditures have generally hovered between 1.5 to 2.5 percent of the gross domestic product (GDP) for most of its postindependence history, crossing this ceiling mainly during major wars or bursts of large capital expenditures.⁴

The data since 1991 is more interesting. Although India's average GDP growth has jumped beyond 5 percent per annum since its economic reforms in that year, its defense expenditures as a proportion of GDP have progressively fallen, even though the year-on-year military spending has increased in absolute terms. The decline in military expenditures as a proportion

3. World Bank Group, "Poverty & Equity Brief: South Asia India," World Bank DataBank, April 2020, https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_IND.pdf.

4. Laxman Kumar Behera, *Indian Defence Industry: An Agenda for Making in India* (New Delhi: Pentagon Press, 2016), 5.

of GDP since 2011-12 has been especially significant (see figure 5-2), and the slowing growth of the Indian economy since at least 2017 suggests Indian defense spending is unlikely to increase as a percentage of GDP in the future.⁵



Note: GDP figures for up to 2010-11 are based on base year 2004-05 and between 2011-12 and 2016-17 on base year 2011-12.

Figure 5-1. Share of defense expenditure in GDP, 1950–2016

Reprinted with permission from Laxman Kumar Behera, *Indian Defence Industry: An Agenda for Making in India* (New Delhi: Institute for Defence Studies and Analyses: Pentagon Press, 2016), 5. © 2016 by the Institute for Defence Studies and Analyses.

The Indian defense budget in 2019–20 hovered at slightly less than \$62 billion, placing India among the top six military spenders globally.⁶ Though this total is somewhat less than a third of China’s official defense

5. Vinay Kaushal, “Defence Budget 2019–20: The Slide Continues,” February 4, 2019, <https://idsa.in/idsacomments/defence-budget-2019-20-vkaushal-040219>.

6. Stockholm International Peace Research Institute, *Trends in World Military Expenditure, 2018* (Stockholm: Stockholm International Peace Research Institute, April 2019), 2.

spending, it is over five times that of Pakistan's defense budget.

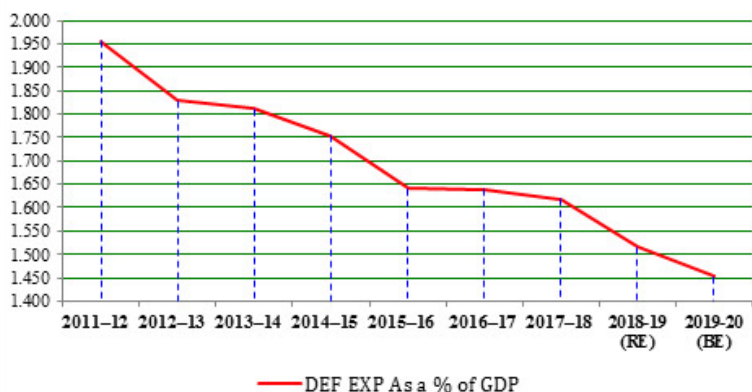


Figure 5-2. Indian defense spending since 2011-12

Reprinted with permission from Vinay Kaushal, "Defence Budget 2019-20: The Slide Continues," February 4, 2019, <https://idsa.in/idsacomments/defence-budget-2019-20-vkaushal-040219>. © 2019 by the Manohar Parrikar Institute for Defence Studies and Analyses.

India's military expenditures are substantial, but a closer look reveals significant problems. India's defense budget includes three different accounts: (1) civil expenditures related to the Ministry of Defence; (2) defense pensions; and (3) expenditures on the defense services themselves, which include the allocations for the Indian Army, Indian Navy, Indian Air Force (IAF), Defence Research and Development Organisation, and Indian Ordnance Factories. When India's defense budget is divided among these three accounts, the third receives about 71 percent of the total of approximately \$62 billion (about \$44 billion).

The lion's share of the \$44 billion goes to the Indian Army (56 percent), followed by the IAF (23 percent), the Indian Navy (15 percent), and the Defence Research and Development Organisation (6 percent),

with the small residual covering the costs of the Indian Ordnance Factories.⁷ The crisis afflicting Indian defense spending derives fundamentally from the resources available for modernization being crowded out almost entirely by the “revenue expenditure” – costs that neither create assets nor reduce the government’s liabilities. Today, almost 60 percent of the Ministry of Defence’s defense budget is eaten up by pay and pensions, a testament to the steady increase in size of India’s personnel under arms over the last three decades—during which the 10 biggest defense spenders have done exactly the opposite.

The Indian Army is especially victimized by this reality: 83 percent of the army’s budget is eaten up by revenue expenditures, leaving only 17 percent for capital investments. The IAF and the Indian Navy fare better, but not dramatically so: The revenue expenditure of the air force is 49 percent vice 51 percent available for capital investments, and the revenue expenditure of the navy, the smallest service, is 43 percent, thus leaving a somewhat more respectable 57 percent available for capital modernization. The upshot is those armed services most capable of power projection outside the country’s immediate frontiers enjoy only modest financial advantages where force improvements are concerned. But even these gains are limited by the total funding of the IAF and the Indian Navy, which collectively is less than 27 percent of the defense budget.⁸

Even so, the aim of effectively protecting the Indian landmass in the face of rising external threats is under

7. Laxman Kumar Behera, *India’s Defence Budget 2019–20* (New Delhi: Manohar Parrikar Institute for Defence Studies and Analyses, June 8, 2019), 2–6.

8. Behera, *India’s Defence Budget*, 5–6.

stress. The committed liabilities of the Indian military in 2018–19 stood at some \$15.4 billion. Against this obligation, the government of India allocated only some \$10.4 billion. When the necessary acquisitions to meet India’s modernization requirements are factored in, the shortfall grows to close to \$10 billion.

Despite Prime Minister Narendra Modi’s ostensibly muscular national security policy, defense modernization as a share of India’s defense budget has dropped since 2013–14.⁹ This drop does not appear to have prevented India’s Ministry of Defence from continuing to sign new contracts for fresh acquisitions which, since April 2018, have totaled nearly \$16.4 billion. But the resources required to fund these liabilities on a multiyear basis have not been forthcoming. Against the roughly \$2.5 billion in new monies required annually (assuming that 15 percent of the new liabilities is to be paid off each year), the Indian government has allocated barely \$1 billion in additional modernization funds.¹⁰

THE INDIAN ARMY

Despite budgetary pressures, the Indian Army maintains enormous and relatively well-equipped combat forces that are oriented to servicing a “two-and-a-half-front war.”¹¹ The two-front-war requirement entails prosecuting high-intensity operations on

9. Vinayak Krishnan, *Demand for Grants 2019–2020 Analysis: Defence* (New Delhi: PRS Legislative Research, July 8, 2019), 3.

10. Behera, India’s Defence Budget, 7.

11. Cecil Victor, “India’s Security Challenge: A Two-and-Half-Front War,” *Indian Defence Review*, July 7, 2017, <http://www.indiandefencereview.com/spotlights/indias-security-challenge-a-two-and-half-front-war/>.

the western border against Pakistan and on the northern border against China simultaneously (or near simultaneously), even as the force concurrently conducts counterinsurgency operations—the half front—in various domestic locales, such as Jammu and Kashmir. As budgetary constraints have become more severe, the question is whether the two-and-a-half-front-war criterion remains a sensible guideline for force acquisitions and war planning.

This debate is long overdue, and two issues merit reconsideration: first, whether the Indian Army should be formally tasked with counterinsurgency duties, given India has a huge paramilitary force that exceeds even the Indian Army in size; and, second, whether the requirements of prosecuting a two-front war simultaneously ought to be retained, given the relatively low probability of such a war occurring. In theory, the elimination of the simultaneity criterion ought to permit the Indian Army to reduce its force size because the maneuver forces maintained for dealing with one adversary can also be deployed for operations against the other.

One must remember the Indian Army has been fighting counterinsurgency campaigns for close to 70 years in various parts of India.¹² Although India's paramilitary forces could be employed as full substitutes for the army in this role, their likely inability to replicate the army's expertise effectively suggests the latter will still be required for some counterinsurgency duties. Similarly, the removal of the simultaneity criterion may not provide the force reductions that, in the abstract, appear plausible

12. Rajesh Rajagopalan, *Fighting Like a Guerrilla: The Indian Army and Counterinsurgency* (New Delhi: Routledge India, 2008).

because the China and Pakistan fronts are sufficiently distinctive that the Indian Army in effect maintains two different kinds of warfighting forces: mountain warfare divisions along the northern borders and infantry divisions complemented by mechanized and armored divisions for operations in the plains and deserts along the western border. Although some formations deployed against Pakistan are dual-tasked formations, meaning they would be deployed against China in an emergency, the realities of geography and size of the opposing forces in each case prevent the Indian Army from sharply reducing the number of divisions it maintains.¹³

Two other realities shape the Indian Army's large force size. First, given the trauma surrounding the country's independence, which resulted in the partition of the subcontinent, India's political leaders since have insisted their armed forces lose no further territory in the event of conflict. The huge territorial claims levied by Pakistan and China over the years have only reinforced this sentiment. The political requirement that no Indian territory be lost has compelled the Indian Army to defend the country's vast frontiers linearly, packing the front with numerous combat formations intended to parry any adversary thrusts that might result in significant territorial losses. The inability to trade space for operational effectiveness

13. Franz-Stefan Gady, "Ajai Shukla on the Current and Future State of India's Military," *Diplomat*, September 25, 2019, <https://thediplomat.com/2019/09/ajai-shukla-on-the-current-and-future-state-of-indias-military/>; and Kartik Bommakanti, "India's Two-Front War Challenge: The Problem of Choice, Scenarios and Uncertainty," Observer Research Foundation, October 10, 2019, <https://www.orfonline.org/expert-speak/indias-two-front-war-challenge-problem-of-choice-scenarios-and-uncertainty/>.

has thus prevented the Indian Army from generally prosecuting large-scale campaigns of maneuver. Instead, the army plans for wars of attrition in which large forces deployed along virtually continuous fronts are employed to grind down their opponents in set-piece battles that put a premium on numerical and firepower superiority.

The other reason the Indian Army has ended up with huge military forces is the enlisted manpower that forms the bulk of the army's infantry formations is drawn mainly from rural India. Although recruits have completed high school and are trained to rigorous standards upon joining the service, they are most proficient in infantry operations that involve either holding territorial objectives or mounting prepared advances on the battlefield. The officer corps of the Indian Army is also highly conservative and appears to be comfortable with methodical and deliberate operations. The constrained defense budgets have only reinforced the army's proclivity for attrition operations because the army could not invest heavily in alternatives to light infantry.

In all of its wars with Pakistan, only once did the Indian Army demonstrate the capacity for deep-maneuver warfare. In East Pakistan in 1971, then-Major General Jack Jacob devised a war plan that used mainly infantry forces in narrow penetrations at great operational depths, not so much to destroy the Pakistan Army's war-waging capacities than to extinguish its capacity to respond coherently, thus inflicting a swift and conclusive defeat.¹⁴ Over the next two decades, the Indian Army toyed with

14. J. F. R. Jacob, *Surrender at Dacca: Birth of a Nation* (New Delhi: Manohar, 1997).

maneuver warfare using armored forces. This approach culminated in General Krishnaswamy Sundarji's plan Army 2000: to use concentrated armor formations to thrust rapidly and deeply into Pakistan—either to destroy Pakistan's encircled defenders physically or to impair their capacity to mount a coherent defense—before the Indian armored spearheads reached Pakistan's principal north-south lines of communication to cut the country in half. But Pakistan's acquisition of nuclear weapons made such plans for decisive maneuver campaigns questionable. Since the 2001-02 India-Pakistan standoff, the Indian Army—cognizant of Pakistan's nuclear capabilities—has reverted to attrition warfare, planning to pursue shallow penetrations of Pakistani territory, destroy local defenses, and inflict meaningful costs on Pakistan while still staying below its redlines for a nuclear response.¹⁵ Against China, the emphasis remains on robust frontier defense, albeit with room for modest tactical offensives, depending on the terrain.

Consistent with these concepts of operations, the Indian Army is deployed along the country's borders to the north and west to guard against Chinese and Pakistani threats. These forces are organized under six commands.

The Eastern Command oversees the Indian northeast and is primarily responsible for the defense of the Sino-Indian border in the region. The Eastern Command controls four corps, with one new mountain strike corps still forming. Once this corps has been completed, Eastern Command will control 12 divisions for operations against China.

15. Walter C. Ladwig III, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no. 3 (Winter 2007/08): 158-90.

The Northern Command, which has an area of responsibility that covers Jammu and Kashmir, shares responsibility for defending against China in the east and Pakistan in the west. The Northern Command controls three corps: one oriented against China, another focused on the northern Line of Control vis-à-vis Pakistan (but which would be available for Chinese contingencies in an emergency), and a third oriented solely against Pakistan. All told, the Northern Command controls upward of seven divisions when command reserves and other counterinsurgency forces are counted.

The Western Command is responsible for the defense of the northern Indian Punjab and controls three corps, with upwards of eight divisions plus an independent artillery division for operations against Pakistan. Moving further south in the area encompassing southern Punjab and northern Rajasthan is the Southwestern Command, which controls two corps, with five divisions as well as a separate artillery division.

Finally, the Southern Command covers the huge area of southern Rajasthan and the state of Gujarat—the southern extremity of the border with Pakistan—with two corps. Additionally, the Central Command hosts one mountain division as an army reserve, which could be deployed in support of either the Southwestern or Southern Command vis-à-vis Pakistan or in support of the Northern or Eastern Command vis-à-vis China as required.¹⁶

Against China, Indian military planners posit the army must be prepared to face anywhere from six to 20

16. Richard Rinaldi and Ravi Rikhye, *Indian Army Order of Battle* (Takoma Park, MD: Tiger Lily Publications LLC, 2011).

People's Liberation Army (PLA) division equivalents, with this number growing as China completes its infrastructure modernization in Tibet. Because the terrain along the northern borders constrains China's force-to-space ratios in predictable ways, the Indian Army does not have to match the attacking Chinese in numbers across the board, but the army would require significant advantages in battlefield firepower, tactical mobility, air support, and command and control to be successful.

India also must have the ability to carry out behind-the-border attacks to prevent Chinese theater reinforcements from reaching the front as well as the ability to interdict the large Chinese combat forces that are likely to echelon in depth behind the line of contact. In any event, Indian political goals in such a conflict would be relatively conservative—preventing China from capturing Indian territory while seizing some significant Chinese pockets to trade away in postwar negotiations. Attaining these objectives will require continued modernization of India's northern defenses.

Against Pakistan, India must plan for two possibilities: Pakistan could initiate a conventional conflict on short notice as it did in 1947–48, 1965, and 1999, or India could initiate conventional operations in retaliation for some Pakistani provocation, such as a major terrorist attack. In both scenarios, India would likely respond with some variation of its Cold Start doctrine, which calls for the conventional forces deployed closest to India's border to move quickly into Pakistani territory and mount modest penetrations to weaken the Pakistani defenders enough to penalize them for the *casus belli*. The Indian Army must reckon with the prospect of confronting some 14 Pakistani infantry divisions, two armored divisions, and two

mechanized divisions, besides other independent brigades. The Indian Army can summon 24 divisions against this Pakistani force, but not all would be immediately available for operations because of their dispersed locations in the rear.

The broad comparison above suggests the Indian Army would have difficulty reducing its division strength dramatically unless it could trade numbers for greatly enhanced lethality and mobility of its forces. But such a trade would require significant capital investment and different operational competencies. Moreover, such a restructuring would represent a gamble because, if the quest for smaller yet more sophisticated forces falters, India's security could be at enhanced risk, at least in the short run. Given this risk, the Indian Army has fallen back on what it is most comfortable with: maintaining and improving an incrementally expanding, infantry-dominant force.

Realizing this more modest ambition, however, would still require abundant resources. Although the Indian Army has world-class competencies in high-altitude and jungle warfare and is capable of both effective special operations and large-scale infantry operations, it urgently needs to upgrade everything from its individual and crew-served weapons to its artillery, air defense, and aviation systems to be able to fight effectively at night, in adverse weather, and in an increasingly dense electronic and cyber warfare environment.¹⁷

The Indian Army's most significant power projection limitation is it is no longer an expeditionary

17. Philip Campose, "Modernising of the Indian Army: Future Challenges," in *Defence Primer 2017*, ed. Sushant Singh and Pushan Das (New Delhi: Observer Research Foundation, 2017), 26-34.

force, as it was in the days of the British Raj. Army planners hope to expand this capability, but, today, the army's capabilities reside in small units, such as the 50th Parachute Brigade.

THE INDIAN AIR FORCE

The IAF is a large, competent, and sophisticated force. Today, the IAF fields about 800 aircraft.¹⁸ The IAF's combat core consists of 700 to 800 tactical fighters oriented toward air-intercept and ground-attack missions, with the remainder consisting of combat support platforms for airborne early warning, aerial refueling, and theater or strategic transport. Ever since India became a nuclear weapon state, nuclear gravity bombs have been an important element of the Indian deterrent; however, these weapons are now increasingly complemented by land- and sea-based ballistic missiles.¹⁹ The IAF remains a credible part of India's nuclear triad because the air force is superior to its Pakistani and Chinese counterparts (the latter being in the Tibetan theater).

The IAF's primary mission remains air defense of India. India's political leaders expect, above all else, their air force will protect India's population centers, its critical economic and technological hubs, and its major military installations and assets from the threat

18. IISS, *The Military Balance 2019* (London: IISS, 2019), 270.

19. Ashley J. Tellis, *A Troubled Transition: Emerging Nuclear Forces in India and Pakistan*, Fall Series Issue 919 (Washington, DC: Hoover Institution on War, Revolution, and Peace, November 5, 2019).

of air attack.²⁰ In the early postindependence period, this objective implied a concentration on air defense operations executed mainly through defensive air control supplemented by offensive counterair and, as required, close air support operations in aid of the Indian Army and Navy.

As the size, capability, and relative force advantages of the IAF improved—with the induction in sizable numbers of third-generation fighters, such as the MiG-23/27, the Jaguar, and the Mirage-2000, and fourth-generation fighters, such as the MiG-29 and the Su-30MKI—the orientation of the service changed dramatically. Today, the IAF's capabilities enable it to pursue an offensive counterair campaign—one that accepts defensive counterair missions when necessary, but which seeks to maximize success by destroying the adversary's air capabilities from the outset through attacks aimed at air defenses, air bases, and combat aviation. These operations are all supported by enabling capabilities such as electronic warfare, airborne battle management, aerial refueling, and unmanned aerial operations.²¹

As India's leaders have expressed the ambition for the country to become a "leading power," the IAF's vision of itself has also evolved along three dimensions.²² First, the service no longer thinks of itself as a supporting force intended simply to realize

20. Sanu Kainikara, "Indian Air Power," in *Routledge Handbook of Air Power*, ed. John Andreas Olsen (London: Routledge, 2018), 327–38.

21. Ashley J. Tellis, *Dogfight!* (Washington, DC: Carnegie Endowment for International Peace, 2011), 29–39.

22. Subrahmanyam Jaishankar, "IISS Fullerton Lecture by Dr. S. Jaishankar, Foreign Secretary in Singapore" (speech, Fullerton Forum 2015, Singapore, July 20, 2015).

success in land and naval operations; rather, the IAF regards itself as an independent warfighting arm that can produce strategic effects through the autonomous application of concentrated yet discriminate airpower. In this sense, the IAF reflects the expectations of most of its peer air forces in the first world.

Second, the IAF views the ability to exploit space, cyberspace, and the electronic spectrum as critical to operational success in the aviation sphere. Accordingly, the service has articulated the ambition of becoming an aerospace force as it has deepened its dependence on space for meteorology; navigation; communications; and intelligence, surveillance, and reconnaissance (ISR) operations. As the IAF integrates these capabilities and evolves toward becoming a networked force, it has come to realize the value of jointness with the other services. Nevertheless, the IAF's desire to remain a combat arm capable of producing strategic effects independently has often brought it into opposition against plans for developing joint, higher command institutions out of fear the autonomous contribution of air warfare might be shortchanged.

Third, for most of the IAF's history, the service focused predominantly on the Indian subcontinent. Today, the IAF has expanded its field of view vastly beyond: from the Persian Gulf and the east coast of Africa in the west, to much of China in the north and northeast, the Southeast Asian straits in the southeast, and the Indian Ocean in the south. The IAF's ambition is to become the nation's preferred instrument

whenever power must be applied rapidly at long distances.²³

The IAF has made considerable progress in absorbing the airpower transformations that have become visible in the West since Operation Desert Storm. In the air-to-air arena, the IAF is now completely sold on counterair operations beyond visual range. Ever since new Russian, Israeli, and French active air-to-air missiles entered its inventory, the IAF has switched its focus from close-in tactics to long-range air intercepts. Despite this switch in focus, the IAF is still handicapped by the fact that its best active air-to-air missiles are inferior in different respects to those possessed by Pakistan and the best in the Chinese inventory—weaknesses that will persist until the European Meteor enters the Indian inventory.

Although the service has long fielded many of the best Russian combat aircraft, the IAF never divested itself of its British heritage of emphasizing pilot initiative; the air force uses its ground control intercept systems to vector its interceptors, but it leaves actual air combat operations to the skill of its pilots. Today, the IAF has demonstrated a high degree of proficiency in basic fighter maneuvering; the best Indian squadrons compare favorably with their Western peers. Pilots in the IAF consistently execute long-range shots beyond visual range, making up for their current weapon deficiencies through the heavy use of electronic warfare systems and by increasingly using their best

23. Vinod Patney, "Indian Air Force," in *Handbook of Indian Defence Policy*, ed. Harsh V. Pant (London: Routledge, 2015), 161–72; and Benjamin S. Lambeth, "India's Air Force at a Pivotal Crossroads," in *Defence Primer 2017*, ed. Sushant Singh and Pushan Das (New Delhi: Observer Research Foundation, 2017), 35–44.

aircrafts' infrared search and tracking capabilities for passive intercepts. As the IAF integrates its airborne early warning systems, its ability to prosecute long-range, air-to-air engagements will only increase.

In the surface warfare arena, the IAF has focused on acquiring the capacity to undertake conventional precision attacks on a large scale. At present, the IAF does not have enough precision munitions if the threat of even a sequential two-front war is to be taken seriously. The IAF's doctrine traditionally emphasized low-altitude strikes by relatively large formations. But as the quality of its combat aircraft and precision munitions improved, the service began to employ variable strike packages for medium- and high-altitude operations as well. Long-range surface strikes employing standoff munitions are now increasingly the norm, as evidenced by the punitive air strikes conducted at Balakot in Pakistan in February 2019. Although this mission was unsuccessful in interdicting its intended targets, the large strike package involved—12 interdiction aircraft, covered by four aircraft on combat air patrol and supported by airborne warning and control systems, aerial refuellers, and unmanned aerial vehicles (UAVs)—represents a good template for how the IAF plans to conduct future strategic air operations.²⁴ No doubt the lack of success has also reinforced the value to the IAF of both real-time ISR and the importance of tight sensor-to-shooter integration.

24. Raj Chengappa, "Balakot: How India Planned IAF Airstrike in Pakistan—An Inside Story," *India Today*, March 15, 2019, <https://www.indiatoday.in/magazine/cover-story/story/20190325-balakot-airstrikes-pulwama-terror-attack-abhinandan-varthaman-narendra-modi-masood-azhar-1478511-2019-03-15>.

Success in these operations is difficult even for advanced air forces because seamlessly integrating sensors and shooters is a complex institutional and operational enterprise, something the IAF has not yet completed. The service has done better where maritime strike operations are concerned. Given the Pakistani and, increasingly, the Chinese naval presence in the Indian Ocean, the IAF has allocated a dedicated squadron of Jaguar attack aircraft for the role, with more Brahmos-equipped Su-30MKI aircraft also available for strikes at longer ranges at sea.

All told, the IAF's near-term ambition is to be able to: (1) prosecute a swift and decisive offensive campaign against India's traditional adversaries, Pakistan and China, at minimal notice; (2) execute discrete, conventional strategic air operations, such as punitive strikes, if required along India's extended neighborhood; and (3) conduct peace support operations, including humanitarian and disaster relief, at great distances from the subcontinent in largely permissive environments.²⁵

To achieve these aims, the IAF currently fields a dedicated strike contingent of close to 200 Jaguar and MiG-27ML aircraft, almost 300 multirole Su-30MKI and Mirage 2000 strike fighters, and over 200 modernized MiG-21 Bison and MiG-29 Fulcrum air defense fighters—all of which will be supplemented in the near future by 36 Rafales and some 120 indigenously developed Tejas light fighter aircraft. The service also possesses almost 250 transports, 27 of which are capable of extra subcontinental missions; six aerial refueling aircraft (with more to come); and four

25. Christina Goulter and Harsh V. Pant, *Realignment and Indian Airpower Doctrine* (Maxwell Air Force Base, AL: Air University, January 2, 2020).

airborne early warning and control platforms, besides numerous utility helicopters and a small contingent of UAVs for ISR.

These assets are controlled by five regional air commands: the Western Air Command headquartered in New Delhi, the Southwestern Air Command headquartered in Gandhinagar, the Eastern Air Command headquartered in Shillong, the Central Air Command headquartered in Allahabad, and the Southern Air Command headquartered in Trivandrum. Currently, about 35 fighter squadrons, along with combat support aircraft, are spread across some 60 air bases, airfields, and forward base support units throughout the country. In recent years, the air base infrastructure has been extensively modernized to allow for the flexible deployment of different aircraft squadrons across the country.²⁶

The aviation component of the IAF is supported by an extensive, integrated, ground-based air defense system. This system (now supplemented by the airborne warning and control platforms) is integrated with civilian radars, signals intelligence systems, and other sensors to provide a unified air situation picture. In time, India will likely deploy a limited ballistic missile defense system to protect the national capital and a few other major cities.

The IAF is a unique force. Few air forces routinely conduct missions in such diverse terrains that characterize the Indian subcontinent: from the high Himalayas in the north to the deserts and plains in the west to the jungles and intensely wet tropics in the northeast to the arid plateau of the southern

26. Jon Lake, "Indian Air Power," *World Air Power Journal* 12 (Spring 1993): 138–57.

peninsula and the ocean spaces and islands in them. The IAF operates facilities and conducts operations in all of these milieus, operating a bewildering diversity of aircraft, including seven different types of fighters alone. The air force's pilots are well educated, and the service's human capital base has enabled it to absorb sophisticated systems rapidly while modifying them indigenously as required. The IAF is thus capable of making a distinctive contribution in support of India's growing international ambitions, but the service is constrained by the two formidable local competitors it faces.

The Pakistan Air Force is smaller, but with close to 400 combat aircraft, the service is by no means a pushover. The pressures on the Indian defense budget, the vagaries of New Delhi's procurement process, and the IAF's fixation with acquiring the best—and often the most expensive—tactical fighters have resulted in a diminishing number of fighter aircraft in recent years, thus leading to a dilution of India's traditional numerical superiority over Pakistan.

The transformation of China's PLA Air Force in recent decades has only imposed further burdens on the IAF. China's current air threat to India is manageable because the basing infrastructure in the Tibetan region cannot sustain a huge Chinese airpower presence, but this advantage will diminish as China improves its air base infrastructure, builds more dual-use airfields, and rotates ever more sophisticated capabilities into the region. By 2025 or shortly thereafter, the four major air bases currently used by China along the Sino-Indian border could expand to as many as 12 facilities of different kinds, which—depending on the number of air regiments deployed—could confront the IAF with anywhere

from 200 to 400 Chinese combat aircraft in the event of a major conflict. Adding to the threat are potential Chinese conventional ballistic and cruise missile attacks, as well as major space, cyber, and electronic warfare challenges India has not faced before.²⁷

Because of budgetary pressures, the IAF has not been able to maintain its desired squadron strength against the sanctioned strength of 39.5 squadrons. Today, the IAF possesses only about 35 squadrons, and more than half the force consists of third- and early fourth-generation aircraft that would have been retired years ago if resources had permitted. The air force invested significant resources in a Russian collaboration aimed at procuring new fifth-generation fighters, but the poor stealth performance of the Su-57/T-50 has resulted in the IAF attempting to develop a homegrown alternative. Despite its many challenges, however, the IAF remains one of the most capable air forces in Asia.

THE INDIAN NAVY

The Indian sea service, the smallest of India's armed forces, is fundamentally outward-looking and expeditionary in character. Although it bears primary responsibility for protecting India's ocean spaces against its regional adversaries, the Indian Navy is, by its operating medium and institutional temperament, a force that ranges far beyond the Indian subcontinent, even in peacetime. This flexibility is enhanced by the navy's superiority over both the Pakistan Navy

27. Ashley J. Tellis, *Troubles, They Come in Battalions* (Washington, DC: Carnegie Endowment for International Peace, 2016), 7–15.

and the Chinese naval flotillas now emerging in the Indian Ocean.

Although small in comparison to its sister services, the Indian Navy is still the world's seventh-largest navy when measured by the number of vessels.²⁸ Today, the navy fields some 60 frontline combat vessels capable of offensive sea control operations in a force of about 150 ships of all types; about 230 aircraft, helicopters and UAVs; as well as a small marine force. The major surface combatants include 16 submarines (one completed strategic ballistic missile submarine and three that are under construction, one owned nuclear attack submarine and another one possibly on lease, and 14 purchased diesel-electric submarines and 11 vessels in the acquisition queue), one 45,000-ton short takeoff conventional aircraft carrier (and another one under construction), 14 missile-armed destroyers, 13 missile-armed frigates, and 16 missile-armed corvettes, all capable of offensive blue-water operations. The surface fleet also includes one landing platform dock and about 20 landing ships of different kinds for amphibious operations. The naval air arm encompasses MiG-29K strike fighters for the carriers; land-based, long-range antisubmarine warfare (ASW) aircraft, such as the P-8I and IL-38s, and ASW ship-based helicopters; airborne early warning helicopters; land-based maritime patrol aircraft of varying ranges; and medium-altitude UAVs for ISR. The Indian Navy is supported by the Indian Coast Guard, which has some 115 patrol and coastal combatants and about 50 aircraft and helicopters. The Indian Coast Guard bears primary responsibility for safeguarding India's territorial waters and exclusive economic zone in

28. IISS, "Chapter Six: Asia," in *Military Balance 2019*.

peacetime, but the coast guard comes under the navy's operational control in times of conflict.

The Indian Navy's assets are controlled by three commands. The Western Naval Command, headquartered in Mumbai, is the largest of the operational commands. The command, which oversees the major naval bases at Mumbai and Karwar on the western seacoast, has traditionally had the largest complement of warfighting assets. The Western Naval Command area of responsibility covers the entire Arabian Sea, and the command is expected to lead all naval operations against Pakistan in the event of a conflict. But the command's assets are flexible enough to be committed to operations anywhere in the wider Indian Ocean. With the PLA Navy's appearance in the northern Arabian Sea on antipiracy missions and the new Chinese base at Djibouti, the Western Naval Command's responsibilities have extended to tracking China's local assets as well as managing India's naval contributions to the antipiracy missions in the Persian Gulf region.

The Eastern Naval Command, which is headquartered in Visakhapatnam roughly midway along the east coast of the Indian peninsula, was traditionally the weaker of the two naval combatant commands because it lacked proximity to Pakistan. With China's new presence in the Indian Ocean and the criticality of the Southeast Asian straits through which the PLA Navy's surface vessels and submarines transit, the importance of the Eastern Naval Command has increased. As a result, the command, which in the past hosted mainly patrol vessels and second-rank surface combatants, now has first-rank surface combatants as well. Visakhapatnam has always been an important submarine base, but now that it is

housing India's nuclear ballistic missile submarines, the base's operational significance has grown. This naval command also exercises operational command over the long-range maritime patrol and ASW aircraft based at INS Rajali at Arakkonam in Tamil Nadu.

The Southern Naval Command, which is headquartered in Kochi, is the navy's primary training command. This command oversees all of the Indian Navy's schools and training establishments, but it also possesses various facilities, such as bases and naval air stations, that are home to the command's few combat vessels. The command remains home to the Indian Navy's marine commandos and some UAV squadrons as well.²⁹

The Indian Navy is a capable, well-trained force that maintains an intense operational tempo with extended deployments that cover vast spaces around the Indian peninsula. The navy's 2015 strategy document, *Ensuring Secure Seas: Indian Maritime Security Strategy*, designated the entire Indian Ocean bounded by a line from South Africa to the Indonesian archipelago as the "primary area of interest" for the Indian Navy, with the spaces south and around the land areas bounded by the line areas of "secondary interest" (see figure 5-3).³⁰

29. Anit Mukherjee and Raja Mohan, ed., *India's Naval Strategy and Asian Security* (New York: Routledge, 2015).

30. Indian Navy, *Ensuring Secure Seas: Indian Maritime Security Strategy* (New Delhi: Integrated Headquarters Ministry of Defence [Navy], 2015), 32–36; and Indian Navy, *Freedom to Use the Seas: India's Maritime Military Strategy* (New Delhi: Integrated Headquarters Ministry of Defence [Navy], 2007), 59–60.

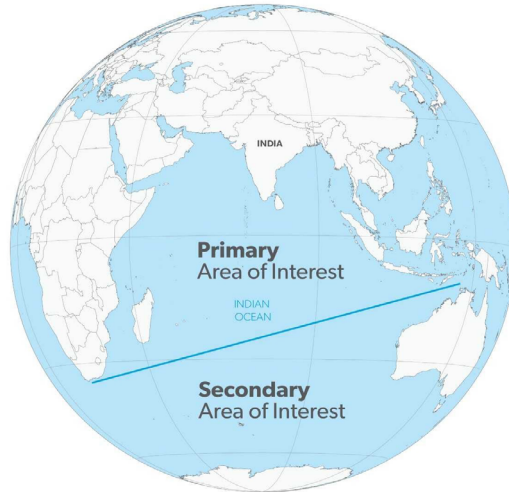


Figure 5-3. The Indian Navy's areas of interest

Illustration courtesy of Allison Torban, Danielle Curran, and Jennifer Moretta, adapted from Indian Navy, *Ensuring Secure Seas: Indian Maritime Security Strategy* (New Delhi: Integrated Headquarters Ministry of Defence [Navy], 2015), 34–35. © 2020 by the American Enterprise Institute.

Today, in support of this mission, the Indian Navy sustains seven permanent “mission based deployments” throughout the Indian Ocean. The navy persistently deploys ships or submarines on patrols near the mouth of the Strait of Malacca; in the Bay of Bengal, in waters north of the Andaman Islands and the coasts of Bangladesh and Myanmar; between North Andaman Island and South Nicobar; in the North Arabian Sea and the approaches to the Strait of Hormuz and the Persian Gulf; off the Gulf of Aden; in waters south of India, off the coasts of the Maldives and Sri Lanka; and in the southern part of the Indian

Ocean, off the coasts of Mauritius, the Seychelles, and Madagascar.³¹

No fleet in the region other than the US Navy can routinely sustain such a far-flung presence. But the US Navy's obligations in East Asia and the western Pacific have resulted in the service increasingly relying on intensified cooperation with the Indian Navy to bridge the gaps. The Indian Navy, for its part, remains committed to pursuing the objective of maintaining a "balanced fleet" – that is, a warfighting capability that permits the service to secure the maximum control possible on the surface, under the sea, and in the air simultaneously.³² Only a balanced fleet permits the Indian Navy to protect India's coastline, defend its sea lines of communication, and defeat seaborne threats from Pakistan and China.

Toward these ends, the Indian Navy has targeted a fleet size of some 200 vessels by 2027, of which 140 would be major combatants, with minor warships, support vessels, and auxiliaries making up the difference.³³ The major combatants would include three aircraft carriers, 24 advanced diesel-electric submarines (including some with air-independent

31. Sujan Dutta, "Indian Navy Informs Government about the Fleet's Reoriented Mission Pattern," *New Indian Express*, April 1, 2018, <https://www.newindianexpress.com/nation/2018/apr/01/indian-navy-informs-government-about-the-fleets-reoriented-mission-pattern-1795404.html>.

32. M. Chhaya, "Indian Navy Plans to Boost Its Fleet," *India Abroad*, June 8, 2005, <https://www.rediff.com/news/2005/jun/08navy.htm>.

33. Press Trust of India, "Indian Navy Aiming at 200-Ship Fleet by 2027," *Economic Times*, July 14, 2018, <https://economictimes.indiatimes.com/news/defence/indian-navy-aiming-at-200-ship-fleet-by-2027/articleshow/48072917.cms?from=mdr>.

propulsion), four nuclear-powered submarines, 60 destroyers and frigates, 30 missile craft, and about 15 major amphibious vessels, complemented by various support ships.

Even with its current size, the Indian Navy is already capable of maintaining a high degree of sea control in the Indian Ocean against its local adversaries. The navy's advantages in this regard stem from a concatenation of capabilities. The fleet already possesses significant scouting capabilities deriving from both a vast shore-based network of high-frequency direction finding stations and satellite communications intercept and signals intelligence facilities and various airborne systems, such as maritime patrol aircraft and UAVs (supplemented by the IAF's airborne warning and control systems and, eventually, space systems). The navy's surface and subsurface vessels also contribute critical information toward building the common operational picture necessary for successful naval operations.

Furthermore, the Indian Navy is exceptionally proficient in surface warfare operations, either by employing carrier-centered strike forces or through independent surface and subsurface operations. Carrier-based air warfare operations, in both the air-to-air and air-to-surface domains, remain another major Indian strength because the Indian Navy has continually operated aircraft carriers for almost 60 years. This capability will expand further once the second Indian carrier has been inducted into the fleet, and the capability will be transformed dramatically if the Indian Navy is able to secure funding for its

desired third carrier, which is expected to displace 65,000 tons and host an air wing of about 50 aircraft.³⁴

Surface antiair warfare operations remain another of the Indian Navy's significant strengths, and this capability will experience another qualitative leap forward if the service can fund the procurement of the US Aegis antiair warfare system, which has now been released for export to India. Air and surface ASW operations, in contrast, remain a continuing challenge, which is exacerbated by the service's acute shortage of modern ship-based ASW helicopters. The Indian Navy is scheduled to acquire 24 new US MH-60R ASW helicopters for its frontline warships, but even this amount is a small fraction of the tactical air ASW systems it needs. The Indian Navy's land-based air ASW capabilities are in better shape, but the numbers of aircraft currently available—eight P-8I Poseidon and five IL-38SD systems—are insufficient. If the Indian Navy's attack submarines were committed more consistently to ASW, the viability of India's capable surface fleet would be greatly enhanced.

The service has a decent amphibious warfare capability—with the lift available to move a brigade-sized force anywhere in the Indian Ocean—but this capability is unlikely to be effective for forcible entry operations against any major adversary. Similarly, the Indian Navy has the capacity to conduct offensive mine warfare against a small number of adversary facilities, but the fleet has not prioritized mine warfare.³⁵

34. Ashley J. Tellis, *Making Waves: Aiding India's Next-Generation Aircraft Carrier* (Washington, DC: Carnegie Endowment for International Peace, 2015).

35. James R. Holmes, Andrew C. Winner, and Toshi Yoshihara, *Indian Naval Strategy in the Twenty-First Century* (London: Routledge, 2009).

Whatever the fleet's current limitations may be, the Indian Navy is the Indian Ocean's most powerful fleet. The service has few weaknesses that cannot be fixed by the availability of more resources; indeed, the gap between the ambitions of India's civilian leaders and the resources they have allocated to their naval service is startling.

Ever since Modi became India's prime minister, he has focused on renewing India's Indian Ocean strategy to counter the emerging challenges posed by China in the region. Using a four-pronged approach that emphasized expanding India's "blue economy"; reinvigorating maritime diplomacy toward the regional states (especially the small but critical island states in the Indian Ocean); supporting India's naval modernization; and deepening partnerships with foreign naval powers with interests in the region, such as the United States, France, and Japan, Modi has chalked up significant achievements on all counts save naval expansion.³⁶

The Indian Navy continues to receive the smallest share of the capital budget and only slightly over half its requested allocations. This lack of resources has left the navy unable to meet urgent acquisitions, to provide capabilities that are essential to India's ability to maintain its primacy in the Indian Ocean, to subsist as a viable partner of the United States in the region, or to give heft to Modi's overall Indian Ocean strategy.

Clearly, the most important constraint has been the weakening of India's economy in recent years. But the failures of strategic thinking and interservice rivalries have only compounded the problem. The

36. Vivek Mishra, "Consolidating India's Indian Ocean Strategy," *Diplomat*, June 7, 2019, <https://thediplomat.com/2019/06/consolidating-indias-indian-ocean-strategy/>.

problem of securing governmental approval for the future conventional takeoff and landing carrier, the IAC-3, is emblematic of the challenges.³⁷ The IAC-3 represents the Indian Navy's ambition to return to operating large-deck carriers because of the enormous increases in combat capability that these vessels embody in contrast to their short-takeoff-but-arrested-recovery counterparts. India's civilian leaders seem to be overwhelmed by the cost of a conventional takeoff and landing carrier, but they are forgetting that India needs to secure its interests over certain ranges in the Indian Ocean region.

The IAF's claims, driven by the service imperatives of chasing constrained defense budgets, muddy the waters further. Although the IAF argues that its best strike fighters, such as the Su-30MKI, can range long distances with aerial refueling – and that conventional takeoff and landing carriers are unnecessary as a result – these assertions, even if true, are operationally suspect because land-based tactical aircraft cannot operate persistently at very long distances (even if the other distractions imposed by the demands of a subcontinental conflict are ignored). Thus, the imperative of setting the limits of India's political – and, by implication, naval – influence is critical to arriving at the right decision regarding IAC-3. At a time when China's naval presence in the Indian Ocean will be steadily increasing over the next few decades, the benefits of a larger balanced fleet that includes more nuclear attack submarines and possibly a conventional takeoff and landing carrier that hosts

37. Rajat Pandit, "Navy Builds Case for 3rd Aircraft Carrier," *Times of India*, October 1, 2019, <https://timesofindia.indiatimes.com/india/navy-builds-case-for-3rd-aircraft-carrier/articleshow/71383514.cms>.

a sizeable air wing must be carefully considered by Indian policy makers if they still hew to the ambition of fielding a powerful indigenous naval force in the region.

CONCLUSION

The Indian Armed Forces are without doubt large and competent, but they are constrained by three factors. First, although the Indian military is currently superior to the militaries of China and Pakistan in their respective theaters, these opponents are not feeble. Consequently, between the persistent challenges of internal security and nontrivial local threats, the Indian Armed Forces have their hands full.

Second, the Indian military has never been tested in combined operations in high-intensity conflicts because India's foreign policy, which traditionally has eschewed participation in any alliances, precludes their preparation for such contingencies. Although New Delhi has now shifted from nonalignment in favor of more flexible strategic partnerships, Indian policy makers have still not crossed a Rubicon that permits them to easily contemplate combined military operations with others. Until this bridge is crossed, India's armed forces, though large and effective within their immediate environs, will nevertheless be unable to partner with other nations flexibly in major combat contingencies further afield.

The third check on Indian military capabilities is funding. The three components of the Indian Armed Forces are mainly proficient in Industrial-Age warfare. Such capabilities arguably suffice in India's specific strategic environment because Pakistan's military is inferior, and the PLA is only now evolving

toward information-age warfare across the services at large. India's current proficiencies, however, will be increasingly taxed as the Chinese military completes its modernization. Transforming the Indian military for this new era of warfare will require dramatic changes in capability, doctrine, and training, not to mention significant qualitative improvements in the human-capital base of the force. This transformation cannot happen without additional resources. Though the current state of India's hard power is satisfactory, it does not match the country's larger strategic ambitions or the challenge it will face from China in the future.

6. JAPAN: ADAPTING TO HARSH REALITIES

Toshi Yoshihara

KEY POINTS

- Over the past decade, the Chinese military has extended its quantitative lead over Japan's Self-Defense Force (SDF) while closing the qualitative gap. China's military and paramilitary forces have also ramped up their peacetime operations in the seas and airspace along the Japanese archipelago.
- In response, Japan is adopting a new multi-domain operations (MDO) doctrine and prioritizing long-range strike systems, defense in depth east of the Japanese archipelago, and advances in new warfighting domains.
- Japan's demographic decline and fiscal constraints will complicate its ability to reach its modernization goals and implement its evolving doctrine.

When Japanese strategists survey their surroundings and peer into the future, their prediction is "Trouble ahead." Japan finds itself besieged on multiple flanks as China, Russia, and North Korea pursue policies harmful to Tokyo's interests. China has emerged as a major, if not the dominant, factor in Japan's strategic calculus. The scale of Beijing's defense modernization far surpasses Japan's capacity to keep pace in key areas of the military competition, upending the regional balance of power. China now possesses the materiel wherewithal and confidence to apply peacetime coercive pressure against Japan

on a virtually perpetual basis along various fronts. China fields a formidable conventional force that is particularly well suited for localized conflicts, such as a war over Taiwan or the Senkaku Islands, which would be of grave concern to Tokyo. More troubling still, as China acquires more cutting-edge weaponry and improves its warfighting skills, Japan can expect the strategic balance to deteriorate further in the 2020s.

These worrisome trends have already stimulated shifts in Japan's defense strategy. Indeed, if recent policy documents are any guide, Tokyo's demands on—and requirements for—Japanese hard power will almost certainly intensify in the coming years. To better understand how the vexing security environment will influence Japanese military modernization over the next decade, this chapter: (1) examines Japan's external surroundings, particularly the role of China's military and paramilitary forces in shaping Japanese threat perceptions; (2) assesses key features of the latest National Defense Program Guidelines (NDPG) published in December 2018; (3) surveys Japan's modernization efforts across each of the services; and (4) identifies structural constraints and uncertainties surrounding Japanese strategy and operations that could hamper Tokyo's newfound willingness to develop and exercise its hard power.

JAPAN'S DETERIORATING EXTERNAL ENVIRONMENT

Over the past decade, Japan's surroundings have become increasingly inhospitable. Tokyo confronts security challenges from nearly all of its neighbors, with the notable exception of Taiwan. North Korea's nuclear and missile threat continues

to loom over the Japanese islands, and the prospects for denuclearization on the peninsula remain dim. In recent years, Russia has gradually militarized its position on the disputed Kuril Islands while ramping up air and naval activities in Japan's surrounding airspace and seas, even as the neighboring country forges a closer strategic partnership with China. Japanese relations with South Korea have frayed, owing to highly charged historical controversies.

Japan feels the most intense pressure, however, from China. Chinese military modernization continues at breakneck speed while Tokyo's investments in its defense have dramatically fallen behind Beijing's vigorous efforts. Three decades ago, Japan's defense budget was nearly double that of China's. Since then, Japanese expenditures have stagnated while Chinese spending on the military has skyrocketed. The Stockholm International Peace Research Institute estimates that, in 1990, the Chinese and Japanese defense budgets—measured in constant 2017 dollars—stood at \$21 billion and nearly \$41 billion, respectively. A decade later, China's military spending, which reached \$41 billion, had nearly caught up to that of Japan's \$44 billion on defense. In 2010, China's expenditures leapt to \$137 billion compared to Japan's \$44 billion. By 2018, Beijing spent \$239 billion, dwarfing Tokyo's \$45 billion budget.¹ This role reversal between the two rival powers is extraordinary by any standard. Such growing asymmetries in national resources have, in turn, had a telling effect on the local balance of power.

1. Stockholm International Peace Research Institute, *Military Expenditure by Country, in Constant (2017) US\$ M., 1988–2018* (Stockholm: Stockholm International Peace Research Institute, 2019).

Consider the maritime balance, which includes naval, paramilitary, and civilian capabilities. China's navy is already the largest in the world, with more than 300 ships in its fleet.² By comparison, the US Navy had 299 deployable battle force ships in June 2020.³ The China Coast Guard is also the largest maritime law enforcement service in the world. The China Coast Guard operates over 200 ships capable of offshore operations and over 1,000 smaller vessels for missions closer to China's littorals.⁴ In addition to the coast guard, China employs the maritime militia, an arm of Chinese sea power that derives its numbers from its fishing fleet, which is the world's largest.⁵ By comparison, Japan's Maritime Self-Defense Force (MSDF) deploys nearly 160 ships, including helicopter carriers, destroyers, amphibious assault ships, submarines, patrol craft, and other auxiliary vessels. In 2018, the Japan Coast Guard had just over 450 patrol vessels.⁶ China's quantitative superiority over Japan and its steady qualitative improvements have

2. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019* (Washington, DC: Office of the Secretary of Defense, May 2, 2019), 35.

3. "Status of the Navy," US Navy, updated June 24, 2020, https://www.navy.mil/navydata/nav_legacy.asp?id=146.

4. Andrew S. Erickson, Joshua Hickey, and Henry Holst, "Surging Second Sea Force: China's Maritime Law-Enforcement Forces, Capabilities, and Future in the Gray Zone and Beyond," *Naval War College Review* 72, no. 2 (Spring 2019): 11–25.

5. Andrew Erickson, "China's Three 'Navies' Each Have the World's Most Ships," War Is Boring, February 28, 2018, <https://warisboring.com/chinas-three-navies-each-have-the-worlds-most-ships/>.

6. Japan Coast Guard, *Justice and Humanity* (Tokyo: Japan Coast Guard, March 2018), 6.

enabled Beijing to apply unrelenting pressure against Tokyo on the seas and in the airspace surrounding the Japanese islands.

China's peacetime coercion against Japan has been particularly acute in the East China Sea, the epicenter of the Sino-Japanese maritime rivalry. Since September 2012, Chinese maritime law enforcement vessels have intruded into the contiguous zones and the territorial seas of the disputed Senkaku Islands on a continuous basis. Beijing insists these incursions are regular patrols in Chinese waters. The China Coast Guard has employed such gray-zone tactics to exercise its administrative powers over the seas surrounding the islands. In August 2016, about 200 to 300 Chinese fishing vessels along with an unusually large contingent of coast guard cutters, including an armed one, appeared near the Senkakus and repeatedly entered the territorial seas over three days. The incident demonstrated China's capacity to overwhelm Japanese defenders by surging a large, combined fleet. From April to June 2019, China's Coast Guard vessels operated in the contiguous zone for 64 straight days. This record-breaking feat illustrated the growing staying power of China's seagoing vessels.

At the same time, the Chinese People's Liberation Army (PLA) has made its presence felt along Japan's major maritime flanks. The PLA Navy and its sister services act as a backstop to the frontline paramilitary forces dispatched near the Senkakus. Although conventional military units usually perform overwatch duty just beyond the horizon, Chinese naval vessels have operated near the disputed features. In June 2016, the Japanese spotted a *Jiangkai*-class frigate in the contiguous zone. In January 2018, a *Jiangkai*-class frigate and a *Shang*-class nuclear attack submarine

sailed through the contiguous zone, drawing a sharp rebuke from Tokyo. The PLA Navy has also undertaken dangerous measures against Japanese forces near the Senkakus. In January 2013, during two separate incidents, two Chinese warships—a *Jiangkai*-class frigate and a *Jiangwei*-class frigate—locked their fire control radars onto a Japanese helicopter and destroyer, respectively. These encounters triggered an uproar in Tokyo, but Beijing flatly denied that such provocations ever took place.⁷

Over the past decade, Chinese naval and air units have routinely transited the major international straits formed by the Japanese archipelago. Although PLA forces regularly pass through the Miyako Strait because it is the favored corridor to reach the open waters of the Pacific, Chinese ships and aircraft have navigated through the La Perouse Strait, the Tsugaru Strait, the Tsushima Strait, and the Van Diemen Strait. These transits have tested and improved the PLA's ability to operate far from Chinese shores. Notably, in December 2016, the *Liaoning* carrier and six escorts, including a top-of-the-line, *Luyang-III*-class guided-missile destroyer, passed through the Miyako Strait for the first time.⁸ The Chinese media hailed the battle group's "breakthrough" of the first island chain as

7. Toshi Yoshihara, "China's Coercive Posturing in the Senkakus: The Quest for Dominance," Japan Forward, August 23, 2019, <https://japan-forward.com/chinas-coercive-posturing-in-the-senkakus-a-quest-for-dominance/>; and Toshi Yoshihara, "China's Coercive Posturing in the Senkakus: Waiting for a Radical Turn," Japan Forward, August 25, 2019, <https://japan-forward.com/chinas-coercive-posturing-in-the-senkakus-waiting-for-a-radical-turn/>.

8. "Press Release 2020," Japan Joint Staff, <https://www.mod.go.jp/js/Press/press.htm>.

a major nautical event.⁹ China's high-performance fighters, medium-range bombers, aerial early warning aircraft, electronic warfare (EW) aircraft, and signals intelligence aircraft also regularly conduct long-range flights through the Miyako Strait.

In a show of China's growing confidence in its power projection capabilities, the PLA had extended its reach to the Sea of Japan. In August 2016, a Chinese naval flotilla conducted a confrontation exercise in the Sea of Japan for the first time. Similar drills followed in January 2017 and March 2018.¹⁰ Attesting to closer Sino-Russian military ties, the two great powers engaged in joint naval exercises off the coast of Vladivostok in 2013, 2015, and 2017. In December 2017, the PLA Air Force's H-6K bombers, escorted by Su-30 fighters, reached the Sea of Japan for the first time via the Tsushima Strait. In 2018, Chinese aircraft conducted overflights of the strait eight times. In July 2019, Chinese and Russian strategic bombers jointly patrolled the air over the Sea of Japan and the East China Sea, another first. Japan anticipates PLA operations in the Sea of Japan will increase and intensify in the coming years.¹¹ China's growing activism in that body of water has substantially expanded the maritime front over which Japanese naval and air forces must monitor.

As a matter of course, Japan has had to respond to every major and minor intrusion of Chinese vessels

9. "Chinese Carrier Task Force Passes through the Miyako Strait Breaking through First Island Chain," *Global Times*, December 26, 2016, http://www.xinhuanet.com/world/2016-12/26/c_1120185967.htm.

10. Japan Ministry of Defense, *Defense of Japan 2019* (Tokyo: Japan Ministry of Defense, September 2019).

11. Japan Ministry of Defense, *Defense of Japan 2019*.

into the territorial waters or the contiguous zones of the Senkakus. Similarly, Japanese naval and air units must track and record the courses taken by Chinese naval flotillas and air sorties as they pass through the various straits. These necessary measures have had a discernible impact on the materiel conditions and the readiness of Japan's SDF, owing to much higher operational tempos and the associated wear-and-tear on aircraft and ships. Consider the substantial increase in air intercepts for Japan's Air Self-Defense Force (ASDF). In fiscal year 2000, Japan recorded 155 intercepts. Seven years later, Japanese intercepts nearly doubled to 307 intercepts. In fiscal year 2016, Japanese fighters scrambled nearly 1,200 times, more than 70 percent of which were in response to Chinese flights. This figure was a record high since Japan had begun intercepts in 1958. In fiscal year 2018, Japan recorded 999 scrambles. China accounted for 64 percent of the intercepts.¹² The sheer volume of these launches has raised concerns that the Japanese air fleet could wear out at a faster pace than is anticipated.

China's prominent, if not central, place in Japanese defense planning is not surprising. Indeed, Beijing's peacetime coercion campaign and its growing military capacity to impose its will on Tokyo—should deterrence fail—have compelled Japan to reassess its strategy and priorities. The latest defense policy documents are the clearest signs Tokyo has reoriented its strategic attention squarely on China and the PLA.

12. "Press Release 2020."

THE 2018 NATIONAL DEFENSE PROGRAM GUIDELINES

The NDPG, released in December 2018, provides direction to Japan's defense planning and modernization over a roughly 10-year period. This defense policy document is the fourth version written in 15 years, following previous editions published in 2004, 2010, and 2013. Reflecting Japan's increasingly unfavorable circumstances, as summarized above, the latest report stands out for its sense of urgency and for its call to decisive action. The NDPG acknowledges Japan's external surroundings have undergone change "at a remarkably faster speed than expected" and repeatedly asserts Japan's security challenges are unprecedented in character.¹³ The report leaves little doubt about the source of these dramatic shifts in regional security: China. The NDPG devotes substantially more attention to China than to Japan's two other major rivals, North Korea and Russia. The policy document singles out China's ambitions to build a world-class military; its role behind the rapid shift in the regional balance of power; its development of anti-access and power projection capabilities; its gray-zone activities and hybrid operations; and its "unilateral, coercive attempts to alter the status quo" in the East and South China Seas.¹⁴

In response to these challenges, the NDPG pledges to "defend to the end" against dangers that threaten Japan's citizens, territories, surrounding airspace and

13. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019 and Beyond* (Tokyo: Japan Ministry of Defense, December 18, 2019), 7.

14. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 5.

seas, and access to resources.¹⁵ The framers of this report contend Japan must carry out its responsibilities for the nation's defense "by exerting efforts on its own accord and initiative," hinting at greater self-reliance.¹⁶ To enhance national security, the NDPG calls for adopting radical, if not disruptive, changes to its defense posture to cope with the extraordinary pressures being applied against Japan. The document vows to "build a truly effective defense capability that does not lie on a linear extension of the past" and to "engage in a transformation at a pace that is fundamentally different from the past."¹⁷ The report exhibits a willingness to break with orthodoxy and to embrace thoroughgoing change. Notably, the NDPG proposes the development of a Multi-Domain Defense Force that would help to define Japan's future modernization efforts. The concept appears to be an adaptation of the operational experimentation taking place within the US defense establishment.

In theory, in US-led MDO, the lines that have traditionally divided the roles and functions of land, air, and sea forces would blur, if not dissolve altogether. In this prospective type of warfare, the US Army, Air Force, Navy, and Marine Corps assets would be able to fight more effectively in each other's domains and make maximum use of space, cyberspace, and the electromagnetic spectrum. In the US Army's context, the range, accuracy, and lethality of ground-based strike systems might enable land

15. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 6.

16. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 1.

17. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 2.

forces located on coastal terrain or islands to sweep clear the adjacent seas and airspace of enemy naval and air units, respectively. Cross-domain fires, a less ambitious variation of this concept, enables sensors from one domain to pass on targeting data to a strike platform in a different domain which attacks an adversary operating in yet another domain.¹⁸ For example, a US Air Force fighter would transmit data on the location of an enemy vessel to a US Army shore-based artillery unit, which would in turn use that information to fire its anti-ship missiles against the hostile surface combatant at sea.

The NDPG hints at Japan's objectives for a multi-domain force. According to the document, such a force "organically fuses capabilities in all domains including space, cyberspace and electromagnetic spectrum; and is capable of sustained conduct of flexible and strategic activities during all phases from peacetime to armed contingencies."¹⁹ The proposed force would strive to achieve unprecedented levels of interservice cooperation and integration, enabling individual services to operate, fight, and draw strength from outside their traditional domains. Tokyo anticipates the combined power of the various services within a multi-domain force would generate advantages and military effectiveness disproportionate to the modest size of the SDF, allowing it to punch well above its weight. In other words, in MDO, the whole would be greater than the sum of its parts.

18. Kris Osborn, "Cross-Domain Fires: US Military's Master Plan to Win the Wars of the Future," *National Interest*, July 19, 2016, <https://nationalinterest.org/blog/the-buzz/cross-domain-fires-us-militarys-master-plan-win-the-wars-the-17029>.

19. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 11.

Most importantly, the NDPG carries forward the Dynamic Joint Defense Force concept articulated in the preceding report issued in 2013. In other words, the multi-domain force would build on, rather than replace, the dynamic defense force. The latter concept was the product of a steady evolution in Japanese strategic thought. In the 2010 NDPG, Japan formally jettisoned the outdated Basic Defense Force concept, which was predicated on a largely passive and immobile deterrent force to repel homeland invasions from the sea.²⁰ The 2010 document called for a nimble posture to take the place of static defense. Such a force could deploy swiftly to remote islands for a variety of contingencies, meeting challenges as they arose. To develop a dynamic defense force, the 2010 NDPG urged the services to rejuvenate aerial, surface, and underwater surveillance operations concurrently.

The Dynamic Joint Defense Force promulgated in 2013 thus inherited many of the key tenets developed in 2010. In addition to mobility and readiness, the 2013 NDPG emphasized the close coordination among the naval, air, and ground forces. The inherently amphibian character of the Japanese-held islands in the East China Sea demanded such integration of capabilities. At the same time, the 2013 report called on Japan's SDF to establish an effective intelligence, surveillance, and reconnaissance architecture that would blanket the East China Sea with a variety of sensors to monitor the PLA's naval and air activities more effectively and to respond rapidly to China's gray-zone tactics.

20. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2011 and Beyond* (Tokyo: Japan Ministry of Defense, December 17, 2010).

If the dynamic defense force concept showed how Japan planned to cope with China's peacetime coercion, then the directive to build a Multi-Domain Defense Force illustrates Tokyo's latest thinking about high-end conventional conflict. The latter concept, including the term "multi-domain," represents an explicit attempt to align Japan's warfighting posture with that of the United States. In US Army doctrine, a key objective of MDO is to preclude an adversary from winning so quickly that it could consolidate its gains before the United States and its allies are able to generate enough power to respond.²¹ Multi-domain operations (MDO) would enable US forces to neutralize and defeat enemy anti-access systems progressively, allowing friendly forces to operate effectively well inside the opponent's contested backyard. Though the doctrine addresses the enhanced capacity to deter aggression and to counter peacetime coercion, MDO is clearly meant to defeat a capable adversary, should deterrence fail. How Japan's conception of a multi-domain force fits within or complements the US warfighting strategy would likely be a major allied line of effort going forward.

The 2018 NDPG is remarkably forthright about the SDF's predicament in the context of a high-intensity conflict with China. The document concedes that in the event of a major PLA assault on Japan's Ryukyu Islands, attempts to exercise command of the sea and the air in this area could become "untenable."²² Tokyo

21. US Army Training and Doctrine Command, *The US Army in Multi-Domain Operations 2028*, TRADOC Pamphlet 525-3-1 (Fort Eustis, VA: US Army Training and Doctrine Command, December 6, 2018).

22. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 12.

anticipates that, under certain circumstances, the PLA would seize local sea control and air superiority over parts of the East China Sea, particularly the various avenues of approach to the Ryukyu Islands. In such a case, Japanese defenders would have to fall back to positions east and south of the Ryukyus to stay at a safe distance from the PLA's long-range firepower. In other words, Japan would have to cede the battlespace near or over its own territories, at least temporarily, to stay in the fight. Some, if not many, of the SDF's units would have to contest the PLA's access to Japanese airspace, waters, and key terrain at standoff distances and from locations far from home islands and major Japanese logistical hubs. How Japan would prepare for this grim and increasingly plausible prospect will be a major task for defense planners in the years ahead. With these demanding strategic and operational requirements in mind, the SDF has embarked on its next phase of modernization.

SELECT MODERNIZATION EFFORTS

Japan's recapitalization efforts in the coming years will bring about significant changes to the force composition and posture of its services. New and potentially game-changing capabilities, including long-range strike systems, will enter service throughout the 2020s. Japan's MSDF has continued its efforts to maintain a qualitative edge over its potential adversaries. In 2010, in early recognition of the undersea environment becoming increasingly competitive, Tokyo announced its world-class submarine fleet would grow from 16 to 22 boats. The cutting-edge *Sōryū*-class diesel-electric boat—the largest of its kind in the world—has led the expansion.

With a planned production run of 12 *Sōryū*-class submarines, 10 have been commissioned since 2009, with the last two entering service in 2020 and 2021.

The first 10 boats are fitted with air-independent propulsion, a fuel-cell technology that permits submarines to operate underwater for extended periods while quieting their noise signature. The last two subs, launched in October 2018 and November 2019, feature lithium-ion batteries that promise to greatly enhance operational endurance. Attesting to Japan's commitment to a steady influx of the most modern undersea platforms, Japan began construction of the next-generation hunter-killer boats in 2018 to follow the *Sōryū*-class submarines.²³

Over the past decade, the MSDF has steadily introduced a variety of new warships to its surface fleet that will bring about qualitative leaps in combat power. The two *Izumo*-class multi-purpose carriers were commissioned in 2015 and 2017. Measuring nearly 250 meters in length and displacing nearly 20,000 tons, these carriers are the largest warships the Japanese have built since World War II. The carriers are the centerpieces of task forces for a wide range of missions, from high-end conflict to humanitarian contingencies. The two *Hyūga*-class helicopter carriers, which entered service in 2009 and 2011, are formidable antisubmarine warfare platforms. Similar to the *Izumo* flattops, the *Hyūga*-class carriers are the capital ships around which task forces will form.

23. Gabriel Dominguez and Kosuke Takahashi, "DSEI Japan 2019: KHI Building Second 3,000-Tonne Submarine for JMSDF," *Jane's Defence Weekly*, November 18, 2019, <https://www.janes.com/article/92647/dsei-japan-2019-khi-building-second-3-000-tonne-submarine-for-jmsdf>.

Two *Maya*-class, Aegis-equipped destroyers are expected to join the four *Kongo*-class and two *Atago*-class guided-missile destroyers. The maritime service commissioned the first *Maya*-class warship in March 2020 and is expected to commission the sister ship in 2021.²⁴ Together, these eight top-of-the-line destroyers would act as the shields at sea against long-range ballistic missile attacks. Four *Akizuki*-class guided-missile destroyers, commissioned between 2012 and 2014, provide anti-air, antisurface, and antisubmarine cover for Japan's carriers and Aegis-equipped destroyers. Two *Asahi*-class destroyers optimized for antisubmarine warfare joined the fleet in 2018 and 2019. As components of larger task forces, the *Akizuki*-class and *Asahi*-class warships are designed to perform escort duties by providing protection against a wide variety of threats at sea.

These modern and highly capable combatants form the core of the MSDF's fleet structure. At present, the maritime service organizes its Fleet Escort Force into four main escort flotillas. Each of the four flotillas comprises eight ships capable of launching eight helicopters. An *Izumo*- or *Hyūga*-class carrier serves as the centerpiece of each flotilla, and two Aegis-equipped destroyers and five other destroyers complete the formation. The 2018 Mid-Term Defense Program indicates the MSDF will establish two additional flotillas organized around new multimission frigates,

24. Kosuke Takahashi, "Japan Commissions First Maya-Class Guided-Missile Destroyer," *Jane's Defence Weekly*, March 19, 2020, <https://www.janes.com/article/94978/japan-commissions-first-maya-class-guided-missile-destroyer>.

minesweepers, and tank landing ships for amphibious operations.²⁵

In the coming years, a sizable number of next-generation multipurpose frigates (30FFMs) and offshore patrol vessels will join the fleet in quick succession. Displacing 3,900 tons, the 30FFM is to replace the *Asagiri*-class and *Abukuma*-class warships. The 2,000-ton offshore patrol vessels will be designed to enhance Japan's surveillance and intelligence-gathering capabilities in the East China Sea. The patrol boat will also boast significant endurance to stay at sea for extended periods. Eight 30FFMs are planned, and 12 offshore patrol vessels will be built over the decade.²⁶

In late 2018, the most striking development for the MSDF was the decision to refit the *Izumo*-class carriers to accommodate F-35B short takeoff and vertical landing fighters. The plan to embark fixed-wing aircraft aboard the carriers represents a major step forward for Japan's carrier aviation. A de facto aircraft carrier would provide greater flexibility to Japanese airpower. The Pacific-facing parts of the home islands contain only a few air bases—such as Hyakuri Air Base in Ibaraki Prefecture, Nyutabaru Air Base in Miyazaki

25. Japan Ministry of Defense, *Medium-Term Defense Program (FY 2019 – FY 2023)* (Tokyo: Japan Ministry of Defense, December 18, 2018), 5.

26. Kosuke Takahashi, "DSEI 2019: More Details Emerge About Japan's New Multi-Mission Frigates," *Jane's Defence Weekly*, November 18, 2019, <https://www.janes.com/article/92642/dsei-japan-2019-more-details-emerge-about-japan-s-new-multi-mission-frigates>; and Kosuke Takahashi, "Mitsui Unveils Design Proposal for JMSDF's OPV Plans," *Jane's Defence Weekly*, June 21, 2019, <https://www.janes.com/article/89425/mitsui-unveils-design-proposal-for-jmsdf-s-opv-plans>.

Prefecture, and Naha Air Base in Okinawa – that have sufficiently long runways to support fighter aircraft. Indeed, beyond the air bases on the five main islands, the only airfield east of Japan that military aircraft can safely land on is Iwo Jima, more than 1,000 kilometers from the east coast of Honshu.²⁷ Given the vast area the SDF is expected to cover in the Pacific, a carrier would substantially ease the operational and logistical burdens on Japanese defenders in the air.

Three factors, from the technical and the tactical to the operational and the institutional, will determine the course and outcome of this carrier conversion process. First, the carriers will need to undergo modifications. For example, the flight decks will need to be strengthened to withstand the stresses of operating high-performance short takeoff and vertical landing fighters. Second, integrating fixed-wing operations, an entirely new undertaking, will demand extensive training and doctrinal honing. Given that the aircraft and the pilots will hail from the ASDF, interservice collaboration will be at a premium as the MSDF learns to handle fixed-wing aircraft at sea.

Third, and most significantly, new operational concepts must be developed to govern this new capability. Although defense planners seem to view the carriers as mobile airstrips on which fighters can land on a temporary basis or in times of crisis or war, some questions remain for the future. Will air wings eventually be integrated with the carriers, allowing fighters to embark as an organic component of a carrier task force on deployments? What are the

27. For an illustration of the distribution of key air bases on the Pacific-facing side of Japan, see Japan Ministry of Defense, “On the Modification of the *Izumo* Escort Destroyer,” in *Defense of Japan* 2019.

specific roles and missions for the *Izumo*-class carriers and their air components in peacetime, crisis, and war? How well will the maritime and air services adapt to new operational requirements? Will the services be adequately resourced? How will these carriers operate alongside the United States and other allied forces? Japanese policy makers will have to tackle these important questions as the maritime and air services overcome the technical and tactical challenges of integrating F-35Bs for carrier operations.

Since the 2013 NDPG, the Ground Self-Defense Force (GSDF) has downsized, pivoted from its positions in the north to Japan's southern flank, and adopted a more mobile posture. Under the 2013 report, the GSDF began its shift away from largely static defenses against large-scale invasion of the home islands, a long-running Cold War legacy, to a more nimble and flexible force structure. In the meantime, the GSDF also cut back substantially on its armored and field artillery units. The 2018 NDPG calls on the GSDF to "retain forces only enough to maintain and carry on the minimum necessary expertise and skills" in preparation for the highly unlikely scenario of a massive amphibious assault against the homeland.²⁸ The ground service thus plans to further reduce its inventory of main battle tanks and artillery pieces—which stood at about 600 and 500, respectively, at the end of fiscal year 2018—to 300 each over a 10-year period.

As the GSDF consolidates its assets, its forces will be reoriented to better defend Japan's Ryukyu Islands, an archipelago that arcs from Kyushu to Taiwan. In

28. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 19.

2018, the GSDF formally established the Amphibious Rapid Deployment Brigade, Japan's first marine unit since the Second World War.²⁹ Based in Camp Ainoura at Sasebo in Kyushu, the brigade comprises two regiments, with a third currently being formed. The brigade's organic capacity to project forces ashore is aided by AAV-7 amphibious assault vehicles, which have entered service and are expected to be boosted by V-22 tilt-rotor aircraft. The brigade's task is to project power swiftly in contested littoral environments. Specifically, the brigade is responsible for quickly bolstering defenses along the Ryukyu Islands and, if necessary, retaking islands seized by hostile forces.

The GSDF has steadily enhanced its presence and positions along the Ryukyu Islands. In 2016, the ground service activated a coastal observation post on Yonaguni Island, located at the southernmost tip of the Ryukyu Island chain. The surveillance capabilities there improve Japan's situational awareness near the Senkakus and over parts of the East China Sea. In March 2019, the GSDF opened two bases on Amami Oshima Island and a base on Miyako Island, with more than 500 troops and nearly 400 troops deployed on the islands, respectively.³⁰ The troop presence on Miyako could increase to as many as 800 personnel. The

29. Reuters, "Japan Activates First Marines since WWII to Bolster Defenses against China," *Japan Times*, April 7, 2018, <https://www.japantimes.co.jp/news/2018/04/07/national/japan-holds-kickoff-ceremony-nations-first-full-fledged-rapid-deployment-amphibious-force/#.XuTg7kVKiUk>.

30. Jiji Press, "GSDF Launches New Bases in Kagoshima and Okinawa for Defense of Japan's Southwestern Islands," *Japan Times*, March 26, 2019, <https://www.japantimes.co.jp/news/2019/03/26/national/politics-diplomacy/gsdf-launches-bases-kagoshima-okinawa-defense-japans-southwestern-islands/#.XuQW3EVKiUk>.

garrisons are home to air defense units and antiship cruise missile units designed to defend the approaches to the Ryukyu Islands and the various straits formed by the Ryukyus. In early 2019, the GSDF began to lay the groundwork to expand its presence to Ishigaki Island, another piece of strategically located terrain.

The 2018 NDPG calls on the ground service to deploy two battalions capable of firing “hyper velocity gliding projectiles” for the defense of the Ryukyu Islands. Since fiscal year 2018, research and development have been underway to produce munitions that would “enable island-to-island firing.”³¹ Armed with such a capability and deployed on an island, the GSDF’s shore-based launchers would be able to fire missiles over hundreds of kilometers of water against occupying enemy forces on another island. Hypothetically, Japanese units on Okinawa would be able to deliver precision firepower against Chinese forces that had seized the Senkakus. These proposed units would add another layer of defense to the growing presence and firepower of ground forces on the Ryukyus. An interlocking network of defense-in-depth positions on the islands could pose a formidable challenge to an invading force.

In addition to its role in island defense, the ground service obtained a new mission in ballistic missile defense. In December 2017, the Japanese government announced plans to introduce Aegis Ashore ballistic missile defense systems that would be operated by the GSDF. The land-based system, composed of long-range radars and missile interceptors, would complement Japan’s existing missile architecture.

31. “Research and Development Programs,” Acquisitions, Technology & Logistics Agency, n.d., https://www.mod.go.jp/atla/en/soubi_system.html.

Aegis Ashore would add a third layer to the missile shield provided by Aegis-equipped destroyers and Patriot surface-to-air missile batteries. The shore-based Aegis would also help to ease the operational burdens placed on sea-based ballistic missile defense. Two Aegis Ashore systems, located at two sites in Akita and Yamaguchi Prefectures, would provide full coverage of the entire Japanese archipelago from Hokkaido to the Ryukyu Islands. The systems were expected to begin operations by 2025, but the Japanese government suspended the project in June 2020 owing to local opposition, technical problems, and rising costs. The fate of Aegis Ashore remains uncertain as of this writing.

The ASDF will undergo a major recapitalization process in the coming years. In a massive procurement effort, the ASDF will replace its aging fleet, including the F-4 Phantoms and early model F-15s, with F-35 fighters. Tokyo had originally proposed to field 42 F-35A fighters. The new plan calls for introducing a total of 147 F-35s comprising 105 F-35As and 42 F-35B short takeoff and vertical landing aircraft. Over the course of the latest Mid-Term Defense Program from fiscal years 2019 to 2023, Japan hopes to bring into service 27 F-35As and 18 F-35Bs. As noted above, F-35Bs operating from *Izumo*-class carriers would substantially enhance the air service's ability to operate over the vast Pacific well east of the Japanese islands. Japan is also looking ahead to replace its fleet of about 90 F-2 fighters, which are slated for retirement beginning in 2035. According to the 2018 NDPG, the development of the fighter will be a Japanese-led effort, although the NDPG holds open the possibility of collaboration with international partners.

To enhance its long-range strike capabilities, the ASDF plans to procure the Joint Strike Missile, the Long Range Anti-Ship Missile, and the Joint Air-to-Surface Standoff Missile—Extended Range (JASSM-ER).³² With reported ranges of over 500 kilometers for the Joint Strike Missile, over 500 kilometers for the Long Range Anti-Ship Missile, and over 900 kilometers for the JASSM-ER, these missiles would substantially enhance Japan's ability to threaten enemy forces at standoff distances. The ASDF's F-35As are expected to carry the Joint Strike Missile, and the F-15Js are likely to be modified for the Long Range Anti-Ship Missile and the JASSM-ER. In response to the capable air-defense systems onboard modern Chinese surface combatants, the air service will more than double the range of its newly developed Air-Launched Anti-Ship Missile-3 to some 400 kilometers.³³ The multirole F-2 fighter will be outfitted with the supersonic Anti-Ship Missile-3. These various air-launched weapons would provide Japan's ASDF with a potent combination of firepower to hold at risk ground units and naval surface forces. The weapons could be particularly effective in scenarios involving a Chinese amphibious assault against Japanese positions on the Ryukyu Islands.

In line with the 2018 NDPG directive to enhance EW, space, and cyber capabilities, the services have begun work on various tactical assets in all three

32. Franz-Stefan Gady, "Japan's Ministry of Defense Confirms Plans to Procure New Stand-Off Missiles," *Diplomat*, February 4, 2020, <https://thediplomat.com/2020/02/japans-ministry-of-defense-confirms-plans-to-procure-new-stand-off-missiles/>.

33. Japan Ministry of Defense, *Defense Programs and Budget of Japan: Overview of FY2020 Budget Request* (Tokyo: Japan Ministry of Defense, August 2019), 15.

domains. In addition to the prospective influx of F-35As that boast powerful onboard EW systems, the ASDF's F-15 fighters will undergo upgrades to integrate EW suites. The air service will also develop a new-generation EW aircraft based on the C-2 transport aircraft's airframe. The GSDF, for its part, plans to establish an EW unit in late 2020 that will be based in Kumamoto Prefecture.³⁴ The 80-strong team would help to support Japanese amphibious assault forces and to blunt potential Chinese offensive operations in the East China Sea. In fiscal year 2020, the ASDF will establish a ground-based space surveillance unit, the first of its kind. A team will be assigned to monitor satellites in orbit and to track and respond to potential hostile actions in space, such as antisatellite attacks, by maneuvering orbitals. In subsequent years, an advanced, ground-based radar system and a space-based optical telescope will aid the newly established unit.³⁵ Finally, in the cyber domain, the staff supporting the Cyber Defense Group will be expanded by about 25 percent, and the GSDF will form a new cyber protection unit.

Although Japan's plans to procure a large fleet of F-35 fighters and to convert the *Izumo*-class carrier have attracted the most attention, Tokyo's advances in less prominent aspects of military

34. Jiji Press, "Defense Ministry to Set Up Electronic Warfare Unit in Kumamoto," *Japan Times*, September 15, 2019, <https://www.japantimes.co.jp/news/2019/09/15/national/defense-ministry-set-electronic-warfare-unit-kumamoto-prefecture/#.XecYPOhKiUk>.

35. "Defending Japan's Peace from the Skies, Build a Structure for Defending Japan," Japan Air Self-Defense Force, n.d., https://www.mod.go.jp/asdf/English_page/roles/role04/page05/index.html.

modernization are far more operationally significant. The acquisition of various standoff munitions and the expected development of a hypersonic weapon could substantially enhance the SDF's reach and lethality. Japan clearly recognizes the need to compete more effectively against China's missile arsenal and the outranging challenge it poses to Japanese forces. Tokyo's steps to introduce EW capabilities reflect the judgment that the SDF must be able to operate in an increasingly hostile electromagnetic environment. These enabling assets will become important indicators by which to discern Japan's defense posture.

CONSTRAINTS AND UNCERTAINTIES

Japan's fiscal limits, demographic decline, underdeveloped institutions, lingering questions about the offense-defense balance, and need to further develop operational concepts and strategy could conspire to undermine the NDPG's aims and the current modernization plans. On the surface, the upward trend in defense expenditures has been encouraging. After a decade of declining budgets from fiscal years 2003 to 2012, Japan's defense spending climbed steadily for eight straight years, from fiscal years 2013 to 2020. Indeed, the budget request for fiscal year 2020 represented a historic high.³⁶ Yet, as noted above, the increases over the eight-year period, averaging about 1.5 percent per year, have not been enough to keep pace with, much less offset, China's high rates of defense spending. Consequently, China's prodigious investments in the military have enabled it to close the qualitative gap in hard power as well as

36. Japan Ministry of Defense, *Defense Programs and Budget of Japan*, 3.

widen the quantitative gap in certain capabilities over the past two decades.

Equally worrisome, Tokyo's relatively modest boosts to defense spending have curbed its ability to expand the military. Consider the stagnant figures between the 2013 NDPG's 10-year projection of the force size to that of the 2018 NDPG's decade forecast of end strength.³⁷ Both documents fixed the GSDF's total authorized active-duty and reserve personnel at 159,000 and set the MSDF's fleet size at 54 major surface combatants and 22 submarines. The growth differential between the 2013 and 2018 documents over the anticipated size of the ASDF's combat aircraft fleet was also rather marginal. Consistent with long-standing practice, Japan appears committed to maintaining qualitative superiority to stay competitive. Yet, given the mass China can bring to bear and its significant technological advances, whether quality alone will be enough for Tokyo is unclear.

The 2018 NDPG and the Mid-Term Defense Program repeatedly bemoan the demographic crisis facing Japan. As the documents lament, "the rapidly aging population with declining birthrates" have severely constrained Japan's ability to tap its human capital and eroded its long-term fiscal position.³⁸ The lack of manpower imposes a structural constraint on Japan's ability to expand its military, even if resources were available for a major buildup. Personnel levels for the SDF have stayed stagnant since the end of the

37. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 33; and Japan Ministry of Defense, *National Defense Program Guidelines for FY 2014 and Beyond* (Tokyo: Japan Ministry of Defense, December 17, 2013), 31.

38. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 2.

Cold War. More worrisome, the SDF has struggled to fill its ranks. As of March 2019, the authorized end strength for personnel was some 247,000, but the actual end strength stood at about 226,000, revealing a gap of more than 20,000 people or an 8-percent shortfall.³⁹ To make matters worse, Japan's long-term demographic decline has dramatically shrunk the age group eligible for military service. The chronic shortage of personnel raises troubling concerns about the ability of the services to fill the billets necessary to operate modern equipment that will be fielded in the coming years.

Many of the modernization priorities summarized above would require the services to cooperate to an unprecedented degree. Even if Japan were to use the *Izumo*-class carriers as a temporary mobile air base rather than as a platform for embarking air wings on lengthy deployments, complex carrier operations in the open ocean would still demand the maritime and air services to integrate doctrine, tactics, and procedures. The defense of the Ryukyu Islands, the new locus of Sino-Japanese military competition, would similarly require all-service coordination. Sensors from the air, sea, and land would need to pass critical data and intelligence to each other. For instance, a GSDF shore-based antiship unit deployed on Miyako would need to rely on off-board sensors residing in ASDF and MSDF platforms to search, identify, and track an incoming amphibious assault force. Whether the proposed modernization plans will compel interservice amity remains to be seen.

Japan's planned acquisitions of long-range strike capabilities will increasingly blur the line that separates defensive and offensive operations. On the

39. Japan Ministry of Defense, *Defense of Japan 2019*, 539.

one hand, standoff weaponry should allow Japanese defenders to attack approaching enemy units at such distances that opposing forces would come under fire well before they were in range to hit back. These strike systems, including the various air-launched missiles the ASDF intends to procure, would have the effect of expanding Japan's defensive perimeter around key terrain, such as the Ryukyus. The systems would potentially impose high costs on the adversary as it neared its operational objectives or closed in on Japanese defending units. In recent years, China has been winning this outranging competition; thus, the SDF turning the tables on the PLA would be a welcome development.

Standoff missiles would also allow Japanese naval and air platforms to fire their payloads from locations well east and south of the main islands and still stay within range of enemy units. In a hypothetical Sino-Japanese conflict in the East China Sea, Japanese ships and aircraft could fall back to positions east and south of the Ryukyus while retaining the reach and striking power to inflict pain on adversary forces. Moreover, by pulling away from the first island chain, air and naval assets would both stay outside the densest parts of China's anti-access zones and maximize the strategic depth afforded by the Pacific Ocean.

On the other hand, some of these precision land-attack munitions, such as the JASSM-ER, would potentially furnish Tokyo with the ability to hold enemy units at risk well beyond the approaches to Japanese territory. Indeed, such long-range systems could allow the SDF to strike targets on the Chinese mainland or on the Korean Peninsula. Although policy documents such as the NDPG proclaim that Japan hews to an "exclusively defense-oriented policy," the

reach of these weapons could make Tokyo's long-standing postwar principles increasingly difficult to sustain politically and diplomatically.⁴⁰ Even if Japan were sincerely committed to its policies, the exigencies of war or crisis could radically change the country's calculus. Should deterrence fail, options that were once unthinkable in peacetime could quickly become conceivable, if not necessary. As these new long-range weapons become widely available to the SDF, Japanese decision makers will have to manage the potential misalignments among policy, strategy, and capabilities.

Japan will need to develop concrete operational concepts to harness the expected infusion of new weaponry, and consider a hypothetical defense of the Ryukyu Islands should deterrence fail. To fight effectively in a Sino-Japanese conventional conflict over the archipelago, Tokyo would have to address some key questions. For example, how would the defenders based on the Ryukyus, the first line of defense, survive the initial waves of Chinese attacks while holding their positions as reinforcements from Kyushu and areas further north flow to the frontlines? How would the reinforcements fend off interdiction efforts and other disruptive assaults? How would the assembled forces slow the momentum of China's offensive campaign, regain command of the air and sea, retake the operational initiative, and recapture lost territories if any had been lost to the Chinese?

If air and naval units were to fall back from the first island chain to survive the initial onslaught and stay beyond the reach of China's anti-access weaponry,

40. Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019*, 7.

how far over the horizon would they need to retreat? What role would carrier-based aviation play across the vast ocean bounded by the first and second island chains? How and where would these forces obtain their logistical support while operating far from home territory? Would some forces extend Japan's strategic depth forward by delivering firepower well inside the first island chain? If so, how far forward should such strikes reach to engage the adversary? Would certain circumstances demand limited strikes against critical targets on the Chinese mainland? This list of questions, by no means exhaustive, suggests an overarching campaign plan would be needed to organize Japanese defenses.

Finally, operational design must answer to a larger theory of victory—that is, the interrelationship between Japan's war aims and the SDF's expected military impact on the adversary's decision-making risk calculus and resolve to carry on the fight. This theory must credibly bridge the violent clash of arms on the battlefield to Japan's capacity to compel the enemy to do its will. The defense of the Ryukyu Islands, the contest for sea control and air superiority, the attrition of enemy forces, and so forth should culminate in a sustainable outcome favorable to Japan. In short, Japanese hard power, including the prospective Multi-Domain Defense Force, must never lose sight of its true political purpose.

CONCLUSIONS

The amount of change that can occur in just 10 years is remarkable. Since 2010, China's defense spending has raced ahead of Japan's. In key measures of military power, the PLA's margin of quantitative superiority

over Japan's SDF has increased significantly and will widen further still. Tokyo has learned to accept Chinese activism, if not permanent presence, in the East China Sea and the Sea of Japan. This new normal is a far cry from a decade ago when the PLA's naval and air sorties through and along the first island chain were still sporadic. More astonishingly, the 2018 NDPG acknowledged Tokyo can no longer take for granted the SDF's ability to command the air and the seas surrounding the Ryukyu Islands in a high-intensity conflict against China. In a war's opening phases, Japanese defenders would likely have to cede the battlespace over their home territories to escape and survive the first Chinese blows. Such are Japan's unforgiving strategic realities.

Whether Tokyo's bets on MDO, unprecedented interservice collaboration, long-range strike systems, defense in depth east of the Japanese archipelago, and advances in nontraditional warfighting domains will pay off remains to be seen. In addition, whether Japan can fulfill its defense commitments while staying within its limited means is equally uncertain. Nevertheless, Tokyo's recognition that formulas of past success no longer fit the present circumstances is surely a first step in the right direction.

7. NATO: THE CURRENT CHALLENGE

Heinrich Brauss

KEY POINTS

- The North Atlantic Alliance's strategic priorities are containing the geopolitical threat from Russia and managing the effects of terrorism and political instability across North Africa and the Middle East. The alliance also addresses the strategic implications of China's rise to great-power status.
- Given the multiplicity of threats and where they might come from, the North Atlantic Alliance should strengthen its forward presence and develop greater responsiveness through rapid decision making, more high-readiness forces, and greater mobility.
- The alliance's European members must continue spending more and assume greater responsibility for ensuring the security of Europe as the United States turns its attention to China.

On April 4, 2019, the North Atlantic Alliance marked its 70th anniversary. For more than seven decades, NATO has helped to preserve peace, stability, and prosperity in the Euro-Atlantic area. As is often said, this alliance is the most successful alliance in history. Arguably, NATO's success is due to its distinctive strategic functions and features.

THE ENDURING STRATEGIC FUNCTIONS AND FEATURES OF NATO

The North Atlantic Alliance represents the unique bond between North America and Europe, the two big global centers of Western democracy bound by shared history and values and similar strategic interests. Article 5 of the North Atlantic Treaty, the pledge to defend the sovereignty and territorial integrity of every ally against external threats or attacks, is the alliance's core.¹ Each ally, whether great or small, enjoys equal security, and all decisions are reached through consensus. Also, NATO provides the framework for the US military presence in Europe. This presence and the United States' extended nuclear deterrence remain crucial for Europe's security and underpin NATO's collective defense commitment. Europe, in turn, provides the geostrategic platform at limited cost for the projection of American power to other regions.

Furthermore, NATO has become the hub of a remarkable partnership network. The establishment of relations with some 40 partner countries and international organizations, such as the EU and the UN, is one of the alliance's greatest achievements. Many of these partner countries have made considerable contributions to NATO-led operations, including in the Western Balkans and Afghanistan, thereby enhancing mutual political understanding, interoperability, and effectiveness.

At the same time, NATO provides the institutional platform for continuous transatlantic dialogue among the allies on all security matters of common concern

1. North Atlantic Treaty, Washington, DC, B.E.-C.A.-D.K.-F.R.-I.S.-I.T.-L.U.-N.L.-N.O.-P.T.-U.K.-U.S., April 4, 1949.

by means of the North Atlantic Council and its political and military committees located at NATO Headquarters in Brussels. The permanent NATO Command Structure—the network of strategic- and operational-level military headquarters—ensures enduring situational awareness and military responsiveness through a continuously available assessment and planning capacity. Generations of officers and noncommissioned officers from the allied countries, working together in NATO's integrated military headquarters, have created a common military culture across the Atlantic.

THE VARIOUS MANIFESTATIONS OF NATO IN THE PAST 70 YEARS

The above-mentioned qualities and functions have contributed to NATO's ability to adjust to the varying political-historical challenges that have emerged since the alliance's foundation. Four incarnations of NATO can be identified.

First, during the Cold War, the alliance protected Western Europe—for 40 years—against the threat posed by the gigantic military posture of the Soviet Union and the Warsaw Pact in Europe. Strategic stability was maintained by a balance of large conventional forces and a huge arsenal of nuclear weapons. West Germany alone had eight allied army corps and thousands of nuclear weapons. In the wake of the North Atlantic Council's *Harmel Report* of 1967, NATO's strategy evolved into a combination of credible deterrence and a policy of détente to seek a more stable relationship with the Soviet Union and to look for balanced force reductions in the East

and the West.² This dual-track approach was most famously embodied in the 1979 NATO Double-Track Decision. In response to the Soviet deployment of new theater nuclear ballistic missiles (SS-20s), NATO simultaneously threatened Moscow with the deployment of US ground-based theater nuclear cruise missiles and ballistic missiles (Pershing IIs) in Europe and offered to open arms control negotiations with the Kremlin over these weapon systems. The goal was to make Moscow remove its missiles and, in turn, make US deployment of ground-launched cruise missiles and Pershing IIs unnecessary. When the offer was rejected, the United States deployed the new missiles. Thereafter, negotiations opened, eventually leading to the 1987 Intermediate-Range Nuclear Forces (INF) Treaty, which abolished all American and Soviet, land-based, intermediate-range conventional and nuclear forces. The INF Treaty forbade the United States and Russia from possessing, producing, or flight-testing ground-launched cruise missiles with a range capability of 500 to 5,500 kilometers and from producing launchers of these missiles. Although NATO's strategy had assumed a new dimension (arms control), at its core, the alliance remained focused on the threat posed by the Warsaw Pact. No other mission was contemplated or planned.

The alliance's steadfastness contributed to the end of the Cold War in 1989, ushering in a new era in which the Iron Curtain—which had divided Germany and Europe—fell, the Warsaw Pact was dissolved, the Soviet Union fell apart, and Central and Eastern European countries regained national

2. North Atlantic Council, *The Future Tasks of the Alliance (The Harmel Report)* (Brussels: North Atlantic Council, December 14, 1967).

sovereignty. President George H. W. Bush's vision of "a Europe whole and free and at peace" guided a new strategy: the transfer of stability from the west to the east of Europe.³ This stability transfer was meant to be primarily achieved through internal reforms in the Central and Eastern European states, opening NATO and the EU to new members from Central and Eastern Europe and, in parallel, establishing true cooperation with Russia, Ukraine, and other states of the former Soviet Union. In recognition of Russia's security concerns following the dissolution of the Soviet Union, NATO announced it would not deploy nuclear weapons on the territory of new allies. The alliance also committed to carrying out its collective defense mandate by ensuring the necessary capability for reinforcement rather than "additional permanent stationing of substantial combat forces" in the new member states.⁴ In addition, allies drastically decreased the number of nuclear weapons in Europe, significantly reduced their armed forces, and cut their defense budgets to rake in the peace dividend. In sum, NATO and EU enlargement, combined with a network of new partnerships, formed the basis of the Euro-Atlantic security architecture.

The third era of NATO transformation was generated by the wars in the Western Balkans accompanying the breakup of Yugoslavia in the 1990s, the 9/11 attacks by al-Qaeda, and the safe haven provided for al-Qaeda by the Taliban in Afghanistan. Due to the end of the East-West conflict, deterrence

3. George H. W. Bush, "A Europe Whole and Free" (speech, Mainz, Germany, May 31, 1989).

4. Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation, Paris, FR, N.A.T.O.-R.U., May 27, 1997.

and defense faded into the background, and out-of-area peace support operations and postconflict reconstitution beyond NATO's borders came to the fore. Keeping threats to Europe at bay was NATO's main interest and priority. This strategy shift necessitated a transformation of European armed forces from large, mechanized formations for defense in Europe to light, deployable, rotating contingents for lasting expeditionary crisis management operations. In sum, the North Atlantic Alliance evolved into a multipurpose alliance. Collective defense remained the basis of the alliance, but contributing to international crisis response and expanding partnerships had become the alliance's primary focus. Consequently, NATO's 2010 Strategic Concept established three core tasks for the alliance: (1) deterrence and collective defense; (2) crisis response; and (3) cooperative security.⁵

By 2014, NATO had once more entered a new era. The security environment has again changed fundamentally and continues to evolve at the regional and global level. For NATO, new challenges and threats have emerged primarily from two strategic directions. To the east, Russia's aggression against Ukraine and the illegal annexation of the Crimean Peninsula have profoundly changed the conditions for maintaining security and stability in Europe. To the south, the alliance is confronted with an arc of instability stretching from the Atlantic coast of the Sahel through North Africa and the Middle East to the Caucasus and Afghanistan. Continuing crises, state failure, violent religious extremism, conflicts between

5. NATO, *Active Engagement, Modern Defence: Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization* (Lisbon: NATO, November 19, 2010).

regional powers (such as Saudi Arabia and Iran), the war in Syria, and the rise of the Islamic State of Iraq and Syria have caused mass migration and affected Europe's stability.

Looking beyond NATO's eastern and southern neighborhood, the security environment is also influenced by China's rise to great-power status, the growing competition between the great powers, and its subsequent impact on the multilateral approach to international affairs and the corresponding institutions on which Europe's security has been built. But despite the multitude of challenges, the immediate challenges NATO must tackle are containing the geopolitical threat from Russia and fending off the spillover effects from instability and terrorism in the south.

THE ALLIANCE'S APPROACH TO MEETING NEW CHALLENGES AND THREATS

From an alliance perspective, the challenges emanating from both strategic directions are equally important. The North Atlantic Alliance must be able to support the security of every ally against any existing or potential threat. With this mandate in mind, and based on the summit decisions made in Wales in 2014, Warsaw in 2016, and Brussels in 2018, NATO has developed a comprehensive strategy building on two principal elements: strengthening NATO's deterrence and defense posture and projecting stability to improve security outside its territory. These elements have mutually reinforcing effects for maintaining alliance security.

Projecting Stability

The alliance remains capable of responding to crises beyond its borders. Crisis management and postconflict stabilization and reconstitution, however, require a comprehensive political concept and a civil-military approach tailored to a specific crisis or region. Such an approach involves tools and resources that NATO alone is not able to provide. Comprehensive, civil-military approaches to crisis management necessitate support from other international organizations, such as the UN or the EU. As NATO's operations in Afghanistan have shown, military force can initially bring violence down, but it cannot ensure lasting peace alone. This lesson has led NATO to shift its main strategy from intervening militarily to providing assistance to partners to enhance their resilience and provide for their security.

The alliance's efforts are multifaceted: enhancing and deepening political dialogue with partners and offering tailored defense and security capacity-building support, particularly to countries located in unstable regions, such as Moldova, Ukraine, Georgia, Tunisia, and Jordan. Also, NATO has launched a new training mission for Iraq. Allies and NATO partners have made hundreds of trainers available for providing advice and support to Iraq's Ministry of Defence and military schools and academies.⁶ The members of NATO continue to contribute to the fight against terrorism—for example, by supporting the Global Coalition to Defeat ISIS. The alliance and its partners in the Resolute Support Mission in Afghanistan

6. NATO, "Brussels Summit Declaration," Press Release no. 074, July 11, 2018, https://www.nato.int/cps/en/natohq/official_texts_156624.htm.

continue to provide support to the Afghan National Defense and Security Forces. In light of the February 2020 agreement between the United States and the Taliban on first steps toward a peaceful settlement to the conflict in Afghanistan, NATO is implementing a conditions-based reduction of its military presence.⁷ The alliance also continues its engagement in Kosovo via the Kosovo Force and conducts maritime security operations under Operation Sea Guardian in the Mediterranean.

Contesting Russia's Strategy

Although the above-mentioned measures require constant attention and engagement from allies, Russia represents the most serious external challenge to Europe's security. By its aggressive actions against Ukraine, Russia has broken one of the fundamental political principles of Euro-Atlantic security: Do not change borders by military force. Since then, Russia has stood in violation of numerous key treaties or agreements which have been relevant to Europe's security and stability since the end of the Cold War. And through its military intervention in Syria, Russia has demonstrated its readiness to project military power to regions beyond Europe, even over strategic distances and in a manner that challenges American and allied influence in a key region. In projecting its military power, Moscow is acting as a protector of autocratic rulers, not as a peacemaker.

7. NATO, "Statement by the North Atlantic Council on Afghanistan," Press Release no. 031, February 29, 2020, https://www.nato.int/cps/en/natohq/news_173977.htm?selectedLocale=en.

All of these actions have been designed to restore Russia's great-power status; the country demands a "zone of privileged interest" at the expense of the sovereignty and security of its neighboring states.⁸ But NATO stands in the way of Russia's expansionist ambitions. To achieve its goals, Moscow has therefore adopted a policy of constant confrontation with the West. Russia's "strategy of active defense" is designed to destabilize allies, compromise alliance decision making and inhibit NATO's military options for defense.⁹ To this end, Russia uses a wide range of overt and covert, nonmilitary and military means that are applied in an orchestrated way, underpinning Russia's so-called hybrid warfare. Such hybrid operations avoid open military aggression and remain below the threshold of a direct military confrontation with NATO, thus avoiding triggering military resistance. Yet, these operations achieve an effect similar to military action: surprise, insecurity, and intimidation and paralysis of the opponent. This strategy blurs the boundaries between peace and conflict to impede an expeditious and effective response. Moscow's military-strategic thinking and operational courses of actions were applied during its aggression against Ukraine and were repeatedly demonstrated by the regular, biannual, large-scale Zapad exercises.

Two interdependent factors are of particular concern. The first is Russia's efforts to achieve regional military superiority with conventional forces on

8. Dmitry Medvedev, "Interview Given by President Dmitry Medvedev to Channel One, Rossia, NTV," August 31, 2008, <http://en.kremlin.ru/events/president/transcripts/48301>.

9. Dave Johnson, *Review of Speech by General Gerasimov at the Russian Academy of Military Science*, Russian Studies no. 04 (Rome: NATO Defense College, March 2, 2019).

NATO's borders. Moscow now has the option of a preemptive attack, using rapidly deployable forces—which can be massed within a few days on Russia's western border—together with manifold long-range strike capabilities to disable the alliance's military system. This strategy could involve a limited land grab to achieve a decisive military advantage before NATO can effectively react, accompanied by cyberattacks, disinformation campaigns, and subversive actions on allied territory.

The second factor is Russia's strategy of threatening to use nuclear weapons to underpin a conventional attack and confront NATO with a fait accompli. The breach of the INF Treaty and the deployment of the new, ground-based, intermediate-range, dual-capable cruise missile SSC-8 (with conventional or nuclear warheads) are reminders of Russia's significant arsenal of substrategic air-, sea-, and ground-based nuclear weapons. These missiles are capable of striking capitals and key civilian and military infrastructure in Europe, but the weapons leave US territory unaffected. Consequently, during a conflict, Europe's security could be decoupled from that of the United States and the latter's extended nuclear deterrence undermined. These conditions could lead Moscow to believe it could paralyze allies' decision making and undercut their determination to live up to their collective defense commitments. The Kremlin might conclude it could convince NATO to stand down for fear of nuclear escalation. In the worst case, such attempts at blackmail through the combined use of conventional and nuclear threats could disrupt NATO and thus attain strategic success without a long war.

Accordingly, NATO needs to be able to contest Russia's strategic intimidation efforts and deny

it any options for achieving the desired political effects. The alliance's priorities should therefore be threefold: fostering state and societal resilience against malicious cyber activities and disinformation, denying Russia a *fait accompli* with conventional forces, and developing countermeasures to negate Russia's regional nuclear threat.

In political and strategic terms, NATO's approach to dealing with Russia follows a dual-track approach similar to that established by the *Harmel Report* of 1967. The approach involves ensuring credible deterrence and strong defense capabilities and seeking a periodic, meaningful dialogue with Russia in the Russia-NATO Council as well as through meetings between the supreme military commanders of NATO and Russia. Given the overall political circumstances, for the time being, the minimum objective is to avoid misunderstandings, miscalculation, and unintended escalation and increase transparency and predictability.¹⁰

THE NORTH ATLANTIC ALLIANCE'S COMPREHENSIVE LONG-TERM ADAPTATION PROGRAM

The wide spectrum of potential challenges and threats from various geographical areas—from the north and the North Atlantic through the Baltic and Black Sea regions to the Mediterranean region and North Africa and the Middle East—require NATO to retain maximum awareness, flexibility, and agility to ensure the alliance has the right forces in the right place at the right time. This strategy is to be accomplished by the speedy deployment of

10. NATO, "Brussels Summit Declaration."

forces to the places they are required, rather than the permanent forward stationing of large defense forces. But for geographic reasons, a critical time-distance gap between the possible deployment of superior Russian forces and a buildup of substantial alliance forces through reinforcement exists. This gap is most glaring for the Baltic states and northern Poland, which share a common border with Russia. Complicating matters further are Russia's anti-access/area denial capabilities. These capabilities consist of multiple air-defense systems; long-range artillery; long-range, high-precision strike capabilities; short-range, dual-capable ballistic missiles with conventional or nuclear warheads; and electronic warfare systems intended, in total, to create a defensive bubble around a given area, such as Kaliningrad and the Crimean Peninsula. But these capabilities also have an offensive function: In a conflict, the capabilities could impede or prohibit the movement of allied reinforcement forces into and across the Baltic or Black Sea regions. Therefore, an appropriate, persistent forward presence of allied forces is needed in these regions. At the same time, the alliance must ensure it is capable of rapid and effective reinforcement of a threatened ally or allies with capable combat forces.

Consequently, rapid decision making, sufficient forces at high readiness, and the ability to move them swiftly over great distances are of utmost importance. This concept requires a shift in strategic mindset. For many years, NATO has focused on out-of-area crises and discretionary crisis-response operations with a long preparation time. Now, deterrence and defense—adapted to the political and geostrategic circumstances of today and tomorrow—and the possibility of nondiscretionary collective defense

operations at short notice are back at the heart of the alliance's strategic thinking.

To implement these strategies, the alliance set up an ambitious program which has achieved considerable progress since 2014. The following sections describe the progress that has been made.¹¹

Enhancing Responsiveness

The North Atlantic Alliance has accelerated its procedures for making decisions on the deployment of rapid response forces within eight to 12 hours. In addition, work is underway to improve the alliance's warning and alert system, with a focus on crises occurring with little or no warning.

The NATO military authorities have agreed to a new NATO military strategy for deterrence and defense. This new military strategy is the first since the legendary MC 14/3 of 1967, which laid out NATO's strategy of flexible response. Meanwhile, allies also agreed to a comprehensive military strategic concept for deterrence and defense in the whole Euro-Atlantic area. The concept informs further planning for the reinforcement and defense of a threatened ally or allies in multiple regions – simultaneously, if necessary. The alliance is also working on an effective response to Russia's anti-access/area denial capabilities to ensure the freedom of action and movement of alliance forces on land, in the air, and at sea. In addition, NATO is developing its exercise program to better integrate large-scale, Joint, collective defense operations, cyber defense operations, and logistics support.

11. Heinrich Brauss, *NATO Beyond 70: Renewing a Culture of Readiness* (Tallinn, EE: International Centre for Defence and Security, November 2018).

The NATO Command Structure is being enhanced to reacquire capabilities to command and control the whole range of operations across several regions. To this end, some 1,200 new posts have been added to the NATO Command Structure staff, and a new Cyber Operations Centre has been established at the Supreme Headquarters Allied Powers Europe. In addition, two new commands were set up: the Joint Force Command Norfolk in Norfolk, Virginia, which is responsible for managing the movement of US and Canadian forces across the Atlantic, and the Joint Support and Enabling Command in Ulm, Germany, which is in charge of supporting and protecting the movement of forces across and from Europe.

The alliance knows hybrid threats at the nonkinetic end of the conflict spectrum, such as disinformation, malicious cyber activities, and interference in domestic affairs, have the potential for destabilizing societies and governments. Allies have been working to implement the 2016 Warsaw Summit pledge to enhance resilience in key areas, such as ensuring continuity of government and essential services, protecting critical civilian infrastructure, and ensuring allies' military forces receive support from civilian resources. The establishment of the new Joint Intelligence and Security Division within NATO's International Staff has improved NATO's situational awareness in this area. New Counter Hybrid Support Teams can be dispatched to allied capitals on short notice for advice and support. The allies also agreed hybrid attacks could lead the alliance to invoke Article 5.¹² Finally, cyber defense is now part of

12. NATO, "NATO's Response to Hybrid Threats," August 8, 2019, https://www.nato.int/cps/en/natohq/topics_156338.htm.

NATO's core task of collective defense and an essential element of NATO's deterrence and defense posture. The 2016 Warsaw Summit Cyber Defence Pledge commits all allies to delivering strong national cyber defense.¹³ Allies have also agreed to integrate "sovereign cyber effects" (that is, offensive cyber operations conducted by individual states) into alliance operations and missions.

Enhancing Forward Presence

In the Baltic region, under the alliance's Enhanced Forward Presence, four multinational, combat-ready battle groups in Estonia, Latvia, Lithuania, and Poland have been operational since mid-2017. Some 20 allies are contributing forces. These formations—each composed of roughly 1,000 troops or more—are led by the United Kingdom, Canada, Germany, and the United States, respectively. Though it is not leading a battle group, France has deployed a contingent which annually alternates between Estonia and Lithuania. Although limited in size, the battle groups signal to Moscow it would be immediately met by allied military forces, including forces from the three allied nuclear powers (the United States, France, and the United Kingdom) as well as Germany, the Central European power, even in the event of a limited incursion. This strategy represents deterrence in a nutshell.

When considering measures to enhance NATO's deterrence and defense posture in the Baltic region, the Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation

13. NATO, "Cyber Defence Pledge," Press Release no. 124, July 8, 2016, https://www.nato.int/cps/en/natohq/official_texts_133177.htm.

was an important political factor. Thereby, as already outlined, the alliance pledged, inter alia, in the “current and foreseeable security environment” of 1997, to carry out its collective defense commitments by ensuring the necessary interoperability, integration, and capability for reinforcement, engaging in “additional permanent stationing [of] substantial combat forces” on the territory of the new allies.¹⁴ Despite the security environment having changed fundamentally in the meantime and Russia having violated its obligations set out in the founding act in many ways, the alliance, as matter of principle, decided to adhere to all of its international commitments. But the pledge to provide substantial combat forces neither quantified the size of additional allied forces under the threshold of “substantial” nor defined the duration of their stationing under the threshold of “permanent,” and no relevant agreement within the alliance or between NATO and Russia exists.¹⁵ Furthermore, the historical record of the discussions on conventional arms control in Europe suggests forces larger than the Enhanced Forward Presence battle groups, perhaps at least up to a mechanized brigade, could permanently be stationed in each of the Baltic states in peacetime without contravening the pledge.¹⁶

Notably, the United States has significantly increased its commitment to, and funding for, its European allies’ security under the European Deterrence Initiative. This commitment included the

14. Founding Act on Mutual Relations.

15. William Alberque, “‘Substantial Combat Forces’ in the Context of NATO-Russia Relations,” NATO Defense College Research Paper 131 (Rome: NATO Defense College, June 2016), 14–15.

16. Alberque, “‘Substantial Combat Forces,’” 15.

deployment of more US troops in Europe, enhanced prepositioning of equipment, more exercises, and infrastructure improvements. The additional troops include a US armored brigade combat team (up to 5,000 troops) rotating into Poland from the United States. The budget for the European Deterrence Initiative increased from \$3.4 billion in 2017 to \$6.5 billion in 2019.¹⁷ Moreover, based on a bilateral US-Polish agreement, the United States will station some 1,000 additional troops in Poland, including a division headquarters (forward), and build the infrastructure needed to support the rapid buildup of a US Army division. Poland will cover the infrastructure costs.¹⁸

In the Black Sea region, US troops are continually present under NATO's Tailored Forward Presence. The alliance has also established the new Headquarters Multinational Division South-East and the Multinational Brigade South-East, which provide a framework for regular multinational exercises in Romania and Bulgaria. Fourteen allies have committed to contributing to NATO's Tailored Forward Presence. Several allies have also reinforced Romania and Bulgaria's efforts to protect their respective airspaces. In addition, NATO has increased its naval presence and maritime patrol aircraft flights in the Black Sea.¹⁹

17. Office of the Under Secretary of Defense (Comptroller), *European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2019* (Washington, DC: Office of the Under Secretary of Defense (Comptroller), February 2018).

18. Joint Declaration on Defense Cooperation Regarding United States Force Posture in the Republic of Poland, New York, NY, U.S.-P.L., September 23, 2019.

19. NATO Public Diplomacy Division, *Public Diplomacy Division (PDD) Press and Media Playbook* (Brussels: NATO Public Diplomacy Division, October 10, 2019), 4.

In the alliance's south, NATO has established NATO Strategic Direction-South Hub at the Allied Joint Force Command Naples. The hub is designed to enhance NATO's situational awareness in the region and improve the alliance's ability to respond to threats from the south, including from terrorist groups, potentially with allied forces or with training assistance to partner states.

Enhancing Readiness

The alliance has tripled the size of the NATO Response Force, creating a high-readiness Joint Force of some 40,000 troops. The force's spearhead, the multinational Very High Readiness Joint Task Force of some 5,000 troops, is on permanent standby and ready to move its initial elements within a few days. The framework nation role alters annually among European allies. In addition, at the 2018 Brussels Summit, the allies launched the NATO Readiness Initiative, which has the goal of the alliance being able, by 2020, to employ up to 30 maneuver battalions, 30 kinetic air squadrons, and 30 combat vessels in a theater of operations within 30 days or less.²⁰ The alliance has also agreed these forces will evolve into multiple land combat brigades, maritime task groups, and enhanced air wings at very high readiness. These forces will significantly improve NATO's military responsiveness and reinforcement capability.

The alliance maritime posture is being reinforced to improve overall maritime situational awareness in allied associated waters, reinvigorate maritime warfighting capabilities in key areas, and protect sea lines of communication. This new posture is

20. NATO, "Brussels Summit Declaration."

particularly important in the case of the North Atlantic, given its potential role in moving troops and materiel from North America to Europe.²¹

Similarly, NATO's Joint Air Power Strategy is an effort to enhance NATO's air policing and ballistic missile defenses. The strategy will guide the Joint operation of allies' aerospace capabilities, be it in peacetime, during a crisis, or in a conflict.²² Given the geographic realities in the European theater, the alliance's airpower would likely be the reinforcement force of first choice.

Enabling Reinforcement

For timely reinforcement, allied forces must be able to move rapidly across Europe and the Atlantic. To this end, NATO is implementing a comprehensive Enablement Plan. In parallel, the EU is working to implement its Action Plan on Military Mobility. The two initiatives complement each other in creating the legal, logistical, and infrastructure conditions for enabling rapid movement of military forces across borders in Europe, whether on land or in the air, in peacetime or in a crisis. The European Commission plans, under its Trans-European Transport Network program, to cofinance dual-use (civilian and military) infrastructure projects, such as roads, bridges, tunnels, harbors, and airfields, to facilitate the movement of forces through and from Europe.

21. NATO, "Brussels Summit Declaration."

22. NATO, "Brussels Summit Declaration."

Reinvigorating Nuclear Deterrence

The North Atlantic Alliance's nuclear capability is an essential component of the alliance's deterrence and defense posture.²³ The US strategic nuclear forces are the supreme guarantee of allies' security. The independent strategic nuclear forces of the United Kingdom and France have a deterrence role of their own and contribute to the overall security of the alliance. The alliance's nuclear deterrence posture also relies on forward-deployed American nuclear weapons and European dual-capable aircraft (DCA), as well as the supporting infrastructure, qualified to deliver both conventional and nuclear armament.²⁴

The alliance insists any employment of nuclear weapons against it would fundamentally alter the nature of a conflict. The alliance has also affirmed, if the fundamental security of any of its members were to be threatened, NATO has the capabilities and resolve to impose costs on an adversary that would far outweigh the benefits any adversary could hope to achieve.²⁵ After years of restraint in articulating the role of nuclear deterrence in the alliance's strategic posture, in highlighting the importance of nuclear deterrence in such strong terms at the Warsaw and Brussels summits, the alliance sent a clear message to Russia that any use of nuclear weapons, including for blackmail, could eventually result in NATO inflicting unacceptable damage on Russia itself, and should therefore not be considered.

23. NATO, "Brussels Summit Declaration."

24. NATO, "Brussels Summit Declaration."

25. NATO, "Brussels Summit Declaration."

FAIR BURDEN SHARING

Responsiveness, readiness, and reinforcement require adequate and equitable contributions from all allies, in line with Article 3 of the North Atlantic Treaty. (Article 3 reads, “In order more effectively to achieve the objectives of the Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack.” The Article 5 collective defense commitment should be seen in conjunction with allies’ Article 3 obligations.) Fair burden sharing is the ultimate expression of alliance solidarity and NATO’s credibility. In 2017, NATO leaders agreed on what constitutes fair burden sharing—namely, “the 3Cs”: defense expenditure (cash), implementation of NATO capability targets (capabilities), and participation in military operations and missions that strengthen Europe and NATO’s security (contributions).

Capabilities: NATO Defense Planning

The North Atlantic Alliance’s key tool for identifying the quantity and quality of forces and capabilities needed for operations across the whole mission spectrum—operations the alliance wants to be capable of conducting, in pursuance of its three core tasks—is the NATO Defence Planning Process. Every four years, NATO defence ministers issue their Political Guidance for the development of allies’ forces and capabilities. In light of the changed security environment and the need to strengthen deterrence and defenses, in 2016, emphasis was placed on developing “heavier and more high-end forces and capabilities, as

well as more forces at higher readiness.”²⁶ Additional capabilities, such as cyber defenses, were also deemed necessary. In 2019, the alliance emphasized improving the quality and readiness of forces (for example, through improvements in personnel, equipment, training, and munition stocks).

Ministers also decide NATO’s Level of Ambition, a construct for determining the generic pool of forces and capabilities required for all conceivable present and future operations. For that purpose, the ministers directed the allies to provide the forces and capabilities needed for NATO to be able to conduct two generic Major Joint Operations (MJOs) and six generic Smaller Joint Operations concurrently. (An MJO comprises land forces of corps size [some 50,000 personnel] and the equivalent air, maritime, and special operations forces, and a Smaller Joint Operation comprises land forces of division or brigade size.) At the same time, the pool of forces and capabilities identified on that basis should also provide for NATO’s ability to mount an MJO Plus—that is, a large-scale Joint operation comprising several MJOs in multiple regions and across multiple operational domains.

Based on the ministers’ guidance, NATO’s strategic commanders identify the set of Minimum Capability Requirements. Using a complex algorithm for identifying a fair share of the overall burden for each ally—mainly based on nations’ relative wealth—each nation receives a set of quantitative and qualitative NATO capability targets that have to be met in the short and medium term. (Within the framework of NATO defence planning, “short term” means up to

26. NATO, “Warsaw Summit Communiqué,” Press Release no. 100, July 9, 2016, https://www.nato.int/cps/en/natohq/official_texts_133169.htm.

six years, “medium term” up to 19 years, and “long term” 20 years or more.) As a result, the United States gets the biggest target package, covering some 50 percent of the overall alliance capability requirements. Germany gets the second biggest package, followed by the United Kingdom and France, and so forth. In some areas, typically involving higher-end capabilities and strategic enablers, the United States currently provides much more.

In 2017, for the first time in NATO’s history, all allies accepted all targets assigned to them. The relevant NATO civil and military staffs are required to review the allies’ progress in implementing these targets every two years. For NATO’s effectiveness and credibility, gaps between allies’ NATO targets and their national capability plans and financial plans must remain limited and be closed as soon as possible. Also, Canada and the European allies must provide their fair share of capabilities.

Defense Investment

Carrying out all of NATO’s planned improvements will require considerable resources. In recognition of this fact, at the 2014 Wales Summit, NATO leaders agreed to the Defence Investment Pledge. Allies that spent less than 2 percent of gross domestic product (GDP) on defense committed to moving toward that benchmark by 2024, and those that spent less than 20 percent of their defense budget on new major equipment and research and development committed to increasing, within a decade, their annual

investment to at least that mark.²⁷ Allies' commitment to implementing the Defence Investment Pledge is underpinned by an annual presentation by each nation of its contributions to the 3Cs and its plans to reach the 2- and 20-percent targets by 2024, if they have not already been reached.

Allied defence ministers set the 2- and 20-percent guidelines for the first time in 2006, when—because of continuous reductions in defense budgets since the early 1990s—the mean of the defense budgets of the European allies and Canada had fallen below 2 percent of GDP. The goal was to encourage allied governments to stop further cuts. But as these guidelines were not binding and Europe perceived no direct threat to its security, reductions continued, with the mean contracting to 1.43 percent in 2014. Since 2015, however, all allies have increased their defense spending. In 2019, nine allies spent at least 2 percent of their GDP on defense (up from three allies in 2014) and 16 allies spent at least 20 percent of their GDP on major equipment.²⁸ In addition, 2019 marked the fifth consecutive year of growth in defense spending for the European allies and Canada, with an increase in real terms of 4.6 percent from 2018 to 2019.²⁹ The European allies and Canada, together,

27. NATO, "Wales Summit Declaration," Press Release no. 120, September 5, 2014, https://www.nato.int/cps/en/natohq/official_texts_112964.htm.

28. Jens Stoltenberg, *The Secretary General's Annual Report 2019* (Brussels: NATO Public Diplomacy Division, March 19, 2020), 36–41; and NATO, "Defence Expenditures of NATO Countries (2013–2019)," Press Release no. 123, November 29, 2019, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_11/20191129_pr-2019-123-en.pdf.

29. Stoltenberg, *Secretary General's Annual Report 2019*.

will have added a total of \$130 billion to their defense budgets between 2016 and the end of 2020. Moreover, the European allies and Canada are estimated to have spent approximately \$66 billion on major equipment and the associated research and development. As a global power with global interests, commitments, and responsibilities, the United States spends more than twice as much on defense as its European allies and Canada together.³⁰ On the other hand, estimates suggest 25 percent of overall US defense spending is directed to alliance security, and the direct costs of US presence in Europe amount to 5.6 percent of the total US defense expenditure.³¹

Cooperation between NATO and the EU

Shaken by the new challenges and threats posed to Europe since 2014, NATO and the EU have engaged in unprecedented cooperation. Based on the Joint Declaration on EU-NATO Cooperation, which the NATO secretary general and the presidents of the European Council and the European Commission signed at the 2018 Brussels Summit, NATO and the EU are cooperating on 74 projects in a range of areas, including countering hybrid threats, providing cyber defense, developing capabilities, mobilizing the

30. Stoltenberg, *Secretary General's Annual Report 2019*.

31. Lucie Béraud-Sudreau, "On the up: Western Defence Spending in 2018," *Military Balance Blog*, IISS, February 15, 2019, <https://www.iiss.org/blogs/military-balance/2019/02/european-nato-defence-spending-up>.

military, building defense capacity for partners, and strengthening maritime security.³²

In the past few years, the EU has built significant momentum in improving the capabilities and structures needed for civilian and military crisis response operations within the framework of the EU's Common Security and Defence Policy. Although collective defense remains NATO's sole responsibility, the EU's peacekeeping operations and civil-military conflict prevention programs in regions beyond Europe also contribute to transatlantic security and further transatlantic burden sharing. Enhancing European nations' forces and capabilities by using EU instruments also benefits the alliance, given the overlap of EU and NATO membership (21 European nations are members of both NATO and the EU). Finland and Sweden are especially linked to NATO through regular political dialogue and consultations on the security situation in the Baltic Sea region, exchanges of information on hybrid warfare, and Joint training and exercises.

The EU's Permanent Structured Cooperation and European Defence Fund (EDF) are intended to help European nations develop, through enhanced multinational cooperation, more and better capabilities; reduce duplication; and help to converge nations' capability development plans over time. Member states of the EU have, to date, launched 47 cooperative projects which cover a variety of capability areas, from the "Eurodrone" (European Medium Altitude Long Endurance Remotely Piloted Aircraft System) to training facilities, supported by

32. NATO, "Joint Declaration on EU-NATO Cooperation," Press Release no. 095, July 10, 2018, https://www.nato.int/cps/en/natohq/official_texts_156626.htm.

different groups of nations. The EDF is supposed to cofinance selected research and development programs as well as multinational capability projects within the forthcoming EU 2021–27 Multiannual Financial Framework. The EDF is thus meant to be an instrument to support and help consolidate the European defense industries. Detailed regulations for the participation of non-EU nations or companies are the subject of ongoing negotiations. (Notably, between 2014 and 2016, American companies exported armaments worth \$62.9 billion to Europe, and European companies exported armaments worth \$7.6 billion to the United States. Accordingly, US defense imports from the EU are estimated to be worth less than 2 percent of US defense expenditures in 2016, and EU imports from the United States are estimated to be almost 10 percent of the total of EU member states' defense expenditures.)³³

Because all EU-NATO countries only have one set of forces and one defense budget each, military capabilities developed within the framework of the EU must also be available to NATO, and vice versa. Relevant NATO and EU staffs work together to ensure capability development within the two organizations is complementary and the respective priorities and outputs are coherent.

FURTHER ALLIANCE ADAPTATION

The alliance's immediate task is to implement expeditiously and effectively the reforms cataloged

33. Jacopo Barigazzi and Joshua Posaner, "EU to US: Don't Worry about Our Military Plans," *Politico* Europe Edition, May 16, 2019, <https://www.politico.eu/article/european-military-defense-army-nato/>.

above. But because of Russia's hybrid warfare strategy and the deployment of ground-based, intermediate-range cruise missiles, some additional measures should be taken to ensure the credibility of NATO's deterrence posture and its ability to deny Russia any decisive gain from its coercive strategies or a potential military conflict.

Fostering societal resilience against disinformation and malicious cyber activities is a formidable challenge for open, democratic societies. Allies have started to address the issue of how to deter an adversary from launching significant, widespread cyberattacks—for example, by combining classic deterrence, digital resilience, and measures that need to be developed to impose costs on those who would harm allied nations.³⁴ But more needs to be done in thinking about the proper mix of defensive and offensive responses to cyberattacks, including political and economic sanctions and the employment of the full range of capabilities in case of a large-scale cyberattack with strategic effect. (For its part, the United States has stated it reserves the right to use nuclear weapons in “extreme circumstances” in the case of a strategic-level nonnuclear attack.)³⁵ Deterrence of hybrid threats is a challenge that needs to be urgently taken forward by allies.

The combat readiness of the Enhanced Forward Presence battle groups should be further improved by ensuring a full set of combat and combat support units. As the battle groups are closely connected with the respective national defense forces, reinforcing

34. NATO, “Brussels Summit Declaration.”

35. James Mattis, *Nuclear Posture Review* (Washington, DC: Office of the Secretary of Defense, February 2018), 21.

the battle groups in the Baltic states would also considerably benefit the Baltic states' army brigades. In addition, the battle groups in the Baltic states should be supplemented by US combat units to further increase their deterrent value. Increasing NATO's maritime presence in the Baltic Sea to ensure sea control and geographical depth for alliance operations is also a pressing need.

Allied air forces would be the first to reinforce Eastern European allies' national defense forces. Joint fires employing long-range, precision-guided weapons and electronic warfare capabilities are required for being able to defeat Russia's anti-access/area denial capabilities and its massed conventional forces. Therefore, all arrangements related to alert, political decision making, and command and control must be in place to ensure the rapid availability of allied air forces at any time.

At the same time, in light of the threat caused by the Russian intermediate-range missiles, allies' air and missile defenses need to be drastically strengthened to protect critical military infrastructure and forces for reinforcement. The acquisition of such capabilities should become a top procurement priority for European allies.

The NATO Response Force should be adjusted to establish multiple light-combat formations that could be employed rapidly to different regions to underpin NATO's resolve. The forces generated by the NATO Readiness Initiative would then provide a high-readiness (mechanized) reinforcement force; consequently, these forces must be vigorously developed. Moreover, establishing additional, larger follow-on formations to create an alliance full-spectrum warfare capacity is essential.

To enable their timely deployment, NATO and the EU must make achieving military mobility in Europe a priority, and they must exercise that capability in peacetime. Also, the allies urgently need to enhance their transport capacity, which must be available on demand, significantly.

In July 2019, the alliance determined its response to Russia's breach of the INF Treaty and the deployment of dual-capable, intermediate-range ground-based missiles would be measured, balanced, and defensive.³⁶ In June 2020, NATO defence ministers established a balanced package of political and military measures.³⁷ This package is intended to ensure NATO's deterrence and defense posture remains credible and effective but does not mirror Russia's behavior.³⁸ The package does not include deployment of new ground-based nuclear missiles in Europe. Rather, recognizing Russian missiles must not be considered in isolation, but as part of Russia's integrated use of conventional and nuclear capabilities, allies decided to improve NATO's capabilities in a variety of areas, primarily focusing on conventional capabilities—intelligence, surveillance, and reconnaissance; air and

36. "Secretary General: NATO Response to INF Treaty Demise Will Be Measured and Responsible," August 2, 2019, https://www.nato.int/cps/en/natohq/news_168177.htm.

37. Jens Stoltenberg, "Press Conference by NATO Secretary General Jens Stoltenberg Following the Meetings of NATO Defence Ministers" (speech, NATO Headquarters, Brussels, Belgium, June 17, 2020), https://www.nato.int/cps/en/natohq/opinions_176520.htm?selectedLocale=en.

38. Jens Stoltenberg, "Press Conference by NATO Secretary General Following the Defence Ministers' NAC" (speech, NATO Headquarters, Brussels, Belgium, June 29, 2017), <https://nato.usmission.gov/june-29-2018-nato-sec-gen-press-conference-nac/>.

missile defenses; advanced conventional capabilities; exercises; and a safe, secure, and effective nuclear deterrent—to deny Russia options for intimidating the alliance or obtaining a decisive military advantage.

In implementing the various measures, the alliance's unity must be preserved, and the credibility of NATO's deterrence as a whole, including US extended nuclear deterrence, must be maintained.³⁹ Thus, the measures need to contribute to maintaining the linkage of NATO's deterrence and defense posture in Europe to the US strategic nuclear potential. For the time being, the United States intends to counteract the Russian regional nuclear threat by means of a limited number of sea-launched ballistic missiles with low-yield nuclear warheads.⁴⁰ Additionally, a ground-based, intermediate-range, conventional, precision strike missile is being developed that could target key nodes of Russia's armed forces and thus impede Russia's ability to conduct conventional war.⁴¹

NATO's existing nuclear deterrent in Europe and the alliance's nuclear sharing arrangements, including the DCA capabilities provided by multiple European allies, play an essential role in ensuring the credibility of the US extended nuclear deterrence. Both the nuclear deterrent and the nuclear sharing arrangements are crucial to maintaining the strategic

39. Heinrich Brauss and Christian Mölling, *Europe's Security without the INF Treaty: Political and Strategic Options for Germany and NATO*, DGAPkompakt no. 02 (Berlin: German Council on Foreign Relations, December 2, 2019).

40. Mattis, *Nuclear Posture Review*, 54.

41. Jon Harper, "Options Abound for New Intermediate-Range Missiles," *National Defense*, October 31, 2019, <https://www.nationaldefensemagazine.org/articles/2019/10/31/options-abound-for-new-intermediate-range-missiles>.

unity of the allies' territories and the indivisibility of allies' security and, thus, the credibility of NATO's deterrence posture in its entirety.⁴² Enhancing the readiness of NATO's DCA capabilities, as well as the scale of DCA exercises, is presumably included in the response package. Such exercises should at times be conducted concurrently with, or in the context of, selected conventional exercises to demonstrate the relationship between conventional defense and nuclear deterrence. Russia must realize its territory would not be a sanctuary if the country were to threaten Europe with nuclear missiles.

Moscow must also realize arms control is a means to enhancing strategic stability in Europe and reducing risks to Russian security. Allies, on their part, have declared they remain committed to the preservation of an effective arms control regime. The alliance must therefore maintain its dual approach of strengthening deterrence and engaging in meaningful dialogue with Russia to seek reciprocal transparency and reduce the risk of misperception and inadvertent incidents.

LOOKING TO THE FUTURE: BROADENING THE PERSPECTIVE

At the NATO meeting in London and Watford, United Kingdom, in December 2019, NATO's political leaders recognized "China's growing influence and international policies present both opportunities and challenges that . . . [the leaders] need to address

42. Stoltenberg, "Following the Meetings of NATO Defence Ministers."

together as an Alliance.”⁴³ China’s ambition to become a world power and its growing economic, technological, and military potential represent a strategic challenge for the transatlantic community as a whole, a point NATO’s secretary general made explicit.⁴⁴ Allies have started to address the various implications of China’s strategy, a move which should help to develop a common approach. Also, NATO should enhance its dialogue with Asian-Pacific partners: Japan, South Korea, Australia, and New Zealand. Moreover, increasing indications of a Russo-Chinese entente could lead to “the greatest potential redefinition of worldwide power distribution in half a millennium” in favor of autocratic regimes.⁴⁵

Thus, the transatlantic partners must cope with two strategic competitors at the same time. The United States’ focus on the Indo-Pacific region will have implications for Washington’s strategic and operational planning, including the assignment of military forces. Consequently, the European nations will need to do more for the security of both Europe and the transatlantic community by contributing

43. NATO, “London Declaration Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in London 3–4 December 2019,” Press Release no. 115, December 4, 2019, https://www.nato.int/cps/en/natohq/of%EF%AC%81cial_texts_171584.htm.

44. Douglas Lute and Nicholas Burns, *NATO at Seventy: An Alliance in Crisis* (Cambridge, MA: Belfer Center for Science and International Affairs, February 2019); and Jens Stoltenberg, interview by Geoff Cutmore, *Squawk Box Europe*, CNBC, August 7, 2019.

45. Andrew Michta, “As China Surges, Europe Is on the Menu,” *American Interest*, September 11, 2019, <https://www.the-american-interest.com/2019/09/11/as-china-surges-europe-is-on-the-menu/>.

to NATO's deterrence and defense in Europe; contributing to crisis management in the Middle East and North Africa region; and supporting the United States in upholding freedom of navigation, which is essential for Europe's own economies.

In London, NATO's political leaders also agreed to address the breadth and scale of new technologies and declared space an operational domain for NATO.⁴⁶ The disruptive technologies of the Digital Age will likely change the nature of conflict fundamentally.⁴⁷ With the private sector leading the way, innovations are available to almost everyone at the same time – democratic nations; autocratic states; and even, at times, terrorists. Defensive and offensive cyber capabilities, new generations of sensors, space-based capabilities, long-range precision fires, autonomous weapon systems, much-improved air and missile defense, and information warfare using social media will have a massive impact on the delivery of security and defense. These factors will transform the way armed forces are organized, equipped, and deployed.⁴⁸ The United States' Third Offset Strategy aims to maintain technological superiority as a basis for US military dominance vis-à-vis the country's peer competitors: China and Russia.⁴⁹ But NATO, as a whole, also needs to deepen its commitment to

46. NATO, "London Declaration."

47. Richard Barrons, "European Defence for the 21st Century," *LSE Ideas* (blog), October 9, 2018, <https://medium.com/@lseideas/european-defence-for-the-21st-century-d69d97380e2a>.

48. Barrons, "European Defence."

49. Jesse Ellman, Lisa Samp, and Gabriel Coll, *Assessing the Third Offset Strategy* (Washington, DC: Center for Strategic and International Studies, March 16, 2017).

innovation to keep its technological edge and maintain interoperability.

The magnitude of concurrent strategic challenges led the alliance's political leaders to ask NATO Secretary General Jens Stoltenberg to start a forward-looking reflection process to strengthen NATO's political dimension.⁵⁰ This reflection process, supported by a group of senior experts, is expected to generate proposals for the requirements for NATO 2030 to "stay strong militarily, be more united politically, and take a broader approach globally." Stoltenberg outlined, to this end, allies must continue to invest in NATO's armed forces and modern military capabilities, use NATO as the forum where North American and European allies discuss and act on all issues concerning their common security, and work even more closely with like-minded partners to defend common values in a world of increased global competition.⁵¹

Moreover, the totality of strategic challenges posed to the transatlantic partners makes equitable burden-sharing a strategic necessity. European nations must contribute their fair share in ensuring security for their own continent and therefore assume greater responsibility for the burden of defending Europe.⁵² But European allies face huge concurrent challenges in strengthening and modernizing their forces and capabilities for the full spectrum of collective defense

50. NATO, "London Declaration."

51. "Secretary General Launches NATO 2030 to Make Our Strong Alliance Even Stronger," June 8, 2020, https://www.nato.int/cps/en/natohq/news_176193.htm.

52. Nick Witney, *Strategic Sovereignty: Building Europeans' Capacity to Defend Themselves*, ECFR 289 (Berlin: European Council on Foreign Relations, June 25, 2019).

and crisis management missions. Gaps in strategic enablers, the readiness of forces (including full combat support, combat service support, manning, and equipment), military mobility, cyber defense and resilience, force deployability, and sustainment of military operations must be filled. Taken together, these enormous challenges and tasks suggest European allies will have to spend at least 2 percent of GDP for defense, if not far more. European leaders must face these demands, explain them to their public, and achieve the necessary political and domestic support for adequate defense spending. As the central European power with the largest economic potential and the hub for the reinforcement of allies, Germany should lead by example. The readiness of the *Bundeswehr* is critical for both NATO and EU missions.

The common strategic challenges also require the EU to further enhance its contributions to transatlantic security as well as the defense of Europe to support NATO's efforts. In addition, the strategic challenges posed by Russia and China require the EU to focus on the capability requirements that are essential for the whole mission spectrum, crisis response and high-end defense alike. Improving military mobility in Europe is a case in point. Similarly, the EU should engage in developing the demanding capabilities required to protect Europe, such as air and missile defense or long-range precision strike weapons—for example, by means of Permanent Structured Cooperation projects supported by the EDF. Furthermore, European allies should set themselves a challenging Level of Ambition for their share of future NATO capabilities in quantitative and qualitative terms, thereby strengthening NATO and the European pillar as well

as Europe's capacity to act on its own.⁵³ For example, as the NATO Level of Ambition for capability development is defined by the "two plus six" formula, meaning the forces and capabilities needed for two MJOs plus six Smaller Joint Operations, a European Level of Ambition could be "one plus two" or "one plus three" as part of NATO's Level of Ambition. All of these endeavors contribute to transatlantic burden sharing.

North America and Europe form a security community that defends democratic values and institutions that other powers contest. Together, the two continents represent half of the world's economic output and are each other's biggest trading partners. These two partners need to stand together against the multitude of challenges concerning them both. The alliance is an anchor of stability in the Euro-Atlantic region, and US leadership continues to be imperative. America needs to remain a European power, but it also needs Europe to remain the global superpower it is today. As stated by Secretary General Stoltenberg, "The strength of a nation is not only measured by the size of its economy or the number of its soldiers, but also by the number of its friends."⁵⁴

53. Witney, *Strategic Sovereignty*.

54. Jens Stoltenberg, "NATO: Good for Europe and Good for America" (speech, US Capitol, Washington, DC, April 3, 2019), https://www.nato.int/cps/en/natohq/opinions_165210.htm.

8. POLAND: HISTORY RETURNS

Andrew A. Michta

KEY POINTS

- Since 2014, the consensus in Poland has been that Russia poses an existential threat, and Poland's defenses and security relationships need to be positioned accordingly. Despite domestic political divides, the consensus will endure.
- Poland views NATO and its bilateral security relationship with the United States as central to Poland's security and ability to deter or defend itself against Russian aggression; however, Poland does not believe its European partners give the threat enough credence.
- Poland has set forth ambitious plans to modernize its military and reduce its dependence on Soviet-era equipment. Still, the country has struggled to develop its indigenous defense industry and to meet the plans without substantial international support.

One may fairly argue that when the Polish think about strategy, history is never far from the surface. Poland's enduring geostrategic dilemma has been that of a midsize state in Central Europe with no natural barriers to invasion from either the east or the west. This sense of historical vulnerability has been reinforced by the experience of the Second World War and the Cold War. After a mere two decades of independence, Poland was attacked and partitioned by Germany and the Soviet Union, only to become – for a half-century thereafter – Moscow's satellite within the

Soviet bloc. Poland's territory was truncated, and the country's sovereignty was forfeited once more. Hence, although Poland is arguably more secure today than at any time in its modern history—as a member of both NATO and the EU—its national security priority remains deterring an assertive and revisionist Russia and, should deterrence fail, defending its national territory.

For reasons of geography and history, national territorial defense is at the center of Polish military doctrine. But though national defense is important to Poland, the country does not focus exclusively on this area of public policy. Because homeland defense requires allied support, Warsaw sees supporting allied military operations outside Poland's borders as a way of establishing credit among its prospective partners and allies and, hence, a contributor to its national interest. Since the late 1990s—and especially post-9/11—Poland's military has made structural changes that have allowed the Polish Armed Forces to participate in foreign missions in support of the allied war on terrorism and, in the process, to develop a considerable special operations force capability.

Polish units have served alongside the American military in Afghanistan since the beginning of the Afghanistan War. In the aftermath of the Iraq War, Poland led a division-sized security zone in Iraq. Even today, Polish forces continue to operate outside the country, with over 300 troops deployed in Afghanistan, 240 in Kosovo, 130 in Iraq, and 100 in Kuwait. In addition, the Polish Air Force has participated in the Baltic Air Policing mission, and the Polish government provided 200 soldiers for NATO's

Enhanced Forward Presence in Latvia.¹ Outside of NATO, the Polish military has participated in the EU's Operation Althea and contributed 200 troops to the UN Interim Force in Lebanon.² That said, such missions are increasingly seen, especially in Warsaw, as detracting from the primary territorial defense role of the Polish Armed Forces and are unlikely to increase in scope, especially those performed outside of NATO because they consume resources needed for continued military modernization at home.

Since the Ukraine crisis in 2014, Warsaw has seen the growing threat posed by the Kremlin's determination to reestablish a sphere of privileged interest in Eastern Europe as the reaffirmation of a geostrategic constant in Polish national security. In the words of Paweł Soloch, head of the Polish National Security Bureau, "All political forces [in the country] agree that the principal direction of the threat is from the East," notwithstanding deep political differences between *Prawo i Sprawiedliwość* (the Law and Justice party), the current conservative government, and the opposition led by *Platforma Obywatelska* (the Civic

1. International Institute for Strategic Studies (IISS), "Chapter Four: Europe," in *The Military Balance 2019* (London: IISS, 2019), 66–165.

2. Rafał Lesiecki, "Okolo 200 polskich żołnierzy pojedzie jesienią do Libanu. Powrót na misje pokojowe ONZ" [About 200 Polish soldiers will be sent to Lebanon this fall. Serving again in US peacekeeping missions], Defence24, March 27, 2019, <https://www.defence24.pl/okolo-200-polskich-zolnierzy-pojedzie-jesienia-do-libanu-powrot-na-misje-pokojowe-onz>.

Platform party).³ This national security consensus is the central premise underlying the new *Strategia Bezpieczeństwa Narodowego Rzeczypospolitej Polskiej* (*National Security Strategy of the Republic of Poland*) that replaced the 2014 document. The interagency process to frame the new strategy was initiated by Prime Minister Mateusz Morawiecki on October 1, 2019, and the new National Security Strategy was signed by President Andrzej Duda in May 2020.⁴

The new National Security Strategy covers four principal areas outlined in the 2018 guidance issued by the presidential National Security Bureau: (1) improving interagency coordination and cooperation across the country's national defense sector; (2) strengthening the capacity for civilian crisis response; (3) charting the principal trajectory for the development of the armed forces; and (4) strengthening Poland's "external pillars of security," including NATO, the EU, bilateral relations with the United States, and

3. "Szef BBN dla tygodnika 'Sieci' o nowej Strategii Bezpieczeństwa Narodowego" [Head of the National Security Bureau for the weekly "Sieci" about the new National Security Strategy], January 10, 2019, <https://www.bbn.gov.pl/pl/wydarzenia/8381,Szef-BBN-dla-tygodnika-quotSieciquot-o-nowej-Strategii-Bezpieczenstwa-Narodowego.html>.

4. Mateusz Morawiecki, *Zarządzenie nr 137 Prezesa Rady Ministrów z dnia 20 września 2019 r. w sprawie Międzyresortowego Zespołu do spraw Opracowania Strategii Bezpieczeństwa Narodowego Rzeczypospolitej Polskiej* [The Prime Minister's Decree No. 137 Establishing the Group to Develop the National Security Strategy] (Warsaw: Chancellery of the Prime Minister of Poland, September 20, 2019); and "President Signs the Polish National Security Strategy. New Threats & Back to the Roots," Defense 24.com, 14 May 2020, <https://defence24.com/president-signs-the-polish-national-security-strategy-new-threatsback-to-the-roots-commentary>.

regional security cooperation.⁵ The new National Security Strategy addresses the country's persistent vulnerability to invasion from the east and provides guidance to the Polish Armed Forces to address the changing nature of war, including cyber, hybrid warfare, and cross-domain threats.

Although its current cyber capabilities are limited, Poland has been working to develop a cyber force. In January 2015, the National Security Bureau issued a cybersecurity doctrine, identifying specific tasks needed to build cybersecurity capabilities and focusing on active cyber defense. In November 2018, the Ministry of National Defence (MOD), in conjunction with an announcement regarding plans for the further development of the Polish Armed Forces, referenced plans to create a cyber force (and reaffirmed the intent to focus on cyber in 2019).⁶

A central aspect of discussions over the country's territorial vulnerability, which have unfolded in Poland since the Ukraine crisis, is the interplay between lessons from the country's past and options for contributing to NATO's eastern defenses. In this context, Western analysts have focused on the Baltic states' vulnerability to a Russian invasion through the Suwałki gap—the 60-mile sliver of land separating Poland from Lithuania and connecting Russian ally

5. Biuro Bezpieczeństwa Narodowego [National Security Bureau], *Rekomendacje do Strategii Bezpieczeństwa Narodowego RP* [Recommendations concerning the National Security Strategy] (Warsaw: Biuro Bezpieczeństwa Narodowego [National Security Bureau], December 18, 2018).

6. Ministerstwo Obrony Narodowej [Ministry of National Defence (MOD)], "Wojska Obrony Cyberprzestrzeni" [Cyberspace Defense Forces], n.d., <https://www.gov.pl/web/obrona-narodowa/wojska-obrony-cyberprzestrzeni>.

Belarus to Kaliningrad, a Russian territory in the Baltics (see figure 8-1).⁷ Multiple analysts have argued a Russian invasion through this path would allow Russian forces to encircle and cut off allied Baltic states in the event of war and hand NATO a strategic *fait accompli*.⁸ But the Poles seem increasingly preoccupied with lessons from past invasions, with the center of gravity being the Smolensk Gate located between the rivers Daugava and Dnieper, a flat terrain that historically served as Russia's principal entry point through Belarus into Central Europe (see figure 8-1).⁹ In recent years, some Polish analysts have argued the Smolensk Gate should be the focal point of the country's defenses because it still constitutes the most direct invasion route should Russia decide to attack Poland again. In 2019, this analysis led to a debate over Polish national defense policy and the military capabilities the country needs to defend its territory, with critics of defense planning stating if Poland were to deploy its principal land force east of the Vistula River (to respond to a Russian push into the Suwałki gap), the country would lack sufficient resources to counteract a potential Russian military incursion across Belarus.

7. Jacek Bartosiak, "The Potential War Map of Eastern Europe," *Geopolitical Futures*, October 30, 2019, <https://geopoliticalfutures.com/the-potential-war-map-of-eastern-europe/>.

8. Ben Hodges, Janusz Bugajski, and Peter B. Doran, *Securing the Suwałki Corridor: Strategy, Statecraft, Deterrence and Defense* (Washington, DC: Center for European Policy Analysis, July 2018).

9. Bartosiak, "Potential War Map of Eastern Europe."

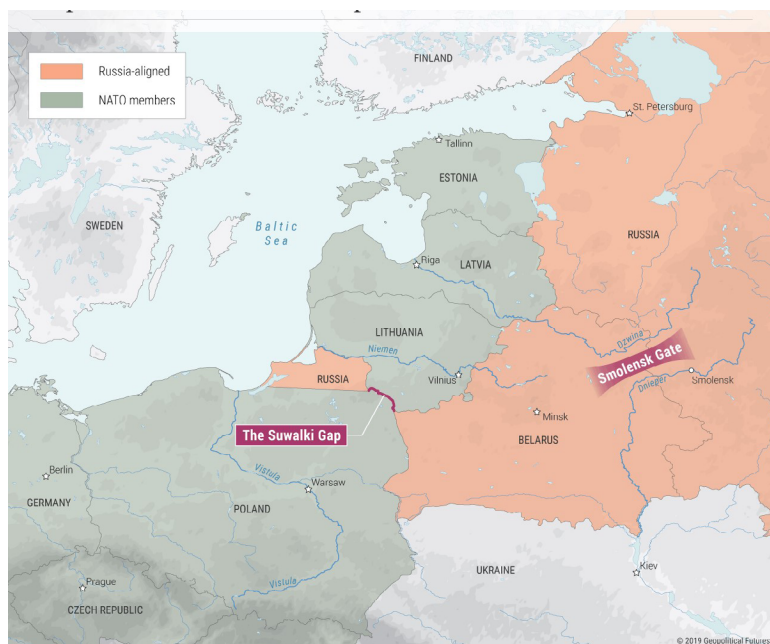


Figure 8-1. The Suwałki gap and the Smolensk Gate

Reprinted by permission from Jacek Bartosiak, “The Potential War Map of Eastern Europe,” *Geopolitical Futures*, October 30, 2019. © 2019 by Geopolitical Futures

Of late, some Polish strategists seem to be taking an ever more historically based view, contending that to defend itself effectively, Poland needs to concentrate most of its forces at the center and on the western side of the Vistula River.¹⁰ This viewpoint is an important driver in Warsaw’s effort to secure a permanent US military base on the country’s territory—an effort dubbed “Fort Trump” in the media on the basis of

10. Jacek Bartosiak, *Rzeczpospolita między lądem a morzem: O wojnie i pokoju* [The Polish Republic between land and sea: Of war and peace] (Warsaw: Zona Zero, 2019).

one of President Andrzej Duda's speeches.¹¹ From this perspective, a permanent US military presence in Poland would both significantly increase deterrence—because any Russian attack against Poland would automatically result in a US-Russian conflict—and give Warsaw much-needed flexibility in where it deploys its principal military assets and how it acts during a crisis.

THE STRATEGIC DEFENCE REVIEW OF 2016

The Strategic Defence Review of 2016 (SPO) underpins the Polish military modernization program through 2032.¹² The SPO was prepared by five research teams tasked with assessing: (1) the overall security environment; (2) the national command and control (C2) system; (3) the operational capabilities of the Polish Armed Forces; (4) nonmilitary defense readiness; and (5) Poland's defense planning process. Although the document itself is classified, the unclassified conclusions of the SPO were released to the public by then-minister of national defence Antoni Macierewicz and briefed at a special session organized by the National Defence University.

The summary emphasizes the primary role of the armed forces is the defense of Poland's national territory. From this perspective, the Polish Armed Forces prioritize addressing key deficiencies in its

11. Alexandra Brzozowski, "Eyeing Increased US Presence in the Region, Poland Revamps Military Spending," EURACTIV, March 1, 2019, <https://www.euractiv.com/section/defence-and-security/news/eyeing-increased-us-presence-in-the-region-poland-revamps-military-spending/>.

12. MOD, "The Strategic Defence Review of 2016," in *The Defence Concept of the Republic of Poland* (Warsaw: MOD, May 2017).

organizational structure, including C2, planning processes, and current military capabilities. The review frames Poland's strategic priorities through 2032, with the goal of translating these objectives into specific tasks for the Polish Armed Forces. The review places a special emphasis on C2 and equipment modernization, two areas in which the greatest deficiencies have been identified. In addition, the SPO emphasizes the requirement for the force to interact more effectively with other government agencies and services. The overarching intent of the review is to frame a new model for the Polish Armed Forces that is to be implemented in the next 15 years. The model is to incorporate lessons learned from recent conflicts (especially Russian military operations in Ukraine) and various training exercises and wargames conducted by the MOD.¹³

The review reverses some of the structural changes introduced by the preceding government. One key structural reform has been the appointment of a chief of the General Staff as the principal military commander in wartime (the "first soldier," as the Poles refer to the individual). The Polish Land Forces, Air Force, Navy, Special Forces, and newly created Territorial Defence Force are subordinate to this individual. In the event of war, the chief of the General Staff would command all Polish forces in the country and abroad and serve as the principal senior officer in the strategic planning of force deployment. This structure is a major departure from the C2 system adopted by the previous government in 2013; the change disbands

13. MOD, "Polish Defence in the Perspective of 2032," in *The Defence Concept of the Republic of Poland*.

the Armed Forces General Command and the Armed Forces Operational Command.

In the new system, the commands of the various services have taken over the tasks of the former General Command, although the function of the Operational Command has been folded into the newly established Training and Command Inspectorate and Support Inspectorate of the Armed Forces. These inspectorates are now subordinated to the chief of the General Staff. This individual, in turn, is supported by two deputies: one responsible for defense operational planning and the other for support and logistics. In the new system, the Support Inspectorate of the Armed Forces has been elevated to the strategic-operational level. Finally, following the SPO's recommendations, the General Staff is firmly embedded in the Ministry of National Defence to strengthen civilian control and ensure policy guidance provided through the newly established Defence Policy Division of the ministry is developed with the minister of national defence's oversight and approval.

The general thrust of the SPO reflects the realities of the resurgent great-power competition, with an emphasis on a whole-of-nation approach to national defense. This approach has especially manifested in the recommendation to establish the Territorial Defence Force and the renewed emphasis on interagency coordination, both in peacetime and in war. In a significant departure from past practice, the MOD has been paying special attention to the question of national mobilization—a topic that was largely abandoned after 1989. The SPO specifically advocates the restoration of the country's ability to mobilize for total defense in case of invasion, including the development of both a legal and a regulatory

framework to be implemented across central, regional, and local governments and their agencies. This process is currently underway.

THE FORCE

In 2019, Poland's total active-duty military personnel stood at 117,820. The Polish Land Forces (Poland's army) remains the traditional core of the Polish military, with 61,200 members. The Polish Air Force stands at 18,700, and the navy at 7,020. (The Polish Navy is small, consisting largely of coastal patrol boats, a small naval aviation element, and coastal defenses.) Poland plans to expand the size of its armed forces by offering pay increases over the next two years.¹⁴

In addition, after an earlier half-hearted attempt at building up the nation's military reserve component, in January 2017, Poland established the *Wojska Obrony Terytorialnej*, or the Territorial Defence Force, to augment the operational army in the event of an invasion. As a distinct branch of the Polish Armed Forces, the Territorial Defence Force was created with a target of 53,000 personnel. The force is to be organized into 17 light infantry brigades and cost an estimated 3.5 billion Polish złoty (PLN), or US\$921 million, to establish. As of late 2019, the force had reached 21,000

14. Informacyjna Agencja Radiowa, "Mariusz Błaszczak: Moim zadaniem jest zwiększenie liczby żołnierzy" [Mariusz Błaszczak: My task is to increase the number of soldiers], Polskie Radio 24, October 5, 2019, <https://polskieradio24.pl/5/1222/Artykul/2378494,Mariusz-Blaszczak-moim-zadaniem-jest-zwiekszenie-liczby-zolnierzy>.

personnel.¹⁵ The force draws on the traditions of the Home Army, an underground guerrilla force from the Second World War.¹⁶ Though whether the Territorial Defence Force will reach its recruitment target remains to be seen, the Polish government seems committed to relying on the force to provide a platform for training and mobilization in the case of war. In line with the government's policy of promoting the domestic defense industry, the force became the first customer for the new Polish-designed assault rifle, the FB MSBS Grot, as part of an MOD contract for 18,000 new assault rifles and 20,000 new pistols ordered from FB "Łucznik" Radom.¹⁷

As part of the ongoing military reform, the MOD has signaled its intent to reestablish divisions as tactical combat units of the Polish Armed Forces. Arguably, the most important decision made by the Law and Justice government was the September 2018 announcement involving the creation of a new division to address perceived defense deficiencies along the eastern border. The new division, the 18th Mechanized Division, will include the 1st Armored Brigade, the 21st Brigade of Podhale Riflemen, and

15. "Poland to Build Territorial Defense Force by 2019," Deutsche Welle, November 14, 2016, <https://www.dw.com/en/poland-to-build-territorial-defense-force-by-2019/a-36386036>.

16. "Polish Territorial Defence Force: Where It Stands Today," Poland In, January 24, 2019, <https://polandin.com/41006693/polish-territorial-defence-force-where-it-stands-today>.

17. "Wojska Lądowe dostają MSBS Grot" [Land forces receive the MSBS Grot rifle], Defence24, July 26, 2019, <https://www.defence24.pl/wojska-ladowe-dostaja-msbs-grot>; and "Wojsko kupuje karabiny Grot i pistolety VIS" [The army buys the Grot rifle and the VIS pistol], Defence24, September 27, 2019, <https://www.defence24.pl/wojsko-kupuje-karabiny-grot-i-pistolety-vis>.

the newly formed 19th Mechanized Brigade—plus support units. The creation of the 18th Mechanized Division was recommended for the SPO to fill the numerical gap in Polish forces that emerged after the 1st Mechanized Division was deactivated in 2011. The goal of basing the 18th Mechanized Division in the east is to ensure Poland becomes less vulnerable to a surprise attack across the territory of Belarus.

As it focuses on expanding the size of the military, the Polish government considers sufficient military manpower reserves to be key to national territorial defense. But since 1989, the country's demographic trends have often been overlooked in discussions about national mobilization in case of war. After the collapse of communism, Poland experienced a massive outflow of its youth, many of whom immigrated to Western Europe in search of employment. This outflow accelerated when Poland joined the EU in 2004, especially to the United Kingdom, which had no restrictions on access to the labor market. According to a 2019 estimate, since 1989, at least 2.5 million Poles have opted to work and live outside the country, with the largest communities in the United Kingdom (estimated between 800,000 and 1 million), Germany (approximately 700,000), and the Netherlands (120,000).¹⁸ From the perspective of the current plans for military mobilization in the event of war, such massive emigration tells only part of the story. The age breakdown of Poland's 2018 population raises

18. Danuta Pawłowska, "Polacy mieli wracać z emigracji, ale wyjeżdża ich coraz więcej. Ile pieniędzy wysyłają do Polski?" [Poles were supposed to return home, but more and more are leaving. How much money do they send back to Poland?], BIQdata, February 18, 2019, <http://biqdata.wyborcza.pl/biqdata/7,159116,24452247,polacy-na-emigracji.html>.

serious questions about the manpower available both for military service and for national mobilization in a crisis. In the latest figures, Poland's population stood at over 38 million; however, the cohort of 20- to 24-year-olds comprised only 3 percent of males and 2.8 percent of females. The plurality of Poland's population is between the ages of 30 and 64 (25.2 percent of the male population and 25.7 percent of the female population), with retirees comprising 16.9 percent of the total. From the military's perspective, even more disturbingly, the 2018 data shows only 2.5 percent of males and 2.4 percent of females are between the ages of 15 and 19.¹⁹ These statistics—in combination with projections that in the event of an economic downturn, two million or more young people may leave the country in search of work—raise serious concerns about the extent to which the Polish military will be able to draw on the requisite pool of reservists as anticipated in the current plan.

DEFENSE SPENDING AND EQUIPMENT MODERNIZATION

Like other allied states that were members of the Warsaw Pact, Poland's military contracted both in size and capabilities after the end of the Cold War, allowing the government to focus on reforming the economy and meeting the various criteria for NATO and EU membership. Since the Russian invasion of Crimea, the Polish government has moved to reverse the numerical decline of the armed forces and to address the most urgent capability deficits.

During the last four years, the Polish military has been playing catch-up to replace legacy and outdated

19. IISS, "Chapter Four: Europe."

systems. To that end, the government has taken advantage of the country's robust economic growth. (The Polish economy has been the fastest growing in Europe since the mid-1990s, with the gross domestic product [GDP] for 2018 at \$585.5 billion.)²⁰ Poland met its allied commitment of 2 percent of GDP for defense, with a 2019 defense budget of 44.674 billion PLN (US\$11.785 billion). This figure represents an increase of roughly 3.5 billion PLN from the 2018 budget, despite a slower projected annual GDP growth rate (5.09 percent in 2018 versus 3.76 percent projected for 2019). In 2020, the defense burden should reach 2.1 percent of GDP and, in 2021, 2.2 percent. Over the past decade, Polish defense spending has increased each year, rising (in constant 2010 US dollars) from \$7.8 billion in 2008 to \$13 billion in 2019, with the percentage of GDP going to defense rising from 1.74 percent in 2012 to the current 2-percent mark (see figure 8-2).²¹

Of note, in 2018, the government changed its accounting methodology for calculating the percentage of GDP spent on defense by relying on the projected GDP for the current year, rather than applying it to the previous year, which, considering Poland's continuing economic expansion, translated

20. "The World Bank in Poland: Overview," The World Bank, last updated April 16, 2020, <https://www.worldbank.org/en/country/poland/overview>.

21. NATO, "Defense Expenditure of NATO Countries (2012-2019)," Press Release no. 069, June 25, 2019, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_06/20190625_PR2019-069-EN.pdf.

into additional outlays for defense.²² The current government's goals of spending 2.3 percent of GDP on defense—and possibly up to 2.5 percent—and increasing the size of the army to 120,000 are still largely aspirational. Nevertheless, assuming no major recession, Poland could be spending 2.5 percent of its GDP on defense by 2030.

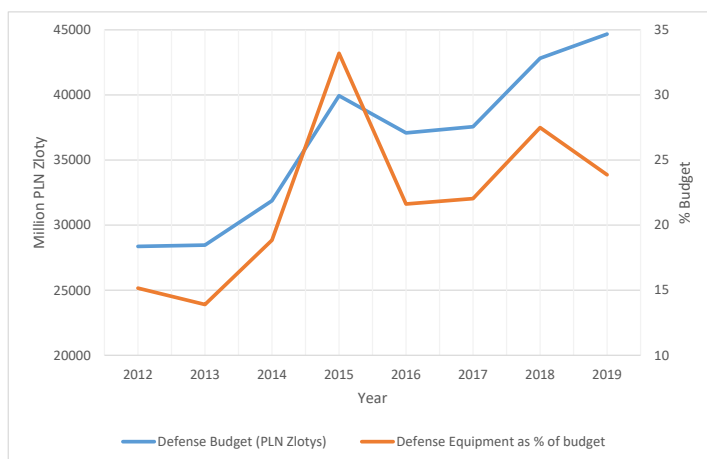


Figure 8-2. Polish defense investment over time

Graph by Lance Kokonos

The equipment operated by the Polish Armed Forces remains qualitatively uneven, with a substantial component of the force equipped with Soviet-era materiel and platforms. The equipment of the Polish Air Force and Navy is especially outdated. Poland

22. Jakub Paloski, “Cztery lata PiS w obronności. Rozbudowa armii, sojusznicy i modernizacja z przeszkodami” [Four years of the Law and Justice party in national defense: The expansion of the army, allies, and problems of modernization], Defence24, October 8, 2019, <https://www.defence24.pl/cztery-lata-pis-w-obronnosci-rozbudowa-armii-sojusznicy-i-modernizacja-z-przeszkodami-analiza>.

continues to fly Su-22s and MiG-29s with increasingly problematic maintenance records as they age. The Polish Air Force also has a fleet of 48 American F-16s, acquired in 2003. Only a portion of that fleet is operational.²³ Although the army's armor is a mix of older and newer equipment, including domestically developed platforms based on the former T-72 design and the previous generation of the Leopard 2 acquired from Germany's *Bundeswehr*, the army's 637 tanks represent the third largest main battle tank fleet among European NATO members. In fact, today Poland fields up to three times as many main battle tanks as Germany, France, Italy, and the United Kingdom, respectively.²⁴ In addition, Poland operates 690 of the Rosomak wheeled armored personnel carriers built on the Finnish Patria platform, arguably one of the best vehicles of its kind produced in Europe and one that has been tested on deployments in Afghanistan and Iraq.²⁵ In line with the government's decision to preserve and enhance the country's domestic defense industrial capacity, Poland plans to produce the Rosomak platform through 2023, both for the army and for export.

The watchword since 2014 has been equipment modernization across the services, with multiple

23. "Problemy przy naprawach F-16? Dowództwo Sił Zbrojnych odpowiada na doniesienia DGP" [Maintenance problems with the F-16? The Armed Forces Command responds to a report in the DGP Daily], *Dziennik Gazeta Prawna*, August 21, 2019, <https://wiadomosci.dziennik.pl/polityka/artykuly/605640,f-16-naprawa-problemy-doniesienia-dgp-odpowiedz-dowodztwo-sil-zbrojnych.html>.

24. IISS, "Chapter Four: Europe."

25. "Rosomak: Armored Personnel Carrier," n.d., <http://www.military-today.com/apc/rosomak.htm>.

contracts already signed or fulfilled. In December 2015, the MOD awarded a contract to the *Polska Grupa Zbrojeniowa* (Polish Armaments Group) to upgrade 142 Leopard 2s.²⁶ In addition, in 2019, the army took delivery of 24 Krab 155-millimeter self-propelled howitzers produced by the Polish company Huta Stalowa Wola; 96 Rak 120-millimeter mortar tracked armored personnel carriers, also contracted from Huta Stalowa Wola; and 420 Piorun man-portable air defense systems contracted from the Polish Armaments Group. In addition, the MOD has contracted with Norway's Kongsberg Gruppen for land-based antiship missile systems and with Lockheed Martin Corporation for wheeled rocket launchers (M142 High Mobility Artillery Rocket System) and air-to-ground cruise missiles (Joint Air-to-Surface Standoff Missile-Extended Range).

The current *Plan Modernizacji Technicznej* or Technical Modernization Plan, the Polish military modernization program for 2017 through 2026, projects procurement spending to reach 185 billion PLN (approximately US\$48 billion), with the top three priorities being the acquisition of a fifth-generation aircraft (the Harpia program), a short-range air defense system (the Narew program), and a new attack helicopter (the Kruk program).²⁷ According to

26. Remigiusz Wilk, "Leo 2PL Tests Completed," MILMAG—The Military Magazine, June 17, 2018, https://www.milmag.eu/news/view?news_id=992.

27. Rafał Lesiecki, "185 mld zł na modernizację techniczną wojska. W planach do 2026 r. m.in. Harpia, Kruk i Narew" [185 billion PLN for military equipment modernization. Plans up to 2026 to include, among others, the Harpia, Kruk, and Narew systems], Defence24, February 28, 2019, <https://www.defence24.pl/185-mld-zl-na-modernizacje-techniczna-wojska-do-2026-r-jest-nowy-plan>.

Polish Chief of the General Staff General Rajmund Andrzejczak, the acquisition of the F-35 fifth-generation aircraft became the top priority in 2019 as Poland decided to get rid of all legacy Soviet fixed-wing aircraft. According to Andrzejczak, for cases in which helicopter maintenance requirements demand access to parts for legacy Soviet equipment, Poland will look to Ukraine and other non-Russian suppliers for parts until the new helicopter contract has been finalized.²⁸

In late 2019, Poland finalized the F-35 negotiations, and on January 31, 2020, the minister of national defence signed a \$4.6 billion contract to acquire 32 fifth-generation F-35A Lightning II fighter jets from the United States.²⁹ The F-35s, which are being procured as part of the Harpia program, will replace the Soviet-era Su-22 and MiG-29 aircraft.

The MOD has also indicated it might buy more than the initial 32 F-35 aircraft in the future. In March 2019, Deputy Minister of National Defence Wojciech Skurkiewicz announced the two F-35 squadrons currently planned would likely be augmented by an additional squadron of 16 aircraft to be purchased in the next acquisition cycle, for a total of 48 fifth-generation planes to be operated by the Polish Air

28. Joe Gould, "Polish Armed Forces Chief on Walking the Line with Russia," *Defense News*, December 27, 2019, <https://www.defensenews.com/congress/2019/12/27/polish-armed-forces-chief-on-walking-the-line-with-russia/>.

29. Jarosław Adamowski, "Poland Inks \$4.6 Billion Contract for F-35 Fighter Jets" *Defense News*, January 31, 2020, <https://www.defensenews.com/global/europe/2020/01/31/poland-inks-46-billion-contract-for-f-35-fighter-jets/>.

Force in 2035.³⁰ If these planes are to be acquired, the decision will be made in 2020 because Technical Modernization Plans are developed on a four-year cycle, which means acquisition decisions for the 2021–25 plan would need to be finalized in 2020.

Regardless, the F-35 program for the Polish Air Force is likely to dominate budgeting priorities going forward, as Poland's President Duda has indicated the Harpia program should be given "*ranga narodowa*" (national-level priority) to allow for its financing from the national budget (outside the MOD budget), as was the case with the F-16 acquisition program in the early 2000s.³¹

Next in the order of priority is the Narew program for air and missile defense. The Narew system is envisioned as a short-range air and missile defense system that will serve as a component of Poland's anti-access/area denial system. The plan is to integrate elements of the Wisła system—the US Patriot midrange system being procured by Poland for \$4.75 billion—with a short-range missile system codeveloped with Western partners but built largely

30. Rafał Lesiecki "Wiceminister: 48 samolotów w programie Harpia. Dodatkowa eskadra po 2026 r.?" [Deputy minister: 48 aircraft in the Harpia program. An additional squadron after 2026?], Defence24, March 7, 2019, <https://www.defence24.pl/wiceminister-48-samolotow-w-programie-harpia-dodatkowa-eskadra-po-2026-r>.

31. Polish Press Agency, "Po wypadku myśliwca. Prezydent chce nadać programowi HARPIA rangę narodową" [After the fighter plane crash, the president wants to make the Harpia program a national-level priority], Polskie Radio 24, March 5, 2019, <https://polskieradio24.pl/5/1222/Artykul/2272988,Po-wypadku-mysliwca-Prezydent-chce-nadac-programowi-HARPIA-range-narodowa>.

by Poland's domestic defense industry.³² The MOD wants the Narew system to become an integral component of the country's air and missile defense system and to serve as a significant boost to Poland's defense industrial capacity because it will involve the transfer of key technologies.

For the nation's air and missile defense system, the MOD has outlined an admittedly ambitious goal of facilitating multilayered integration across platforms, including integration with the Patriot's battle control system.³³ The Narew system envisions 19 batteries to defend against cruise missiles, unmanned aerial vehicles, aircraft, and helicopters. The requirements that will go into the final request for proposals are still being developed because the MOD seems determined to avoid some of the contracting mistakes of earlier tenders and the attendant delays.³⁴ The question at the center of the Narew negotiations will be the extent to which offset agreements allow for technology transfer and coproduction with Polish defense contractors.

The MOD plans to have the Narew system deployed within the next six years—clearly an ambitious target, considering the length of time the program has been in gestation and the various detours and peregrinations involving previous acquisition

32. Lidia Kelly, "Poland Signs \$4.75 Billion Deal for US Patriot Missile System Facing Russia," Reuters, March 28, 2018, <https://www.reuters.com/article/us-raytheon-poland-patriot/poland-signs-4-75-billion-deal-for-u-s-patriot-missile-system-facing-russia-idUSKBN1H417S>.

33. Marek Świerczyński, *Patriot System in Poland* (Warsaw: Polityka Insight, January 20, 2014).

34. Arkady Saulski, "Rakietowa 'Narew'" [The "Narew" missile], *wGospodarce* [In the economy], May 28, 2019, <http://wgospodarce.pl/informacje/64085-rakietowa-narew>.

decisions for the Wisła program. The time lines have also elicited skepticism because although the Polish defense industry has made considerable progress on radars and system integration, the industry continues to struggle with developing modern missiles with a 20-kilometer (12-mile) range (and the requisite missile launchers)—essential components of the Narew system.³⁵ The Polish defense industry has limited experience producing such missiles and launchers; thus, assuming the government will insist on a domestically produced system, the key contracting aspect will have to be technology transfer from the United States or Western Europe to shorten the indigenous development cycle. Notably, because the Poles plan to integrate the Narew system with the Patriot's battle command system, the United States will need to be a key partner in any discussions about the selection of the short-range missile supplier. The total cost of the Narew program is currently estimated at 20 billion PLN (US\$5.2 billion), and the program is listed by the MOD as a priority program to be implemented no later than 2026.³⁶

The third major Polish military modernization initiative is the Kruk attack helicopter program. The initial plan is to acquire 32 helicopters, although the MOD recognizes the army's attack helicopter

35. Zbigniew Lentowicz, "Rakietowa Narew wzmocni tarczę powietrzną RP" [The Narew missile will strengthen Poland's air defense shield], *Rzeczpospolita*, September 4, 2019, <https://radar.rp.pl/wydarzenia/mspo/14542-rakietowa-narew-wzmocni-tarcze-powietrzna-rp>.

36. Zbigniew Lentowicz, "Przeciwlotnicza Narew wciąż tonie we mgłę" [The air defense Narew system still lost in the fog], *Rzeczpospolita*, March 27, 2019, <https://www.rp.pl/Przemysl-Obronny/303279892-Przeciwlotnicza-Narew-wciaz-tonie-we-mgle.html>.

requirement is greater. As a stopgap measure, an effort is already underway to modernize the old Mi-24 fleet.³⁷ The urgency with which the Polish military seeks to acquire the new attack helicopter is in part a result of the 2015 cancelation of the negotiation for 50 of the French H225M Caracal helicopters, which followed a change of government in Warsaw and the new government's decision to relaunch the competition. The Boeing Apache and Bell Viper are only available through the US Foreign Military Sales program, but whether the MOD will turn to the United States as its supplier for the Kruk program is unclear because using the Foreign Military Sales program may not be compatible with some of Poland's competitive bidding rules. Alternatively, the MOD may look to Italy's Leonardo Helicopters and the still-in-development AW249—an option that would allow for possible further codevelopment with the Italians to meet the MOD's specifications.³⁸

Regardless of the supplier that is ultimately selected, in the current 2026 Technical Modernization Plan cycle, Poland will concentrate on a tender for two squadrons of attack helicopters, leaving the transport mission to the existing helicopter fleet. In 2019, the MOD accepted delivery of four S-70i Black Hawks

37. Juliusz Sabak, "Program Kruk: co najmniej 32 śmigłowce. Przygotowania do modernizacji Mi-24" [The Kruk program: At least 32 helicopters. Preparations to modernize the Mi-24], *Defence24*, February 2, 2018, <https://www.defence24.pl/program-kruk-co-najmniej-32-smiglowce-przygotowania-do-modernizacji-mi-24>.

38. Maciej Szopa, "AW249: Śmigłowiec przyszłości dla Polski?" [The AW249: Poland's future helicopter?], *Rzeczpospolita*, January 8, 2019, <https://www.rp.pl/Rzecz-o-polskich-smiglowcach/301089951-AW249-smiglowiec-przyszlosci-dla-Polski.html>.

for the Polish Special Forces at a cost of 680 million PLN (US\$178 billion) as well as four of the multirole AW101s built by Leonardo (the owner of Poland's WSK PZL-Świdnik) for 1.65 billion PLN (US\$434 million).³⁹ Yet, regardless of the outcome of the Kruk program competition, the need to replace Poland's aging helicopter fleet will remain high on the list of the MOD's new equipment acquisition priorities.

The current Polish equipment modernization program also includes contracts with local industry for the Odra (a mobile, medium-range radar system) and the BYSTRA (a mobile, tactical radar station), as well as contracts for the Feniks missile for the WR-40 Langusta system (a truck-mounted rocket launcher). And, as already noted, among the smaller contracts successfully resourced at home, one can point to the acquisition of the new domestically designed and manufactured FB MSBS Grot 5.56-millimeter assault rifle, which has become standard issue for the newly formed Territorial Defence Force.

On balance, the speed with which the Polish military can modernize its equipment will depend on the extent to which these systems are purchased outright or codeveloped at home. The government remains committed to maintaining and growing the country's defense industry, but, of late, Warsaw seems increasingly aware of the inherent limitations on what it can produce, absent major international investment in the Polish defense sector. Polish defense industrial capabilities remain uneven, with some niche competencies, for instance, in communications. Here current contracts and future cooperation with

39. "Kruk ruszy w przyszłym roku" [The Kruk program will be launched next year], Defence24, May 17, 2019, <https://www.defence24.pl/kruk-ruszy-w-przyszlym-roku>.

Raytheon Company, Lockheed Martin, and Kongsberg may offer a possible path forward, especially as Poland fields and maintains new systems. Arguably, the F-35 contract with Lockheed Martin offers the Polish defense industry the best opportunity to date to begin absorbing core technologies through developing maintenance and cooperative arrangements. But the industry is still years away from having indigenous capacity on the scale the government would like to have established. A good indicator of where the Polish defense industry is heading in the next decade will be the relative success of the Leopard 2PL modernization program, which could potentially demonstrate the ability of the industry to deliver state-of-the-art capabilities in an area where it once excelled: the production of tanks and armored vehicles.

In fact, multiple Polish equipment acquisition programs have been plagued by delays. Although much ink has been spilled in Poland over the need to produce a man-portable antitank missile indigenously, in 2019 the MOD began to discuss buying Javelins from the United States, an implicit admission of the limitations inherent in the Polish defense industrial sector as currently structured. Other program delays, though not as important as those involving Narew and antitank missiles, included the much-discussed replacement for the old Honker four-by-four utility vehicle (programs Mustang and Pegaz) and the acquisition of a new battle management system for the Rosomak wheeled personnel carrier.

Overall, although Poland has made progress investing in military reequipment, the current government's determination to preserve the country's domestic industrial capacity has yielded mixed results. The greatest challenges facing the Polish

military modernization program remain translating increased expenditures into capabilities that address the greatest areas of need and accelerating the completion of existing contracts with which the Polish defense industry continues to struggle. For example, the ORP *Ślązak*, one of seven multipurpose offshore corvettes planned by the MOD some 20 years ago, was finally delivered after 18 years, but it was only one ship with considerably restricted capabilities, rather than the seven originally envisioned. The story of the *Ślązak* contract underscores the persistent problems besetting the Polish defense industry: cost overruns and limited ability to produce state-of-the-art systems on the one hand, and the government's insistence that contracts awarded to foreign defense firms both include offset agreements and ensure significant domestic participation on the other. Hence, some analysts have recommended that instead of the current main battle tank modernization program, the Polish Land Forces should simply aim to purchase the M-1 Abrams directly from the United States.⁴⁰ Making this purchase would of course work against the Polish government's determination to preserve the country's defense manufacturing sector and imply, although smaller purchases such as the new Grot assault rifle can be sourced domestically, large-ticket items remain beyond the industry's capacity.

40. Dan Gouré, "President Trump Should Offer to Sell M-1 Tanks to Poland," RealClearDefense, December 2, 2019, https://www.realcleardefense.com/articles/2019/12/02/president_trump_should_offer_to_sell_m-1_tanks_to_poland_114885.html.

WHITHER POLISH DEFENSE?

The Polish military is a force in transition that seeks to address deficiencies that have been allowed to deepen for too long since 1989. The government realizes it urgently needs to address the post-Soviet equipment obsolescence that still permeates large areas of the armed forces. Since Poland prioritizes NATO and bilateral security relations with the United States, the country's participation in EU-led defense initiatives always comes with the stipulation that they not disadvantage the transatlantic alliance or negatively impact the continued US strategic commitment to the defense of Europe. Predictably, Poland has been tentative in its support for three EU initiatives launched in 2017: Permanent Structured Cooperation, the new Coordinated Annual Review on Defence, and the European Defence Fund, as well as the revised 2018 Capability Development Plan and its 11 EU Capability Development Priorities jointly identified by member states.⁴¹

Today, Poland is once again confronted by its geopolitical dilemma of being a midsize power whose own resources are unlikely to provide the level of security needed to meet the strategic challenge posed by a Russian adversary. Although Poland remains a staunch supporter of NATO, the country has increasingly staked its security on developing a special strategic partnership with the United States, in the process demonstrating its willingness to risk straining relations with other European allies to secure

41. Guy Chazan and Michael Peel, "US Warns against European Joint Military Project," *Financial Times*, May 14, 2019, <https://www.ft.com/content/ad16ce08-763b-11e9-bbad-7c18c0ea0201>.

a larger US military presence on its territory. President Duda's much-touted offer to spend US\$2 billion to fund a permanent "Fort Trump" on Polish territory is emblematic of this effort. The country's insistence that only a US presence on Polish territory could serve as an effective deterrent to Russia is also an implicit admission of its belief, its own expenditures on defense notwithstanding, the alliance has yet to come to terms with the dramatic change in the relative military power balance wrought by Russian military modernization over the past 20 years.

The larger, long-term national security question Warsaw must grapple with is whether NATO will in fact remain the centerpiece of European defense. Concern over this question has been growing in Poland as key allies in Western Europe seem to have become increasingly unmoored from their traditional transatlantic orientation. The friction that has defined the US-German and US-French relationships in recent years has also raised questions about NATO's effectiveness going forward—notwithstanding the significant reinvestment by the United States in its military capabilities in Europe since 2014. Strategically, Poland finds itself in an increasingly complex situation. On the one hand, its deepening security and defense relationship with the United States has strengthened deterrence along the country's eastern border; on the other hand, the internal fracturing of Europe and the continued lack of political will on the part of the majority of the allies to meet defense spending targets could put Poland's reliance on NATO as the key pillar of the country's security increasingly in question. For Poland, NATO's ability to make the tough policy decisions needed to meet the members' defense obligations is a matter of the national *raison d'être*.

And if NATO proves unable to correct its course (or continue the course correction that has taken place in a more urgent, substantial, militarily useful way), Poland's security may deteriorate further.

In the final analysis, Poland does not have the option of self-insuring against Russian aggression for the simple reason that the power differential between the two countries remains too great. Consequently, Warsaw will continue to prioritize close defense and security cooperation with the United States and to view NATO as key to Polish security. Though three decades have transpired since the end of the Cold War, the regional security environment in Central Europe has not transformed as much as expected. Although Poland is no longer strictly the land in between it was perceived as during the interwar period, since 2014 the historical geopolitical dilemmas in the east have returned with full force. For this reason, notwithstanding enduring political divisions in the country on a host of domestic policy issues, Poland is likely to maintain the current national security consensus across the political spectrum on the nature of the threat posed by Vladimir Putin's Russia and the existential consequences of Moscow's neoimperial project. And perhaps because, unlike elsewhere in Western Europe, mistaken foreign policy and security decisions have at times led to the disappearance of the nation, the country is likely to remain committed to investing in national defense and being one of America's closest allies in Europe. Thirty years into its postcommunist independence, Poland seems to appreciate more keenly than many of its allies in Europe the potential price of neglecting defense readiness for too long.

9. SOUTH KOREA: CAPABLE NOW, QUESTIONS FOR THE FUTURE

Bruce W. Bennett

KEY POINTS

- South Korea faces a substantial military threat from North Korea, especially given North Korea's arsenal of weapons of mass destruction (WMDs).
- The South Korean military's capabilities have grown substantially over the years, and it now fields the largest active-duty force of any US ally, with many advanced weapon systems. But some of its weapons are old and need to be replaced.
- Military support from the United States has been essential in helping to deter North Korea. In exchange, South Korea has supported US global security efforts.
- South Korean demographics and political decisions will result in a much smaller army over the coming decade, challenging South Korea's ability to defend itself, even with US assistance.

South Korea, formally the Republic of Korea (ROK), exists in a highly militarized region. South Korea's neighbor, North Korea, formally the Democratic People's Republic of Korea, invaded the South in 1950 and has posed continuing military threats ever since. But China has also posed a threat at times, and the country will most likely continue to do so. Moreover, especially recently, some in the ROK

perceive a threat from Japan. This chapter focuses on the North Korean threat and only briefly discusses the Chinese and Japanese threats, which are not currently direct military challenges for the Republic of Korea.

THE NORTH KOREAN THREAT¹

In June 1950, North Korea invaded the ROK in an effort to unify Korea under North Korean control. The Korean War ended in an armistice rather than with a peace agreement, and North Korea has never renounced its interest in a North Korea-controlled unification. Indeed, that interest still dominates North Korean military planning.¹

Some experts discount this objective, arguing North Korea has long since lost its ability to defeat the ROK and US forces arrayed to defend the Republic of Korea. But North Korean leader Kim Jong-Un continues his impassioned calls for unification in his New Year's addresses—his version of the State of the Union.² Because North Korea-controlled unification was the policy of his father and grandfather, Kim Jong-Un must act consistently with this objective or jeopardize his legitimacy as the North Korean ruler.

The North Korean leadership's even higher priority objective is regime survival. The North Korean regime regularly complains about US-ROK military training, claiming the United States and the

1. Nicholas Eberstadt, *The End of North Korea* (Washington, DC: American Enterprise Institute Press, 1999).

2. Kim Jong-Un, "Kim Jong Un's 2019 New Year Address," trans. Rodong Sinmun (speech, The National Committee on North Korea, Pyongyang, North Korea, January 1, 2019); and "Kim Jong Un Delivers the New Year's Speech," NK Leadership Watch, January 1, 2018, <http://www.nkleadershipwatch.org/2018/01/01/new-years-address/>.

Republic of Korea are preparing to eliminate the North Korean regime.³ Seeking to justify continued retention of nuclear weapons shortly after the 2018 US-North Korea Singapore Summit, “North Korean authorities gathered their core officials and held an internal lecture that emphasized that ‘nuclear weapons are a noble legacy left by former leaders Kim Il Sung and Kim Jong Il, and that if we do not have nuclear weapons, we die.’”⁴ North Korea sought nuclear weapon technologies as early as the 1950s because of North Korea’s perceptions of the strategic advantages nuclear weapons had given the United States during the Korean War.

In practice, the strategy and military capabilities required to achieve North Korean regime survival and North Korean-controlled Korean unification overlap considerably. Strategically, President Jimmy Carter’s proposed removal of US forces from Korea in the 1970s coincided with one of Kim Il-Sung’s central goals: Kim believed “that this would lead inevitably to reuniting the peninsula under his leadership, whether by peaceful or violent means.”⁵ In addition, Carter’s proposed removal of US forces would also remove the key threat to North Korean regime survival: “North

3. See Song Sang-Ho, “N. Korea Threatens to Turn Seoul, Washington into ‘Sea of Fire,’” Yonhap News Agency, February 25, 2016, <https://en.yna.co.kr/view/AEN20130306011600315>.

4. Thae Yong Ho, “North Korea Seeks to Dissolve UN Command through End-of-War Declaration,” Daily NK, August 8, 2018, <http://www.dailynk.com/english/north-korea-seeks-to-dissolve-un-command-through-end-of-war-declaration/>; and Roger Dingman, “Atomic Diplomacy during the Korean War,” *International Security* 13, no. 3 (Winter 1988–89).

5. Don Oberdorfer, *The Two Koreas: A Contemporary History* (Reading, MA: Addison-Wesley, 1997), 94.

Korea's strategy towards the United States and South Korea has been based on a desire to decouple Seoul from Washington."⁶ North Korean military capabilities have also supported both regime survival and Korean unification under North Korean control. For example, some 7,000 North Korean artillery pieces are reportedly postured within range of Seoul to support a North Korean invasion of South Korea or to defeat any ROK or US effort to invade the North.⁷ And North Korea could use its nuclear weapons in an attempt to break the US-ROK cohesion and defeat either the US-ROK defense of South Korea or a US-ROK offensive into North Korea.

Most experts argue North Korean conventional weapons are largely antiquated, many of them being based on designs that are 50 or more years old. But as North Korea's arsenal of Scud-derivative ballistic missiles indicates, even weapon designs that are 50 or more years old can still be effective. Still, North Korea has selectively modernized some of its weapons, such as its testing and likely deployment of advanced short-range ballistic missiles during the summer of 2019. North Korean information denial makes knowing the performance of individual weapons and the weapons that have been updated difficult, but in recent years the North Koreans have fielded a number of new

6. Khang Vu, "North Korea's 'Selective Détente,'" RealClearDefense, January 11, 2019, https://www.realcleardefense.com/articles/2019/01/11/north_koreas_selective_dtente_114097.html.

7. Franz-Stefan Gady, "Trump-Kim Summit: Why North Korea's Conventional Threat to South Korea Should Be Discussed in Singapore," Diplomat, June 11, 2018, <https://thediplomat.com/2018/06/trump-kim-summit-why-north-koreas-conventional-threat-to-south-korea-should-be-discussed-in-singapore/>.

artillery rocket systems and missiles that seem to be quite accurate. North Korea has also fielded much longer-range missiles, including intercontinental ballistic missiles.

In the 1960s and 1970s, hurting from its failure to conquer the Republic of Korea in the Korean War, North Korea sought to field a ground force with the ability to reach Busan rapidly by using armor. The country also sought WMDs, including nuclear, chemical, and biological weapons. By 2000, North Korea reportedly possessed 2,500 to 5,000 tons of chemical weapons.⁸ Former Commander, United States Forces Korea General Leon LaPorte said, “They don’t view using chemical weapons as [WMDs]. They see it as part of their normal doctrine.”⁹ By 2017, North Korea may have had 30 to 60 nuclear weapons and the ability to build about 12 or more per year.¹⁰

The US Defense Intelligence Agency wrote the following: “In any attack on the South, Pyongyang could use chemical weapons to attack forces deployed near the [demilitarized zone], suppress allied

8. Republic of Korea (ROK) Ministry of National Defense, “White Paper 2000” (white paper, ROK Ministry of National Defense, 2000), 56–58, 86.

9. Discovery Channel and *New York Times* Television, *Discovery Spotlight*, “Nuclear Nightmare: Understanding North Korea,” aired August 6, 2003, on Discovery Channel.

10. Eleanor Albert, “North Korea’s Military Capabilities,” updated December 20, 2019, <https://www.cfr.org/backgrounder/north-koreas-military-capabilities>; and Ankit Panda, “US Intelligence: North Korea May Already Be Annually Accruing Enough Fissile Material for 12 Nuclear Weapons,” *Diplomat*, August 9, 2017, <https://thediplomat.com/2017/08/us-intelligence-north-korea-may-already-be-annually-accruing-enough-fissile-material-for-12-nuclear-weapons/>.

airpower, and isolate the Peninsula from strategic reinforcement.”¹¹ The agency also warned:

North Korean chemical weapons would complement conventional military power and provide some unique advantages. Chemical weapons would have a demoralizing effect on defenders and reduce the effectiveness of defending forces, potentially denying use of some mobilization and force reception centers, storage areas, and military bases without physically destroying facilities or equipment. Used against civilian and rear area targets, chemical weapons could cause extensive casualties, tax medical resources, impede mobilization, and cause general panic.¹²

Biological and nuclear weapons could cause even greater casualties and panic if used against military or civilian targets.

North Korea has not explained how it would use nuclear weapons. But in 1997, the most senior North Korean military defector at the time, Young-Hwan Ko, shared with the US Congress the following statement:

Some Americans believe that even if North Korea possessed the ability to strike the United States, it would never dare to because of the devastating consequences. But I do not agree with this idea . . . Kim Jong-il believes that if North Korea creates more than 20,000 American

11. Defense Intelligence Agency (DIA), *North Korea: The Foundations for Military Strength – Update 1995* (Washington, DC: DIA, December 1995), 12.

12. DIA, *North Korea: The Foundations for Military Strength* (Washington, DC: DIA, October 1991), 5.

casualties in the region, the US will roll back and the North Korea [sic] will win the war.¹³

North Korea may still believe early use of nuclear weapons could kill or injure enough Americans to induce US force withdrawal from the ROK. Although this statement is more than 20 years old, it reflects comments that a more recent and more senior North Korean military defector made. Today, this level of US casualties could be achieved by North Korea detonating a nuclear weapon on the US military headquarters at Camp Humphreys.

Even one nuclear weapon could cause tremendous damage in the Republic of Korea or any other target area. Although many nuclear weapon experts thought the first test in 2006 was a fizzle, even a nuclear weapon of that caliber could cause massive damage and potential casualties upwards of 170,000 if the target were Seoul. And the nuclear weapon tested in 2017, having far greater yield, could potentially result in more than 3 million fatalities and serious injuries in Seoul and the surrounding area.¹⁴

North Korea is also prepared to execute various other kinds of attacks, including cyber and electronic warfare. As early as 2011, North Korean hackers were

13. *North Korean Missile Proliferation: Hearing before the Subcommittee on International Security, Proliferation, and Federal Services of the Committee on Governmental Affairs, 105th Cong.* 241 (October 21, 1997) (statement of Young-Hwan Ko, former official, Ministry of Foreign Affairs, North Korea).

14. D. P. Voytan et al., "Yield Estimates for the Six North Korean Nuclear Tests from Teleseismic P Wave Modeling and Intercorrelation of P and Pn Recordings," *Journal of Geophysical Research: Solid Earth* 124, no. 5 (May 2019); and Nukemap2 Program (230 Kt nuclear airburst; Yeouido Subway Station; 37.5216 N 126.9242 E), <http://nuclearsecrecy.com/nukemap/>.

able to cripple the operations of a major South Korean bank, and, since then, they have targeted South Korean media, government offices, nuclear plants, and electronic currency.¹⁵ Because cyberattacks can be done with significant stealth, the extent to which North Korean hackers have already installed Trojan horse malware to disable or spy on national security- and infrastructure-related computer systems in a time of conflict is unknown.¹⁶ Based on conversations with North Korean refugees, the author believes North Korea has more than 10,000 hackers today. North Korea has also been fielding global positioning system (GPS) jammers with effective ranges of 100 kilometers or more to disrupt GPS guidance.¹⁷ And North Korea has demonstrated its extensive psychological operations capabilities in both its internal indoctrinations and its external information broadcasts.

15. "N. Korea's Cyber Warfare Unit in Spotlight After Attack on S. Korean Bank," Yonhap News Agency, May 3, 2011, <https://en.yna.co.kr/view/AEN20110503010600315>; Dave Lee and Nick Kwek, "North Korean Hackers 'Could Kill,' Warns Key Defector," BBC, May 29, 2015, <https://www.bbc.com/news/technology-32925495>; and Sam Kim, "North Korean Hackers Hijack Computers to Mine Cryptocurrencies," *fin24*, January 2, 2018, <https://www.news24.com/fin24/Tech/Cyber-Security/north-korean-hackers-hijack-computers-to-mine-cryptocurrencies-20180102>.

16. Song Sang-Ho, "Korea Vulnerable to Cyberwarfare," *Korea Herald*, July 6, 2014, http://khnews.kheraldm.com/view.php?ud=20140706000175&md=20140709005358_BL.

17. "Military Grilled on Defense against N. Korean GPS Jamming," *Korea Herald*, September 19, 2011, <http://www.koreaherald.com/view.php?ud=20110919000941>.

THE CHINESE AND JAPANESE THREAT TO THE ROK

In the author's experience, the Chinese military threat to the ROK, beyond provocations, is not often addressed in ROK security discussions. China fought against the Republic of Korea in the Korean War, but now China has told North Korea that if it starts a war against the United States and the ROK, China will not intervene to help it.¹⁸ Nevertheless, China could pose a serious threat to the Republic of Korea and, eventually, to a unified Korea. China's leader Xi Jinping has said, "As a close neighbor of the peninsula, we will absolutely not permit war or chaos on the peninsula."¹⁹ How China would prevent war or chaos other than by intervening in North Korea, which could be a challenge for the ROK and United States, is not clear.

China could also pose a series of limited threats to the Republic of Korea. China could attack ROK forces at sea or in the air, though the former does not appear to be planning any such conflicts in the coming years. Currently, China poses some lesser threats, such as the intrusion of Chinese fishing ships into South Korean waters, the violation of the ROK air defense identification zone by Chinese

18. Simon Denyer and Amanda Erickson, "Beijing Warns Pyongyang: You're on Your Own If You Go after the United States," *Washington Post*, August 11, 2017, https://www.washingtonpost.com/world/china-warns-north-korea-youre-on-your-own-if-you-go-after-the-us/2017/08/11/a01a4396-7e68-11e7-9026-4a0a64977c92_story.html.

19. Michael Martina, "China Won't Allow Chaos or War on Korean Peninsula: Xi," Reuters, April 28, 2016, <https://www.reuters.com/article/us-china-northkorea-xi/china-wont-allow-chaos-or-war-on-korean-peninsula-xi-idUSKCN0XP05P>.

military aircraft, and Chinese economic warfare in response to the US deployment of the Terminal High Altitude Area Defense missile defense system in the Republic of Korea.

The history of Japanese aggression in both North and South Korea has led some in the ROK to fear future Japanese military action. In the future, Japan could challenge the Republic of Korea at sea and in the air—areas where Japan has substantial military capabilities—but Japan’s Ground Self-Defense Force, which consists of about 150,000 personnel, is less than one-third the size of current ROK ground forces. As such, Japan would likely not invade South Korea.

THE ROK STRATEGIC OUTLOOK

Although North Korea has constituted almost all of the military threats to the Republic of Korea during the last 66 years, some ROK governments have treated these threats differently. Historically, conservative governments have identified North Korea as “the main enemy,” though toward the end of the previous conservative South Korean government, the 2016 *Defense White Paper* recognized other potential threats:

First, the constant military threats and provocations from North Korea are the primary security threats the ROK faces today. In particular, North Korea’s nuclear weapons including ballistic missiles, [WMDs], cyber-attacks and terrorism pose major threats to our national security . . . At the same time as contending with these threats, the ROK will also continuously expand its capacity to respond to potential threats against its peace and security as well as transnational and non-military threats.²⁰

20. ROK Ministry of National Defense, 2016 *Defense White Paper* (Seoul: ROK Ministry of National Defense, December 31, 2016), 41.

Instead, the current progressive South Korean government focuses its national security objectives on achieving regional peace, especially with North Korea. In releasing its 2018 ROK national security strategy, "The Blue House announced that its national security strategy has three goals: finding a peaceful solution to the North Korean nuclear issue and establishing permanent peace, contributing to the peace and prosperity of Northeast Asia and the world, and creating a secure society that protects the lives and safety of its people."²¹ Indeed, an Associated Press report said the South Korean government's 2018 *Defense White Paper* no longer uses terms that label North Korea "an 'enemy,' a 'present enemy' or the South's 'main enemy.'" Still, the government believes "the North's [WMDs] are a 'threat to peace and stability on the Korean peninsula.'"²²

The current ROK government hopes this revised wording will help improve relations with North Korea while the Republic of Korea deploys adequate military capability to deter North Korean aggression. Key to this adequate military capability is ROK military strength and the ROK alliance with the United States. Early in his administration, ROK President Moon

21. Seong Yeon-Cheol, "Blue House Publishes National Defense Strategy of Moon Administration," *Hankyoreh*, December 21, 2018, http://english.hani.co.kr/arti/english_edition/e_national/875385.html.

22. Associated Press, "South Korean Defence Report No Longer Refers to North as an Enemy, Confirming Closer Ties," *South China Morning Post*, January 15, 2019, <https://www.scmp.com/news/asia/diplomacy/article/2182107/south-korean-defence-report-no-longer-refers-north-enemy>.

Jae-In “promised to ‘retain overwhelming military superiority’ and ‘a firm ROK-US alliance.’”²³

To deter attacks by its neighbors (mainly North Korea) and defend against them if deterrence fails, the Republic of Korea entered the Mutual Defense Treaty between the United States and the Republic of Korea in 1953. The treaty secures US assistance in both deterrence and defense, and the *2018 Defense White Paper* specifies the size of the expected US assistance: “The US augmentation forces that are deployed to the Korean Peninsula in contingencies to support the defense of the ROK consist of 690,000 troops, 160 vessels, and 2,000 aircraft from the Army, Navy and Marine Corps, and Air Force.”²⁴ Given the mutual defense nature of the treaty, the United States has sought ROK partnership in dealing with threats to global and regional security, and the Republic of Korea has provided such assistance over the years in Vietnam, East Timor, Afghanistan, Iraq, the Gulf of Aden, Lebanon, South Sudan, and other locations.²⁵ But whether the United States could provide a force this large would depend on other worldwide US commitments at the time.

23. Kim Ji-Eun, “President Moon Lays Out Five Principles for a Peaceful Korean Peninsula,” *Hankyoreh*, November 2, 2017, http://english.hani.co.kr/arti/english_edition/e_national/817211.html.

24. ROK Ministry of National Defense, *2018 Defense White Paper* (Seoul: ROK Ministry of National Defense, January 15, 2019), 59–60.

25. Hojun Song, “South Korea’s Overseas Peacekeeping Activities—Part I: The History and Current Status,” *Peninsula* (blog), July 29, 2016, <http://blog.keia.org/2016/07/south-koreas-overseas-peacekeeping-activities-part-i-the-history-and-current-status/>.

THE ROK'S MILITARY CAPABILITIES, BUDGETS, AND PLANS AND ITS STRATEGIC OUTLOOK

Although measuring ROK capabilities is important if the country is to achieve its strategic outlook, in practice many of the elements of that outlook are accomplished by US-ROK Combined Forces Command (CFC) rather than just ROK military forces. The Republic of Korea's qualitative military capabilities have been growing to defeat North Korean threats; however, those threats have grown significantly, as outlined above.²⁶ Thus, President Moon is anxious to sustain the US-ROK alliance, even as he reaches out to North Korea for peaceful coexistence.

Republic of Korea Defense Reform

In the early 2000s, the ROK military recognized it faced a substantial reduction in active-duty personnel in the coming years because of the declining age cohort supplying military personnel. The ROK fertility rate fell from 4.53 births per woman per lifetime in 1970 to 2.82 in 1980 and 1.66 by 1985. Then, the fertility rate was stable through 1995, but it fell further to 1.18 in 2002 and below 1.0 in 2018.²⁷ The military established the Defense Reform Plan 2020 in 2005 to trade advanced technology for the expected reduced

26. See Jo He-Rim, "Seoul, US Agree on 'Rational and Fair' Defense Cost-Sharing Negotiations: Cheong Wa Dae," *Korea Herald*, July 30, 2019, <http://www.koreaherald.com/view.php?ud=20190730000702>.

27. Korean Statistical Information Service (accessed July 10, 2019), http://kosis.kr/eng/statisticsList/statisticsListIndex.do?menuId=M_01_01&vwcd=MT_ETITLE&parmTabId=M_01_01&statId=1994044&themaId=#A_6.2.

manpower. But the combination of less manpower availability than expected, a reduced conscription period, and fewer investments in military technology than expected have undermined the premises of this plan.

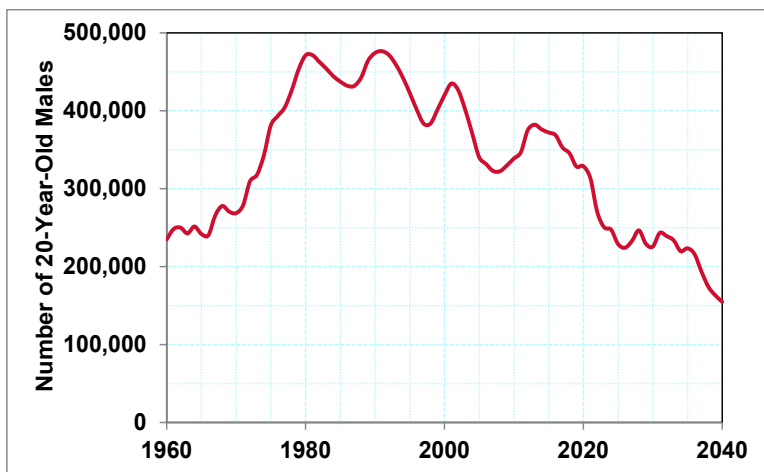


Figure 9-1. The ROK demographic problem

Figure 9-1 shows the age cohort for ROK male 20-year-olds—the manpower pool from which the ROK military drafts.²⁸ This cohort was large enough to sustain a ROK military of 690,000 active-duty personnel from the mid-1970s through the 1990s and into the early 2000s. But, now, the cohort is declining and will fall precipitously over the next five to six years. President Moon plans to reduce the ROK military from roughly 600,000, the level at the end of 2018, to 500,000 personnel by the time he leaves

28. Korean Statistical Information Service.

office in 2022.²⁹ The military manpower reduction will be larger than the demographics mandate because the Moon administration is also reducing the period draftees serve from 21.5 months to 18 months, affecting both the manpower numbers and the average training level of ROK military personnel. But the author's estimates suggest that of the anticipated 500,000 ROK active-duty personnel in 2022, roughly 310,000 may be (male) draftees. Thus, the shorter draft period might reduce ROK military manpower by over 50,000 personnel by 2022.

In an effort to offset some of the lost manpower and training, the Republic of Korea has sought to increase the amount of volunteers (officers and noncommissioned officers) in the ROK military because they serve longer than draftees. But confirming the effectiveness of that effort is not possible because the defense ministry does not publish the number of volunteers who are serving or their average length of service.

As figure 9-2 indicates, the decline in all ROK military manpower will accelerate over the next few years, amounting to a 28-percent manpower reduction between 2000 and 2022.³⁰ Over this same period, because the ROK Air Force will lose no manpower and the ROK Navy will add some manpower, the ROK

29. Jun Hyun-Suk, "Troops to Be Slashed to 500,000 by 2022," *Chosun Ilbo*, January 22, 2018, http://english.chosun.com/site/data/html_dir/2018/01/22/2018012201244.html.

30. ROK Ministry of National Defense, *Defense White Papers 2000–2018* (Seoul: ROK Ministry of National Defense, 2001–2019); ROK Ministry of National Defense, *Defense Reform Plan 2020: The Way Ahead* (Seoul: ROK Ministry of National Defense, December 8, 2005); and Kim Kwang-Tae, "S. Korea to Reduce Troop Numbers to 500,000 by 2022," Yonhap News Agency, November 6, 2019, <https://en.yna.co.kr/view/AEN20191106001651320>.

Army manpower will drop by 35 percent. Thereafter, the ROK military could decline from 500,000 active-duty personnel in 2022 to perhaps 395,000 by 2026. The ROK military would then stabilize in 2030 for about 7 years at around 380,000 active-duty personnel—a net reduction of approximately 45 percent since 2000.

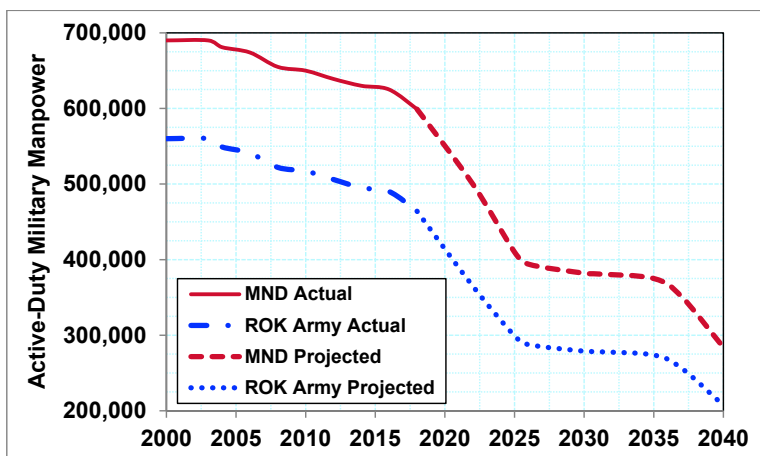


Figure 9-2. Historical and estimated ROK active-duty military manpower

The Ministry of National Defense apparently anticipates reducing the air force and navy active-duty personnel levels after 2022. Assuming a proportional manpower reduction for each service, the ROK Army would have a total of about 288,000 personnel in 2026 and 279,000 in 2030, which would likely be inadequate for even defending the Republic of Korea until additional, reinforcing US forces arrived. Avoiding this potentially disastrous decline would be difficult, unless the Moon administration started taking appropriate measures in the next couple of years, such as extending the length of time draftees serve,

providing a path for draftees to become officers, and including more incentives and benefits for military volunteers. Alternatively, the Moon administration could create a second class of reservists that complete two to four weeks of active duty each year in addition to serving one weekend a month; this class could serve like US military reservists.

The Defense Reform Plan 2020 sought to offset anticipated manpower reductions with advanced-technology military equipment. Such a tradeoff is easier to make for forces operating defensively, but more difficult for manpower-heavy operations involved in missions such as occupying and stabilizing captured territory.

The author's 2006 report, "A Brief Analysis of the Republic of Korea's Defense Reform Plan," provides some insight into the country's defense budget from 2006 to 2020:

The ROK military originally projected the need to increase the budget 11.1 percent per year through 2015, and then 7 percent per year through 2020, or an aggregate of some 683 trillion won between 2006 and 2020. After further analysis, the defense ministry concluded that 621 trillion won through 2020 would be sufficient. Of this, 272 trillion won were required for force investment (about 40 times the 2005 force investment budget) and 349 trillion won for personnel and operations.³¹

The ROK Ministry of National Defense provided a detailed explanation of the goals of the Defense Reform Plan 2020 in its initial document, but provided

31. Bruce W. Bennett, *A Brief Analysis of the Republic of Korea's Defense Reform Plan* (Santa Monica, CA: RAND Corporation, 2006), 2; and "Japan Worried by Korean Defense Reform Plans," *Chosun Ilbo*, October 16, 2005, http://english.chosun.com/site/data/html_dir/2005/10/16/2005101661004.html.

no explanation for how this investment requirement was determined or the reason the projected budget was reduced to 621 trillion won.³² Since 2005, the Republic of Korea has made significant investments in a wide range of more capable military equipment. These investments have included

- about 530 K1A1 tanks, 100 K2 tanks, 500 K21 infantry fighting vehicles, almost 300 K9 self-propelled artillery systems, Hyunmoo-2 short-range ballistic missiles, Hyunmoo-3 cruise missiles, 36 Apache attack helicopters, and 110 Surion transport helicopters.
- almost 10 F-35A and 60 F-15K fighters, 50 FA-50 light combat aircraft, 80 T-50 and TA-50 trainers, 4 B-737 airborne early warning and control aircraft, several kinds of unmanned aerial vehicles (also called drones), a range of precision munitions, and 8 Patriot air and missile defense batteries (which are now receiving Patriot Advanced Capability-3 interceptors designed for missile defense). The ROK has also started to replace its I-Hawk air defense batteries with the indigenous KM-SAM air and missile defense system.
- a single *Dokdo*-class amphibious ship with 4 amphibious transport docks, 3 KDD-III destroyers, 6 KDD-II destroyers, 7 *Incheon*-class frigates, 18 *Gumdoksuri*-class corvettes, and 7 *Chang Bogo*-class submarines (German Type-214).
- a variety of ongoing research and development efforts, as well as new procurements that are

32. ROK Ministry of National Defense, *Defense Reform Plan 2020*.

just starting, such as the country's purchase of four Global Hawk reconnaissance aircraft.³³

In practice, many of these new acquisitions were designed to replace very old systems. The country also added a Military Cyber Command on January 1, 2010, and has been using that organization to counter North Korean hacking and to prepare for full cyber warfare.³⁴

Although these new additions are clearly welcome, they have not provided the planned technology-versus-manpower tradeoff, in part because the government has not funded the plan sufficiently.³⁵ For example, the ROK financial difficulties in the four years after the Defense Reform Plan was formulated in 2005 caused the Ministry of National Defense to reduce the planned 15-year budget in 2009 from 621 trillion Korean won to 599 trillion Korean won, though the manpower target for 2020 was increased. The Republic of Korea planned for a military force of 517,000 for 2020, rather than the 500,000 it originally projected. The actual ROK military budgets from 2006 to 2020 will be about 100 trillion won short of even

33. International Institute for Strategic Studies (IISS), "Chapter Six: Asia," in *The Military Balance 2019* (London: IISS, February 2019); and IISS, *The Military Balance 2005–2006*, 105th ed. (London: IISS, October 2005).

34. Song Sang-Ho, "Military Investigates Hacking of Seoul's War Operations Plan," *Korea Herald*, December 19, 2009, <http://m.koreaherald.com/view.php?ud=20091219000021>.

35. Yoo Jee-Ho, "Defense Reforms Aimed at North," *JoongAng Ilbo*, June 27, 2009, <http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=2906672>.

the 621-trillion-won plan.³⁶ Determining how much of that budget shortage occurred in military equipment acquisition is difficult because budget categories have been adjusted several times since 2005. But the author estimates the force enhancement programs fell about 70 trillion won short of the 2005 plan, cutting about 30 percent of the equipment acquisition planned from 2006 to 2020. The result is the ROK military still uses a fair amount of very old equipment. For example, one-quarter of ROK tanks are still M-48s, and 40 percent of ROK combat aircraft are still F-4s and F-5s, contrary to the Defense Reform Plan 2020 expectation of decommissioning all F-4s and F-5s.³⁷ In fact, the M-48s, and even many of the K1 tanks, were supposed to be replaced by the next-generation tanks, which were presumably the K2 tanks, but only about 100 of the K2s have been fielded. The K2s amount to only 4 percent of the ROK Army tank inventory.

Other serious shortfalls exist as well. Though the ROK military has fielded advanced military platforms such as F-35s, F-15s, and Aegis destroyers, retired Lieutenant General Chun In-Bum said in a Brookings report, “Soldiers still lack basic equipment needs

36. ROK Ministry of National Defense, *2018 Defense White Paper*; Paek Jae Ok, *Structure and Policy Implications of the 2019 ROK Defense Budget*, ROK Angle Issue 193 (Seoul: The Korea Institute of Defense Analyses, January 28, 2019); and Yonhap News Agency, “S. Korea’s 2020 Defense Budget Rises 7.4% to over 50tr Won,” *Korea Herald*, December 11, 2019, <http://www.koreaherald.com/view.php?ud=20191211000099>.

37. See IISS, *Military Balance 2019*, 284–86; and ROK Ministry of National Defense, *Defense Reform Plan 2020*, 19.

including night-vision goggles, GPS, radios, first aid kits, body armor, sights, and lasers.”³⁸

The Republic of Korea’s difficulty in fielding adequate modernized equipment may be exacerbated by US President Donald Trump asking the country to pay the United States \$5 billion in defense burden sharing annually for 2020—an increase of \$4 billion compared to South Korea’s 2019 payment. Because of coronavirus disease 2019 emergency relief costs, the ROK government has already cut its defense budget by about \$730 billion as of mid-April 2020. Eighty percent of this defense budget reduction was taken from arms procurement, primarily from equipment purchased from US defense contractors. Thus, the costs of coronavirus disease 2019 emergency relief would almost certainly force the ROK government to take any increase in burden sharing from the existing military budget. Also, because President Trump apparently intends to use increased burden sharing for US deficit reduction, any additional ROK payment would also reduce alliance defense capabilities, thus further harming the US-ROK alliance.³⁹ Also, the lost equipment acquisition would come primarily from US defense contractors, resulting in lost US jobs.

Some countries counter limitations in the number of active-duty manpower by providing personnel from the military reserves. But, in the Republic of Korea, almost all reserve personnel serve only three days or fewer a year. Although ROK Army reservists have almost all served on active duty, three days a

38. Chun In-Bum, *Korean Defense Reform: History and Challenges* (Washington, DC: Brookings, October 31, 2017).

39. Park Byeong-Jin, “US Arms Reduction Budget Cuts, Defense Cost Negotiations Will Be a Pressure Card,” *Segye Ilbo*, April 17, 2020, <http://m.segye.com/view/20200417515709>.

year is not enough to maintain even basic individual skills, let alone build the kind of reserve-unit cohesion needed in military operations. The ROK Army has been contemplating a two-track reserve system; the new track would train reservists one weekend a month and two weeks each summer, as is typical in the US Army Reserve. Active-duty units augmented with substantial numbers of this kind of reservist could help mitigate the military demographic problems, but such an action has not yet been implemented. The author believes more extensive reserve duties would not be accepted in the Republic of Korea without the inclusion of a major incentive, such as paying the college tuition of the reservists who take this new track, including graduate school tuition for those still in college.

Dealing with Major Conventional Military Attacks on the Republic of Korea

Traditionally, ROK defense capabilities have mainly been measured in terms of the ability of CFC—the joint military command of US and ROK forces in South Korea—to defeat a North Korean conventional force invasion of the Republic of Korea. For many years, US commanders in Korea have felt confident such a North Korean invasion could be defeated and deterred. In 2002, then-Commander of CFC General Thomas Schwartz testified to Congress, “Although an attack on the ROK would cause many casualties and great destruction, CFC would rapidly defeat North Korean forces.”⁴⁰ Subsequent commanders have

40. *National Security Challenges and US Military Activities in the Indo-Pacific*, 116th Cong. (2019) (statement of General Thomas A. Schwartz, commander, United States Forces Korea).

reiterated that message, including then-chairman of the Joint Chiefs of Staff General Joseph Dunford, the US commander in Korea General Vincent K. Brooks (in 2017), and the US commander in Korea General Robert Abrams (in 2019).⁴¹ The conventional forces of the United States and the Republic of Korea have significant qualitative superiority over comparable North Korean forces, providing the former the apparent advantages needed for victory, despite their general quantitative inferiority. North Korea has also known that if it were to lose a major war with the United States and the ROK, the North Korean regime would probably be destroyed, a major deterrent as long as North Korea is not confident it could win.

Because Kim Jong-Un's prospects of defeating a US-ROK alliance are not good today, he appears to be trying to decouple the Republic of Korea and the United States and leave the ROK without US military assistance. Kim Jong-Un hopes the threat of nuclear intercontinental ballistic missiles and nuclear weapons capable of reaching the United States will convince the latter to withdraw its military forces from the Republic of Korea rather than risk a North Korean nuclear

41. Jim Garamone, "Dunford: US-South Korean Alliance Ready to Defend against North Korean Threat," DoD News, August 14, 2017, <https://www.defense.gov/Explore/News/Article/Article/1277384/%20dunford-us-south-korean-alliance-ready-to-defend-against-north-korean-threat/>; and *National Security Challenges and US Military Activities in the Indo-Pacific*, 116th Cong. (2019) (statement of General Robert B. Abrams, commander of UN Command and US-ROK Combined Forces Command).

attack.⁴² During the Cold War, the Soviet Union was similarly successful in decoupling France from the NATO military alliance by deploying intercontinental ballistic missiles with nuclear weapons to undermine the French confidence in the extended deterrence of NATO. The Soviet Union also unsuccessfully tried to decouple West Germany. Given this view, the North Korean military's current and prospective nuclear weapons, and its advantages in sheer numbers of personnel and platforms over the ROK's military, President Moon's emphasis on the importance of the US-ROK alliance is not surprising.⁴³

Although the United States and the Republic of Korea could probably defeat a major North Korean conventional attack, the price paid for such a victory could be very high. For example, according to a RAND Corporation paper, the DoD "has estimated that a [Democratic People's Republic of Korea] artillery barrage could inflict 250,000 casualties on Seoul alone."⁴⁴ The United States and the ROK have not fielded the military forces that would be required to limit such damage appreciably (short of significant US use of nuclear weapons). The vast majority of US forces that would participate in defending the

42. Khang Vu, "Why Moon Jae-In Should Not Follow Willy Brandt's Footsteps," *Diplomat*, May 10, 2019, <https://thediplomat.com/2019/05/why-moon-jae-in-should-not-follow-willy-brandts-footsteps/>.

43. Yonhap News Agency, "Moon Says Korea-US Alliance Should Continue Forever," *Korea Herald*, November 5, 2018, <http://www.koreaherald.com/view.php?ud=20181105000903>.

44. Gian Gentile, *Four Problems on the Korean Peninsula: North Korea's Expanding Nuclear Capabilities Drive a Complex Set of Problems*, ed. Yvonne K. Crane et al. (Santa Monica, CA: RAND Corporation, 2019), 8.

Republic of Korea is based in the United States, leaving the ROK forces primarily responsible for defense during the early weeks of any conflict. This arrangement risks damage to the Republic of Korea should war occur, but the arrangement also allows the United States flexibility in the ways in which it uses its forces. In addition, because the United States also fields the airlift and sealift that would be used to move US forces to the peninsula, the ROK reduces its defense budget, manpower requirements, and land usage for basing and training, thus reducing the costs of defending its country.

As noted above, the Republic of Korea's other neighbors generally pose lesser threats to it for now. Japan lacks the forces to invade the ROK seriously and currently does not pose a substantial threat of standoff attack. The US bilateral alliances with both the Republic of Korea and Japan further mitigate against any Japanese military threat to the former. China lacks a land border with South Korea and thus cannot cross over and attack it easily, and ROK military capabilities and the US-ROK alliance help deter limited Chinese attacks that could lead to a major war. But ROK capabilities have not been sufficient to deter very limited Chinese provocations; as a result, the Republic of Korea should enhance these capabilities.

Dealing with Major WMD Attacks on the Republic of Korea

Because North Korea would likely not be able to win a major conventional conflict with the Republic of Korea and United States, North Korea will almost certainly use WMDs if it starts or is propelled into a major war. To deter such a threat, the United

States and the ROK should be prepared to fight and overwhelmingly win a major war; however, current US and ROK capabilities would face some risks in doing so. At the very least, North Korean WMDs could cause substantial damage to the Republic of Korea. The cost of adequately defending against such threats is greater than the ROK and the United States are prepared to, or likely willing to, pay. If North Korea's use of WMDs is to be deterred, the United States and the Republic of Korea will have to threaten North Korea with substantial punishments in response to an attack—threats that neither the ROK nor the United States are now making in a clear manner. In particular, North Korean WMDs might give a North Korean invasion of the Republic of Korea enough of an advantage to succeed unless opposed by US nuclear weapon use, which is exactly the US commitment many ROK senior military officers feel is needed to deter North Korean WMD use.

The Republic of Korea's request for a guaranteed US nuclear retaliation against any North Korean WMD use, and especially nuclear weapon use, is logical: In a simple deterrence assessment, North Korea would decide to use nuclear weapons based on the benefits versus the costs. North Korea may perceive that its nuclear weapon use could offset US-ROK conventional military superiority. The United States seems to withhold no military capability during conventional warfare except nuclear weapons, and thus North Korea might suffer no unique cost to offset the North Korean benefits of nuclear weapon use unless the United States commits to responding with nuclear weapons. But, because nuclear weapon use is up to the US president, US officials often believe they cannot give such a guarantee.

The US 2018 *Nuclear Posture Review* established the US declaratory policy against North Korean nuclear weapon use: "Our deterrence strategy for North Korea makes clear that any North Korean nuclear attack against the United States or its allies and partners is unacceptable and will result in the end of that regime."⁴⁵ But the US strategy underlying this policy has not been fully and publicly articulated, undermining its deterrence value. During a conflict, the North Korean regime would likely hide in deep underground facilities, which may not be vulnerable to even precision conventional "bunker busters."⁴⁶ Thus, this US commitment may be very close to promising a US nuclear weapon response to North Korean employment of nuclear weapons and should likely be described as such to enhance deterrence of North Korea. In addition, a specific US or ROK deterrent policy against North Korean use of chemical and biological weapons does not appear to exist, though a US nuclear weapon response could be posed since nuclear weapons are the only form of WMDs the United States deploys.

The Republic of Korea has developed its "system for responding to nuclear weapons and [WMDs]."⁴⁷ The system includes the ROK Strategic Target Strike

45. James Mattis, *Nuclear Posture Review* (Washington, DC: Office of the Secretary of Defense, February 2018), 33.

46. Moon Sung-Hwi, "North Korea Moves Its Wartime Command Center to Nampo Taesan," *Liberty Korea Post*, July 7, 2018, <http://www.lkp.news/news/article.html?no=4808>.

47. See Noh Ji-Won, "Defense Ministry Changes Terminology for 'Three-Axis System' of Military Response," *Hankyoreh*, January 13, 2019, http://english.hani.co.kr/arti/english_edition/e_national/878208.html; and ROK Ministry of National Defense, *2018 Defense White Paper*, 165.

counterforce capability (formerly referred to as “the Kill Chain”) to destroy North Korean missiles, aircraft, and WMDs before they are launched; the Korean Air and Missile Defense to stop North Korean aircraft and missiles while in flight; and Overwhelming Response to target the North Korean leaders to prevent launch and other orders from being executed.⁴⁸ This system was developed by the Republic of Korea largely without US coordination.

Equally essential though not stated as being part of this system is the intelligence collection and analysis to identify the appropriate targets in North Korea. According to a confidential UN report cited by a UN Security Council diplomat, North Korea is hiding its WMDs from the United States because it fears a US military strike. North Korea’s ability to hide its nuclear weapons and means of delivery limits the effectiveness of Strategic Target Strike.⁴⁹ Accordingly, the United States and the ROK need to enhance their capabilities to find those targets, with the Republic of Korea seeking to do so in part with its acquisition of the high-altitude, remotely piloted Global Hawk surveillance aircraft. Each element of the ROK system for responding to nuclear weapons and WMDs started as a concept with some underlying capabilities, and the Republic of Korea has sought to develop these capabilities over time. But these capabilities

48. Daryum Ji, “ROK to Spend over \$84 Billion on New Military Capabilities over Five Years: MND,” NK News, January 11, 2019, <https://www.nknews.org/2019/01/rok-to-spend-over-84-billion-on-new-military-capabilities-over-five-years-mnd/>.

49. Richard Roth, “North Korea Is Hiding Nukes and Selling Weapons, Alleges Confidential UN Report,” CNN, February 5, 2019, <https://www.cnn.com/2019/02/05/asia/north-korea-nuclear-sanctions-prep-intl/index.html>.

are expensive and will require the integration of increasingly sophisticated technology. As a result, this system will require many years and major investment to mature fully.

Military operations in a WMD environment are not just about the ability to destroy the opposing WMDs. Both ROK and US military forces need to have doctrine and procedures for defending themselves in WMD environments, and work is required in these areas, including enhancing the peacetime dispersal of forces, increasing the number of facilities like airfields and ports to complicate North Korean targeting, planning for further force dispersal upon warning to reduce the damage that could be done by North Korean WMD attacks, and enhancing force protections with resources like shelters and individual protection. But US forces in South Korea have, in part, progressed in the opposite direction. The United States has consolidated much of its basing at Camp Humphreys, which is in Pyeongtaek and has great peacetime benefits of efficiency, cost savings, and enhanced morale. But, in a nuclear environment, Pyeongtaek provides North Korea with a key target.

The United States would prefer the Republic of Korea and many other allies not to have hard-power nuclear capabilities. Instead, the United States offers a so-called “nuclear umbrella”: The country promises to handle any situation in which its allies or partners are attacked by nuclear weapons so those states do not need their own nuclear weapons. The United States does not want to allow a precedent of its allies and partners obtaining nuclear weapons, which could lead other nonnuclear states to develop nuclear weapons and undermine US support for the Treaty on the Non-Proliferation of Nuclear Weapons, which intended

to cap the states with nuclear capabilities at five: the United States, the United Kingdom, France, Russia, and China.⁵⁰

In recent years, discussions have occurred in the ROK about whether it needs its own nuclear weapons, and the literature surrounding this topic increasingly pushes for ROK nuclear weapon acquisition.⁵¹ The Republic of Korea has much of the required infrastructure and human capital to develop nuclear weapons, including over 20 large nuclear plants. But the ROK lacks the uranium enrichment and plutonium reprocessing capabilities needed for an independent nuclear weapon program, and the country abandoned any intention to have such capabilities or its own nuclear weapons in its 1992 Joint Declaration of the Denuclearization of the Korean Peninsula.⁵² The Republic of Korea recommitted to this declaration in the April 2018 Panmunjom Declaration adopted between Moon and Kim: The leaders committed to implementing fully “all existing inter-Korean declarations and agreements adopted thus far.”⁵³ If the ROK were to pursue nuclear weapons, whether the United States would seek to dissuade ROK nuclear weapon development by giving the country a choice between having its own nuclear weapons or

50. Treaty on the Non-Proliferation of Nuclear Weapons, CN-FR-GB-RU-US, July 1, 1968, Article XI.

51. See Chung Mong-Joon, “Thinking the Unthinkable on the Korean Peninsula” (speech, 2013 Carnegie International Nuclear Policy Conference, Washington, DC, April 9, 2013).

52. Joint Declaration of the Denuclearization of the Korean Peninsula, ROK-DPRK, January 20, 1992.

53. Panmunjom Declaration on Peace, Prosperity and Reunification of the Korean Peninsula, ROK-DPRK, April 27, 2018.

preserving the US-ROK alliance remains to be seen. The United States gave the Republic of Korea this same choice in the 1970s.⁵⁴

APPLYING HARD POWER

Since the Korean War, the United States and the ROK have worked together closely to defend South Korea, operating under the direction of the leaders of both countries. In July 1950, ROK President Syngman Rhee transferred operational control (OPCON) of ROK forces to the UN Command, which was helping to defend the Republic of Korea and was led by a US general. In 1978, Washington and Seoul agreed to establish CFC with a US general as CFC commander; this commander assumed OPCON of all alliance forces. Then, in 1994, peacetime OPCON of ROK forces was returned to the ROK chairman of the Joint Chiefs of Staff, giving him the authority to deal with North Korean provocations in particular, though this authority is often shared between the chairman of the Joint Chiefs of Staff and the commander of CFC. By mutual agreement in 2006, wartime OPCON was scheduled to transition to the Republic of Korea in 2009. But that date has been postponed several times, and the transition is now conditioned on ROK forces being adequately prepared to take on these responsibilities. When the ROK forces do assume these responsibilities, a ROK general will become the commander of CFC, with a US official serving as the deputy commander. This approach to transitioning OPCON was tested as part of a command post exercise

54. Don Oberdorfer, *The Two Koreas: A Contemporary History* (New York: Basic Books, December 6, 2001), 68–73.

in August 2019 that went well, according to an official present at the drill.⁵⁵

Since the transition of peacetime OPCON in 1994, the ROK chairman of the Joint Chiefs of Staff has commanded efforts to deal with North Korean provocations. That role led the Republic of Korea to promulgate a new strategy, proactive deterrence, in response to the March 2010 North Korean sinking of the ROK warship *Ch'önan*. Initially, this concept simply asserted North Korea was the Republic of Korea's "main enemy" and the ROK would respond to limited attacks with serious retaliation.⁵⁶ But after the North Korean shelling of Yeonpyeong Island in November 2010, proactive deterrence took on a more aggressive, retaliatory character. The Republic of Korea threatened an Overwhelming Response of three to five times as many artillery or other rounds as North Korea uses to be fired directly against the North Korean attackers. Then, the ROK would escalate to attacks on the North Korean command and control and logistics supporting the North Korean attackers. Though this approach risks further North Korean escalation, the Republic of Korea adopted it in an effort to deter North Korean limited attacks on South Korea, and this strategy appears to have been largely effective in achieving such deterrence.

55. Lee Sung-Eun and Kwon Hye-Rim, "Seoul, Washington to Kick Off Combined Drill," *JoongAng Ilbo*, August 5, 2019, <http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=3066340>; and Yonhap News Agency, "S. Korea, US Wrap Up Summertime Combined Exercise," *Korea Herald*, August 20, 2019, <http://www.koreaherald.com/view.php?ud=20190820000638>.

56. Lee Myung-Bak, "Full Text of President Lee's National Address," Yonhap News Agency, May 24, 2010, <https://en.yna.co.kr/view/AEN20100524003400315>.

Many US experts are also concerned the ROK's preemptive Strategic Target Strike concept could cause an escalatory spiral into major war. These concerns were heightened by the 2013 testimony to the National Assembly by the ROK Joint Chiefs of Staff chairman, who "made clear that preemptive strikes on the North's nuclear facilities are a matter of exercising the right of self-defense and Seoul does not require Washington's consent to make them."⁵⁷ The chairman's statement illustrated both ROK efforts to deter North Korean threats to use nuclear weapons and ROK military thinking about how it might independently operate under adverse circumstances. Today, one can expect the ROK military leadership likely has its own ideas about how warfare in Korea should be fought, and these ideas may differ at least somewhat from traditional US concepts.

The United States also needs to decide how CFC will respond to North Korean nuclear weapon use under a ROK commander after OPCON transition. In the past, the United States has apparently not shared its planning for the employment of nuclear weapons with the Republic of Korea. This approach may not be practical in the future because the ROK commander of CFC would need to know where nuclear weapons would potentially be targeted before commanding units to go to such locations. To avoid further ROK interest in acquiring nuclear weapons, the United States will likely need to provide some part of the ROK military leadership with the necessary education on nuclear weapons in general and how they could

57. Ser Myo-Ja, "Park Tells Military to Strike Back If Attacked," *JoongAng Ilbo*, April 2, 2013, <http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=2969490>.

be used in both North and South Korea in particular should conventional defenses fail.

Dealing with North Korean Limited Attacks and Provocations

The US-ROK alliance has been successful in countering some North Korean provocations, but unsuccessful in preventing others. For example, the ROK Navy's development of advanced surface warships has allowed it to defeat North Korean surface naval attacks around the Northern Limit Line so decisively that the North has backed off from such provocations since 2009. But the alliance has not been so successful in countering the North Korean missile and nuclear weapon tests that, around 2016 and 2017, significantly undermined the stability of the Korean Peninsula.

North Korea appears to recognize the US and ROK vulnerability to some low-end challenges and has tested new options periodically. North Korea tends to have the initiative in these provocations and continues to find options that are not adequately deterred by existing US or ROK military plans and capabilities. This lack of adequate deterrence has forced the Republic of Korea and the United States to seek counters to a wide range of possible North Korean actions in such areas as cyber, GPS jamming, submarine warfare, and North Korean missile and nuclear weapon tests. Adjustments in the ROK strategy have also helped. For example, the Republic of Korea's proactive deterrence concept appears to have played a role in significantly reducing some North Korean provocations.

Supporting International Peace and Stability

Immediately after the Korean War, the ROK military was engaged in defending South Korea. But as its military capabilities developed, the Republic of Korea responded positively to US requests for support in international peacekeeping and related operations, initially in Vietnam in 1964.⁵⁸ More recently, the Republic of Korea has participated in a combination of UN peacekeeping operations (especially in Lebanon and South Sudan), multilateral peacekeeping operations (especially in the Gulf of Aden), and defense cooperation activities (currently in the United Arab Emirates), with 1,100 ROK military personnel deployed abroad in 2018.⁵⁹ The ROK Navy has deployed destroyers one at a time for four-month stays in the Gulf of Aden; to maintain this rotation, the Republic of Korea must commit roughly half of its KDD-II destroyers each year, and its army forces perform most of the remainder of these peacekeeping operations.

Although the ROK military has forces prepared to perform these missions, it has only a short supply of some of the required specialized equipment. In summer 2019, for example, to equip and train a unit going to South Sudan for a peacekeeping mission properly, 60 sets of special equipment, including silencers, sights, scopes, and night-vision equipment,

58. Shin-Wha Lee and Park Joon Sung, "Peacekeeping Contributor Profile: South Korea," Providing for Peacekeeping, updated June 2014, <http://www.providingforpeacekeeping.org/2015/03/30/peacekeeping-contributor-profile-south-korea/>.

59. ROK Ministry of National Defense, *2018 Defense White Paper*, 389.

were taken from a ROK special forces brigade.⁶⁰ This kind of equipment shortfall, combined with the anticipated reduction in the number of ROK Army active-duty personnel, suggests in upcoming years the ROK Army will have significantly less capability to support international peace and stability operations as it endeavors to sustain internal defense capabilities.

CONCLUSIONS

The size of a country's active-duty military force is one measure of the country's hard power. In 2019, the United States and 10 other countries in the world had active-duty military forces of 400,000 personnel or more. Not a single one of those countries is a European member of NATO; indeed, to reach a total of 400,000 in active-duty personnel, one must combine the militaries of Britain, Germany, and Italy, which would equal about 500,000 military personnel.⁶¹ Of the 10 countries other than the United States, only one is an ally of the United States: the Republic of Korea. As of the end of 2018, the ROK had 600,000 active-duty military personnel. But as argued above, by 2026, the ROK military will likely fall below 400,000 personnel because of a combination of adverse demographics and the political decision to reduce the amount of time served by draftees. When this reduction occurs, the

60. Yang Seung-Sik, "Special Equipment for South Korea's 'Decapitation Unit' Diverted to South Korea's Peacekeeping Unit in South Sudan," trans. Tara O, July 19, 2019, <https://eastasiaresearch.org/2019/07/19/special-equipment-for-south-koreas-decapitation-unit-diverted-to-south-koreas-peacekeeping-unit-in-south-sudan/>.

61. IISS, *Military Balance* 2019, 513–18.

ROK Army will have lost a significant fraction of its hard-power capabilities.

In qualitative terms, the ROK military of today is a mixed story. The military possesses significant quantities of very modern military weapon systems; has well-trained and capable professional military personnel; has a strong alliance with the United States; and is covered by US extended deterrence, including the US nuclear umbrella. But the ROK military also has significant shortfalls, including some very old major military weapon systems; an inadequate ability to assemble key intelligence information, especially on North Korean nuclear weapons; insufficient defenses against North Korean WMDs; shortages of basic military equipment, like night-vision goggles; and a reserve force that receives too little training each year.

Both the quantitative and qualitative concerns about the ROK military can be resolved at least partially if the Ministry of National Defense is provided with adequate funding and an effort is made to ensure a component of the reserve forces is adequately trained to supplement the ROK active-duty forces. Time and government decisions will reveal the ROK government's degree of seriousness about fielding a strong military of sufficient size to bear much of the burden of ROK defense as well as sustaining a strong military alliance with the United States that augments ROK capabilities.

10. SWEDEN: THE ALIGNED NONALIGNED

Craig Kennedy and Gary J. Schmitt

KEY POINTS

- The Russian invasion of Ukraine in 2014 generated a cross-party consensus to rebuild Sweden's military defensive capabilities and renew the country's civil defense preparations – implementing a concept of total defense.
- Defense plans have included a reintroduction of conscription, a significant increase in military spending, and modernization of the existing force structure.
- Sweden recognizes, however, these improvements would not be adequate in a sustained conflict with Russia; hence, although formally nonaligned, Sweden has increasingly worked with NATO, the United States, and Nordic neighbors, particularly Finland, to bolster military cooperation and planning.

For almost two centuries, Sweden had a policy of neutrality toward regional and global conflicts.¹ At the same time, the country had military conscription for all able-bodied men and built significant commerce

1. When Sweden joined the EU in 1995, the country's formal status as a neutral country ended. See the Swedish parliament's 2008 adoption of the Lisbon Treaty and Article 42.7, which obligates EU members to assist and support any member state under attack, as consonant with Article 51 of the UN Charter. Treaty of Lisbon, A.T.-B.E.-B.G.-C.Y.-C.Z.-D.E.-D.K.-E.E.-E.S.-F.I.-F.R.-G.R.-H.U.-I.E.-I.T.-L.T.-L.U.-L.V.-M.T.-N.L.-P.L.-P.T.-R.O.-S.I.-S.E.-S.K.-U.K., December 13, 2007, Article 42.7 T.E.U.

in the sale of munitions and other military supplies to countries around the world.² The result was a foreign policy that purported to stay above the fray of competing great powers and a defense policy seriously committed to protecting Sweden and maintaining a defense industry to support self-sufficiency. The balance between these two poles shifted after the Cold War's end, with Stockholm cutting defense resources and setting peacekeeping missions abroad as its forces' priority. The Russian invasions of Georgia in 2008 and Ukraine in 2014 reset Sweden's commitment to a robust defense at home.

Swedish security priorities are articulated through a collaborative process that involves most of the parties in the *Riksdag*, the Swedish parliament. About every five years, a multiparty defense commission, appointed by the minister of defence and drawn from the *Riksdag*, identifies key threats, develops a long-term strategic plan for the country's security, and makes recommendations on spending levels for implementing these priorities. Though the government's annual statements at the beginning of the parliamentary year modify and amplify these priorities, the Swedish Defence Commission's report establishes the framework for Swedish security policy thereafter. The commission's process and its focus on creating a broad base of agreement among Sweden's leading parties provide an element of stability in defense planning and are often cited by Sweden's politicians with pride.

2. Inspectorate of Strategic Products, *Annual Report 2018* (Solna, SE: Inspectorate of Strategic Products, 2019).

The commission's 2019 white book focuses on security and defense policy for 2021 through 2025.³ The white book's overarching theme is the need to revive the concept of total defense in response to the threat now posed by Russia. This concept has three key elements: first, strengthening Sweden's conventional defense capabilities; second, increasing the country's capacity for national resilience in the event of a conventional attack on its territory; and third, strengthening ties with security partners in both the region and further abroad.

Russia's role as the primary threat is not surprising, given the country's military buildup, its willingness to use military force against neighboring countries, and its intervention in Syria to achieve seemingly expansive Kremlin goals. But the report's very blunt and public assessment that Russian military capabilities are far superior to those of Russia's neighbors, alone and together, and that this power imbalance will grow during the next decade is a surprise.⁴ Consonant with this view is the commission's judgment that Sweden, by itself, is poorly prepared to defend itself. The white book states:

The Swedish Armed Forces have a limited capability to manage developments if the security situation deteriorates. When it comes to the requirement to be able to meet an armed attack, it is the assessment of the Defence Commission that the operational capability of the Swedish Armed Forces has considerable limitations.

3. Swedish Defence Commission, *The Swedish Defence Commission's White Book on Sweden's Security Policy and the Development of the Military Defence 2021–2025* (Stockholm: Swedish Defence Commission, May 14, 2019).

4. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 1.

The limitations are due to deficiencies in the units of the wartime organization regarding personnel and equipment and the fact that there are too few units . . . The Defence Commission notes that the Armed Forces have not fully reached the ambition set out in the Government's Defence Bill of 2015.⁵

Based on the Defence Commission's previous report, *Resilience: The Total Defence Concept and the Development of Civil Defence 2021–2025*, and concerns the Russian military threat has not diminished, the commission's negative assessment of the government's implementation of priorities for the years 2016 through 2020 explains the sense of urgency in the 2019 white book's tone, recommendations, and call for a significant increase in defense spending.

The Swedish government's second major priority is civil defense. Like its neighboring state, Finland, Sweden places considerable emphasis on its ability to mobilize private resources and the civilian population in the case of an attack on its territory. In keeping with Sweden's realistic view of the country's military capabilities, one cannot assume Sweden will be able to repel a foreign invader. Rather, the focus of civil defense and "national resilience" is to "manage serious disruptions to the functionality of society" for at least "three months."⁶ As the *Resilience* report notes, "In a severe security crisis . . . it will take a relatively long time before the necessary decisions on international support of Sweden have been made. It will take even longer for the international support to make a practical difference. Meanwhile, Sweden must

5. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 3.

6. Swedish Defence Commission, *Swedish Defence Commission's White Book*.

have the capability to defend itself and endure the hardships unaided.”⁷

As it does with Sweden’s military capabilities, the Defence Commission has a critical take on the country’s civil defenses. “Large parts” of the system have been “decommissioned,” and, even after the increased threat from Russia, Swedish civil defense planning has had “limited strategic direction or defined ambitions.”⁸ More has to be done for Sweden to buy time and endure in case of a conflict.

Although Sweden has emphasized its policy of neutrality over the decades, the current threat environment and its own weakness have led to a third priority—strengthening ties with other states concerned about Russian ambitions and behavior. Accordingly, in both 2009 and 2015, the Swedish parliament emphasized the need to work more closely with neighboring countries as well as the EU and NATO on defense and security matters.

CONVENTIONAL DEFENSES

Sweden’s active-duty force totals approximately 30,000 personnel. The army’s numbers are less than 7,000, the navy’s are just over 2,000, and the air force’s total 2,700. The remaining personnel are tied to units tasked with logistics, intelligence, information warfare, electronic warfare, maintenance, and medical services. In addition, the Home Guard—National Security Forces, which can be called on to assist in territorial

7. Swedish Defence Commission, *Resilience: The Total Defence Concept and the Development of Civil Defence 2021–2025* (Stockholm: Swedish Defence Commission, December 20, 2017), 2.

8. Swedish Defence Commission, *Resilience*, 2.

defense efforts, consists of approximately 22,000 volunteers.⁹ According to the commission's 2019 white book, currently the "wartime organization," which comprises the Home Guard and civilians, consists of about 60,000 individuals.¹⁰ In spite of the change in the security environment facing Sweden, the size of the country's armed forces and defense organization has not changed appreciably in recent years. Indeed, upon ending conscription in 2010—a fact of life for Sweden's young men for more than a century—the number of volunteers was insufficient to fill the armed forces' ranks, leaving the military short of its authorized numbers.¹¹

Starting in 2018, conscription was reintroduced, with the target of drafting 4,000 men and, for the first time in Swedish history, women into the force.¹² The commission, however, has already indicated the addition of 4,000 conscripts is not sufficient for the planned growth in Sweden's defense structure, proposing the number be doubled to 8,000. In total, the commission is recommending a 50-percent increase in the end strength of the wartime defense structure to 90,000.¹³

9. International Institute of Strategic Studies (IISS), "Chapter Four: Europe," in *The Military Balance 2019* (London: IISS, February 2019).

10. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 7.

11. IISS, *Military Balance 2019*, 79.

12. Adam Chandler, "Why Sweden Brought Back the Draft," *Atlantic*, March 3, 2017, <https://www.theatlantic.com/international/archive/2017/03/sweden-conscription/518571/>.

13. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 7.

Major proposed changes to the Swedish Army include the addition of a mechanized brigade to the two existing brigades, upgrades to the armored vehicles and Leopard 2 main battle tanks, continued acquisition of self-propelled artillery and mortars, man-portable antiaircraft missiles, and the introduction of a division-level command structure capable of directing and concentrating the country's land forces to meet attacks on Sweden's soil if need be.¹⁴ To fill the existing gap in the country's defense against ballistic missiles and Swedish air defenses, the government agreed in August 2018 to purchase four Patriot Configuration 3+ air and missile defense batteries. Delivery of the Patriots is expected to begin in 2021.¹⁵

As for the Swedish Air Force, the commission has no intention of growing the basic force structure of six fighter squadrons, three squadrons of helicopter wings, and the transport fleet of six C-130s. The air force's current major program is the acquisition and integration of 60 Saab JAS-39 Gripen E multirole fighter aircraft into the force. The Gripen E program, completed in 2019, follows the procurement of the Gripen C/D models, which was completed in 2015. Moving beyond current programs, Sweden is participating in the development of a next-generation stealthy fighter—the United Kingdom-led BAE

14. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 4–6; and IISS, *Military Balance 2019*, 80–81.

15. David Donald, "Sweden Joins the Patriot Club," AIN Online, August 11, 2018, <https://www.ainonline.com/aviation-news/defense/2018-08-11/sweden-joins-patriot-club>.

Systems Tempest program.¹⁶ As reported, Sweden's participation in the Tempest development is also tied to the possibility of integrating parts of that program into existing platforms as they are developed. In fact, according to the Swedish government, the agreement "does not entail long-term commitments between the countries, but is intended to enable future positions."¹⁷ In any case, the first flight of a new-generation fighter is not expected until the mid-2030s at the earliest. So, instead of changing the current size of the air force, the emphasis is on revitalizing Cold War-era plans for distributing the force in a time of conflict. Dispersal, command and control, and sufficient logistics for carrying out wartime contingencies are the orders of the day.¹⁸

Similarly, the fleet size for Sweden's capital navy vessels (submarines, corvettes, and missile boats) will remain largely the same. According to the commission's white book, the goal is to grow the submarine force slightly from four vessels to five vessels within the 2024 to 2025 time frame by upgrading the existing *Gotland*-class submarines, retiring an older class, and adding two new

16. Stephen Kuper, "UK Tempest Consortium Grows with Swedish Interest in 6th-Gen Fighter Program," Defence Connect, July 22, 2019, <https://www.defenceconnect.com.au/strike-air-combat/4449-uk-tempest-consortium-grows-with-swedish-interest-in-6th-gen-fighter-program>.

17. Ministry of Defence, "Sweden and United Kingdom Sign Agreement on Development of Future Combat Aircraft Capabilities," July 19, 2019, <https://www.government.se/press-releases/2019/07/sweden-and-united-kingdom-sign-agreement-on-development-of-future-combat-aircraft-capabilities/>.

18. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 5.

Archer-class submarines. All of Sweden's submarines are equipped with air-independent propulsion systems. The *Visby*-class corvettes will be kept at five vessels, but will be upgraded with air defense missiles and new antiship missiles, and the missile patrol boat fleet will remain at four vessels. The key additional capabilities are tied to developing offensive mine-laying capabilities, outfitting Swedish helicopters for antisubmarine warfare operations, adding forces to protect the western coast of the country, and acquiring 18 new fast patrol boats capable of carrying 20 soldiers to maintain the fleet for quick-reaction coastal defense.¹⁹ Finally, given the relatively small size of the Swedish fleet and Sweden's long coastlines, the commission has recommended maintaining the existing system of land-based antiship systems.

If Sweden's defense plans appear short on major new acquisition programs for the next five years, the commission in its latest report makes clear "the capacity for sustained action" during war—meaning improved logistics, support functions, and command and control systems—is a priority. The phrase also means improving the capability of the Home Guard's 40 battalions to mobilize quickly, defend key installations, and conduct necessary surveillance and demolition operations. This improvement will include new equipment (such as night-vision equipment and antitank weapons) and more extensive training and

19. Jeff Martin, "Sweden Navy Chief Aims to Grow Sea Power," *Defense News*, April 10, 2018, <https://www.defensenews.com/digital-show-dailies/navy-league/2018/04/10/sweden-navy-chief-aims-to-grow-sea-power/>; and "Sweden Orders Additional 18 CB90-Class Fast Assault Craft," *Naval Today*, July 10, 2017, <https://navaltoday.com/2017/07/10/sweden-orders-additional-18-cb90-class-fast-assault-craft/>.

exercise regimes.²⁰ The government has also dispersed service staffs from Stockholm to enhance Sweden's survivability in case of conflict. The air staff has moved inland to Uppsala, and the navy has moved back to the Muskö Naval Base, a cavernous, underground naval facility on the island of Muskö, just south of Stockholm.²¹ And, like other modern states now critically dependent on digital communications and the Internet, Sweden is focused on upgrading its cyber defenses and developing offensive capabilities as well. The country expects to draw on the talent of conscripts to help improve competencies in that area. Finally, Stockholm is increasing its defense posture on the geographically important Baltic Sea island of Gotland.²² As recently as 2015, the island lacked a military garrison. Going forward, the plan is to harden the existing defense posture on the island with more territorial forces, field a battery of ground-based antiship missiles, create a battalion-sized mechanized

20. Swedish Defence Commission, *Swedish Defence Commission's White Book*, 5.

21. Paolo Valpolini, "The Swedish Air Force Looks to the Future," *European Defence Review*, July 16, 2018, <https://www.edrmagazine.eu/the-swedish-air-force-looks-to-the-future>; and David Crouch, "Swedish Navy Returns to Vast Underground HQ amid Russian Fears," *Guardian*, September 30, 2019, <https://www.theguardian.com/world/2019/sep/30/swedish-navy-returns-to-vast-underground-hq-amid-russia-fears>.

22. Simon Johnson, "Sweden to Boost Gotland Air Defense amid Russia Tensions," Reuters, July 1, 2019, <https://www.reuters.com/article/us-sweden-defence-gotland/sweden-to-boost-gotland-air-defense-amid-russia-tensions-idUSKCN1TW27U>; Swedish Defence Commission, *Swedish Defence Commission's White Book*, 4; and Grzegorz Kuczyński, "Sweden Faces the Russian Threat in the Baltic Sea," December 10, 2019, <https://warsawinstitute.org/sweden-faces-russian-threat-baltic/>.

battle group, and deploy a missile air defense system and artillery units.

CIVIL DEFENSE

After World War II and the massive threat posed by the Soviet Union during the Cold War, both Finland and Sweden adopted strategies of total defense, preparing their countries to both wage war against an invader and to maintain a coherent strategy as a nation during the fight. To this day, Finland has attempted to sustain a total defense strategy with a fairly formidable, if small, conventional military force, a population-wide reserve force, and an extensive array of tunnels and shelters designed to complicate an adversary's ability to occupy and pacify the country.²³ This comprehensive security concept was the norm as well for Sweden from the 1940s until the late 1990s. But the idea of total defense lay fallow after the implosion of the Soviet Union because Sweden saw no threat to the homeland from a weak Russia. In the 1990s, Stockholm emphasized dealing with crises outside of Sweden's borders.²⁴ This emphasis led to the establishment of an expeditionary military capability and a concomitant set of strategies for dealing with crises outside Sweden. But, considering

23. Teri Schultz, "Finland Wins Admirers with All-Inclusive Approach to Defense," *Deutsche Welle*, October 4, 2017, <https://p.dw.com/p/2lDXv>; and Thomas Grove, "Beneath Helsinki, Finns Prepare for Russian Threat," *Wall Street Journal*, July 14, 2017, <https://www.wsj.com/articles/beneath-helsinki-finns-prepare-for-russian-threat-1500024602>.

24. See Barbara Kunz, *Sweden's NATO Workaround: Sweden's Defense and Security Policy against the Backdrop of Russian Revisionism*, Focus Stratégique no. 64 (Paris: Institut Français des Relations Internationales, November 2015), 13.

the conflict in South Ossetia, the Ukraine crisis, and Russian President Vladimir Putin's stated ambitions for reordering the security architecture of Europe, the Swedish government turned its thoughts to civil defense and, more broadly, the nation's resilience in case of an invasion. In 2015, total defense planning was begun once again.²⁵ But, as noted earlier, the Defence Commission's 2017 report *Resilience* clarified, though some planning had resumed, the total defense effort lacked sufficient urgency and direction.

Though it may have seemed radical, the move to revive the total defense posture was not so because the legal structure for the strategy was still in place.²⁶ Although planning had stopped, the laws governing the government's ability to carry out civil defense policies had remained on the books. The issues facing the government were not small, however. The issues included traditional civil defense goals such as making sure adequate food, water, and drug supplies were available and maintaining access to energy, provisions for handling mass casualties, and sufficient bunkers and shelters for both civilians and government officials.

Complicating these traditional needs were new issues. Sweden, like many Western states, has

25. Swedish Defence Commission, *Sweden's Defense Policy 2016 to 2020* (Stockholm: Swedish Defence Commission, June 1, 2015), 3.

26. Swedish Defence Commission, *Resilience*; Björn von Sydow, "Resilience: Planning for Sweden's 'Total Defence,'" *NATO Review*, April 4, 2018, <https://www.nato.int/docu/review/articles/2018/04/04/resilience-planning-for-swedens-total-defence/index.html>; and Fredrik Lindgren and Ann Ödlund, "Total Defence at the Crossroads," in *Strategic Outlook 7*, ed. Cecilia Hull Wiklund et al. (Stockholm: Swedish Defence Research Agency, October 9, 2017), 37–44.

developed a highly efficient and economical just-in-time supply system for many of these necessities. Also, Sweden has become a highly digitalized society since the late 1990s. Resilience would require plans for dealing with cyberattacks, disruptions in electronic communications, and information warfare waged through social media. Finally, because of reforms made by Swedish governments in the past, many of the public services the government had operated in the past had passed into private hands. Developing the mechanisms for tying the public sector to the private sector, the national government to local governments, and civilians to the military to ensure a whole-of-nation approach to total defense—and then training and exercising those mechanisms—is no small task.

In its report, the commission suggested a single agency be put in charge of coordinating the total defense effort and recommended the Swedish Ministry of Defence be given that role.²⁷ The focus of the Swedish Civil Contingencies Agency has been on peacetime disruptions. The commission appears to have concluded, although the Civil Contingencies Agency would have a role to play in the civil defense effort, total defense required greater organizational capacity and a strategic outlook. The commission set 2025 as the date by which to complete the civil defense revitalization. For 2018 through 2020, the commission has allocated some 400 million Swedish krona (SEK) (US\$41 million) per year to civil defense

27. Swedish Defence Commission, *Resilience*, 3.

efforts.²⁸ According to the commission, its proposal to strengthen both military and civil defense is expected to cost about 4.2 billion SEK annually for 2021 through 2025.²⁹

SECURITY PARTNERSHIPS

The Swedish government believes that by itself, Sweden would not be able to withstand a Russian invasion for longer than a few months. Indeed, according to the Defence Commission, the expectation is “Russia’s military capability in absolute terms will continue to increase over the coming decade” and, so far, this “development . . . has not been matched by a corresponding increase in Western military capability.”³⁰ In such a security environment, a priority for Sweden is to enhance its deterrence posture vis-à-vis Russia by working with other states and their militaries.

Repeatedly, in government reports and formal statements of government policy, the EU is described as Sweden’s “most important . . . arena” or “platform” for its foreign and security policy.³¹ These statements are followed by a Swedish refusal to “remain passive”

28. Aaron Mehta, “Fortress Sweden: Inside the Plan to Mobilize Swedish Society against Russia,” *Defense News*, March 14, 2018, <https://www.defensenews.com/global/europe/2018/03/14/fortress-sweden-inside-the-plan-to-mobilize-swedish-society-against-russia/>.

29. Swedish Defence Commission, *Resilience*, 6.

30. Swedish Defence Commission, *Swedish Defence Commission’s White Book*, 1.

31. See, for example, Swedish Defence Commission, *Swedish Defence Commission’s White Book*, 1; and Ann Linde, “The Government’s Statement of Foreign Policy, 2020,” (speech, the Riksdag, Stockholm, Sweden, February 12, 2020).

if a fellow EU member, Norway, or Iceland “suffers a disaster or an attack.” In turn, the expectation is “these countries will act in the same way if Sweden” faces “a disaster or an attack.”³² As an element of the EU Common Security and Defence Policy, since 2008, Sweden has led the Nordic Battlegroup, consisting principally of Swedish troops and elements from neighboring militaries. As with all EU Battlegroups, the Nordic Battlegroup has never been deployed to an actual crisis or sent into conflict, undoubtedly because doing so would require the consent of all EU member states. The primary difficulty with the EU being the centerpiece of Sweden’s security policy is the EU’s defense cooperation is limited to operations outside the territory of the EU. Nor is the EU set up institutionally to act at the level of decisiveness required to meet the kind of large-scale contingencies posed by a potential conflict with Russia. In such a situation, the EU’s NATO members are expected to rely on the alliance to provide for their defenses. Given this reality, Sweden has opted to deepen security ties with its neighboring democracies, the United States, and NATO, even while remaining outside the alliance formally. The Defence Commission has reiterated “the transatlantic link plays a crucial role for Europe and for Sweden,” and “NATO is the clearest manifestation of this link.”³³

Well before the heightened concern about Russia, Sweden was cooperating with other Nordic states in several security-related forums. In 2009, these

32. See, for example, Linde, “Government’s Statement of Foreign Policy”; and Swedish Defence Commission, *Swedish Defence Commission’s White Book*, 2.

33. Swedish Defence Commission, *Swedish Defence Commission’s White Book*, 2.

forums were brought together in the Nordic Defence Cooperation, which includes Sweden, Denmark, Norway, Iceland, and Finland.³⁴ The Nordic Defence Cooperation is an effort to develop collaborative defense programs that allow for cooperative actions, such as sharing costs in specific acquisition programs. In light of the declining defense budgets of each country at the time, getting more from less by working on joint projects seemed reasonable.

As for NATO, Sweden joined the Partnership for Peace program in 1994 and is one of the five Enhanced Opportunities Partners, a designation which reflects their work with NATO operations and strives to deepen interoperability with alliance members.³⁵ Sweden has also offered rotational forces for the alliance's high-readiness force, the NATO Response Force.³⁶ In 2014, Sweden signed, and eventually ratified in 2016, a host nation support agreement with NATO that makes providing logistical support for NATO training exercises on Swedish soil and, in a time of conflict or crisis, providing support to or receiving support from NATO forces easier.³⁷ Sweden also participates in Strategic Airlift Capability, a multinational arrangement managed by NATO. The program provides heavy-lift air transport to its 12 member states, with Sweden having the most

34. "About NORDEFECO," Nordic Defense Cooperation, n.d., <https://www.nordefco.org/the-basics-about-nordefco>.

35. "Relations with Sweden," NATO, accessed October 4, 2018, https://www.nato.int/cps/en/natohq/topics_52535.htm.

36. "Relations with Sweden."

37. Charles Duxbury, "Sweden Ratifies NATO Cooperation Agreement," *Wall Street Journal*, May 25, 2016, <https://www.wsj.com/articles/sweden-ratifies-nato-cooperation-agreement-1464195502>.

access, after the United States, to the program's C-17 Globemaster aircraft.³⁸

Since becoming a NATO partner state, Swedish naval, air, and ground forces have hosted or been involved in numerous military exercises with neighbors and NATO members.³⁹ Sweden has been a participating member of NATO's Cooperative Cyber Defence Centre of Excellence since 2015 and participated in NATO-hosted cyber exercises. Sweden also participated in NATO crisis management exercises in 2016, 2017, and 2019.⁴⁰ Three of the more notable military exercises have been Aurora 17, Sweden's biggest exercise in two decades, which multiple alliance members participated in, including the United States; Exercise Trident Juncture 2018, NATO's largest exercise in 20 years; and the Swedish Army exercise Northern Wind—conducted in 2019 in the northeast of Sweden and involving some 7,000 troops from the United States, Norway, Finland, and

38. "Strategic Airlift," NATO, updated March 31, 2020, https://www.nato.int/cps/en/natolive/topics_50107.htm.

39. Kuczyński, "Sweden Faces the Russian Threat," 13–14.

40. "France Wins Cyber Defence Exercise Locked Shields 2019," NATO Cooperative Cyber Defence Centre of Excellence, n.d., <https://ccdcoe.org/news/2019/france-wins-cyber-defence-exercise-locked-shields-2019/>; and NATO, "Crisis Management Exercise 2019," Press Release 052, May 3, 2019, https://www.nato.int/cps/en/natohq/news_165844.htm.

the United Kingdom.⁴¹ In addition, in recent years Sweden has signed defense cooperation agreements with Poland (2015), Denmark (2016), and the United States (2016) and a trilateral accord with Finland and the United States (2018).⁴²

Sweden's deepest defense tie is with Finland, who shares a border and seas with both Sweden and Russia. Potentially, Finland's defense provides strategic and operational depth to Sweden. Not long after signing the 2018 defense cooperation agreement with the United States and Finland, Sweden and Finland finalized an accord that called for joint defense exercises and military access to each other's territory. In addition, the agreement has evolved to include joint operational defense planning.⁴³ Under the umbrella of Northern Wind, a joint Swedish-Finnish brigade was created for the exercise, with the Finnish contingent of approximately 1,500 troops being the largest force Finland has deployed outside its territory since World

41. Mike Winnerstig, "The Strategic Ramifications of the Aurora 17 Exercise in Sweden," October 2, 2017, <https://icds.ee/the-strategic-ramifications-of-the-aurora-17-exercise-in-sweden/>; Supreme Headquarters Allied Powers Europe Public Affairs Office, "The Swedish Armed Forces Participate in Trident Juncture," 2018, <https://shape.nato.int/news-archive/2018/the-swedish-armed-forces-participate-in-trident-juncture->; and Defence Today News Desk, "Winter Warfare Capabilities Tested in Swedish Exercise Northern Wind," Defence Today, March 22, 2019, <https://www.defencetoday.com/security/winter-warfare-capabilities-tested-in-swedish-exercise-northern-wind/>.

42. Kuczyński, "Sweden Faces the Russian Threat," 13–14.

43. Memorandum of Understanding between the Government of the Republic of Finland and the Government of the Kingdom of Sweden on Defence Cooperation, F.I.-S.E., July 9, 2018; and Karin Enström and Carl Haglund, *Action Plan for Deepened Defence Cooperation* (Turku, FI: Swedish Ministry of Defence and Finnish Ministry of Defence, May 6, 2014).

War II. Swedish-Finnish defense cooperation is set to increase, as proposed by the Defence Commission.⁴⁴ With limited defense funds, coordinating on procurement and operational planning buys both countries more capability. The Swedish Air Force and Swedish submarines provide Finland with more capacity and, in turn, the Finnish Army and surface fleet help fill gaps in Sweden's forces.⁴⁵

Although the rationale for much of Sweden's post-Cold War military deployments abroad has been Stockholm's sense of obligation to assist in maintaining international order through crisis management, such assistance is also understood as easing discussions with security partners over potential Swedish defense needs in turn. Under the various umbrellas of the UN, the EU, NATO, the Organization for Security and Co-operation in Europe, and ad hoc arrangements, Sweden has deployed small numbers to Afghanistan, Iraq, Ukraine, Bosnia, Kosovo, and Somalia. In 2011, Sweden sent several Gripen jets and an aerial tanker to fly defensive air cover and eventually collect tactical intelligence in support of the UN-sanctioned, NATO-led Libya campaign.⁴⁶ As late as 2012, Swedish forces numbered 500 in Afghanistan, with Sweden taking the lead of a Provincial

44. See Finnish Prime Minister's Office, *Government's Defence Report* (Helsinki: Finnish Prime Minister's Office, July 2017), 18.

45. See Piotr Szymański, *The Northern Tandem: The Swedish-Finnish Defence Cooperation*, OSW Commentary no. 298 (Warsaw: Centre for Eastern Studies, March 20, 2019).

46. Ann-Sofie Dahl, *Partner Number One or NATO Ally Twenty-Nine? Sweden and NATO Post-Libya*, NATO Defense College Research Paper no. 82 (Rome: NATO Defense College, September 2012).

Reconstruction Team in the country's fourth-largest city, Mazār-e Sharif.⁴⁷ In 2020, Sweden sent an additional 150 troops to accompany some 200 already serving in Mali to assist in training, intelligence, and French-led counterterrorism operations under the UN-sanctioned stabilization mission and the EU training mission. This contingent, now totaling more than 300, is Sweden's largest contingent abroad.⁴⁸

THE DEFENSE BURDEN

Thirty years ago, just before the end of the Cold War, Sweden fielded a formidable force when compared with today's force. Swedish active-duty soldiers numbered 100,000, and the country's reserves totaled some 350,000. The air force consisted of some 300 combat aircraft, and the navy's fleet consisted of 40 ships, including a dozen submarines.⁴⁹

Sweden's defense spending at that point was approximately 2.5 percent of gross domestic product (GDP). In 2000, the defense burden as a percentage of the GDP was still 2 percent. A decade later, the GDP stood at 1.3 percent and continued to decline, resting at 1.12 percent in 2018. Guided by the Defence Commission report, the major Swedish parties in fall 2019 agreed to a goal of 1.5 percent of GDP for defense

47. International Security Assistance Force, "International Security Assistance Force (ISAF): Key Facts and Figures," ISAF Placemats Archive, January 6, 2012, https://www.nato.int/isaf/placemats_archive/2012-01-06-ISAF-Placemat.pdf.

48. Fergus Kelly, "Sweden's Government Proposes to Send 150 Troops and Helicopters to Mali for Task Force Takuba," *Defense Post*, March 16, 2020, <https://www.thedefensepost.com/2020/03/16/sweden-150-special-forces-helicopters-takuba-mali/>.

49. Kuczyński, "Sweden Faces the Russian Threat."

by 2025.⁵⁰ The decline in Swedish defense burden as GDP percentage is expressed in figure 10-1.⁵¹

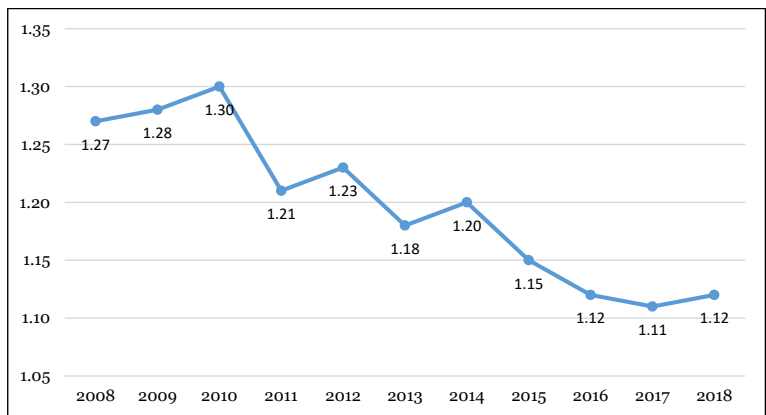


Figure 10-1. Swedish defense expenditure as a percentage of GDP

Since the mid-1990s, when the Swedish government introduced a series of reforms that considerably lightened public intervention in the country’s economy and pulled back on deficit spending, the composition of the Swedish government’s budget has remained relatively stable in areas such as housing, health, and education. Nevertheless, other than the drop in the percentage of monies spent on public services, the only other cut was associated with national defense. Since the start of the century, defense’s percentage of

50. Daniel Darling, “Sweden Plans \$2 Billion in Extra Defense Spending from 2022–2025,” *Defense & Security Monitor* (blog), September 5, 2019, <https://dsm.forecastinternational.com/wordpress/2019/09/05/sweden-plans-2-billion-in-extra-defense-spending-over-2022-2025-period/>.

51. “Military Balance+,” IISS, n.d., <https://www.iiss.org/publications/the-military-balance-plus>.

the budget had gone from 4.1 percent to 2.4 percent in 2018 – a decline of 42 percent.⁵²

Following the Ukraine crisis, Sweden has gradually increased the amount spent on the military. According to the Stockholm International Peace Research Institute, the defense budget in 2013 was 42.5 billion SEK and has grown every year, with the latest figure for 2018 at 50 billion SEK—a nominal increase of approximately 17 percent. Sweden’s defense spending numbers are represented in figure 10-2.⁵³

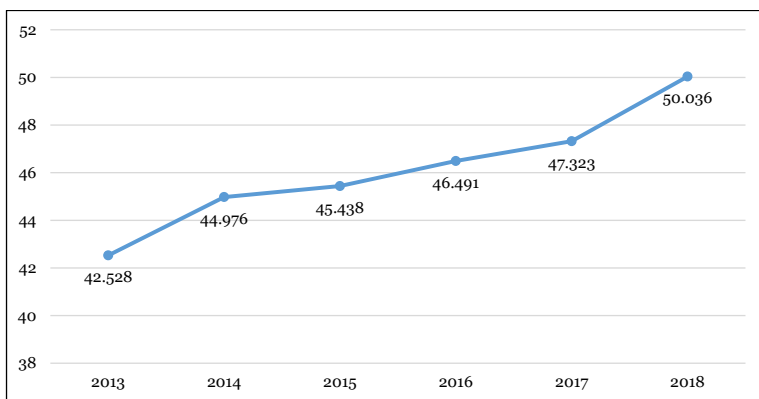


Figure 10-2. Swedish defense spending in billions (SEK)

The official Swedish budget numbers shown in figure 10-3 are slightly higher, but they include monies

52. “General Government Expenditure by Function (COFOG),” EuroStat, accessed March 4, 2020, https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_exp&lang=en.

53. Stockholm International Peace Research Institute, *Military Expenditure by Country, in Local Currency, 1988–2018* (Stockholm: Stockholm International Peace Research Institute, 2019).

for national contingencies—that is, expenditures beyond a base military budget—as part of the total defense effort.⁵⁴ Both figure 10-2 and figure 10-3 show growth in defense spending and a more rapid rise in recent years.

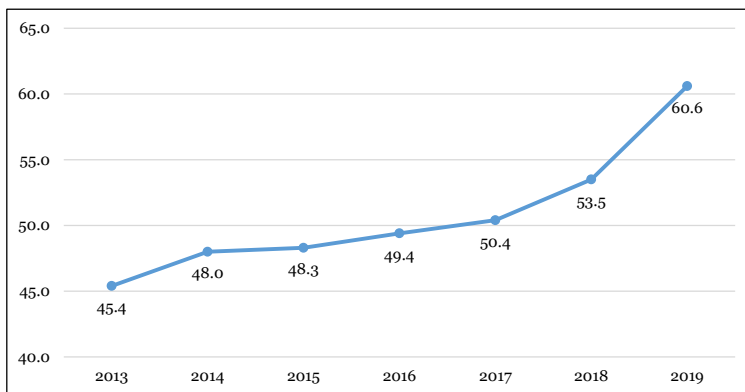


Figure 10-3. Swedish defense and contingency spending in billions (SEK)

In the aftermath of the Ukraine crisis and with the Russian intervention in the Syrian Civil War ongoing, the Swedish defense bill set out to increase Sweden’s military capability and identified multiple gaps that needed to be filled. Spending would increase by some US\$236 million annually from 2016 to 2020.⁵⁵ Soon, Sweden realized it would need more resources. In 2017, the parties agreed to an increase of US\$300 million annually from 2018 to 2020.⁵⁶ Even so, in early 2018,

54. Government Offices of Sweden, *Swedish Government Offices Yearbook 2017* (Stockholm: Government Offices of Sweden, June 7, 2018), 40; and Government Offices of Sweden, *Swedish Government Offices Yearbook 2019* (Stockholm: Government Offices of Sweden, June 16, 2020), 38.

55. Darling, “Sweden Plans.”

56. IISS, “Chapter Four: Europe,” 82.

the Swedish Armed Forces reported, under current plans, the budget was at least US\$700 million short for the years 2018 to 2025—a gap implicitly recognized in the Defence Commission’s 2019 white book.⁵⁷

In fall 2019, the parties reached a new agreement to increase defense spending again. In addition to the 12-percent nominal increase from 2018 to 2019, the 2020 defense budget grew 8 percent to a total 64.8 billion SEK.⁵⁸ With a commission goal of reaching 84 billion SEK for defense in 2025, the government will budget some 20 billion SEK more between now and 2025.⁵⁹ If this goal is accomplished, Sweden will have, in nominal terms, nearly doubled its armed forces’ resources over a period of 12 years—a notable achievement. Nevertheless, though this increase will leave Sweden spending approximately 1.5 percent of its GDP on defense, Sweden remains short of the 2-percent goal NATO members have set as the minimum for each member. Sweden, of course, is not a NATO member and has no formal obligation to reach the 2-percent target. But, even at 1.5 percent, the country will be in lockstep with the plans of Germany, which is Europe’s largest economy and a NATO member.

57. “Sweden Edges Up Military Spending, Says More to Come,” Reuters, March 13, 2017, <https://www.reuters.com/article/us-sweden-defence/sweden-edges-up-military-spending-says-more-to-come-idUSKBN16K1K6>.

58. Fenella McGerty, “Sweden Proposes 2020 Budget,” *Jane’s Defence Industry*, September 18, 2019, https://web.archive.org/web/20190922190609/https://www.janes.com/article/91383/sweden-proposes-2020-budget?from_rss=1.

59. Swedish Defence Commission, *Swedish Defence Commission’s White Book*, 10.

TO BE OR NOT TO BE

Sweden's strategic outlook has obviously evolved as the security environment both abroad and on its borders has changed. During the Cold War, though it took no side formally between the military blocs led by Moscow and Washington, DC, Sweden was heavily militarized. Bunkers and shelters were dispersed throughout the country; army, air force, and naval bases were spread throughout virtually the whole of Sweden. And, because conscription was nearly universal, generations of Swedish men had served in the military, and many remained in the reserves. After the Cold War, Sweden's military was substantially downsized and became an active participant in blue-helmet UN peacekeeping and crisis management operations. The military, if it was to be deployed, was principally tasked with helping to tamp down simmering disputes or to create conditions for reconciliation. As a small, nonaligned state, Sweden has viewed the preservation of international law and the security order of central importance to the country's security. With the conflict in South Ossetia in 2008 and Putin's rhetoric of reestablishing a Russian sphere of influence, Stockholm began to reconsider the strategic environment. But the Swedish government did not take concrete steps to begin to rebuild the military's capabilities and reinvigorate the country's civil defenses until 2014, following the Ukraine crisis and the rise of the Islamic State of Iraq and Syria.

In the midst of the conflict in Ukraine in 2013–14 but before Russia moved militarily against Ukraine, Sweden's then-Minister for Foreign Affairs Carl Bildt gave the 2014 statement of the government's

foreign policy before the Swedish parliament.⁶⁰ The statement is notable for the centrality of Europe in the Swedish government's strategic vision. Bildt called for "a strong, united and open Europe" – a "global Europe." Although the statement also mentions the need for Sweden to have "strategic links with other global actors," Bildt stresses Sweden is "committed to" the EU. Bildt speaks of the Swedish military twice as having a role in peacekeeping and "crisis management" operations – operations the government may or may not assume. In contrast, toward the end of his remarks, Bildt, in line with the 2009 solidarity clause of the Lisbon Treaty, reiterated the Swedish solidarity declaration from 2009 that Sweden will not stand by if a Nordic country or an EU member state is under attack and emphasized, for Sweden, this declaration has meant strengthening security ties with neighboring Nordic states.

The 2015 government's annual foreign policy statement was made under a new, center-left government, and the statement's tone was considerably different.⁶¹ In the wake of "the Russian aggression against Ukraine" and the Islamic State of Iraq and Syria's "barbaric offensive" in the Middle East, Sweden now faced "a time of greater insecurity." Although this statement perpetuated the Swedish theme "international collaboration and cooperation" are central to the country's foreign policy, Sweden's security commitment to the defense of Nordic countries and EU member states and the

60. Carl Bildt, "Statement of Government Policy" (speech, Parliament House, Stockholm, Sweden, February 19, 2014).

61. Margot Wallström, "Statement of Foreign Policy 2015" (speech, Parliament House, Stockholm, Sweden, February 11, 2015).

expectation it would receive the same was moved to near the statement's beginning. The 2015 statement also brought forward Sweden's cooperation with its neighboring states in defense matters and, unlike the 2014 statement, stipulated "close transatlantic collaboration between the EU and the United States is particularly important."

The most recent statement, made in February 2020, begins by noting "the world is becoming increasingly unpredictable."⁶² The mention of security partners beyond the Nordic states, with specific mentions of the United Kingdom, Germany, and France, make this statement distinctive. The 2020 statement also flags "enhanced cooperation" with Finland. With NATO skeptic Donald Trump in the White House, the minister's underlying point is "Europe must take greater responsibility for its own security," and this point is accompanied by a gentle reminder that "a strong transatlantic link is important" for both Europe and the United States.

That link, however, has never included Sweden's formal membership in NATO, and, from the viewpoint of the parties of Sweden's center-left, "non-participation in military alliances" has, in the minister's words, served Sweden "well and [contributed] to stability and security in northern Europe." Although all of Sweden's center-right parties now favor NATO membership, public support for membership has consistently fallen short of a majority.⁶³ In 2015, a

62. Linde, "Government's Statement of Foreign Policy."

63. See IISS, "Chapter Four: Europe," 79; and Anna Wieslander, "Will Sweden's Elections Lead to NATO Membership?," *New Atlanticist* (blog), September 6, 2018, <https://www.atlanticcouncil.org/blogs/new-atlanticist/will-sweden-s-elections-lead-to-nato-membership/>.

poll finally indicated more Swedes favored NATO membership than did not. But, even then, those favoring membership topped off at 45 percent.⁶⁴

Whether nonparticipation in a military alliance continues to serve Sweden's security remains an open question. Certainly, the *Totalförsvarets forskningsinstitut* (Swedish Defence Research Agency) has not downgraded the military threat posed by Russia. In its forecast for Russian military capabilities for the next decade, the agency concludes, though the Russian economy might prevent the Russian military from exponentially improving, it can be expected to "consolidate" the significant improvements made to its forces since 2008 and retain "the ability to launch a regional war." Putin's goals remain, according to agency analysis, "recognition [of Russia] as a great power and [the establishment of] a sphere of interest in its neighborhood."⁶⁵

As already discussed, Stockholm has tried to square the circle of formal military nonalignment with its threat perception by increasing defense ties with NATO and its members. In some respects, this strategy is not new. Although Sweden publicly adhered to a policy of neutrality during the Cold War, the country engaged in secret military cooperation with multiple NATO countries beginning in the

64. "More Swedes Want to Join NATO," Radio Sweden, January 11, 2015, <https://sverigesradio.se/sida/artikel.aspx?programid=2054&artikel=6064600>.

65. Fredrik Westerlund and Susanne Oxenstierna, ed., *Russian Military Capability in a Ten-Year Perspective – 2019* (Stockholm: Swedish Defence Research Agency, December 2, 2019), 3.

earliest days.⁶⁶ Democratic and geostrategically important, Sweden was both an inviting target for Soviet forces and an obvious partner of the democratic West should war have broken out. Even though the Cold War was brought to a peaceful conclusion and Russian revanchism had yet to appear, Sweden was the largest single contributor to the creation of armed forces in Estonia, Latvia, and Lithuania after their independence, and, as previously noted, Sweden was among the first nations to join NATO's newly created Partnership for Peace program in 1994.⁶⁷ Sweden also took a supportive view of NATO's expansion into the Baltic states just a few years later. And, indeed, though a majority of Swedes do not seem to favor joining NATO, in recent polling almost two-thirds have a "favorable" view of the alliance.⁶⁸

Even before the Ukraine crisis, Sweden was participating in NATO exercises. In 2011, a command exercise hosted by Norway was designed around a potential military attack against the country by the

66. See Commission on Neutrality Policy, *Had There Been a War . . . Preparations for Reception of Military Assistance 1949–1969*, SOU 1995:11 (Stockholm: Commission on Neutrality Policy, 1994); and Mikael Holmström, *Den dolda alliansen: Sveriges hemliga NATO-förbindelser* [The hidden alliance: Sweden's secret NATO relations] (Stockholm: Atlantis, 2011).

67. See Johan Raeder, "Thinking of the Future of NATO's Partnerships," in *Advancing US-Nordic-Baltic Security Cooperation: Adapting Partnership to a New Security Environment*, ed. Daniel S. Hamilton, Andras Simonyi, and Debra L. Cagan (Washington, DC: Johns Hopkins University Center for Transatlantic Relations, 2014), 51.

68. See Moira Fagan and Jacob Poushter, *NATO Seen Favorably across Member States* (Washington, DC: Pew Research Center, February 9, 2020), 7.

fictional state of Vineland.⁶⁹ As such, the scenario involved discussions of mutual defense guarantees under Article 5 of the North Atlantic Treaty.⁷⁰ Though not a signatory to the treaty, as the crisis unfolded, Sweden offered political support to Norway; next, Swedish airspace for the alliance to use; and, then, air and maritime forces in support of NATO operations and under alliance command. Admittedly, the scenario hit close to home because Norway was being invaded. Nevertheless, this exercise signaled, when the pressure is on, Sweden would likely not stand aside in a NATO conflict with Russia, especially if it involved a Nordic or Baltic neighbor. And, in turn, the expectation is NATO would not stand aside if Sweden were the target of Russian aggression.

CONCLUSION

In spring 2018, the Swedish government published a 20-page pamphlet, *Om krisen eller kriget kommer (If Crisis or War Comes)*, providing guidance on civil defense.⁷¹ The pamphlet was distributed to five million households throughout the country, with versions in Swedish, English, and multiple other languages and dialects. The pamphlet was also made available in audio formats. The pamphlet outlines advice on preparing home supplies—food, water, heat, and communications—in the wake of a national emergency. The pamphlet also notes, if

69. Dahl, *Partner Number One*, 6–8.

70. The North Atlantic Treaty, B.E.-C.A.-D.K.-F.R.-I.S.-I.T.-L.U.-N.L-N.O.-P.T.-U.K.-U.S., April 4, 1949.

71. See Swedish Civil Contingencies Agency, *If Crisis or War Comes* (Karlstad, SE: Swedish Civil Contingencies Agency, May 2018).

judged necessary for the country's defense, private property can be requisitioned by the government, and individuals between the ages of 16 and 70 may be conscripted to undertake jobs they do not usually have. The pamphlet lists the various types of attacks Sweden might face—from cyber to air and rocket attacks—and asserts strikingly, “If Sweden is attacked by another country, we will never give up. All information to the effect that resistance is to cease is false.”⁷²

Three issues appear to complicate Sweden's confidence in its ability to resist. The first is tied to the booklet being published for the first time since 1961. In many ways, Sweden has grown and improved as a country. But Sweden is significantly different in terms of civic culture, popular expectations, and the place the military occupies in Swedes' daily lives. Indeed, one reason the booklet was published in 16 languages is, as of 2019, approximately 20 percent of Sweden's population was born outside of the country.⁷³ Hence, renewing a whole set of practices and attitudes that, following World War II, were deeply ingrained in the whole of society is no small task. As one critic of the booklet noted, the 2018 pamphlet being addressed

72. Swedish Civil Contingencies Agency, *If Crisis or War Comes*, 12.

73. “Summary of Population Statistics 1960–2019,” Statistiska Centralbyrån [Statistics Sweden], updated March 19, 2020, <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population/population-composition/population-statistics/pong/tables-and-graphs/yearly-statistics--the-whole-country/summary-of-population-statistics/>.

to “the population of Sweden,” not “the citizens” of Sweden as the original version was, is perhaps telling.⁷⁴

The second issue concerns resources. Again, as with the pamphlet, the Swedish government had shown itself to be serious about meeting the new security environment by pushing defense budgets up considerably. Yet, the hole Sweden found itself in was deep. Whether the plans for rebuilding Swedish military capabilities are sufficient for the country to dig itself out of the hole and meet the threat the country faces is not obvious. Modernizing a military is expensive, and, looking at Swedish defense procurement plans, the government has seemingly decided to buy new platforms or update older platforms instead of adding substantial new force structure. For a country that spent 2 percent of its GDP on defense as recently as the turn of the century, the government’s goal to have a defense burden of 1.5 percent by mid-decade is not as compelling as it might be.

The third issue concerns Sweden’s ability to rely on its security partners under the present circumstances. Sweden’s defense procurement strategy means the country is more dependent on friends and partners to supply its defense needs; thus, the country’s ties to the EU, Finland, NATO, and the United States are vitally important. But the EU’s ability to act as a coherent whole in security and defense matters has been notably lacking for years, and this problem shows few signs of abating anytime soon. As for the United States and NATO, Sweden has seen two successive

74. Kristian Gerner, “Why Sweden’s ‘Prepare for War’ Leaflet Is a Waste of Time,” *The Conversation US*, May 25, 2018, <https://theconversation.com/why-swedens-prepare-for-war-leaflet-is-a-waste-of-paper-97194>.

American presidents who have shown less regard for transatlantic relations than any others in memory. Absent actual NATO membership, uncertainty in Stockholm about Swedish security in case of a conflict is not surprising.

In her 2020 statement before the Swedish parliament on the government's foreign policy, Minister for Foreign Affairs Ann Linde said, "Diplomacy is our primary line of defence."⁷⁵ Sweden has not, up until now, paid a price for keeping its ties to the alliance short of formal commitments. Also, a majority of Swedes take pride in being free to follow policies not constrained by alliance politics. But alliance commitments are like insurance policies: They are rarely used, but everyone is relieved to have insurance coverage when emergencies do occur.

75. Linde, "Government's Statement of Foreign Policy."

11. TAIWAN: THE “ROC” IN A HARD PLACE

Michael Mazza

KEY POINTS

- The People’s Liberation Army (PLA) is capable of challenging the security of the Republic of China (ROC) or Taiwan in the air and at sea, and possibly complicating US efforts to intervene in a conflict.
- Taiwan is striving to respond to this challenge by recapitalizing and reforming its military and by developing and implementing a new military strategy.
- Insufficient defense spending, manpower shortages, and an uncertain commitment to the new defense strategy threaten to undermine Taiwan’s efforts to grapple with the threat from the People’s Republic of China (PRC).

Two competing narratives about Taiwan’s defense transformation and military modernization efforts contradict each other. Taiwan’s efforts are either inadequate or advancing steadily; either focused on big-ticket items at the expense of more useful capabilities or successfully recapitalizing while reforming as well. The truth lies somewhere in the middle.

Taiwan must grapple with Beijing threatening to use military force to coerce the island state into unifying with the PRC. In his January 2019 speech to mark the fortieth anniversary of the Message to Compatriots in Taiwan, Chinese President Xi Jinping explicitly refused to rule out the use of force against

Taiwan, avowing, “We will not promise to give up the use of force and we reserve the right to use any necessary measures.”¹ Although the Department of Defense (DoD) describes China as “prepared to defer the use of military force as long as it believes unification with Taiwan over the long-term remains possible and the costs of conflict outweigh the benefits,” the pressing question is whether Beijing continues to believe peaceful unification remains possible given political and generational trends within Taiwan.² Fewer Taiwanese seem to be interested in unification.³

Given this trend, China may no longer see a realistic potential for peaceful unification. Taiwan’s Ministry of National Defense (MND) asserts in its 2013 *ROC National Defense Report* China “plans to build comprehensive capabilities for using military force against Taiwan by 2020.”⁴ China having set this goal during a time of cross-strait détente – when cross-strait relations were, at least on the surface, stable – suggested Beijing was not confident in unification on peaceful terms even then.

1. Xi Jinping, “Speech Marking the 40th Anniversary of the Message to Compatriots in Taiwan” (speech, Great Hall of the People, Beijing, China, January 2, 2019).

2. Department of Defense (DoD), *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019* (Washington, DC: DoD, May 2, 2019), 83.

3. See Hui-ling Chen, *Taiwan Independence vs. Unification with the Mainland (1992/06–2020/06)* (Taipei, TW: Election Study Center, July 3, 2020); and Hui-ling Chen, *Taiwanese/Chinese Identity (1992/06–2019/06)* (Taipei, TW: Election Study Center, July 3, 2020).

4. Republic of China Ministry of National Defense (MND), 2013 *ROC National Defense Report* (Taipei, TW: MND, October 2013), 66.

China's efforts to field a coercive military have made significant progress, according to the MND. In its *2017 Quadrennial Defense Review* (2017 QDR), the MND reports, "The PLA now possesses the capability to impose a blockade on Taiwan and conduct multi-dimensional operations to seize our offshore islands."⁵ Taiwan's *National Defense Report 2019* echoes this conclusion, noting, "The PLA is capable of implementing air and maritime blockades in the vicinity of the Taiwan Strait."⁶ The report describes a Chinese military "capable of initiating joint blockades and joint firepower strikes against Taiwan, and . . . posing severe challenges to our defense preparations and defensive operations."⁷ Currently, the PLA does not appear prepared to conduct a successful amphibious assault against Taiwan, but scenarios short of such an operation would still be stressful for the ROC Armed Forces.

THE GROWING THREAT

The PLA has been improving its ability to contest Taiwan across multiple domains. Taiwan's 2017 QDR and *National Defense Report 2019* provide useful overviews of the PLA's progress as perceived by the

5. MND, *2017 Quadrennial Defense Review* (QDR) (Taipei, TW: MND, March 2017), 21.

6. MND, *National Defense Report 2019*, trans. ADI Advanced Systems Co., Ltd. (Taipei, TW: MND, December 2019), 47.

7. MND, *National Defense Report 2019*, 46.

MND.⁸ (Assessments by the DoD paint similar pictures of the evolving PLA, though they do not emphasize the threat to Taiwan as heavily.) In the national defense report, the MND describes advances in intelligence, surveillance, and reconnaissance capabilities, stating China is “now capable of monitoring dynamic air and maritime status on the western side of the second island chain.”⁹ The 2017 QDR notes command, control, and communications capabilities can also “cover areas west of the Second Island Chain.”¹⁰ Put another way, the PLA can now maintain effective situational awareness in waters to the east of Taiwan while commanding and communicating with forces operating there. These capabilities both erase one of Taiwan’s former advantages—the strategic depth provided by the western Pacific to Taiwan’s maritime and air forces—and increase the difficulty of intervention by American and other foreign forces in a Taiwan Strait conflict.

China has deepened its advantages as it has undermined Taiwan’s. The PRC’s medium- and

8. See DoD, *Annual Report to Congress 2019*; Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win* (Washington, DC: Defense Intelligence Agency, May 2019); Ian Easton, *The Chinese Invasion Threat: Taiwan’s Defense and American Strategy in Asia* (Manchester, UK: Eastbridge Books, October 2017); Michael J. Lostumbo et al., *Air Defense Options for Taiwan: An Assessment of Relative Costs and Operational Benefits* (Santa Monica, CA: RAND Corporation, 2016); Jim Thomas, John Stillion, and Iskander Rehman, *Hard ROC 2.0: Taiwan and Deterrence through Protraction* (Washington, DC: Center for Strategic and Budgetary Assessments, 2014); and Dean Cheng, *Taiwan’s Maritime Security: A Critical American Interest* (Washington, DC: The Heritage Foundation, March 19, 2014).

9. MND, *National Defense Report 2019*, 46.

10. MND, 2017 QDR, 21.

short-range ballistic and cruise missiles can target the entirety of the island, and “continuous improvements on maneuverability, accuracy, and lethality” make those missiles more likely to hit their targets and more difficult to counter.¹¹ This firepower threat is multifaceted; the PLA Ground Force, PLA Navy (PLAN), PLA Air Force, and PLA Rocket Force field rocket and missile launchers that “can cover Taiwan Proper and its offshore islands.”¹² The defense ministry also points to the PLA’s increasing ability to complicate a foreign intervention in a cross-strait conflict through its improvements in long-range antiship ballistic missiles and the expanding reach of PLAN and PLA Air Force bombers.¹³

The PLA Air Force’s improvements are particularly concerning. According to the MND, the addition of new unmanned combat aerial vehicles and long-range munitions to the force, combined with more experienced pilots of manned aircraft, has put the PLA in position “to achieve multi-layered firepower, joint air defense, anti-missile operations, and even . . . air supremacy west of the first island chain, while further threatening [Taiwan’s] efforts to obtain regional air superiority.”¹⁴ If the PLA can now achieve air superiority within the first island chain, allied air forces’ mitigation of the Chinese air threat and contribution to strikes on China, if deemed necessary, will be far more difficult.

11. MND, 2017 QDR, 21–22.

12. MND, *National Defense Report 2019*, 48.

13. MND, *National Defense Report 2019*, 48; and MND, 2017 QDR, 22.

14. MND, 2017 QDR, 22.

Likewise, the MND is concerned about the PLAN's modernization efforts. The PLAN's combatant ships are improving, and the service is putting to sea new amphibious vessels and auxiliary ships which allow for sustained, distant maritime operations. The defense ministry also states submarine-launched ballistic missiles are strengthening China's strategic deterrence. "With the assistance of its indigenous aircraft carrier and capability to form a blue water carrier battle group," the MND concludes, "the [PLAN] has demonstrated that it has increased capability to conduct nuclear counterstrike, deny access of foreign forces, and blockade Taiwan and its surrounding waters."¹⁵

The PLAN's additional firepower is supported by more realistic PLAN training. Recent exercises have emphasized "joint maritime strike, joint blockade, [simulations] countering foreign forces, anti-submarine, anti-mining, air-sea coordination, far seas drills, and synthesized tactical drills."¹⁶ Combined flotillas of surface vessels and submarines have been conducting "blue water voyage training regularly, so as to sharpen [the PLAN's] capabilities of blue water maneuver operations and countering foreign forces in the Western Pacific, the South China Sea, and the Indian Ocean."¹⁷ All told, China's naval advancements would make an American effort to conduct a distant blockade of China in the event of a conflict more difficult.

15. MND, 2017 QDR, 23.

16. MND, *National Defense Report 2019*, 44.

17. MND, *National Defense Report 2019*, 44.

The PLA's capacity for ground operations is improving as well. In the 2017 QDR, the MND describes a force preparing specifically for an invasion:

The PLA Ground Force has been developing in the direction of three-dimensional operations, rapid maneuverability, long-range power projection, precision strike, and special operations capabilities. The army aviation units are equipped with various types of indigenous helicopters, and have increased training with special operations forces in order to improve its air-land battle, rapid assault, and air assault operations capabilities. Furthermore, it has deployed transport vessels along Mainland China's southeastern coast and conducted joint landing drills to fulfill its future operational requirements against Taiwan. It is believed Mainland China has acquired the capability to initiate triphibious landing operations to seize our offshore islands.¹⁸

In 2019, the MND continued to assess the PLA can seize an offshore island—not necessarily an easy undertaking—and highlighted the continuing “complexity of landing operations and a lack of proper transport vehicles and logistic support” as limiting factors for more ambitious amphibious operations.¹⁹ Difficulties aside, China has pushed forward by constructing its transportation infrastructure to meet both civilian and PLA needs, resulting in the PLA's “unconventional support capabilities,” such as the enhancement of civilian airliners and ferries.²⁰

The PLA is also enhancing its ability to contest Taiwan in cyberspace and across the electromagnetic

18. MND, 2017 QDR, 23–24.

19. MND, *National Defense Report 2019*, 48. For a discussion on offshore island seizures, see Easton, *Chinese Invasion Threat*, 115–17.

20. MND, 2017 QDR, 25.

spectrum. The PLA Strategic Support Force “was formed to integrate space, technical reconnaissance, cyber warfare, electronic countermeasures, and psychological operations units.” Per the 2017 QDR, the Strategic Support Force is developing “electronic interfering and paralyzing capabilities,” and the force now has “a cyberattack capability to collect our electromagnetic parameters, and to monitor, cut off, and interfere with our surveillance, reconnaissance, [and] command and control systems.”²¹ The *National Defense Report 2019* paints an even more disturbing picture:

[The PLA] can jam and attack our nodes of command, control, communications, cyberspace, intelligence, surveillance, and reconnaissance (C4ISR), land-based air defense missile, and fire-control and early warning radar sites. To achieve the goal of “integrated cyber and electronic warfare (ICEW),” the PRC has developed [integrated cyber and electronic warfare] platforms to initiate cyberattacks on our critical political, economic, and military installations, and take chances to disseminate disinformation, expecting to paralyze our high-value targets (HVTs) and cause disturbances in the public.²²

These emerging capabilities provide Beijing with the potential capability to disable Taiwan’s defenses and the option to interfere in Taiwan’s politics and inhibit Taipei’s ability to govern effectively.

TAIWAN’S RESPONSE

Tackling the challenges posed by the PRC is a tall order. Emphasizing the difficulty of offsetting these challenges in her 2017 National Day address, President

21. MND, 2017 QDR, 24–25.

22. MND, *National Defense Report 2019*, 46.

of Taiwan Tsai Ing-wen highlighted the need for both qualitative and quantitative improvements in Taiwan's defenses "to protect the safety of our 23 million people."²³

Tsai's speech was followed by a new military strategy. The MND's *National Defense Report 2017* refers to the strategy as "resolute defense and multi-domain deterrence." The strategy's components are spread out over multiple subsections in the report, but the strategy's most central aspects are as follows:

In order to achieve the objective of resolute defense through the means of multi-domain deterrence, "innovative-asymmetric" thinking is adopted to maximize joint warfighting effectiveness and thus create multiple dilemmas for the enemy, thus deterring it from imprudently starting a war. If the enemy still attempts to invade, the Armed Forces will implement the force concept of "preservation of warfighting capability, pursuing decisive victory in the littoral area, and annihilating the enemy in the beach area," and conduct multi-layered interception and joint firepower strikes to erode the enemy's operational force, break up the attack and block enemy landing forces.²⁴

In other words, an ability to conduct joint operations on the sea, in the air, and on land—with an emphasis on asymmetric approaches—will deter Chinese adventurism. Should deterrence fail, the ROC Armed Forces will be poised to survive a missile and air assault and be capable of fighting in and over the Taiwan Strait and on the coastline.

23. Tsai Ing-wen, "2017 National Day Address" (speech, Presidential Office Building, Taipei, Taiwan, October 10, 2017).

24. MND, *National Defense Report 2017*, trans. Kevin's Chinese to English Translation Service (Taipei, TW: MND, March 2018), 67.

A key aspect of the new strategy is the Overall Defense Concept (ODC), also introduced in late 2017. The *National Defense Report 2019* describes the ODC as having three priorities: force protection (through, among other things, the tactics of mobility, concealment, dispersion, and deception); the capability to force a decisive battle in the littoral zone (through the joint firepower of the ROC Armed Forces); and the destruction of the enemy on Taiwan's landing beaches, if necessary. The ODC's fundamental goal is to frustrate the "enemies' invasive mission."²⁵ According to the United States-China Economic and Security Review Commission, the ODC "seeks to emphasize the development of asymmetric capabilities and tactics to capitalize on Taiwan's defensive advantage, enhance resilience, and exploit the weaknesses of the PLA."²⁶ Weapons useful for asymmetric warfare, according to the *National Defense Report 2017*, are characterized by "mobility, stealth, fast speed, low cost, abundance, minimum damage, and high effectiveness."²⁷

Although President Tsai has publicly backed the new defense whether the concept has sufficient institutional buy-in to outlast changes in military and civilian leadership is unclear. Nevertheless, the ODC

25. MND, *National Defense Report 2019*, 68.

26. United States-China Economic and Security Review Commission, *2019 Report to Congress of the US-China Economic and Security Review Commission* (Washington, DC: United States-China Economic and Security Review Commission, November 2019).

27. MND, *National Defense Report 2017*, 86; and Michael Mazza, "Taiwan's High-End and Low-End Defense Capabilities Mix," *Global Taiwan Brief* 4, issue 20 (October 23, 2019).

appears to be driving at least some defense acquisition decisions, as described below.²⁸

Capabilities: Quality and Quantity

Despite the recent prioritization of the ODC, which emphasizes countering an invasion, the MND is also striving to field a force capable of conducting a variety of missions, such as air sovereignty patrols, counter-blockade operations, disaster response, and defense against aerial bombardment. Taiwan's leaders know focusing on the most pressing scenario—Chinese invasion—while excluding other scenarios would leave Taiwan vulnerable to other coercive uses of force.

With the island purchasing modern equipment in large numbers, 2019 was a banner year for US arms sales to Taiwan. In early July, the US Department of State approved the sale to Taiwan of 108 M1A2T Abrams main battle tanks and related equipment and support for a total cost of approximately \$2 billion.²⁹ Even if Taiwan were to retire all 365 of its older M48 Patton medium tanks, after completing the purchase of new M1A2T tanks and likely upgrading many of its 200 M60A3 Patton main battle tanks, the country

28. Adapted from Michael Mazza, "US-Taiwan Defense Ties Advance with Senior Official Visit," *Global Taiwan Brief* 4, issue 23 (December 4, 2019).

29. Defense Security Cooperation Agency, "Taipei Economic and Cultural Representative Office in the United States (TECRO)—M1A2T Abrams Tanks and Related Equipment and Support," Transmittal no. 19-22, July 8, 2019, <https://www.dsca.mil/major-arms-sales/taipei-economic-and-cultural-representative-office-united-states-tecro-m1a2t-abrams>.

would field a total main battle tank force of 308.³⁰ This force would be historically small for Taiwan, but the force would still be larger than the current main battle tank inventory of Germany, for example.

In August 2019, the US Department of State approved the sale to Taiwan of 66 F-16C/D Block 70 aircraft for an estimated cost of \$8 billion. The ROC Air Force, which is already in the process of upgrading its fleet of older F-16A/B aircraft, will field over 200 new and upgraded F-16s in the coming years. Taiwan's F-16 fleet alone, without including the older Mirage 2000s and 87 soon-to-be-retired F-5E/Fs, will be double the size of Australia's fighter fleet and approximately two-thirds the size of Japan's entire fighter fleet.

New F-16 aircraft will enhance Taiwan's ability to maintain air sovereignty and respond to PLA coercion in the skies around the island. But the F-16s also have a role to play in "pursuing decisive victory in the littoral area" (that is, the Taiwan Strait), as the *National Defense Report 2017* states, and potentially even in "annihilating the enemy on the beach." Taiwan can use M1A2Ts to deny PLA forces a beachhead and to contest their drive inland should they secure one. But the MND has pursued new tanks and fighters for years; the requirement for these assets may be consistent with the ODC, but the ODC likely did not drive the requirement.

The ODC, however, may be driving other requirements. When tank sales were approved in July 2019, the US Department of State also authorized the sale of 240 FIM-92 Stinger missiles, which are

30. Aaron Tu and Jonathan Chin, "Army to Upgrade Patton Tanks to Build Up Forces," *Taipei Times*, July 9, 2019, <http://www.taipetimes.com/News/taiwan/archives/2019/07/09/2003718367>.

man-portable air defense systems. This acquisition will be in addition to the approximately 2,000 Stinger missiles already in Taiwan's arsenal. These missiles enhance Taiwan's ability to counter "helicopters, unmanned aerial vehicles, cruise missiles, as well as low-level fixed and rotary-wing aircraft."³¹ A large Stinger inventory will strengthen Taiwan's capacity for point defense and complement the island's MIM-104 Patriot and indigenous Sky Bow air defense batteries and shipborne surface-to-air missiles.³²

The MND wants to purchase other arms relevant to the ODC. In addition to the Abrams tanks and Stinger missiles, the MND has requested the procurement of 1,240 BGM-71 tube-launched, optically tracked, wire-guided (TOW) antiarmor missiles and 409 FGM-148 Javelin antitank missiles. These purchases would grow Taiwan's arsenal to well over 3,000 TOW missiles and more than 900 Javelins.³³ Given the PLA is expected to attempt to land tanks and armored vehicles on Taiwan and outlying islands during an invasion, TOW and Javelin missiles will be of critical importance to soldiers and marines defending beaches and routes to the interior. Such missiles complement Taiwan's tanks in the counter-armor fight, diversifying the nature of the threat to PLA armor and thus complicating Chinese military planning and operations.³⁴

31. "Stinger Man-Portable Air Defence System (MANPADS)," Army Technology, n.d., <https://www.army-technology.com/projects/stinger-man-portable-air-defence-system-manpads/>.

32. Adapted from Mazza, "Defense Capabilities Mix."

33. "Taiwan Confirms Request for US Tanks, Air Defense Systems," Associated Press, June 6, 2019, <https://apnews.com/bdfe659a9e84476cb89eb257d5d5e9b9>.

34. Adapted from Mazza, "Defense Capabilities Mix."

Contingency planning for a Chinese invasion will be complicated further if Taiwan goes ahead with the purchase of new artillery systems. The MND is reportedly seeking to purchase M109A6 “Paladin” self-propelled howitzers and possibly the M142 High Mobility Artillery Rocket System (HIMARS) from the United States.³⁵ Taiwan already has more than 2,000 older artillery pieces, including earlier versions of the M109. As a mobile, survivable system, the Paladin, alongside Stingers, TOW missiles, and Javelins, would help transform Taiwan during a time of war into a “porcupine” – a term popularized by the Naval War College’s William Murray in 2008 – making Taiwan difficult for the PRC “to swallow.”³⁶ (A common criticism of Murray’s argument is a porcupine strategy would leave Taiwan susceptible to coercive uses of force short of invasion. But, though Taiwan might be seeking to transform itself into a porcupine in the event of an invasion, the country has not focused on this mission to the exclusion of others.) Placed on Kinmen Island, which is governed by the ROC, Paladins could potentially reach PLA invasion staging grounds. On Taiwan, Paladins would be useful for defending the coast and wreaking havoc on landing beaches.³⁷

If the MND wishes to transform itself into a porcupine in the event of an invasion, HIMARS would make it extra spiny. Like the Paladin, HIMARS can shoot-and-scoot, making it of great value in

35. Mike Yeo, “Taiwan Looks to Boost Artillery Forces to Counter China,” *Defense News*, September 27, 2019, <https://www.defensenews.com/global/asia-pacific/2019/09/27/taiwan-looks-to-boost-artillery-forces-to-counter-china/>.

36. See William S. Murray, “Revisiting Taiwan’s Defense Strategy,” *Naval War College Review* 61, no. 3 (Summer 2008): 4.

37. Adapted from Mazza, “Defense Capabilities Mix.”

circumstances where effective defense relies on mobility and survivability. Armed with six M270 rockets, HIMARS can fulfill a similar function to new Paladins. Alternatively, Taiwan might opt to fit MGM-140 Army Tactical Missile System munitions onto the HIMARS launcher, providing Taiwan's military with a means of attacking Chinese territory itself. Finally, the DoD is in the process of procuring an updated version of HIMARS, one version of which has an antiship capability.³⁸ Procuring HIMARS now – with the ability to incorporate a new antiship missile when one is ready – would obviously enhance the island's capacity to fend off a seaborne invasion.³⁹

Taiwan's indigenous defense industry has also developed capabilities useful for asymmetric warfare. Some of these developments preceded the advent of the ODC. Since the mid-2000s, the ROC Navy has put to sea 32 *Kwang Hua IV*-class missile boats and fielded a new stealthy, fast-attack missile boat, the *Tuo Chiang*-class corvette.⁴⁰ In the first half of 2019, the MND began construction on the first of three *Min Jiang*-class stealthy missile corvettes, a follow-on to the *Tuo Chiang*-class, and the first of four *Gan Jiang*-class

38. Todd South, "The Corps Needs an Anti-Ship, Coastal Defense Missile System," *Marine Corps Times*, November 20, 2017, <https://www.marinecorpstimes.com/news/your-marine-corps/2017/11/20/the-corps-needs-an-anti-ship-coastal-defense-missile-system/>.

39. Adapted from Mazza, "Defense Capabilities Mix."

40. Michael Mazza, *Taiwanese Hard Power: Between a ROC and a Hard Place* (Washington, DC: American Enterprise Institute, April 24, 2014).

rapid mine-laying ships.⁴¹ According to former DoD official and current research fellow at Singapore's Lee Kuan Yew School of Public Policy Drew Thompson, Taiwan "is currently developing two new types of shallow and deep-water influence mines, which they plan to deploy by 2021," as well as a "self-propelled mine with a planned deployment date around 2025." Taiwan is also, Thompson notes, refurbishing the mines already in its inventory and seeking to buy Mark 62 Quickstrike air-deployed mines from the United States.⁴²

In 2018, Taiwanese news media reported the navy was studying the possibility of fielding large numbers of even smaller vessels, dubbed Stealth Mini-Missile Assault Boats.⁴³ In the event of a conflict, these boats will presumably enter the Taiwan Strait and surrounding waters, loose their antiship missiles at PLAN vessels steaming toward Taiwan, and then return to shore to reload. In its annual report, the United States-China Economic and Security Review

41. Joseph Trevithick, "Taiwan's Next Batch of Stealthy Catamarans Will Have Serious Mine-Laying Capabilities," Drive, May 24, 2019, <https://www.thedrive.com/the-war-zone/28201/taiwans-next-batch-of-stealthy-catarmans-will-have-serious-mine-laying-capabilities>.

42. Drew Thompson, "Hope on the Horizon: Taiwan's Radical New Defense Concept," War on the Rocks, October 2, 2018, <https://warontherocks.com/2018/10/hope-on-the-horizon-taiwans-radical-new-defense-concept/>; and Mazza, "Defense Capabilities Mix."

43. Keoni Everington, "Taiwan Navy Begins Research into Fleet of 60 'Stealth Mini-Missile Boats,'" Taiwan News, January 24, 2018, <https://www.taiwannews.com.tw/en/news/3348868>.

Commission noted, “Taiwan allocated funding for 60 small fast-attack missile craft” in 2019.⁴⁴

The ROC Navy continues to sail destroyers and frigates and is procuring a large amphibious assault ship. The navy is also in the process of developing a new submarine via the Indigenous Defense Submarine program. When eventually put to sea, these submarines could add another layer of complexity to the multidimensional force a PLA invasion would face. New submarines could complicate the operations of PLAN surface vessels maneuvering in waters north and south of the strait or east of Taiwan and force the PLA to divert resources to hunt the submarines down. Despite Taiwan’s continuing reliance on more traditional naval platforms, the MND has clearly recognized the need for smaller, stealthier, high-speed craft as well.⁴⁵

The missiles these newer vessels will be firing are also indigenously produced. The vessels carry the subsonic Hsiung Feng II and supersonic Hsiung Feng III antiship missiles, both of which can also be fired from mobile launchers ashore. The Hsiung Feng IIE, meanwhile, is a ground-launched surface-to-surface variant that can strike PRC territory.⁴⁶

Other missile systems under indigenous production include the Tiangong 3 antiballistic missile interceptor. In 2019, the MND accelerated the production and fielding of the Tiangong 3, with completion of a project “to upgrade the country’s missile defense systems along the eastern seaboard”

44. United States-China Economic and Security Review Commission, *2019 Report to Congress*.

45. Adapted from Mazza, “Defense Capabilities Mix.”

46. Adapted from Mazza, “Defense Capabilities Mix.”

moved up two years to 2022.⁴⁷ Tiangong 3s will replace the 1960s-era MIM-23 Hawks. As of 2017, the plan was to field a total of 12 Tiangong 3 batteries, which will complement the nine deployed Patriot Advanced Capability-3 batteries; an additional Patriot Advanced Capability-3 battery is held in reserve. Defending against a PLA ballistic missile saturation attack is a significant challenge. But as Taiwan defense analysts Michal Thim and Liao Yen-Fan argue, the 21 deployed batteries, when combined with passive defenses and offensive electronic warfare operations, could play an important role in sustaining civilian morale and protecting important infrastructure and military targets.⁴⁸

Also in 2019, the National Chung-Shan Institute of Science and Technology began mass production of the Yun Feng cruise missiles and launchers. With a reported range of 2,000 kilometers, the Yun Feng is Taiwan's only land-based missile capable of striking Beijing; a 1,500-kilometer variant capable of launch from a mobile platform was reportedly developed as a prototype in 2019 as well.⁴⁹ Taiwan continues to upgrade these missiles and grow its munitions stores.

Taiwan has also sought to respond to the PLA's integration of cyber and electronic warfare capabilities

47. Duncan DeAeth, "Taiwan's NCSIST Ordered to Expedite Missile Production Programs," Taiwan News, August 10, 2019, <https://www.taiwannews.com.tw/en/news/3761445>.

48. Michal Thim and Liao Yen-Fan, "Taiwan and the Missile Defense Dilemma," Taiwan Sentinel, March 30, 2017, <https://sentinel.tw/taiwan-missile-defense-dilemma/>.

49. Duncan DeAeth, "Taiwan Begins Production of Cloud Peak Missiles and Mobile Launch Platforms," Taiwan News, August 9, 2019, <https://www.taiwannews.com.tw/en/news/3761242>.

in the Strategic Support Force. In June 2017, the MND established the Information, Communications and Electronic Force Command. President Tsai, who attended its launch, stated the command's mission is engaging in cyberwar and researching electromagnetic technologies.⁵⁰ The MND does not release much information on its operations in the cyber and electromagnetic domains, but the *National Defense Report 2019* explained, "To strengthen the electronic warfare and cyberwarfare capabilities, the ROC Armed Force [sic] have been actively integrating the capacities of intelligence, operations, and cyberwarfare forces." The MND is continuing to invest in electronic warfare and cyber research and development and is seeking greater engagement with civilian experts and relevant foreign entities.⁵¹

Manpower: Quality, Not Quantity

In her 2017 National Day address, President Tsai spoke to the human resources challenge of fielding a credible defense and steps the government is taking to address that challenge:

We must also raise our military morale. Over the past year, we have worked to upgrade personnel equipment, refurbish military housing, and refine our system of military conscription. We have enhanced the pay system to provide more bonuses. I trust that this commitment has been felt by all of our brothers and sisters in uniform . . . We are also encouraging non-commissioned officers to engage in further study and refine their abilities so that their military specializations can carry over to their

50. Taiwan Today, "Ministry of National Defense Launches New Cybersecurity Command," Taiwan News, July 4, 2017, <https://www.taiwannews.com.tw/en/news/3202752>.

51. MND, *National Defense Report 2019*, 78–79.

post-military careers. More importantly, we are closely studying the structures of other advanced countries, so that we can craft a new retirement system that rewards military retirees based on their length of service.⁵²

Left unsaid is these reforms are particularly important because of the difficult shift to an all-volunteer force. Starting in 2013, Taiwan began moving away from a conscripted force. Universal conscription for males remains, but servicemen are only required to undergo four months of military training and are entered into the reserves before returning to civilian life. Taiwan's military is now a professional one, reliant on volunteers to fill all ranks.

Setting aside the political expediency of abandoning a military reliant on conscripts, the Taiwanese recognize modern militaries increasingly rely on high-tech equipment. Operating this equipment requires, on average, a better educated and better trained military. Because the all-volunteer force seeks to attract recruits who intend to make a career of service, or at least dedicate a substantial amount of time to serving, and the force no longer faces constant turnover that resulted from two- and three-year service requirements, Taiwan's military can invest more resources in training and educating personnel.

But Taiwan's population will soon be shrinking and aging, the result of which will be increased competition among employers for young men and women entering the labor market.⁵³ Military recruitment becomes more difficult in a tight labor market. The ROC Armed

52. Tsai, "2017 National Day Address."

53. "Data Query," Population Projections for the R.O.C. (Taiwan), n.d., https://pop-proj.ndc.gov.tw/main_en/data/Search.aspx?uid=78&pid=78.

Forces must now compete with the private sector for recruits, requiring the military to provide better pay, pensions, and other perks. The shift to an all-volunteer force has also forced the military to better market itself to Taiwan's public. As the 2017 QDR reports, the "MND has been cooperating with the media to portray a professional image for the ROC Armed Forces so as to win the recognition and trust from the people."⁵⁴ Left unsaid, but presumably understood, is a military worthy of recognition and trust is a military worth joining.

The government's efforts to attract more recruits seem to have paid off in recent years. Eleven months into the first year of volunteer recruitment, the MND reported recruitment levels at only 30 percent of the goal. Recruitment rates for infantry and armored units were only 4 percent and 16 percent, respectively.⁵⁵ In July 2019, the MND reported recruitment rates had risen from 77.06 percent in 2016 to 84.33 percent in 2019 and were expected to reach the 90-percent goal by the end of 2020.⁵⁶ The active-duty military totals 173,000, down from 290,000 just before the beginning of the transition to an all-volunteer force. The end strength of the army has shrunk from 200,000 to 88,000; the end strength of the navy from 45,000 to 40,000; the

54. MND, 2017 QDR, 64.

55. Shang-Su Wu, "Taiwan's All-Volunteer Military," *Diplomat*, December 25, 2013, <https://thediplomat.com/2013/12/taiwans-all-volunteer-military/>.

56. "Ministry of National Defense Press Release," MND, July 8, 2019, <http://www.mnd.gov.tw/english/Publish.aspx?title=Defense%20News&p=76462>.

end strength of the marines from 15,000 to 10,000; and the end strength of the air force from 55,000 to 35,000.⁵⁷

But an all-volunteer force may be difficult to sustain over the long haul because of Taiwan's poor demographic outlook and the financial strain put on defense spending to maintain such a force. Indeed, even as the size of the armed forces has shrunk, personnel costs have increased. As a Pentagon report notes:

The cost savings from manpower reductions provides [sic] some margin to improve individual pay and benefits, housing, and incentive pay; however, these savings have been insufficient to cover the full increase in manpower-related costs needed to attract and retain personnel under the new system. The unanticipated magnitude of transition costs has led Taiwan to divert funds from foreign and indigenous defense acquisition programs, as well as near-term training and readiness.⁵⁸

Barring substantial increases in defense spending, costs associated with maintaining an all-volunteer force will most likely increasingly crowd out spending on new equipment, training, and research and development – which, of course, calls into question the logic for the shift to an all-volunteer force. The force may remain manned primarily by volunteers, but whether they will sign up in sufficient numbers and be sufficiently educated, trained, and armed remains to be seen.

57. International Institute for Strategic Studies (IISS), *The Military Balance 2013* (London: IISS, 2013), 335–37; and IISS, *The Military Balance 2019* (London: IISS, 2019), 308–9.

58. DoD, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018* (Washington, DC: DoD, May 16, 2018), 102.

The transition to a smaller, all-volunteer force and the PLA's growing ability to launch an invasion make the ROC Armed Forces Reserve crucial to the island's defense. The size of the reserve force is substantial. According to Ian Easton et al., the military reserve system comprises 2.5 million men (to augment active-duty forces), with an additional one million civil defense volunteers (to be tasked with activities such as "air raid defense, communications, firefighting, first aid, and traffic control"). Altogether, reservists include "one man out of every four."⁵⁹

Whether those reservists would be effective in a crisis is debatable. Since the transition to the all-volunteer force, new reservists have received minimal and infrequent training:

Taiwan's force transformation program reduced compulsory military service for the reserve force from one year to four months of basic and specialized training prior to assignment to the reserve force, and the service does not necessarily have to be continuous. For example, a university student may divide his military service commitment into two eight-week periods over two consecutive summers to fulfill his service obligation. After that, the conscript will register with his local reserve command, where he will report for duty only once every two years for a mere five to seven days of refresher training. That equates to as little as 20 days of training spread out over eight years. After eight years, conscripts will go into inactive reserve status, and Taiwan will call these inactive reservists back into service only in the event of a war. Noncommissioned officers (NCOs) and officers, in contrast to other reservists, continue to receive refresher training until age 50 and may stay in the system even longer if they reach a high rank.⁶⁰

59. Ian Easton et al., *Transformation of Taiwan's Reserve Force* (Santa Monica, CA: RAND Corporation, 2017), 12–13.

60. Easton et al., *Transformation*, 6.

Easton et al. describe this training as “insufficient to meet the challenges posed by the increasing threat from the PLA” and recommend a minimum of two to three weeks of realistic training annually for “specialist reservists” in the areas of electronic and cyberwar, air defenses, and sea control.⁶¹

The absence of serious training has meant China takes little note of the role the ROC Armed Forces Reserve plays in the country’s defense capabilities. To ensure the reserve force makes a more prominent contribution to strategic deterrence, the report’s authors call for more publicity for the reserve force from Taiwan’s political and military leaders as well as inclusion of the reserves in the military’s most high-profile exercises. The authors also argue Taiwan’s reserve force should be prepared to contribute to the island’s defense at the earliest stages of a conflict.⁶² Notably, arguments such as these appear to have gained some sway in Taiwan. According to the *National Defense Report 2019*, as part of the ODC, Taiwan is transforming its reserve force into one that can conduct coastal defense, protect high-value targets, and defend against airborne and helicopter assault operations.⁶³

Addressing the reserve force’s shortcomings requires a greater commitment of resources and political will. Are Taiwan’s elected leaders willing to push for more extensive training, resulting in reservists being away from their jobs and families more? Are Taiwan’s citizens open to such a push? The results of public opinion surveys conducted over the

61. Easton et al., *Transformation*, 63.

62. Easton et al., *Transformation*, 61–63.

63. MND, *National Defense Report 2019*, 73.

last year do not provide much clarity. Describing the results of the January 2019 Taiwan National Security Survey, Dennis V. Hickey notes, in the case of war, “a plurality (almost 45 percent) plan to ‘leave the country,’ ‘unhappily accept the situation,’ ‘hide’ or ‘choose to surrender.’” On the other hand, a majority of respondents believe “most Taiwanese will resist an attack.” Many respondents, however, think resistance will be futile: “70 percent think the military cannot win a war.”⁶⁴

Another survey, commissioned by Yao-Yuan Yeh et al., found 62.4 percent of respondents “considered the conscription training to be helpful in the battlefield.” Importantly, analysis of the results “revealed that when citizens consider the training to be helpful, it will increase their willingness for self-defense by as much as 6 percent” —defining self-defense as a willingness to join the military or act to defend against an invasion. According to Yeh et al., the results counter the common misconception “the public in Taiwan consider their military training to be ineffective in preparing them for . . . actual combat.”⁶⁵

If Taiwan’s leaders want to take advantage of these trends and extend reservists’ commitments, the MND should continue to emphasize its concept of all-out defense. The concept posits “safeguarding the nation is a common responsibility shared by the government

64. Dennis V. Hickey, “PacNet #21—What the Latest Opinion Polls Say about Taiwan,” *Pacific Forum*, March 8, 2019, <https://pacforum.org/publication/pacnet-21-what-the-latest-opinion-polls-say-about-taiwan>.

65. Yao-Yuan Yeh et al., “Meet the New Taiwan: Trained for War and Ready to Fight,” *National Interest*, April 10, 2019, <https://nationalinterest.org/feature/meet-new-taiwan-trained-war-and-ready-fight-51797>.

and the people”; the aim is to have all Taiwanese care about, support, and participate in the nation’s defense.⁶⁶ All-out defense activities seek to educate high-school and university students as well as the population at large about defense affairs, strengthen civil-military relations via public affairs and increased engagement, and heighten admiration of the military. Conscription will always be an imposition, but efforts like all-out defense may succeed in convincing more young people to view compulsory military service as both an obligation and an opportunity.

Indigenous Defense Industry

The final defense priority President Tsai highlighted in her 2017 National Day address was Taiwan’s indigenous defense industry. Tsai wants to expand the links between the armed forces and society at large. Beyond Taiwan’s robust missile production efforts, Taiwan is “committed to building [its] own military jets and submarines, which, particularly for young engineers and researchers, will create many new job opportunities.” As the president described, developing the island’s defense industry is about “strengthening [Taiwan’s] military capabilities” and boosting civilian industry.⁶⁷

Whether Taiwan’s defense industry can deliver complex, dependable, affordable platforms reliably and whether the anticipated positive externalities will emerge remain to be seen. Perhaps the biggest success of the initiative to date is the Aerospace Industrial Development Corporation’s development of a prototype of an indigenous advanced jet trainer,

66. MND, *National Defense Report 2019*, 164.

67. Tsai, “2017 National Day Address.”

which was first displayed publicly in September 2019. The corporation is expected to build four more prototypes, and flight-testing began in 2020. Mass production is slated to begin in 2023, with a total of 66 aircraft delivered by 2026.⁶⁸

A bigger test is the Indigenous Defense Submarine program. Having broken ground on a submarine shipyard and displayed a miniature model of the submarine design during the first half of 2019, the MND reports a prototype is due for delivery in 2025.⁶⁹ If the program is to stay on track, Taiwan will need international participation for the development of subcomponents. In April 2018, the US Department of State reportedly granted licenses permitting “American defense companies to market submarine technology to Taiwan.”⁷⁰ Even with foreign industrial cooperation, which may or may not occur, Taiwan’s engineers and shipbuilders will have to master techniques with which they have little experience. If CSBC Corporation, Taiwan, can deliver the country’s first homemade submarine on time and without significant cost overruns, the accomplishment will be notable for Taiwan’s defense industry and arguably

68. “Taiwan’s 1st Indigenous Advanced Jet Trainer Makes Public Debut,” Kyodo News, September 24, 2019, <https://english.kyodonews.net/news/2019/09/1fdee542565d-taiwans-1st-indigenous-advanced-jet-trainer-makes-public-debut.html>; MND, *National Defense Report 2019*, 105; and Su Mu-Chuan and Joseph Yeh, “New Indigenous Trainer Jet Conducts First Test Flight in Taichung,” Focus Taiwan, June 10, 2020, <https://focustaiwan.tw/politics/202006100008>.

69. MND, *National Defense Report 2019*, 107.

70. Mike Yeo, “US State Department OKs License for Submarine Tech Sales to Taiwan,” *Defense News*, April 9, 2018, <https://www.defensenews.com/naval/2018/04/09/us-state-department-oks-license-for-submarine-tech-sales-to-taiwan/>.

serve as proof of concept for Tsai's indigenous defense industry initiative.

Paying for Quality and Quantity

How is Taiwan resourcing the all-volunteer force, a new defense strategy requiring a mix of high-end and low-end capabilities, and reliance on a domestic defense industry with a small market and (in some areas) immature production capabilities? According to data from Taiwan's Directorate General of Budget, Accounting and Statistics, Taiwan's national defense expenditure averaged only 1.10 percent growth in current dollars for the years 2014 to 2018 (2018 is the last year for which directorate general data is available). During that time frame, defense spending as a share of gross domestic product (GDP) hovered between 1.73 percent and 1.83 percent.⁷¹ For years, the United States has urged Taiwan to increase its share of the GDP spent on defense to 3 percent—a goal set, but not met, by three consecutive presidents of Taiwan.

Although defense spending as a share of GDP is a useful, if imperfect, measure of a society's commitment to its defense, it is not the only measure of note. Another measure worth considering is the government's prioritization of defense spending as a share of overall government expenditure. According to directorate general statistics, defense spending as a share of overall government spending varied between

71. Directorate General of Budget, Accounting and Statistics (DGBAS), "Table 44. Gross Domestic Product and Expenditure," in *Statistical Yearbook of the Republic of China 2018* (Taipei, TW: DGBAS, September 2019), 81; and DGBAS, "Table 91. Net Government Expenditures of All Levels," in *Statistical Yearbook 2018*.

10.8 percent and 11.5 percent between 2014 and 2018. That share is down from 17.8 percent in 1991 and almost 25 percent in 1981.⁷² According to the International Institute for Strategic Studies' publication *The Military Balance 2019*, Taiwan's 2019 defense budget was \$346 billion in New Taiwan dollars (US\$11.3 billion).⁷³

But are things turning around? In August 2019, Taipei announced the largest defense budget increase of the last 10 years—an 8.3-percent boost for 2020—and the largest defense budget of the century.⁷⁴ According to the MND, the most recent defense budget accounts for approximately 2.3 percent of Taiwan's GDP. The budget also accounts for 19.59 percent of central government spending.⁷⁵ The most recent defense budget did not include a special budget for the purchase of new F-16s from the United States. But the Legislative Yuan, Taiwan's legislature, set aside US\$8.1 billion to purchase the F-16s from the United States over a period of seven years.⁷⁶ In addition, in August 2020 the Tsai cabinet proposed a 10.2-percent

72. DGBAS, "Table 91."

73. IISS, *Military Balance 2019*, 307.

74. Yimou Lee, "Taiwan Sharply Boosts Defense Budget amid China Tension," Reuters, August 15, 2019, <https://www.reuters.com/article/us-taiwan-china-defence/taiwan-sharply-boosts-defense-budget-amid-china-tension-idUSKCN1V50TZ>.

75. Flor Wang and You Kai-Hsiang, "2020 National Defense Budget to Account for 2.3 Percent of GDP," Focus Taiwan, August 15, 2019, <http://focustaiwan.tw/news/aip/201908150023.aspx>.

76. Wang Yang-Yu, Justin Su, and Elizabeth Hsu, "Legislature Passes Special Budget for F-16 Purchase," Focus Taiwan, November 22, 2019, <http://focustaiwan.tw/news/aip/201911220019.aspx>.

defense budget increase for 2021 (as of this writing, the legislature has yet to approve next year's budget).⁷⁷

CONCLUSION

The PRC, with its \$200 billion in defense expenditures and its active-duty military of two million, sits just 100 miles away from Taiwan.⁷⁸ Kinmen Island sits less than five miles from the Chinese coastline. The task of defending Taiwan and its outlying islands is an urgent one to say the least, and the challenge is only becoming starker. The PLA is continuing to modernize, allowing it to pose a more credible and direct threat to Taiwan and to foreign forces that might seek to intervene in a conflict across the Taiwan Strait.

An honest assessment of Taiwan's capacity for grappling with this challenge is mixed. Taiwan's military modernization is undoubtedly continuing apace. The defense ministry is acquiring a mix of modern high-end and low-end capabilities that will enable the military to respond to a variety of contingencies. The high-low balance might not be quite right, but the narrative Taiwan consistently opts for big and shiny weapon systems over effective ones is not accurate. Taiwan's new military strategy is well suited to its current security environment. But whether Taiwan will remain committed to implementing the new strategy in the years to come remains to be seen.

77. Yimou Lee and Ben Blanchard, "Taiwan to Raise Defence Spending as China Details Combat Drills," Reuters, August 13, 2020, <https://www.reuters.com/article/us-taiwan-defence/taiwan-to-raise-defence-spending-as-china-details-combat-drills-idUSKCN2590BC>.

78. DoD, *Annual Report to Congress 2019*, 95.

A glass-half-empty assessment of Taiwan's defense would focus on issues of budget and manpower. Three successive presidents have now failed to raise Taiwan's defense spending to 3 percent of the GDP, and defense spending as a share of overall government spending has fallen during the last three decades. The Tsai Ing-wen administration has committed to raising defense budgets and pushing spending closer to the 3-percent threshold, but, given the nature of the evolving threat and the variety of contingencies for which Taiwan's military must prepare, far more substantial spending hikes may well be in order. The challenge of manning an all-volunteer military and maintaining a large (and, hopefully, increasingly effective) reserve force in a country with a population that will soon be shrinking makes the ROC's need to invest significantly in defense more urgent. In the likely event of growing competition with the private sector for labor, a key question in the decades to come will be whether Taiwan's military will be able to attract and retain the best and the brightest.

China may become more likely to use force during the next decade. Xi Jinping has made big promises about delivering prosperity in the coming years—promises made even as Chinese economic challenges have mounted. If he cannot deliver, he may focus his efforts externally. In particular, he might assess whether the annexation of Taiwan would cement his place atop the PRC hierarchy and in the pantheon of the great Chinese communist leaders. A move against Taiwan may become more tempting as the PLA becomes more capable.

In other words, the Chinese threat to Taiwan is neither notional nor something to be thought of as a problem to be addressed down the road. A test of

Taiwan's ability to deter and defend against aggression could come sooner rather than later. If Taiwan is to pass that test, the next few years of defense investment, reform, and training will be crucial.

12. UNITED KINGDOM: THINLY GLOBAL

Gabriel Elefteriu

KEY POINTS

- Britain maintains a full-spectrum military, fielding cutting-edge weapon systems, but this focus on quality has been to the detriment of quantity.
- The problem of mass is offset broadly by advantages in mobility, basing, and unequaled interoperability with US forces that allow Britain to buttress its strategic posture.
- The United Kingdom's military power is predicated on fighting with allies and is designed to support the global geostrategic status quo. But the United Kingdom would be hard-pressed to cope with a major conventional war of any duration or with multiple smaller contingencies.

The British military is facing perhaps its most significant strategic challenge since the Cold War. The military has overcome years of austerity, but its resources remain constrained. And the British government is asking its military both to respond to a threat from Russia and provide forces capable of contributing to the Global Britain agenda. Global Britain refers to the government's emerging vision of the country's post-Brexit future and includes a rebalancing of United Kingdom strategy and foreign policy from a focus on Europe toward a stronger engagement with the rest of the world, especially the Asia-Pacific region. The concept was launched

by Boris Johnson in his first speech as United Kingdom foreign secretary.¹ The Russian problem is particularly onerous for British forces, which have to move away from years of investments in building a lightweight counterinsurgency force and, instead, restore capabilities to address the serious conventional military of a foe.

To understand United Kingdom military power, the essential question is, “How does United Kingdom force posture support United Kingdom interests,” not whether United Kingdom force posture conforms to allies’ preferences. British military power supports alliance obligations as part of Britain’s national interest, but not necessarily in the way many external observers expect. In the face of an expanded set of commitments, United Kingdom military planning is reverting to an older British way of strategy that involves changes in force posture while dealing with limited resources to make those changes. Although the United Kingdom’s strategy is still intended to be effective in support of allied and national interests, it is being stretched to the limit as the country moves into an age of great-power competition.

MILITARY EXPENDITURE

Over the past five years, Britain has been repairing some of the damage inflicted by the cuts to military spending mandated by the Strategic Defence and Security Review (SDSR) 2010.² By 2015, the defense

1. Boris Johnson, “Beyond Brexit: A Global Britain” (speech, Chatham House, London, United Kingdom, December 2, 2016).

2. See David Cameron, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review* (London: Parliament, October 2010).

budget had declined by £8 billion (US\$10.5 billion), a contraction of about 18 percent.³ In June 2016, the Ministry of Defence (MOD) announced defense spending would increase by £5 billion by 2020–21; the government has held to this commitment for the most part.⁴

A superficial reading of defense budgets in figure 12-1 shows consistent growth in recent years, which, according to the MOD, is defined as “Total Departmental Expenditure Limit minus depreciation and impairments.”⁵ This growth, which includes increases to procure equipment, references the MOD’s Defence Equipment Plan, which combines procurement, equipment, and logistical support.⁶ These increases are in accordance with the United Kingdom 10-year Defense Equipment Plan represented in figure 12-2.

3. Noel Dempsey, *UK Defence Expenditure*, Briefing Paper no. CBP 8175 (London: House of Commons Library, November 8, 2018).

4. Samuel White, *Size and Capability of the UK’s Armed Forces for Contributing to Global Peace, Stability and Security* (London: House of Lords Library, November 17, 2017).

5. Ministry of Defence (MOD), *Memorandum for the Ministry of Defence: Supplementary Estimates 2018–19* (London: MOD, February 2019); MOD, *Memorandum for the Ministry of Defence: Main Estimate 2019–20* (London: MOD, May 2019); and “Defence Departmental Resources: Index,” Her Majesty’s Government, updated October 10, 2019, <https://www.gov.uk/government/collections/defence-departmental-resources-index>.

6. Amyas Morse, *Ministry of Defence: The Equipment Plan*, 2015 ed. through 2018 ed. (London: National Audit Office, October 22, 2015, through November 5, 2018).

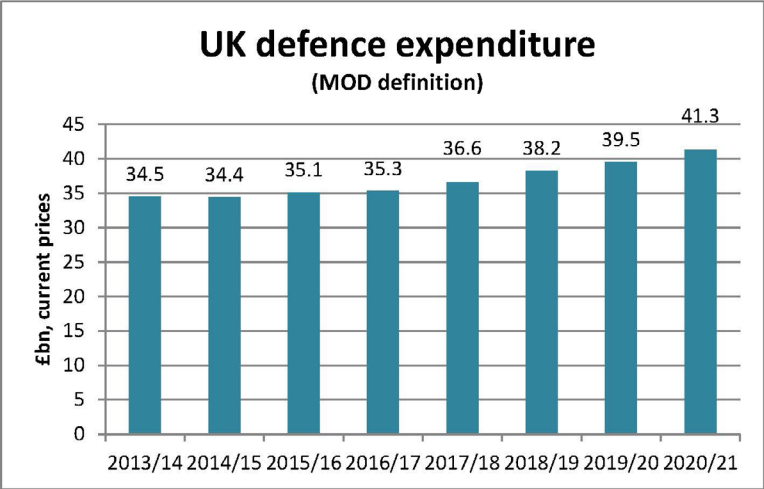


Figure 12-1. United Kindgom defense expenditure

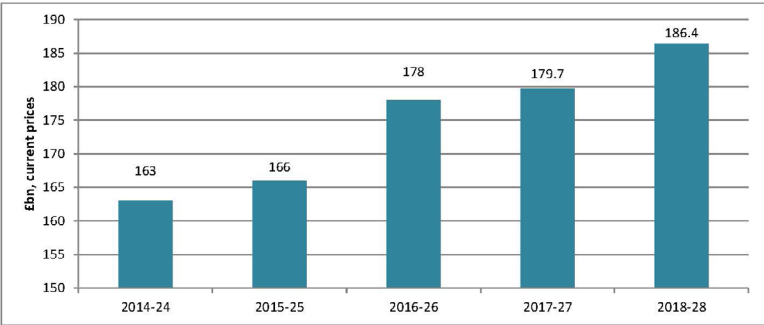


Figure 12-2. United Kingdom 10-year Defense Equipment Plan

These positive headline figures, however, mask a more problematic reality. A significant proportion of these new spending commitments are unfunded and depend on departmental efficiencies that have not been realized yet or on raiding funds intended for other

purposes.⁷ For example, the National Audit Office's *Equipment Plan 2016 to 2026* says the MOD had to use "the entirety of the £10.7 billion headroom" during the 10-year period covered by the Defence Equipment Plan to meet an extra £24.4 billion in new spending commitments under the SDSR 2015. In addition to using the entire headroom, which serves as money set aside to meet emerging priority requirements such as extra projects beyond the core program, the Defence Equipment Plan states the MOD must find a total of over £12 billion in savings. In June 2017, the MOD's top civil servant admitted the efficiency savings target over the next 10 years stood at £20 billion.

Oftentimes, spending targets in the current fiscal year are met by altering payment schedules, bringing some expenditures forward, and then pushing some procurement items to the right on the time line. The result is a perennial black hole in the defense budget that periodically expands to crisis levels, triggering fears of new program cuts to bridge funding gaps. Though this strategy of meeting spending targets has been a trend in recent years, the new Boris Johnson government announced it would be giving the defense budget—along with other elements of the national budget—a boost of £2.2 billion, taking defense spending up to £41.3 billion in 2020 to 2021.⁸

Therefore, two opposing dynamics are affecting United Kingdom defense spending. The first is the MOD is still living largely hand to mouth, despite increased monies. Extra funding is required at

7. Amyas Morse, *Ministry of Defence: The Equipment Plan 2016 to 2026*, HC 914 (London: National Audit Office, January 27, 2017).

8. Sajid Javid, *Spending Round 2019*, CP 170 (London: Her Majesty's Treasury, September 2019).

intervals to plug gaps between planned spending and available resources. The budget is not established on a solid basis; nor, frankly, is the budget sufficiently transparent for proper assessment, with the equipment program in particular being notoriously opaque. The considerable uncertainty about the state of the country's defense finances is due to the lack of transparency of the 10-year equipment program. For example, in contrast to French practice, the 10-year equipment program provides no detailed breakdown of programs in any single area beyond the headline figures: no start or end dates and no specific numbers for exactly what is being procured in a given period. Even parliamentary questions on the status of key programs often fail to obtain specific dates and numbers from the MOD. In contrast to the United States, the Defence Select Committee of the House of Commons is effectively powerless to do more than invite senior officers and officials to state their opinions on various issues voluntarily.

At the same time, driven by a changing geostrategic situation and the intensification of threats, United Kingdom political dynamics favor a stronger defense. Indeed, Parliament's strong support for defense has so far kept the United Kingdom military from running completely off the road. Nevertheless, the defense budget—particularly the affordability of the 10-year equipment program beyond 2025—remains in a precarious position and is vulnerable to electoral shocks and economic downturns.

Military Capability

The SDSR 2015 establishes the current 10-year plan for the force structure and future development

of the British Armed Forces: Joint Force 2025.⁹ Under this concept, the goal is to establish and maintain an expeditionary force that consists of

- a maritime task group centered on a *Queen Elizabeth*-class aircraft carrier with at least 24 F-35B embarked aircraft and around 10 to 25 ships and 4,000 to 10,000 personnel;
- a warfighting division with three brigades, including one of two new strike brigades, plus a range of support units consisting of around 30,000 to 40,000 personnel;
- an air group consisting of around four to nine combat aircraft squadrons, six to 20 surveillance platforms, five to 15 transport aircraft, and 4,000 to 10,000 personnel;
- a special forces task group; and
- Joint forces, including enablers and headquarters of around 2,000 to 6,000 personnel.¹⁰

Coupled with a new commitment to maintain two brigades at high readiness instead of just one as before, Joint Force 2025 represents a significant capability target increase, going from the total deployable force of about 30,000 personnel mandated by the previous defense review to at least 50,000 personnel under the new program. To gain a clearer understanding of the United Kingdom military, however, one must look at three core dimensions—force structure, readiness,

9. David Cameron, *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom*, CM 9161 (London: Her Majesty's Government, November 2015).

10. Defence Strategy & Priorities, *SDSR 2015: Defence Fact Sheets* (London: MOD, January 2016).

and mission capabilities—across the classic domains of warfare.

Naval Power

The Royal Navy is one of the most capable naval forces in the world with a full spectrum of capabilities, from nuclear and carrier strike to amphibious assault and an ability to operate globally. The Royal Navy's weakness, however, is its force structure: too few ships coupled with insufficient manpower. This weakness affects each major mission capability to some extent, but the Royal Navy's ability to meet its operational tasks must be seen in the wider context of Britain's geostrategic approach.

The Royal Navy's core naval combat capability consists of 13 antisubmarine warfare (ASW) frigates, six air defense destroyers, two amphibious assault transport docks, two upcoming 65,000-ton supercarriers, and seven nuclear attack submarines. In addition, the Royal Navy operates the country's nuclear deterrent of four ballistic missile nuclear submarines (SSBNs). At the lower end, naval capability includes 13 mine countermeasure vessels and three offshore patrol vessels. An essential and often overlooked component of the Royal Navy's operational effectiveness is its support arm, the Royal Fleet Auxiliary, consisting of tankers, supply ships, and three amphibious landing ship docks. Finally, the navy includes the Corps of Royal Marines, Britain's highly specialized, brigade-level, amphibious light infantry force.

Though the Royal Navy is fixed at its present size for the foreseeable future, the navy's underlying capability is being transformed by a wide-ranging

construction program. Almost the entire fleet is set to be modernized over the next decade-and-a-half with the introduction of new fleet support ships; frigates; offshore patrol vessels; mine countermeasure assets; nuclear attack submarines; SSBNs; and the full reconstitution of carrier strike capability, complete with F-35B air wings.

As for readiness, the navy's largest problem is a personnel shortage. The SDSR 2010 cut some 5,000 sailors from the force; the navy might require at least another 3,000 sailors to staff its fleet properly. That said, a key reason for the navy's ability to operate routinely on a global scale is its investment in an extensive logistics chain that includes support facilities around the world, from Gibraltar to the Persian Gulf and Singapore.

Despite the Royal Navy's size, the service is one of the few naval forces capable of planning, executing, and sustaining simultaneous naval operations of different kinds at different points around the globe. The headline here is the navy's carrier strike capability will soon be reconstituted, with the HMS *Queen Elizabeth* expected to reach initial operating capability in December 2020. The air wing of the *Queen Elizabeth* will include a mix of 12 British and 12 American F-35Bs. By 2025 to 2026, the United Kingdom expects to have an entirely British air wing of 36 F-35Bs ready to embark on the carrier. The main question regarding the Royal Navy's ability to deliver a full carrier strike mission capability has been the availability of escort ships from a reduced surface warfare fleet. The navy's solution—already advanced with current plans for the first deployment of the HMS *Queen Elizabeth*—is to integrate allied escort ships into the United Kingdom carrier strike group. Initially, the HMS *Queen Elizabeth*

escort group will include a Royal Netherlands Navy frigate.

The other ship in the class, the HMS *Prince of Wales*, is scheduled to become operational in 2023. At that point, Britain will always have a carrier ready to deploy within five days and the other carrier ready to put to sea within 30 days. A second carrier also opens the prospect of having two carriers available to meet different security needs and carry out a mix of tasks.

A strength of the United Kingdom military is its ability to land an expeditionary strike force anywhere in the world. The combination of a carrier with F-35Bs and a mixed force of attack and airlift helicopters, along with an assault ship and other assets, gives the Royal Navy a landing commando force very similar to a US marine expeditionary unit. The secretary of state for defence's announcement in February 2019 of plans to acquire two new vessels under the Future Littoral Strike Ship concept indicates amphibious assault is an area of growth for the Royal Navy.¹¹

In the harsh northern Atlantic maritime environment, ASW is a particularly complex and challenging mission requiring multiple layers of capability. To meet this mission, the Royal Navy can draw on a combined pool of eight towed-array sonar Type 23 frigates, seven hunter-killer submarines, and 30 upgraded Merlin ASW helicopters. With the addition of Boeing P-8 Poseidon maritime patrol aircraft starting in 2020 and plans to modernize other platforms, the United Kingdom's capability in this area should be among the most advanced globally. But this capability is somewhat limited in practice for

11. Gavin Williamson, "Defence in Global Britain" (speech, Royal United Services Institute for Defence and Security Studies, London, United Kingdom, February 11, 2019).

several reasons: The next-generation Type 26 frigate will not start replacing the old Type 23s until 2026 to 2027, the full fleet of nine P-8s will not be available until 2021 to 2022, and new *Astute*-class submarines will replace the last three of the old *Trafalgar*-class submarines by around 2024. In addition, the available ASW capability for the Atlantic theater might be strained by the requirement to support the aircraft carrier deployments.

Landpower

Of the three services, the British Army has experienced the most materiel and conceptual dislocation in recent years because of the reemergence of the possibility of state-on-state warfare in Europe. After nearly two decades of counterinsurgency campaigns, the army is in the process of adapting from a fully expeditionary model to a heavier force more suitable to dealing with the Russian threat. Under Joint Force 2025, the army's core structure will consist of three divisions plus an elite air assault brigade.¹²

The 3rd United Kingdom Division is the army's main deployable formation for heavier warfighting. Also known as the Reaction Force, the 3rd Division is to be kept operationally ready and capable of the full spectrum of intervention tasks. By 2025, the 3rd Division should include two armored infantry brigades (each with a Challenger 2 armored regiment and two armored infantry battalions mounted on Warrior infantry fighting vehicles) and two new Strike brigades (each with two mechanized infantry battalions mounted on Boxer eight-by-eight wheeled

12. British Army, *Transforming the British Army: An Update – July 2013* (London: British Army, July 2013).

armored vehicles and two Ajax armored cavalry regiments equipped with the new Ajax combat reconnaissance vehicle [tracked]). The division's deployment might include drawing on the army's fleet of Boeing AH-64 Apache attack helicopters; 50 of the latest-generation Apaches have been ordered and should begin entering army service in 2022.

The 1st United Kingdom Division, Britain's Adaptable Force, is a combination of lighter units currently organized in six infantry brigades. The Adaptable Force is intended to provide capabilities across the full range of military operations at the lower end of the spectrum: counterinsurgency, security assistance, peacekeeping, disaster relief, and garrison duty. In a major contingency, the 1st Division's principal role would be to provide rotational reinforcements to the deployed 3rd Division.

Finally, the 6th United Kingdom Division was established in 2019 as the army's gray-zone or hybrid-warfare formation. The 6th Division includes a brigade specializing in information warfare; an intelligence, surveillance, and reconnaissance brigade; two signal brigades with specialties in cyber and electronic warfare; and an infantry group with special skills in mentoring and supporting allied and partner forces. Elevating unconventional, noncombat operational capabilities and information maneuvers to the division level signifies an important shift in the ways in which the army expects to fight in the future.

The British Army's maximum-effort capability target, as set in the government's SDSR 2015, is to be able to deploy three maneuver brigades rapidly as a complete warfighting division of up to 40,000 troops by 2025—and to do so over long distances for an unending, high-intensity operation. A deployable

division is a level of effort similar to that which the army deployed in Iraq in 2003, which was a difficult undertaking at the time. Today, the United Kingdom land forces would have to consolidate capabilities into a single formation to generate a warfighting division, resulting in a one-shot army without the reserves of manpower and equipment to replace or sustain it in the field for more than six months.

The army faces significant difficulties in delivering this warfighting division. The army is nominally about 3,500 people short of the 82,000 regular troops plus 30,000 reserves required under current plans.¹³ Recruitment is a chronic problem that is impacted by a highly competitive United Kingdom labor market and a recruiting-age cohort with various issues, including high levels of obesity. In addition, the army's equipment situation is, at least in the near term, problematic. Although the planned equipment program of £19 billion over 10 years has started to address the recapitalization of the army's conventional warfighting capabilities, the army will not be able to restore those capabilities fully, as called for in Joint Force 2025, and hiccups in the budget or procurement could further complicate the matter.

The army's plan is coalescing around three key classes of mission capability: high-intensity conventional conflict, light expeditionary warfighting, and defense engagement and assistance. The most demanding operational benchmark for the army would be meeting a Russian invasion of the Baltics; however, whether a United Kingdom division could

13. MOD, *UK Armed Forces Quarterly Service Personnel Statistics 1 January 2020* (London: MOD, February 20, 2020).

deploy fully in time and fight effectively is debatable.¹⁴ Success would depend on the viability of the army's new Strike brigade concept as well as the effectiveness in combat of the army's two remaining armored infantry brigades.

The Strike brigade is intended as a highly mobile medium formation centered on Boxer eight-by-eight vehicles that can self-deploy with a light logistical footprint at distances up to 2,000 kilometers. Whether the unit is too light to deal with a Russian armored advance is perhaps the most pressing issue. One solution under consideration is to enhance Strike formations with greater fire support capabilities; potential capabilities are new 40-millimeter cannon turrets, 155-millimeter howitzers, air defense and antiarmor missile pods, and even an M142 High Mobility Artillery Rocket System module for the Boxer eight-by-eights.

The other half of the British Army's high-end warfighting capability is a force of two tank—or armored infantry—brigades, each with a regiment of 56 Challenger 2 main battle tanks. The Challenger 2 is beginning a life extension program, with a total of 148 tanks scheduled to be retained until 2035. At this number, the army will struggle to keep enough Challengers in service to fully equip both battle formations. But even at full strength, a United Kingdom brigade is inferior to its American brigade equivalent of around 90 tanks. And aside from the problem of numbers, two tank units based in the United Kingdom deploying in time to make a difference in a Baltic contingency is doubtful. In short,

14. David A. Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics* (Santa Monica, CA: RAND Corporation, 2016).

with the introduction of the hybrid Strike brigade concept, the army's main warfighting capability is less a heavy fighting force and more a medium-weight fighting force. And though the force is gaining in its deployable number of units, readiness, and mobility, the force is arguably doing so at the expense of lethality and protection.

With the Strike brigades and 1st United Kingdom Division, the British Army retains a light expeditionary force for enduring and unending or strategic raiding operations.¹⁵ In this mission area, the army is expanding its options against nonpeer opponents. For the British Army, the new gold standard for a medium-scale intervention is France's Operation Serval—an operation admired for its efficiency, speed, and minimal logistic footprint. The foundations of United Kingdom excellence in operations at this lower scale of conflict are its logistics and transport capabilities. Arguably, with its fleet of heavy-lift helicopters and transport planes and support from the Royal Navy's sealift capacity (if necessary), Britain is second only to the United States in the ability to deploy large units quickly at very long range.

Defense engagement and military support have become increasingly central to Britain's strategic outlook in recent years, and the army has been taking the lead in both. In the context of live conflicts in which the United Kingdom does not or cannot directly intervene, nonkinetic activities like training can evolve into active military support for proxy forces. As the fight against forces of the Islamic State of Iraq and Syria have shown, the combination of small-scale

15. Michael Clarke, interview by the Royal United Services Institute for Defence and Security Studies, November 23, 2015.

but high-end Western military capabilities (including logistics, intelligence, and discrete special operations forces support) and local militaries may well prove to be a winning combination. Much in this operational area will depend on trial and error and a correct assessment of local conditions. That said, Britain's ability to provide key enablers and force multipliers to local allies who can spearhead the fight on the ground is seen as an increasingly important element of United Kingdom military power.

Airpower

The Royal Air Force (RAF) has greater clarity in its operational roles than the other services; as a result, the development of the service has been more predictable and coherent. Having evolved over the past two decades into a global strike force, the RAF is now undergoing a process of modernization rather than one of structural or conceptual transformation. This modernization, when combined with the RAF's early strategic decision to bet its future on the quality of its platforms at the expense of numbers, has meant the service's basic plans have remained relatively stable.

The RAF is recovering from the pains inflicted by the 2010 cuts with the restoration of its maritime patrol capability; fleet improvements in intelligence, surveillance, target acquisition, and reconnaissance (ISTAR); and the government's commitment to the F-35 program. The RAF has lost the Harrier and Panavia Tornado fleets, but the service is attempting to fill in the gaps with multirole fighter jets, Typhoons, and F-35s.

The backbone of United Kingdom combat airpower today is its seven-squadron fleet comprising an

inventory of 153 Typhoons.¹⁶ The RAF is acquiring a total of 138 F-35s by 2035, with the first four squadrons of 48 F-35Bs (the short takeoff and vertical landing types) expected to be in service by 2024 to 2025 and intended primarily for carrier strike duties. The stealth fighter entered RAF operational service in early 2019 with F-35Bs conducting combat air patrols over Syria from Britain's air base in Cyprus. The RAF's ground attack capability also includes armed drones, with the force set to double its current fleet by replacing existing Reapers with at least 20 Protector drones (versions of the Predator B). The decision to procure the Protector drones was announced by former Prime Minister David Cameron in October 2015, with an initial operational capability of 2023 revealed in July 2018.¹⁷

The RAF's ISTAR fleet, second only to that of the US Air Force in capability, includes four Sentinel R1s with wide area surveillance radar, six Boeing E-3D Sentry airborne early warning and control aircraft (likely to be replaced by Boeing E-7 Wedgetails), three RC-135W Rivet Joint aircraft for electronic surveillance, and five Shadow R1s. In addition, as previously noted, nine Boeing P-8 Poseidons are being acquired to support the navy's ASW mission.

16. See MOD, *UK Armed Forces Equipment and Formations 2019* (London: MOD, August 8, 2019).

17. See Peter Dominiczak, "David Cameron Promises to 'Beef Up' the SAS to Take the Fight to ISIL," *Telegraph*, October 3, 2015, <https://www.telegraph.co.uk/news/politics/david-cameron/11909488/David-Cameron-promises-to-beef-up-the-SAS-to-take-the-fight-to-Isil.html>; and Craig Hoyle, "Farnborough: RAF Touts Potential of Protector Programme," *FlightGlobal*, July 15, 2018, <https://www.flightglobal.com/military-uavs/farnborough-raf-touts-potential-of-protector-programme/128836.article>.

The RAF also operates the single biggest air mobility fleet in Europe, consisting of 14 Voyager tanker and air transport jets, 22 Airbus A400M Atlases, eight C-17 Globemasters, and 24 Lockheed C-130J Hercules. In addition, the RAF operates a fleet of 60 Boeing CH-47 Chinook heavy-lift helicopters that are complemented by 23 Aérospatiale Puma HC2 helicopters.

Also of note, in 2018, the RAF decided to incorporate space into its planning more and began commonly referring to its air and space power. Until now, the RAF has lacked space-based capabilities, relying instead principally on the US military for space-derived intelligence. This reliance on the United States has started to change: The United Kingdom has conducted orbital tests, which were followed by recently announced plans to develop two small satellite intelligence, surveillance, and reconnaissance constellations (optical and radar).¹⁸ And, before the December 2019 parliamentary elections, in *Get Brexit Done: Unleash Britain's Potential* (the Conservative and Unionist Party Manifesto 2019), the party announced its intention to establish a Space Command if the party won a majority – which it did.¹⁹

The RAF has extensive operational experience, having kept busy over the past few years with the multinational campaign against the Islamic State of

18. See Penny Mordaunt, "Defence Secretary's Keynote Speech at the Air and Space Power Conference" (speech, Savoy Place, London, United Kingdom, July 18, 2019); and Jonathan Amos, "Project Oberon: UK Eyes Cluster of Military Radar Satellites," BBC, September 11, 2019, <https://www.bbc.co.uk/news/science-environment-49664409>.

19. See Conservative and Unionist Party, *Get Brexit Done: Unleash Britain's Potential* (London: Conservative and Unionist Party, November 2019).

Iraq and Syria, NATO duties in Europe (air policing in the Baltic region, Quick Reaction Alerts in response to Russian air deployments around the United Kingdom, and large-scale air mobility exercises), and occasional air mobility support to allied operations in the Sahel. This history of activity shows the RAF can sustain a high operational tempo and undertake different missions simultaneously at different points across the world.

Nonetheless, these operations have involved relatively small numbers of aircraft. The RAF's contribution to the fight against the Islamic State of Iraq and Syria (Operation Shader), its largest commitment in terms of strike aircraft since the Iraq War, peaked at a maximum of about 15 warplanes, plus up to 10 armed Reaper drones and a mixed ISTAR contingent. But a Strike formation with two full squadrons has not been forward deployed by the RAF for a long time. This lack of forward deployment is not necessarily an indication of an inability to be forward deployed. Operating directly from United Kingdom bases—as was partly the case during Operation Ellamy in Libya in 2011 and as would be the case in a NATO contingency—would make surging the operational availability of the RAF's combat force easier.

Even with a reduced fleet, the RAF can deliver the full range of air warfare mission capabilities, drawing on some of the most advanced weapon systems in the world. But questions remain regarding the degree to which these capabilities are scalable. The Typhoon/F-35B combination puts the RAF at a distinct qualitative advantage in air-to-air combat against any potential enemy, particularly when paired with the United Kingdom's strong tanker fleet. By 2025, Britain's fighter inventory should number around 180 to 190

planes across both types. But operational availability in a major NATO contingency is difficult to predict, particularly if the carrier strike group is at sea, and operational effectiveness will depend on the RAF and the alliance's ability to degrade the anti-access/area-denial systems of adversaries without losing too many planes in the process.

The RAF retired its highly effective ground attack Tornado fleet in 2019. To compensate, 107 Typhoons have been upgraded to integrate Storm Shadow cruise missiles and Brimstone 2 antiarmor, precision-guided missiles. In addition, the F-35Bs will be able to fire next-generation Select Precision Effects at Range Capability 3 long-range strike missiles starting in 2025.²⁰ These aircraft can also carry Paveway IV laser-guided bombs. In total, by the mid-2020s, the RAF is expected to have around 150 fast jets in its active Typhoon/F-35B fleet configured for ground attack missions and armed with advanced munitions in short-, medium-, and long-range strike weapon categories. In addition, the RAF can call on its armed drone fleet in a range of strike scenarios. Upgrading some ISTAR platforms with a ground attack capability based on the Sea Venom missile, which has a range of around 24 kilometers, may also be on the horizon.²¹

20. Gareth Jennings, "RAF Flies Meteor BVRAAM on Typhoon for First Time," *IHS Jane's Missiles and Rockets*, December 10, 2018, <https://web.archive.org/web/20190908234509/https://www.janes.com/article/85102/raf-flies-meteor-bvraam-on-typhoon-for-first-time>.

21. Gareth Jennings and Samuel Cranny-Evans, "UK to Double Armed-ISR Aircraft with 'Venom Kinetic Strike Capability,'" *Jane's Defence Weekly*, February 12, 2019, <https://web.archive.org/web/20190212221937/https://www.janes.com/article/86317/uk-to-double-armed-isr-aircraft-with-venom-kinetic-strike-capability>.

As noted previously, other key mission capabilities at which the RAF excels are ISTAR and air mobility. Britain has a large, full-spectrum, air-breathing ISTAR force, the capabilities of which are only surpassed by those of the US Air Force ISTAR force. In many areas, such as medium-altitude, long-endurance drones, the RAF is a leader in Europe. This ISTAR capability, in conjunction with Britain's well-established strengths in cyber and intelligence, would be a major force multiplier for United Kingdom military power in virtually all conflict scenarios short of high-end, state-on-state warfare, in which many of the platforms would be vulnerable. The RAF's outsized air transport and refueling fleet would also be a major force multiplier in such scenarios.

The RAF's overall strike capability makes the service an exceptionally effective force in close air support and other ground attack missions undertaken at the lower end of the spectrum of warfare and enables Britain to remain an influential partner of choice in multinational operations. But the RAF's operational effectiveness in a higher-end scenario is less clear. A higher-end scenario would involve F-35Bs using their stealth capability to close in on enemy advanced anti-access/area-denial systems and to relay targeting data back to Typhoon squadrons, which would then attack targets with standoff Storm Shadow cruise missiles. The main problems in such a scenario are the availability of RAF aircraft and munitions to deliver saturation attacks and whether operations can be sustained over several weeks of high-intensity operations. The RAF's known shortage of manpower and its rumored deficit in spares and munitions stockpiles would count against it in a long campaign. And one must assume some degradation

of capabilities, either through cyberattacks or possibly conventional attacks on United Kingdom bases.

Nuclear Deterrence

Nuclear deterrence remains the most critically important and expensive standing mission of the British Armed Forces. The capability is based on a fleet of four SSBNs carrying up to eight Trident II D5 missiles and 40 warheads per boat, with one submarine on patrol at all times.²² Nuclear deterrence is an area of world-leading technological and operational excellence for the Royal Navy, with Continuous at-Sea Deterrence having been in uninterrupted operation for over 50 years. But Continuous at-Sea Deterrence comes with a hefty price tag: The annual cost of upkeep for the deterrent is roughly 6 percent of the entire defense budget. Meanwhile, the *Dreadnought* program for building the next generation of SSBNs by the 2030s is the most expensive item in the Defence Equipment Plan at £41 billion.²³ In addition, Britain withdrew all air-launched nuclear bombs in 1998.

Beyond its military role and financial burden on the budget, the United Kingdom's nuclear deterrent is strategically significant in two other ways. First, the nuclear deterrent is an area of extremely deep and sensitive cooperation between the United Kingdom and the United States, particularly as Britain's Trident missiles are leased from and maintained jointly with that country. Thus, the deterrent provides arguably

22. MOD, *UK Nuclear Deterrent* (London: MOD, March 2016).

23. Claire Mills, *Replacing the UK's Nuclear Deterrent: Progress of the Dreadnought Class* (London: House of Commons Library, July 17, 2020).

the strongest and most vital link between the two countries' militaries and is one of the main reasons for the Special Relationship—which, in turn, is the cornerstone of United Kingdom defense policy. Second, the SSBNs based in Scotland are a magnet for Russian naval activity and a critical target in case of war; therefore, protecting the deterrent places a major but unavoidable burden on United Kingdom naval resources and maritime strategy in the northern Atlantic.

ASSESSING UNITED KINGDOM MILITARY CAPABILITY

Given the evolving nature of modern warfare, assessing a nation's warfighting capability is difficult to do with certainty. How effectively a nation networks its force, how adept a nation is at joint operations, and how capable a nation is at integrating new technology into its operations are questions that cannot be easily answered outside of an actual conflict. Nevertheless, the United Kingdom's wide range of tools for dealing with contemporary security challenges is strategically valuable. In addition, the strength of the United Kingdom military is boosted by joint enablers, such as special operations forces, offensive and defensive cyber capabilities, and military intelligence. Special operations forces in particular are an area of excellence for Britain, and the forces received a funding boost of £2 billion in the SDSR 2015.

Of course, military power is not just warfighting capability; military power depends just as much on how forces can be positioned and sustained around the world, which in turn shapes the kind of roles those forces can play. How the United Kingdom

gets to the fight has a military effect in itself and can determine the country's contribution to a conflict. For example, the RAF's base at Akrotiri in Cyprus has been central to military operations in and around Syria. Conversely, the United Kingdom's overseas commitments—defending its own bases and assuring allies and partners—feed back into the military's overall force structure design. For example, the requirement to defend the Falkland Islands has been a key argument for retaining the ability to send a task force at long range to a place like the South Atlantic Ocean, and commitments to the Persian Gulf have supported continued investment in naval mine countermeasure capabilities.

A central component of United Kingdom capability is the ability to deploy military power globally at the time and place of the country's choosing. Britain's military reach is maintained across all of its services as a strategic priority through investments in areas such as logistics, communications, and other support functions and is integrated with Britain's network of overseas bases and access and support agreements with partners all over the world.

Strategic Intent

Britain's strategic intent has evolved considerably since the early 2010s in response to the tectonic shifts in global geopolitics caused by the rise of China and the reemergence of the Russian threat. The result is a strategic policy with two distinct priorities: defending NATO and advancing the concept of Global Britain.

The military is adapting to these changes and new mandates by moving away from the consolidated expeditionary model that evolved through the

campaigns of the 1990s and 2000s. The military is effectively replacing that model with a two-tiered force. The first tier, which is designed for high-end conventional deterrence on land and in maritime environments, focuses on the warfighting division and bringing back the carrier strike group. This strategy is supported by the submarine-based nuclear deterrent, which, in United Kingdom strategy, acts as the ultimate insurance policy against nuclear blackmail. The Royal Navy's SSBNs allow Britain the full freedom to stand up to countries armed with nuclear weapons, like Russia, and confront the countries' actions at the same level of strategic intensity if required.

The second tier of capabilities is intended to support overseas stability operations under the mantle of Global Britain through, first, increased presence and more proactive management of local security dynamics and, second, the option to implement a heavier form of expeditionary capability epitomized by the Strike brigade concept and the navy's evolving amphibious assault forces. These latter capabilities are geared toward unending, higher-intensity interventions and therefore can also function as a deterrent against nonpeer adversaries.

Although the United Kingdom's response to the changed situation in Europe is relatively clear and straightforward, the way London seeks to tackle its expanded set of overseas strategic challenges is more complex and subtle. The main feature of Britain's response is the stepping up of the country's military presence at key points around the world. With the opening of new bases in Bahrain and Oman in 2018, the return "east of Suez," outlined by Boris Johnson in December 2016 when he was foreign secretary, has

become a major theme in United Kingdom strategy.²⁴ This strategy has since been backed by increased Royal Navy deployments to the Pacific, including on freedom of navigation missions in the South China Sea, and by reenergized engagement with allies in Southeast Asia about the Five Powers Defence Arrangements – a 1971 agreement among the United Kingdom, Australia, Malaysia, Singapore, and New Zealand stating the five countries will consult with each other in the event of a threat against any of them.²⁵ In December 2018, the secretary of state for defence took the Global Britain vision further, mentioning plans for two additional permanent bases in the West Indies and East Asia that would eventually enable the United Kingdom to maintain more forces in those places at all times.²⁶

Britain's overseas posture is intended to buttress existing regional security frameworks by denying strategic openings to the revisionist powers and contributing to local security by heading off potential crises before they emerge. Such activities do not require great outlays of military power because the activities aim to assure and assist local allies and partners and are not defense activities per se. In other words, for Britain, presence is strategy. The important

24. Boris Johnson, "Britain Is Back East of Suez" (speech, International Institute for Strategic Studies Manama Dialogue 2016, Manama, Bahrain, December 9, 2016).

25. See Tim Huxley, "Developing the Five Power Defence Arrangements," *Straits Times*, June 1, 2017, <https://www.straitstimes.com/opinion/developing-the-five-power-defence-arrangements>.

26. Christopher Hope, "Britain to Become 'True Global Player' Post-Brexit with Military Bases in South East Asia and Caribbean, Says Defence Secretary," *Telegraph*, December 29, 2018, <https://www.telegraph.co.uk/politics/2018/12/29/britain-become-true-global-player-post-brexit-new-military-bases/>.

thing is to be able to shape local dynamics and, in a crisis, provide key enabling capabilities to proxy forces that would bear the brunt of the fighting.

Overall, these strategies represent a return to a very British way of strategizing. These strategies have not been implemented in full since before World War II, when similarly stretched military resources were used to keep vast areas of the empire under control and to deter inroads by rival powers. Then, as it is starting to do again now, Britain operated a two-tier military. The British military had a heavy force designed for warfighting that was based at home—similar to the Royal Navy’s battle fleet—and had a light force for colonial policing duties—a role tasked to troops abroad and lighter naval units deployed at distant stations. A key to this latter strategy is the ability to do the less exciting, more basic tasks (such as global logistics and defense engagement) well and, hopefully, couple that ability with skilled orchestration of instruments of state power (such as diplomacy, trade, and the military) to achieve and retain local influence.

Whether this approach to the collective defense objectives of NATO and the ambitions of Global Britain will be sufficient is currently an unsettled question. But Britain’s strategy is probably the best that can be set for an overstretched military with growing but limited resources.

CONCLUSION: GAPS AND RISKS

The shape of United Kingdom hard power results from the balancing of risks in a resource-constrained environment. But capability gaps appear less serious when considered in the context of joint operations

and expectations for allied support—particularly US support. In other words, where the United Kingdom military lacks capability, the wider coalition is expected to fill in the gap in a real crisis.

For example, the lack of heavy antiship missiles on carrier aircraft might be offset by capabilities on US Navy escort vessels and United Kingdom submarines. In any northern Atlantic contingency, the Royal Navy should be able to call on US Navy Landpower and airpower and Norwegian F-35s armed with ship-killing Naval Strike Missiles. Similarly, the lack of a standoff land attack capability on Royal Navy destroyers and frigates will be compensated by submarine-launched and air-launched cruise missiles when carrier-based stealth aviation with medium-range air-to-surface missiles is added. A more problematic gap is the lack of a carrier-based deep-strike capability. But, presumably, this capability would be required only in high-end, state-on-state warfare, when the United States would be expected to use a range of assets, such as its strategic bombers.

In the RAF's case, the lack of a strategic bomber and the decision not to have F-35Bs carry the Storm Shadow cruise missile leave the RAF with no independent means to conduct deep conventional strikes. Here, again, the gap would have to be filled by American capabilities.

The army's lack of theater-range ballistic missiles, missile defense, and medium- and long-range air defense systems would be particularly troubling in a conflict with an adversary like Russia. But as the Yemeni Civil War has shown, even in a less high-end conflict, the absence of missile defenses can be problematic. Until the army bridges these capability gaps, its ability to fight and win on a conventional

battlefield in a situation in which air superiority is not guaranteed will be significantly impaired.

Capability gaps that can affect all services in a war are also the most critical for the combat effectiveness of the British Armed Forces. The most salient capability gap is the lack of a long-range ballistic missile defense for the United Kingdom mainland, which has potentially severe implications, particularly for the RAF's exposed bases. Second, the lack of space-based intelligence, surveillance, and reconnaissance capabilities as well as the lack of a sovereign global navigation satellite system and any operational space launch facilities for rapid reconstitution could significantly degrade United Kingdom military power in certain conflict scenarios. These gaps are now being addressed. But the space situation of the British Armed Forces will not improve significantly for a few years, and an offensive counterspace capability is not currently included in future plans.

Mass is a problem across all services. The British Armed Forces have shrunk worryingly to low levels in many areas, and regardless of the quality of equipment, niche capabilities, training, experience, and so on, numbers count in the end.

As was the case during the Cold War, Britain can contribute to a NATO contingency, but the country would not be able to bear the brunt of the effort. The question is whether this contribution in a hypothetical worst-case scenario would be significant enough to meet the requirements of NATO's deterrence posture. On one level, the simple answer is a decision by Moscow to engage in aggression against NATO is unlikely to hinge on whether the British Army has 400 tanks instead of 148 tanks in storage back in England or whether the Royal Navy's battle fleet has 20 ASW

frigates instead of eight ASW frigates. The combined total of all allied capabilities suggests the military balance is still favorable to NATO and deterrence is not imperiled by United Kingdom deficiencies. Arguably, any deficiencies in United Kingdom force posture would not be significant enough to override the Kremlin's risk assessment and invite an attack.

Limited available resources will make delivering an adequate force posture for Global Britain difficult. In particular, the navy will be hard-pressed to maintain a heightened presence overseas with significant naval forces. Arguably, the navy can maintain a heightened presence today, but in a crisis—let alone multiple overlapping crises—in which deployed forces must be significantly reinforced, the model could break down. Working more closely with allies, increasing defense engagement activities, and demonstrating an effective raiding capability based on the Strike brigades and amphibious assault units may help, but this element of United Kingdom military power remains precarious.

That said, despite its reduced size, British military power arguably remains credible and valuable to its allies because of the British Armed Forces' quality of personnel, training, and equipment; high-end niche capabilities; and highly permissive rules of engagement. Operating some of the most advanced military technology in the world with consummate professionalism ensures smaller militaries around the world seek out the United Kingdom for training and assistance, and British forces are interoperable with their American allies. Keeping up with the United States in terms of military technology and skills comes at a heavy price and has, within limiting budgets, resulted in trade-offs in mass. Nevertheless, keeping up with the American military is essential to the health

of the Special Relationship. Likewise, the United Kingdom's niche capabilities buy influence in coalition operations in which allies, often including even the United States, find themselves short of critical talent. Finally, rules of engagement are a key differentiator among militaries on the modern battlefield. And, though the British military is known for its experience on the battlefield, the military is also recognized for its proactive approach to military problems—an asset that is in short supply among many allies.

Britain's military power is currently traversing a period of change as the British Armed Forces adjust to a new strategic environment. In several important areas, such as Landpower and carrier strike, this process of adjustment will not reach maturity for a few years yet. But if current plans stay on track, the British Armed Forces will be markedly improved by the mid-2020s. Yet, military resources will be spread thin. Indeed, United Kingdom forces would have trouble coping effectively and securely with a large-scale conventional war with a military like Russia's and would struggle to handle multiple, simultaneous contingencies on a smaller scale.

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