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China's Missile Program and U.S. Withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty

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Executive Summary

- The Trump Administration cited China as a major reason behind its decision to suspend its obligations under the 1987 Intermediate-Range Nuclear Forces (INF) Treaty with Russia and begin the technical process of treaty withdrawal. Washington initiated the formal process of leaving the treaty on February 2, 2019, which will require six months to complete.*
- Beijing is not a party to the INF Treaty. In contrast to the restrictions the agreement imposes on the United States and Russia, remaining outside the pact has allowed China to rapidly expand its missile arsenal as part of a military strategy designed to counter U.S. and allied military power in Asia.
- China opposes both U.S. withdrawal from the INF Treaty and expanding the accord to include Beijing. Implicit in this position is a recognition that limits on the United States and Russia that do not constrain China advantage Beijing.
- Chinese experts see the U.S. withdrawal as emblematic of a more aggressive U.S. nuclear and missile posture as well as a means for Washington to pressure Moscow. Chinese scholars have proposed punishing U.S. allies in Asia if they host U.S. missiles in the future.
- U.S. withdrawal from the INF Treaty will have significant policy implications for the military balance in Asia, the global arms control regime, U.S. relations with Asian allies, and China-Russia ties. Withdrawal will have mixed impacts that potentially could improve or detract from regional and global security and the U.S. and allied ability to deter China.

Introduction

On February 2, 2019, the United States suspended its obligations under the INF Treaty that it entered into with the Soviet Union in 1987 and began the technical process of treaty withdrawal.¹ The INF Treaty requires destruction of ground-launched ballistic and cruise missiles with ranges of between 500 and 5,500 kilometers (km) (310 and 3,410 miles), their launchers, and associated support structures and equipment.² China is not a party to the treaty, and has consistently refused to accede to the accord.³ In the meantime, over the last two decades Beijing has built up a formidable missile arsenal outside the limits of the pact.

In explaining its justification for withdrawing from the INF Treaty, the Trump Administration has cited both Chinese missile capabilities and Russian violations of the agreement. President Trump criticized both countries' development of INF Treaty-noncompliant missiles and explained his rationale for planning to leave the treaty, saying, "If Russia's doing it, and if China's doing it, and we're adhering to the agreement, that's unacceptable."⁴ National Security Advisor John Bolton further explained the Administration's assessment, noting that China's missile capabilities meant there was a "new strategic reality out there" and that the INF Treaty had now become a "bilateral treaty in a multipolar ballistic missile world."⁵ This brief explains the importance of China's ground-launched missile capabilities to Beijing's overall military strategy; surveys Chinese reactions to U.S. withdrawal from the INF Treaty; and assesses both the positive and negative implications of treaty withdrawal for the military balance in Asia, global arms control regime, U.S. relations with Asian allies, and China-Russia ties.

Missiles as a Pillar of China's Military Strategy

* This paper has been updated to reflect the United States' official suspension of its obligations under the INF Treaty on February 2, 2019. An earlier version was published on January 28, 2019.

† The full official name of the treaty is The Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles. The United States first announced its intention to withdraw from the treaty in October 2018, and on December 4, 2018, U.S. Secretary of State Michael Pompeo announced the Trump Administration would give Russia 60 days to return to compliance or the United States would "suspend our obligations as a remedy." U.S. Department of State, *Press Availability at NATO Headquarters*, December 4, 2018. <https://www.state.gov/secretary/remarks/2018/12/287873.htm>; U.S. Department of State, *Treaty between The United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles (INF Treaty)*. <https://www.state.gov/t/avc/trty/102360.htm>.

Since the mid-1990s, Beijing has built up the world’s largest and most diverse arsenal of ground-launched missiles. China’s inventory contains more than 2,000 ballistic and cruise missiles, approximately 95 percent of which, according to U.S. officials, would violate the INF Treaty if China were a signatory.⁶ China’s military, the People’s Liberation Army (PLA), devotes an entire service, the PLA Rocket Force, to operating those missiles.⁷ Beijing’s INF Treaty-noncompliant missiles include some of its short-range (between 500 and 1,000 km or 310 and 620 miles), all of its medium-range (between 1,000 and 3,000 km or 620 and 1,860 miles), and all of its intermediate-range (between 3,000 and 5,500 km or 1,860 and 3,410 miles) ballistic missile variants.⁸ China’s inventory of ground-launched cruise missiles would also violate the INF Treaty (see Figure 1).⁹ The vast majority of China’s ballistic and cruise missiles are fitted with conventional warheads, although some have nuclear warheads and some are “dual-capable,” meaning they can accommodate either conventional or nuclear warheads.¹⁰

Figure 1: How China’s Rocket Forces Would Be Restricted if China were a Signatory to the INF Treaty

Missile System	Would be Restricted under the INF Treaty?	Estimated Range	Launchers (mechanisms for moving and firing missiles)	Missiles
Intermediate-Range Ballistic Missiles (IRBMs)	Yes	3000+ km	16–30	16–30
Medium-Range Ballistic Missiles (MRBMs)	Yes	1500+ km	100–125	200–300
Ground-Launched Cruise Missiles (GLCMs)	Yes	1,500+ km	40–55	200–300
Short-Range Ballistic Missiles (SRBMs)	Yes, for the significant percentage of China’s short-range missiles with ranges beyond 500 km	300 – 1,000 km	250–300	1,000–1,200
Intercontinental Ballistic Missiles (ICBMs)	Only the small number of missiles with ranges under 5,500 km	5,400 – 13,000+ km	50–75	75–100

Source: Adapted from U.S. Department of Defense, *Annual Report to Congress, Military and Security Developments Involving the People’s Republic of China 2018*, August 16, 2018, 125.

Both the nuclear and conventional missiles in China’s inventory that would be subject to INF Treaty restrictions are foundational to Beijing’s overall military strategy—namely, to hold U.S. forces at risk should they choose to intervene in a regional conflict—although the conventional missiles pose a more consequential problem for U.S. and allied military power in Asia. A small percentage of China’s missiles make up one leg of its small but growing nuclear deterrent force.¹¹ Experts at the Nuclear Information Project with the Federation of American Scientists estimate that China possesses approximately 120 nuclear-capable land-based missiles that can carry 186 of China’s total stockpile of nuclear warheads,[†] although the majority of those missiles are ICBMs and would not be constrained by the INF Treaty.¹² China’s nuclear-capable medium- and intermediate-range missiles support

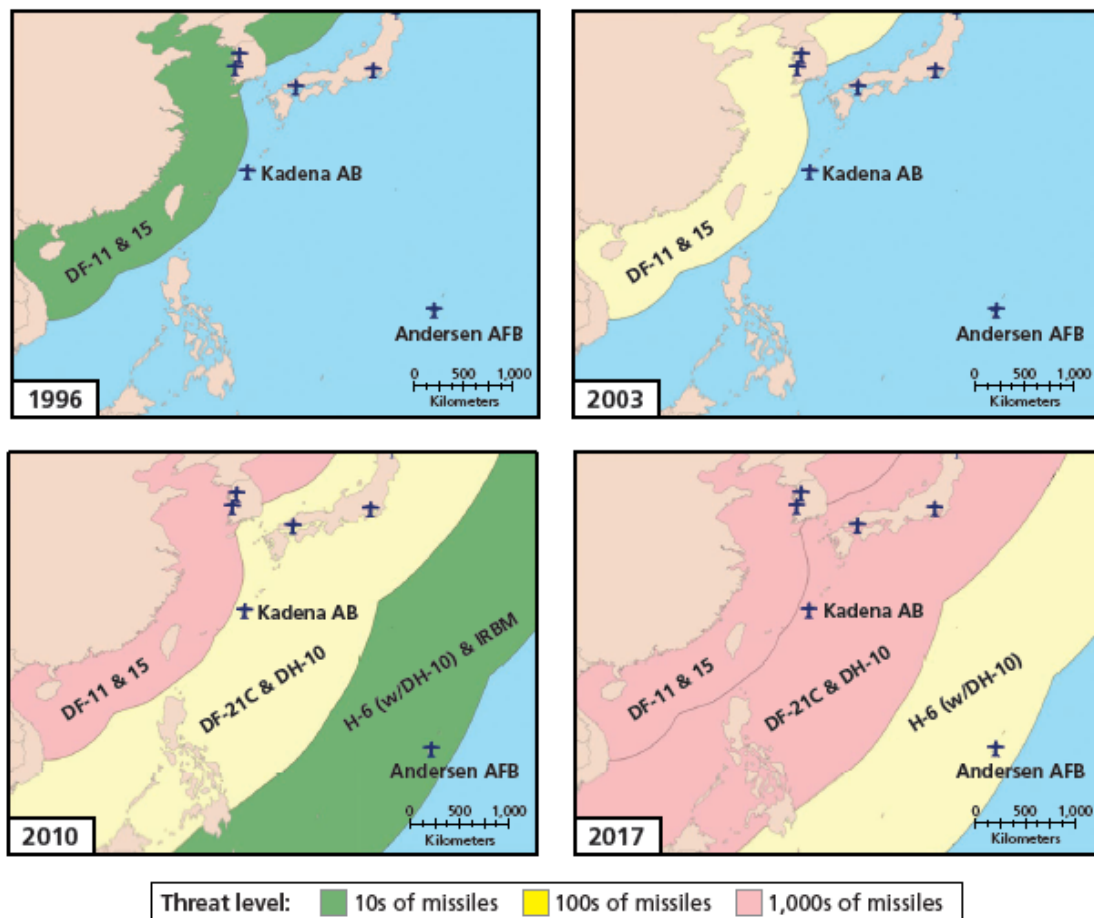
* The People’s Liberation Army also operates several other types of missiles that would not be restricted under the INF Treaty. These include intercontinental ballistic missiles (ICBMs), which have ranges beyond 5,500 km (3,410 miles), some ground-launched missiles with ranges under 500 km (310 miles), and a large inventory of missiles launched from aircraft, surface ships, or submarines.

† Some of these missiles are capable of carrying multiple independently targetable reentry vehicles (MIRV), allowing one missile to deliver multiple nuclear warheads. Other warheads may be kept in storage. China is estimated to possess a total of approximately 280 nuclear warheads, according to the Nuclear Information Project with the Federation of American Scientists. <https://www.tandfonline.com/doi/full/10.1080/00963402.2018.1486620>.

Beijing’s military and deterrence strategies toward regional powers such as Russia, Japan, India, Pakistan, and North Korea.

Separate from its nuclear arsenal, China’s land-based missiles armed with conventional warheads, nearly all of which would be restricted under the INF Treaty, present a more immediate challenge to the United States and its allies and partners. Chinese policymakers view these conventional missiles—whose accuracy has markedly improved in recent years—as a pillar of their warfighting strategy and useful across the spectrum of conflict, from deterrence and coercion to fighting wars.¹³ China plans to threaten or use its conventional missile arsenal against both regional countries and U.S. military assets and bases in Asia in the event of a future regional conflict, including one over Taiwan or islands in the East or South China seas. If such a conflict were to occur, experts assess China would use its conventional missiles to destroy its opponent’s key military targets, starting with reconnaissance and early warning, command and control, and air defenses before moving on to missile sites, aircraft, and ships.¹⁴ The sheer number of Chinese missiles and the speed with which they could be fired constitutes a critical Chinese military advantage that would prove difficult for a regional ally or partner to manage absent intervention by the United States (see Figure 2). China has also already demonstrated a willingness to use its missile capabilities to intimidate and coerce an opponent in scenarios short of war, such as in the 1995–1996 Taiwan Strait Crisis, when Beijing fired missiles into the waters off of Taiwan.¹⁵ The missiles China fired during the crisis were DF-15 short-range ballistic missiles that would be banned by the INF Treaty.¹⁶

Figure 2: Map of China’s Expanding Missile Range and Numbers over Time



Source: Eric Heginbotham et al., “The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power, 1996-2017,” *RAND Corporation*, September 14, 2015, 51.

China also likely plans to use conventional ballistic and cruise missiles as a key element of its strategy to attempt to forestall or defeat U.S. intervention in a regional conflict.¹⁷ Beijing would probably seek to prevent Washington

from coming to the aid of an ally or partner by targeting regional U.S. military facilities as far out as Guam, along with naval and air assets operating offshore, using both land attack and antiship missiles in addition to its other advanced capabilities.¹⁸ Western military strategists refer to this strategy as “anti-access, area-denial” (A2/AD) or simply counter-intervention. Chinese military doctrinal writings mirror those concepts and note how long-range precision strike capabilities can be used to nullify crucial U.S. military advantages.¹⁹ One example of an A2/AD capability is the DF-21D antiship ballistic missile that China designed for use against U.S. aircraft carriers.²⁰ Beijing’s precision strike capabilities are intended to stave off U.S. intervention in two ways: (1) by physically preventing forces from reaching the battlespace, and (2) by creating so much damage that U.S. policymakers become reluctant to keep fighting or sustain additional losses.²¹ Capabilities that can credibly threaten the U.S. military also support Beijing’s aim to intimidate and coerce regional states by fueling doubts about U.S. ability or willingness to intervene in a crisis.

Chinese Reactions to U.S. Withdrawal Announcement

Chinese officials and experts analyzing U.S. withdrawal from the INF Treaty have discussed the decision’s expected impact across several issue areas, including arms control and U.S. nuclear weapons policy, potential U.S. conventional missile deployments in Asia, U.S.-Russia relations, and Northeast Asian regional affairs. In response to the first announcement of U.S. plans to withdraw from the INF Treaty in October 2018, Chinese officials argued Beijing’s policies should not play a role in Washington’s decision. Chinese Foreign Ministry Spokesperson Hua Chunying told reporters “making an issue out of China on withdrawing from the treaty is totally wrong” and called on the United States to “think twice before pulling out.”²² She added a vague warning that U.S. withdrawal from the treaty would have many “negative effects.”²³ The Chinese government has also officially stated its opposition to Beijing joining the INF Treaty. At a separate press conference, Spokesperson Hua responded to a question on potentially expanding membership to include China and others by stating Beijing opposes “multilateralization of the INF Treaty.”²⁴ Implicit in China’s official position is an assessment that U.S. and Russian adherence to the INF Treaty, while China remains outside the pact, creates an asymmetry of arms control regimes that Beijing leverages to its advantage and therefore wants to maintain.

For their part, Chinese scholars expressed concern about what withdrawal signifies for U.S. nuclear policy overall and how it might impact strategic stability. Wu Zurong, a research fellow at the China Foundation for International Studies, argued that withdrawal from the INF Treaty would signal a more aggressive U.S. nuclear policy.²⁵ He also connected the 2002 U.S. decision to pull out of the Anti-Ballistic Missile Treaty to withdrawal from the INF Treaty and a potential future lapse of the New START Treaty, citing these developments as evidence of a general U.S. shift away from arms control treaties as a tool of statecraft.²⁶ INF Treaty withdrawal will deepen existing Chinese concerns about more assertive U.S. nuclear and defense policies stemming from the 2018 Nuclear Posture Review, 2018 National Defense Strategy, and 2017 National Security Strategy, although it is unclear whether these developments will substantially impact the pace or direction of China’s nuclear force development.²⁷ Zhao Minghao, senior fellow with the Charhar Institute and an adjunct fellow at China’s Renmin University, wrote that in addition to other issues in U.S.-China relations such as trade, Taiwan, and maritime disputes, “the potential disruption of strategic stability may become a new source of friction between Beijing and Washington.”²⁸

Chinese experts also argue that U.S. withdrawal would likely enable the U.S. military to deploy in East Asia conventional ground-launched missiles previously banned under the INF Treaty, which could trigger Beijing to further increase its missile arsenal. Ling Shengli, secretary general of the Center for International Security Studies at China Foreign Affairs University, wrote that the United States will deploy ground-launched missiles in Asia “once it breaks free from the shackles of the INF Treaty.”²⁹ In response, Chinese scholars argue, Beijing could respond by doubling down on building its missile inventory. Shi Yinhong, a professor of international relations at Renmin University, said if the United States deploys INF-range missiles in Asia, “the development of Chinese missiles is likely to rapidly accelerate... This is the logic of an arms race.”³⁰

Finally, Chinese analysts evaluated the impact U.S. withdrawal will have on the international security environment, in particular U.S.-Russia relations and in Asia. On the U.S.-Russia angle, Diao Daming, associate professor of international relations at Renmin University, wrote the Trump Administration “could be trying to hang a sword over Russia and be trying to gain an advantage when bargaining with [Moscow] on other issues.”³¹ Separately, Zhou Bo,

an honorary fellow at the PLA Academy of Military Sciences, dismissed the notion that Russia will take advantage of the demise of the INF Treaty to deploy missiles on its border with China.³² Zhou also threatened South Korea and Japan with punishment if they decide to host U.S. ground-launched missiles, drawing a comparison to Beijing’s economic coercion campaign against Seoul over the Terminal High Altitude Area Defense (THAAD) missile defense system. Zhou went on to state that U.S. allies and partners in Asia should “think twice” about whether their “security depends more on improving relations with an immediate neighbor or standing with a distant ally.”³³

Implications for the United States

Some critical factors related to U.S. withdrawal from the INF Treaty, such as the impacts on U.S.-Russia relations and the military balance in Europe, are outside the Commission’s mandate and thus beyond the scope of this report. However, a number of key issues relating to U.S.-China relations and regional security in Asia will be directly impacted by U.S. withdrawal from the treaty.

Regional Military Balance

One of the main rationales for withdrawing from the INF Treaty is likely to offset the advantages China derives from its large missile arsenal and thereby help deter aggressive actions by Beijing. Proponents of removing the INF Treaty’s strictures argue that being allowed to field ground-based missile systems would enhance U.S. strike capability in ways that are both cheaper and more survivable in a conflict.³⁴ U.S. defense planners could also potentially take advantage of those attributes when developing new operational concepts for the region. Furthermore, the low cost of missiles compared to ships and aircraft makes them an attractive option in an era of intense competition for defense dollars. Advocates of leaving the INF Treaty point out that missiles would force China to focus on destroying more targets in a conflict, thus diluting the amount of firepower the PLA could devote to any specific target. U.S. missiles could also potentially be mobile, hidden, and dispersed throughout the territories of its allies and partners—for example in the Ryukyu Island chain in Japan’s southwest or in the jungles of the Philippines—all of which would complicate Chinese military planning.

Conversely, opponents of leaving the treaty argue the case for withdrawal overstates both the military necessity and potential benefits of pulling out, and that leaving the agreement could further contribute to a regional arms race. Analysts who favor remaining in the treaty point out that the United States does not yet have deployable ground-based missile systems and would need to develop them in order to take advantage of INF Treaty withdrawal.³⁵ Withdrawal opponents add that both geographic and political limitations on land areas in which to disperse ground-based missiles could weaken the survivability argument and potentially increase China’s incentive to target the territory of U.S. allies and partners in a conflict.³⁶ Opponents of treaty withdrawal also maintain that the U.S. military already fields sufficient air- and sea-based strike capability to deter and, if need be, neutralize Chinese military forces, including those based on the Mainland.³⁷ These analysts often cite General Paul Selva, Vice Chairman of the U.S. Joint Chiefs of Staff, who testified to Congress in March 2017 that “there are no military requirements we cannot currently satisfy due to our compliance with the INF Treaty. While there is a military requirement to prosecute targets at ranges covered by the INF Treaty, those fires do not have to be ground-based,” although he went on to say ground-based systems in the future could provide both “operational flexibility and scale.”³⁸

Arms Control and U.S.-China Strategic Stability

Leaving the INF Treaty will have implications for the larger framework of U.S. policy toward attempting to further integrate China into arms control agreements and the global nonproliferation regime. In an atmosphere of intensifying great power competition, Washington will need to consider whether, when, and how to incorporate Beijing into existing or future arms control agreements—or whether China can be integrated at all.³⁹ Both U.S. and Russian officials have proposed trying to update and expand the INF Treaty to cover China and thereby ensure the treaty’s long-term viability.⁴⁰ Alternatively, other analysts advocate limiting the INF Treaty’s geographic jurisdiction to Europe, thus allowing both the United States and Russia to match China’s missile buildup in Asia.⁴¹ Such an approach was discussed during the original treaty negotiations in the 1980s, but was ultimately dismissed due to Japanese concerns about the Soviet missile threat in Asia.⁴²

In addition, dissolving the INF Treaty has the potential to both positively and negatively affect the broader U.S. goal of maintaining bilateral strategic stability.⁴³ Strategic stability with China is already under stress amid both sides' expanding nuclear arsenals and potential changes to nuclear policy.⁴⁴ Beijing is seeking to complete a nuclear triad while debating the parameters of its “no first use” policy, while Washington, in line with the 2018 Nuclear Posture Review, plans to build additional low-yield and submarine-launched nuclear weapons and grow the role of nuclear weapons in its defense strategy. Advances in long-range conventional precision strike, missile defense capabilities, and emerging technologies in the space and cyber domains are posing additional challenges to strategic stability.⁴⁵ Deploying U.S. ground-based missiles in Asia could deepen Beijing's fears about the security of its minimal nuclear arsenal—some of which is co-located with conventional missiles and much of which shares command and control networks with conventional forces—and prompt China to further expand both its nuclear and conventional missile capabilities in response.⁴⁶ Conversely, placing ground-based missiles in East Asia following withdrawal from the INF Treaty could bolster Washington's ability to deter aggressive Chinese behavior, thus making the situation more stable rather than less.

Alliance Management and Asian Regional Security

Withdrawing from the INF Treaty could have both drawbacks and benefits for U.S. regional allies. Fielding new ground-based capabilities that were previously banned under the INF Treaty would require placing those systems on land in allied territory (as opposed to in the global commons of the sea or air) within range of China. Analysts have identified Japan as the most likely host for such weapons, although others have suggested Australia, the Philippines, or the U.S. territory of Guam.⁴⁷ However, allies' immediate reactions to the original U.S. withdrawal announcement have signaled initial apprehension combined with an understanding of U.S. concerns and interest in additional consultations. For instance, Japan's Chief Cabinet Secretary Yoshihide Suga said it would be “undesirable” for the United States to withdraw from the INF Treaty and added, “We hope that it will be averted.”⁴⁸ In particular, he raised concerns about the potential for sparking a regional arms race in Asia and complicating disarmament talks with North Korea, although he also recognized the impact of “changes in the global security environment” on the U.S. announcement and expressed a desire to consult with Washington further on the topic.⁴⁹ U.S. policy will also have to take into account the views of its Indo-Pacific treaty allies South Korea, Australia, and the Philippines as well as partners such as India and Taiwan. Some allies might be persuaded that additional U.S. missile capabilities are worthwhile because they help enhance deterrence in Asia. Allied governments could also be convinced that pulling out of the INF Treaty could generate leverage to push for an expanded treaty that addresses Chinese capabilities.⁵⁰

China-Russia Relations

Some experts believe ending INF Treaty restrictions may prompt Russia to deploy medium- and intermediate-range missiles to counter China's rapidly growing missile capabilities.⁵¹ Moscow fielding such missiles could damage the cooperative relationship it has built with Beijing in recent years.⁵² If Russia decided to station INF-range missiles on the Sino-Russian border, that decision would reflect concerns that go beyond just China's missile capabilities. Russian officials—including President Vladimir Putin—have voiced longstanding concerns about how China's military modernization is reshaping the balance of power in Asia.⁵³ For the moment, however, a Russian missile buildup on the border with China that undercuts the Sino-Russian partnership is unlikely to be realized given the significant warming in bilateral ties. Mutual demilitarization of their shared border is a core element of fast-improving Sino-Russian relations. Still, over time, deepening Russian concerns about Chinese military power could develop into a major point of friction between Beijing and Moscow.⁵⁴ Without the INF Treaty, Russia would have fewer restrictions on potential military responses to counter China's military expansion.

Endnotes

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