

POLICY BRIEF



# China's Nuclear Weapons Build-up and Its Implications for Northeast Asian Security

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Cover Photo: The Dongfeng-17 medium-range ballistic missile mounted on the DF-ZF hypersonic glide vehicle, displayed at the "Advancing into a New Era" exhibition at the Beijing Exhibition Center, 20 October 2022. (Wikimedia)

## CHINA'S NUCLEAR WEAPONS BUILD-UP AND ITS IMPLICATIONS FOR NORTHEAST ASIAN SECURITY

### EXECUTIVE SUMMARY

This policy brief argues that China's nuclear modernisation should concern the United States less because it poses a nuclear threat to the US homeland, and more because it poses a risk to vital US interests in Northeast Asia. China's nuclear modernisation increases the risk that it will be emboldened to invade Taiwan, as well as the risk that Japan and South Korea might request deployment of US tactical nuclear weapons on their territory or chose to develop their own nuclear weapons. Although it will be hard for Washington to stop China from continuing to build up its nuclear arsenal, it should seek to manage these risks by strengthening deterrence measures around the Taiwan Strait and giving stronger assurances to its regional allies. Additionally, Washington and Beijing should enhance transparency as to their nuclear posture and missile testing, and also establish viable crisis management mechanisms.

## INTRODUCTION

China is modernising, diversifying, and expanding its nuclear arsenal at a rapid speed. Should Washington be legitimately concerned? After all, the United States' nuclear arsenal will still remain significantly larger than China's. The United States has a solid second-strike capability – the ability to launch a nuclear retaliation against China in the event of China's first nuclear strike against the United States. In other words, the US' deterrence capability against a Chinese nuclear strike will remain intact. However, China's advancing nuclear capabilities may increase the chance China will invade Taiwan by inducing Beijing to believe that the United States would be deterred from intervening. Now that China has enhanced its own second-strike capability against the United States, Beijing will increasingly question if the United States would put its people under nuclear threat to defend Taiwan if push comes to shove. In addition, China's advancing nuclear arsenal is making South Korea and Japan nervous, thereby incentivising Seoul and Tokyo to pursue their own nuclear deterrent options against China. The call for nuclear armament is high among South Koreans, and a recent poll suggests that the country's ambition for indigenous nuclear weapons is partially driven by its fear of China. Meanwhile, some Japanese politicians too have called for the deployment of US tactical nuclear weapons on Japanese soil to counter China. As China's nuclear capabilities grow, there will likely be increasing calls for a nuclear option in South Korea and Japan, which would not only destabilise the region but also undermine the global nonproliferation norm. While it will be hard for Washington to stop China's nuclear buildup, it could seek to mitigate its negative implications by enhancing its capability to deter China from challenging the status quo in the region, and also by signaling to China and its allies its commitment to maintaining stability in the region. In addition, Washington should engage in dialogue with Beijing on crisis management mechanisms in order to avoid miscalculations and reduce the risk of unintended military clash.

## CHINA'S NUCLEAR BUILD-UP

According to a report by the Stockholm International Peace Research Institute, released in January 2023, China maintained about 410 nuclear warheads, marking an increase of 60 from 2022.<sup>1</sup> This assessment is similar to the Department of Defense's 2022 report on China's military power, which estimated that China has over 400 operational nuclear warheads, and also that China could acquire 1,500 warheads by 2035.<sup>2</sup> China is currently building fast breeder reactors and reprocessing facilities, which will not only aid its ambitious civilian nuclear program but could also facilitate its fissile material production capacity and nuclear stockpile enlargement down the road. In addition to

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<sup>1</sup> Stockholm International Peace Research Institute (SIPRI) Yearbook 2023: Armaments, Disarmament and International Security, SIPRI, 2023, <https://www.sipri.org/yearbook/2023>, 284

<sup>2</sup> 2022 Report on Military and Security Developments Involving the People's Republic of China," Office of the Secretary of Defense, 2022, <https://www.defense.gov/CMPR>.

nuclear warheads, China's nuclear delivery mechanisms are also increasing in numbers and becoming more sophisticated. China may possess an equal or a greater number of intercontinental ballistic missiles (ICBMs) than Russia and the United States,<sup>3</sup> and is building silos to house more than 300 ICBMs. According to the US Strategic Command, as of last January, China's inventory of ICBM launchers exceeded that of the United States.<sup>4</sup> China is also building a new generation of its Jin class (Type 094) nuclear-powered ballistic missile submarines. This generation of submarines will carry more missiles and also run more quietly, which will decrease the chance of detection. China is replacing its aging silo-based, liquid-fueled missiles with a number of mobile solid-fueled missiles with multiple independently targetable reentry vehicles (MIRV), which are less vulnerable to interception than China's older missiles. China's other new missile systems, such as the fractional orbital bombardment system<sup>5</sup> equipped with hypersonic glide vehicles and air-launched ballistic missiles, will also be less vulnerable to detection and interception, and could neutralise US missile defense systems.

### WHY DOES THIS MATTER?

Does this necessarily mean that the United States should worry? After all, China's nuclear arsenal is far smaller than the United States'. Even if it is true that China has more ICBMs that can reach the United States, it has far fewer nuclear warheads to mount on those missiles than the United States. China's growing nuclear warhead stockpile (around 400) still pales in comparison to the nuclear arsenal of the United States, which includes more than 3,700 total active nuclear warheads and 1,770 deployed.<sup>6</sup> This gap is significant even considering the fact that the United States has to counter other nuclear actors in addition to China, most notably Russia. China may acquire as many as 1,500 nuclear warheads by 2035 as the Pentagon warns, but the United States can also build more during this time if deemed necessary, although the number of deployed US nuclear weapons may still be limited by treaty obligations. China, though not bound by any relevant treaty, does not deploy nuclear warheads, adhering to its policy of separating nuclear warheads from their delivery vehicles during peacetime. The United States' first strike capability – the ability to destroy a nuclear power's arsenal with a first nuclear strike – against China appears to be eroding given

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<sup>3</sup> SIPRI Yearbook, 284.

<sup>4</sup> Michael R. Gordon, "China Has More ICBM Launchers Than US, American Military Reports," *Wall Street Journal*, February 7, 2023, <https://www.wsj.com/articles/china-has-more-icbm-launchers-than-u-s-american-military-reports-11675779463>. Please note that the accuracy of this statement has been challenged. See Hans Kristensen, Eliana Johns and Matt Korda, "STRATCOM Says China Has More ICBM Launchers Than The United States – We Have Questions," Federation of American Scientists, February 10, 2023, <https://fas.org/publication/stratcom-says-china-has-more-icbm-launchers-than-the-united-states/>.

<sup>5</sup> This technology is still in the testing stage, and some have expressed skepticism toward the efficacy of this system even if China successfully deploys it. See Bleddyn Bowen and Cameron Hunter, "Chinese Fractional Orbital Bombardment," Asia-Pacific Leadership Network, 2021, <https://cms.apln.network/wp-content/uploads/2021/11/FINALBowenHunterPolicyBrief.pdf>.

<sup>6</sup> SIPRI, 248.



the increasing survivability of China's nuclear arsenal. However, the United States still has a solid second-strike capability. Although the United States is now vulnerable to a nuclear attack by China, this vulnerability is also shared with China. Washington is reluctant to accept mutual vulnerability with China, but it was the same mutual vulnerability shared between the United States and the Soviet Union that contributed to averting nuclear Armageddon during the Cold War. In other words, China's nuclear modernisation does not undermine the United States' ability to deter China's nuclear strike against its homeland. However, China's nuclear buildup could have disruptive effects on the stability of Northeast Asia and beyond.

### *Heightened Risk of China Attempting to Invade Taiwan*

Beijing may increasingly believe that its growing nuclear capabilities will deter the United States from intervening should China invade Taiwan, which would significantly lower Beijing's estimated cost of invasion. There have been increasing concerns that China will invade Taiwan. Some, including former commander of Indo-Pacific Command Philip Davison, warned of a potential Chinese invasion of Taiwan by as early as 2027.<sup>7</sup> The cost of invading Taiwan will not be cheap, however. As the Ukraine War illustrates, a country that is militarily superior in general does not necessarily easily invade and occupy another country. In particular, the kind of amphibious operations that China would have to conduct are not simple. On top of that, if the United States comes to the aid of Taiwan, the cost for the Chinese military would be prohibitive. At worst, China may fail to take Taiwan by force. In 2022, the Center for Strategic and International Studies ran a wargame for a Chinese invasion of Taiwan 24 times, finding that China's attempt to reunify Taiwan by force would likely fail if the United States intervened quickly and decisively, and even in some cases where it was successful, would nevertheless suffer significant costs.<sup>8</sup> Failing to reunify Taiwan, or doing so with enormous costs would challenge Beijing's legitimacy and thus its regime security. Therefore, whether Washington will come to the aid of Taiwan or not is one of the most significant factors in China's cost-benefit analysis.

Will Washington defend Taiwan? More importantly, will Beijing believe that Washington will defend Taiwan? Washington's official policy remains one of "strategic ambiguity" – intentionally leaving it unclear to what extent the United States would come to the aid of Taiwan should China invade. In the past, the United States has signaled its strong will to do so. When China fired nuclear-capable missiles in the vicinity of Taiwanese waters during the 1995-96 Taiwan Strait Crisis, US Defense Secretary William Perry told Liu Huaqiu, a senior Chinese national security official, that there

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<sup>7</sup> Adela Suliman, "China could invade Taiwan in the next 6 years, assume global leadership role, US admiral warns," *NBC News*, March 10, 2021, <https://www.nbcnews.com/news/world/china-could-invade-taiwan-next-6-years-assume-global-leadership-n1260386>.

<sup>8</sup> Mark F. Cancian, Matthew Cancian, and Eric Heginbotham, "The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan," Center for Strategic and International Studies, January 9, 2023, <https://www.csis.org/analysis/first-battle-next-war-wargaming-chinese-invasion-taiwan>.

would be “grave consequences” should China strike Taiwan.<sup>9</sup> His words were followed by the United States’ deployment of aircraft carriers, which forced China to back down. At that time, such US actions involved relatively low risk given its overwhelming military superiority in general, and its almost certain first strike capability vis-à-vis China in particular. Even then, though, it is unclear if Beijing believed that the United States would actually intervene. According to Chas Freeman Jr., who had served as assistant secretary of defense, top Chinese military officials said then: “In the 1950s, you three times threatened nuclear strikes on China, and you could do that because we couldn’t hit back. Now we can. So you are not going to threaten us again because, in the end, you care a lot more about Los Angeles than Taipei.”<sup>10</sup> At that time, however, there was doubt whether China could hit back at the United States indeed. Having enhanced second-strike capability, China can now hit back at the United States for certain. Beijing may now believe that there is a higher chance that the United States would be deterred from intervening if it invades Taiwan, which alters Beijing’s calculations of the cost of invasion.

#### *Exacerbating security concerns in Japan and South Korea*

Another repercussion of the expansion and modernisation of China’s nuclear arsenal will be increasing the sense of insecurity on the part of South Korea and Japan. Already, South Korea and Japan are becoming more and more wary of China’s growing military and economic clout and willingness to wield its power. The anti-Chinese sentiment is high in both countries. According to a poll conducted by Pew Research Center in June 2022, only 19% of South Koreans and 12% of Japanese hold a favorable view of China.<sup>11</sup> In another poll conducted by the Central European Institute of Asian Studies, among 56 countries surveyed worldwide, South Korea dislikes China most with 81% expressing negative sentiments toward China, trailed by Switzerland (72%) and Japan (69%).<sup>12</sup> The record high negativity toward China among South Koreans was caused by China’s economic retaliation in the wake of the deployment of US Terminal High Altitude Area Defense (THAAD) on South Korean soil in 2016, which wreaked havoc on South Korea’s economy. China’s recent claims over South Korean cultural legacies, such as *kimchi* and *hanbok*, have also contributed to the rise of antipathy toward China among South Koreans. In Japan, anti-Chinese sentiment rose significantly in the late 2000s, around the time when China started making incursions into Japanese territorial waters off the Senkaku Islands

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<sup>9</sup> Barton Gellman, “US and China Nearly Came to Blows In '96,” *Washington Post*, June 21, 1988, <https://www.washingtonpost.com/archive/politics/1998/06/21/us-and-china-nearly-came-to-blows-in-96/926d105f-1fd8-404c-9995-90984f86a613>.

<sup>10</sup> *Ibid.*

<sup>11</sup> Laura Silver, Christine Huang and Laura Clancy, “Across 19 Countries, More People See the US than China Favorably – But More See China’s Influence Growing,” Pew Research Center, June 29, 2022, <https://www.pewresearch.org/short-reads/2022/06/29/across-19-countries-more-people-see-the-u-s-than-china-favorably-but-more-see-chinas-influence-growing>.

<sup>12</sup> Richard Turcsányi, “Trans-Atlantic public opinion on China: Great power competition amidst Russian invasion of Ukraine,” Central European Institute of Asian Studies, December 2022, <https://ceias.eu/trans-atlantic-public-opinion-on-china>.

(which China calls the Diaoyu Islands).<sup>13</sup> In addition, given the proximity of the Senkaku Islands to Taiwan, the Japanese are increasingly concerned about China's provocations in the Taiwan Strait. Adding to Japanese concern, when then-Speaker of the US House of Representatives, Nancy Pelosi, visited Taiwan in August 2022, China conducted its largest exercise to date in the Taiwan Strait, and fired several ballistic missiles, some of which landed in Japan's exclusive economic zone.

The advancement of China's nuclear arsenal will only further intensify Seoul and Tokyo's sense of insecurity and may incentivise them to consider developing their own nuclear deterrent. Already, China is at least partially driving the growing call for nuclear armament in South Korea. According to a 2022 Chicago Council survey report, 71% of South Koreans support South Korea's indigenous development of nuclear weapons.<sup>14</sup> 39% of those who supported nuclear armament chose as the primary reason "to defend South Korea from threats other than North Korea," while only 23% chose "to counter the threat of North Korea." While it is unclear which actors the respondents had in mind, 56% chose China as the biggest threat to their country 10 years from now – higher than North Korea (22%) and Japan (10%).<sup>15</sup> Taken together, these data allow us to assume that South Koreans' ambition for nuclear weapons is at least partially caused by their fear of China. China's growing nuclear capabilities will only further contribute to this trend.

While the likelihood of Japan's nuclear armament is lower due to the strong "nuclear allergy" – the public antipathy toward nuclear weapons – deeply engrained in the Japanese psyche, Japan may pursue deployment of US tactical nuclear weapons on its soil to counter China's growing nuclear threats. Japan adheres to the "Three Non-Nuclear Principles of not possessing, not producing and not permitting the introduction of nuclear weapons." However, debates about a nuclear option persist. Several prominent politicians have lamented Japan's lack of its own nuclear deterrent against China and North Korea, and called for developing one. Most notably, in the wake of Russia's invasion of Ukraine and rising concern over China, former Prime Minister Shinzo Abe called for the deployment of US nuclear weapons in Japan, arguing that Japan should no longer consider the nuclear option a taboo in the changing security environment.<sup>16</sup> Prior to that, in 2017, former defense minister Shigeru Ishiba also called for hosting US tactical nuclear

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<sup>13</sup> Koya Jibiki, "China's Warmer Feelings toward Japan Go Unrequited," *Nikkei Asia*, January 31, 2020, <https://asia.nikkei.com/Politics/International-relations/China-s-warmer-feelings-toward-japan-go-unrequited>.

<sup>14</sup> A more recent survey conducted by the Korea Institute for National Unification (KINU) found that the call for nuclear armament in South Korea has declined to 53.6%. See Sang Sin Lee et al., KINU Unification Survey 2023, Korea Institute for National Unification, (April-May 2023), <https://repo.kinu.or.kr/handle/2015.oak/14362>.

<sup>15</sup> Toby Dalton, Karl Friedhoff and Lami Kim, "Thinking Nuclear: South Korean Attitudes on Nuclear Weapons," The Chicago Council on Global Affairs, February 21, 2022, <https://www.thechicagocouncil.org/research/public-opinion-survey/thinking-nuclear-south-korean-attitudes-nuclear-weapons>.

<sup>16</sup> Justin McCurry, "China Rattled by Calls for Japan to Host US Nuclear Weapons," *The Guardian*, March 1, 2022, <https://www.theguardian.com/world/2022/mar/01/china-rattled-by-calls-for-japan-to-host-us-nuclear-weapons>.



weapons in Japan. Other Japanese top officials have argued that hosting US tactical nuclear weapons would be constitutional and supported amending the Three Non-Nuclear Principles.<sup>17</sup> Although pursuing a nuclear option is not a mainstream view in Japan, a growing sense of insecurity on the part of the Japanese due to China’s nuclear expansion may increase public support for this option. In particular, if South Korea goes nuclear, the Japanese public’s attitude toward nuclear weapons may change.

Needless to say, the growing call for a nuclear option—either the indigenous development of nuclear weapons or the deployment of US tactical nuclear weapons – in South Korea and Japan has significant implications for regional and global security. The development or deployment of nuclear weapons in South Korea and Japan will make Northeast Asia, which is already heavily nuclearised, even more unstable by enhancing the chance of a nuclear escalation. It will also significantly challenge the global nonproliferation regime and rule-based international order. Even if Seoul and Tokyo do not actually pursue these options, simply discussing them could have negative effects on the global nuclear non-proliferation order.

## RECOMMENDATIONS

As such, China’s advancing nuclear capabilities challenge peace and stability in Northeast Asia and thus US interests. China’s advancements in this domain will make an invasion of Taiwan more tempting for Beijing and incentivise Seoul and Tokyo to consider their own nuclear options. What should Washington do in order to mitigate these negative implications?

It seems unlikely that Washington will be able to stop China’s nuclear modernisation and expansion. An arms control approach will not work – at least not the kind of deal that Washington would prefer, which would entail China unilaterally capping or reducing its stockpile of nuclear weapons or deployed delivery systems. A nuclear arms control deal between the United States and the Soviet Union was possible because the two countries had nuclear arsenals of comparable sizes, and it was in their mutual interest to reduce the size of their arsenals. Unless Washington is willing to significantly reduce the size of its own nuclear arsenal and missile defense system, which is highly unlikely, Beijing will not have any incentives to reduce or freeze its nuclear weapons and missile programs.

Against this backdrop, Washington should instead seek to enhance its capability to deter China from changing the status quo in Taiwan. To be sure, Washington should not reverse its policy of strategic ambiguity and adopt “strategic clarity” as an official policy, as such a change would unnecessarily provoke China. Instead, Washington should seek to convince Beijing that there is a strong chance that the United States, Taiwan, and other likeminded countries, such as Japan, Australia, and even South Korea, would frustrate

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<sup>17</sup> John T Deacon and Etel Solingen, “Japan’s Nuclear Weapon Dilemma Growing More Acute,” *Asia Times*, June 1, 2023, <https://asiatimes.com/2023/06/japans-nuclear-weapon-dilemma-growing-more-acute>.

any Chinese military endeavor to take Taiwan or at least inflict enormous harm on China. To do so, Washington should help Taiwan enhance its military readiness. It should also increase its own military presence in the region. Acquiring expanded access to Philippine bases is a step in the right direction. It is promising that Japan and Australia have become more committed to maintaining stability and rules-based international order in the region, and that countries outside the region, such as the United Kingdom, France and Germany, have started conducting freedom of navigation exercises. Washington should continue to garner support from other countries in the region and beyond. All of these measures will deter China's invasion of Taiwan by increasing the cost of doing so in Beijing's calculations.

In addition, Washington should also reassure South Korea and Japan of its security commitment. Although the United States' extended deterrence is supposed to protect South Korea and Japan from threats posed by any nuclear actors, it has so far been primarily focused on countering nuclear threats posed by North Korea. In order to keep up with the changing security environment, Washington could expand the scope its discussions on nuclear deterrence and take into consideration its allies' concerns about threats posed by China's growing nuclear capabilities. Washington could start this endeavor through the Nuclear Consultative Group that it has created with South Korea, where the two sides will discuss the use of US nuclear weapons in defense of South Korea. The United States could consider expanding this channel to include Japan or create a similar bilateral venue with Japan. In addition, Washington could also address different kinds of Chinese threats facing Japan and South Korea, such as China's competing territorial claims with Japan, or its economic coercion of South Korea.

At the same time, Washington should engage in dialogue with Beijing to reduce the risk of unintended military clash that could escalate into a nuclear war. Washington should be mindful that measures aimed at deterring China and reassuring US allies could enhance China's sense of insecurity and further expedite China's nuclear buildup and heightening tension. To avoid miscalculations and unwanted nuclear exchange, Washington and Beijing should enhance transparency as to their nuclear posture and missile testing and establish crisis management mechanisms. Washington should urge Beijing to restore communication channels and military-to-military engagement, which have been largely suspended of late.<sup>18</sup> These measures will help mitigate risks involved in China's nuclear buildup and contribute to regional and international stability and security.

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<sup>18</sup> Ellen Knickmeyer, "'It Just Rang': In Crises, US-China Hotline Goes Unanswered," *Associated Press*, February 10, 2023, <https://apnews.com/article/politics-united-states-government-lloyd-austin-china-9d1b7c9aa40b22d0bda497ba29be8d9b>; Simina Mistreanu, "Why Haven't China and the US Agreed to Restore Military Contacts?," *Associated Press*, June 20, 2023, <https://apnews.com/article/china-us-blinken-xi-military-communications-a61bc6fe824b7b6d1c9d47c5424b4a5d>.

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The **Asia-Pacific Leadership Network for Nuclear Non-proliferation and Disarmament (APLN)** is a Seoul-based organization and network of political, military, diplomatic leaders, and experts from across the Asia-Pacific region, working to address global security challenges, with a particular focus on reducing and eliminating nuclear weapons risks. The mission of APLN is to inform and stimulate debate, influence action, and propose policy recommendations designed to address regional security threats, with an emphasis on nuclear and other WMD (weapon of mass destruction) threats, and to do everything possible to achieve a world in which nuclear weapons and other WMDs are contained, diminished, and eventually eliminated.



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