Restarting US-China Dialogue on Nuclear Weapons

Active Learning Simulation

Welcome to "Restarting US-China Dialogue on Nuclear Weapons," an active learning experience created by Daisy Alliance. Through this simulation, you will

- Gain experience in applying international relations concepts to practical situations;
- Gain experience in intra- and inter-group negotiations;
- Strengthen your understanding of key nuclear weapons issues and the role nuclear weapons play in global security and power structures; and
- Strengthen your understanding of different perspectives and frameworks in international security and nuclear postures.

The Scenario

The United States and China have agreed to attend a conference aimed at restarting bilateral dialogue on nuclear arms control. You will roleplay one of the following roles: US delegation, Chinese delegation, or civil society delegation. Your goal is to create a set of recommendations for the United States and China to build trust and increase transparency on nuclear weapons issues, aiming to increase strategic stability and reduce tension between the two countries.

This learning package includes an issue guide to provide you with an overview of the issue under consideration and recommended resources to give you a deeper understanding and more nuanced perspective and a role guide detailing the perspectives of the United States, China, and civil society and their key interests.

Some questions you will want to consider as you work through this simulation include the following:

- What is strategic stability? Is it a useful concept?
- How can the United States and China engage in meaningful dialogue that will build trust, reduce tension, and create a pathway for nuclear arms control talks?
- Does a strategic competition exist between the United States and China? If so, how does that affect the potential for nuclear arms control?
- Should nuclear weapons play a prominent role in a country's security? What are the implications of this?
- Does the possession of nuclear weapons exacerbate tensions between the United States and China? In what ways might the nuclear postures of each contribute to tensions?

What Is the Issue?

China's growing nuclear capabilities, US nuclear modernization, technological advancements, and deteriorating relations between the United States and China all present a challenge to strategic stability. While the United States and China have never engaged in serious arms control talks—China eschews participation in trilateral talks, as the United States and Russia have significantly larger arsenals—there have been numerous Track 1.5[1] meetings over the years, such as the US-China Strategic Dialogue. Talks were discontinued under the Trump administration. In November 2021, the United States and China agreed to talks to reduce tensions, but several challenges to meaningful dialogue exist. Historically, China has maintained a minimum nuclear deterrent and the modernizations completed in the 1990s were consistent with that posture. The United States, in comparison, has maintained a large nuclear arsenal since the early years of the Cold War, with multiple delivery methods. Although there has been a

1 *Track 1.5 diplomacy talks are unofficial talks that include both government officials and nongovernmental experts.*

reduction in forces due to arms limitation and reduction treaties with Russia,[2] the United States still possesses over 3,800 nuclear weapons. In exchange for Senate ratification of New START, the Obama administration agreed to upgrade US air-, sea-, and ground-based nuclear forces, as well their command and control systems and the nuclear weapons laboratories. Modernization has continued under the Trump and Biden administrations.

The US government is concerned that as China continues to modernize its forces it may also change its nuclear posture and that a stronger, more technologically advanced and more survivable nuclear arsenal will affect China's strategic calculations. There are also concerns within the US defense establishment that China is a revisionist state seeking to replace the United States as the most influential nation in the region. China's actions in Taiwan and the South and East China Seas are perceived by the United States to be aggressive in nature. Some experts fear that if China attempts to reunify Taiwan with mainland China by force, conflict could escalate to nuclear war, particularly if the United States comes to the defense of Taiwan.

China is concerned about the vulnerability of its second-strike capabilities. Advances in US counterforces, such as more precise weapons and better guidance systems and sensors, increase US ability to target China's nuclear forces in a first strike that could wipe out China's nuclear defense (Talmadge 2019). Whatever a US first strike did not destroy could be cleaned up by US missile defenses, increasing Chinese concerns about its ability to retaliate. Moreover, China does not want to lag the United States technologically. China fears that falling behind in military development will eventually leave China vulnerable to attack (SCIO 2008).

One of the major challenges to talks, which have stymied past Track 1.5 dialogues, is differing perspectives on security and the role of nuclear weapons. Two key terms, security and deterrence, have different meanings to US and Chinese officials, making progress difficult and increasing suspicions between the two states. Each side also has different wants. China wants the United States to acknowledge that the United States is vulnerable to China's nuclear arsenal and for the United States to make a commitment that it will not preemptively use nuclear weapons against China. The United States wants China to be more transparent about its nuclear arsenal and to clarify under what conditions China would use nuclear weapons (Kulacki n.d.). Additionally, relations between the United States and China have been deteriorating for some time, on both security and non-security issues.

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There are several reasons that bilateral talks between the United States and China are needed. First, misperception and lack of trust make the potential for nuclear miscalculation and accident more likely. For example, if the United States were to conduct conventional strikes on Chinese communications, command, and control centers, Chinese leaders might perceive that as an attempt to cripple China's ability to retaliate from a future nuclear attack, prompting a conventional or nuclear response. Second, the catastrophic humanitarian impact of a nuclear exchange, even a limited one, lends urgency to international calls for nuclear weapons states to disarm. Even just initiating talks to try and to find common ground is a start to reducing the potential of nuclear exchange. Finally, improving bilateral relations through talks will improve strategic stability, reducing the potential for conflict and nuclear competition.

This guide is organized as follows:

- Section I: Overview of United States and China Nuclear Arsenals and Modernization Programs
- Section II: Challenges to Meaningful Dialogue and Nuclear Arms Control
- Section III: Overcoming Challenges to Meaningful Dialogue
- Section IV: Civil Society Perspective
- Section V: Role Guides

2 *Strategic Arms Limitation Talks (SALT) I (1972) and II (1979), Anti-Ballistic Missile (ABM) Treaty (1972), Strategic Arms Reduction Treaty (START) I (1991) and II (1993), and New Strategic Arms Reduction Treaty (New START) (2010).*

I. Overview of United States and China Nuclear Arsenals and Modernization Programs

Both China and the United States possess nuclear weapons and the arsenals of both have been undergoing modernization and improvement. The United States currently has a significantly larger arsenal than China, along with more diverse delivery systems. Nuclear weapons also play different roles in the security policies of each country.

I.A. China's Nuclear Forces and Modernization

China initiated its nuclear weapons program in 1955, conducting its first nuclear test in 1964 and exploding its first hydrogen bomb in 1967. The purpose of building a nuclear arsenal was not to influence the behavior of other countries, but rather to feel safe from intimidation by other states and, if necessary, to use conventional military force in a nuclear world without fear. Mao Zedong referred to nuclear weapons as a "paper tiger," believing that they could never actually be used to fight a war—he considered nuclear weapons to be psychological rather than military weapons (Bin 2016). Historically, China maintained a small arsenal of approximately 250 ground-based nuclear-tipped missiles. The weapons were not on high-alert status[3] and warheads were kept separate from the missiles, giving China time to assess the need for a retaliatory strike, rather than respond immediately to a suspected nuclear attack.

A small, limited nuclear arsenal like this severely limits second-strike capabilities. Ground-based weapons are more vulnerable to attack because they are stationary and more identifiable. In contrast, US nuclear forces compose a nuclear triad, consisting of ground-, sea-, and air-based weapons. In the event of a strike on US ground-based intercontinental ballistic missiles (ICBMs), the United States would still have significant capabilities to retaliate, whereas a strike taking out China's ICBMs would leave China vulnerable. Likewise, US missile defense limits China's ability to conduct counterstrikes. The United States could potentially conduct first nuclear strikes against China while preventing retaliatory strikes through missile defense, giving the United States a strong advantage over China and reducing China's ability to operate in the international arena without fear of attack.

China has been slowly and systematically modernizing its nuclear forces since the program began. It reached important milestones in the 1990s and 2000s, increasing the arsenal's size and diversity. Modernization has added to Chinese confidence, and US anxieties, about China's ability to successfully retaliate if the United States strikes first. Current estimates put that number at 350 nuclear warheads, with delivery systems that include approximately 280 land-based ballistic missiles, 72 sea-based ballistic missiles, and 20 nuclear gravity bombs. Some experts believe that additional warheads are being produced (Kristensen and Korda 2021). The US Department of Defense's 2021 report to Congress on China's military and security developments indicates that China could have up to 700 deliverable warheads by 2027 and 1,000 by 2030 (DoD 2021). This projection, however, appears to rely on the construction of new missile silos and assumptions about additional plutonium production rather than on any concrete evidence of intention. China halted production in the 1980s but has enough plutonium stored to double its existing stockpile of nuclear weapons. There are no public reports that it has resumed, although China could possibly acquire plutonium from its civilian reactors (Kristensen and Korda 2021).

Improvements to China's nuclear arsenal include developing mobile road missiles (thought to be capable of carrying multiple independent reentry vehicle [MIRV] missiles), constructing an estimated 300 additional ballistic missile silos, increasing the robustness of its arsenal through sea- and air-based delivery systems, developing technology to evade US missile defense, improving command and control infrastructure, and reassigning a nuclear mission to the People's Liberation Army Air Force (Kristensen and Korda 2021).

Land-Based Weapons

China's land-based delivery systems comprise mobile road and stationary ballistic missiles. Historically, China's ground-based weapons have been more vulnerable to attack, because even though most are mobile, the trucks that carry them can be easily destroyed by precision-guided conventional weapons while en route to designated launch points, which may be already known by US intelligence. Increased numbers and the addition of several hundred hardened silos help ensure at least some of these forces will survive any attempt at preemption. Improvements to China's land leg include

3 *Nuclear weapons on high alert are ready to respond instantaneously to an attack.*

deploying the new DF-41 mobile road ICBM, which is thought to be capable of carrying MIRVs; the more maneuverable DF-31 AG ICBM launcher; and the DF-26 dual-capable intermediate range ballistic missile (Kristensen and Korda 2021). China has also been constructing hundreds of new ballistic missile silos, which, unlike existing silos, are being constructed outside the range of US conventional weapons and are less vulnerable to conventional attack. It is unknown how these silos will operate and how many warheads each missile will carry, but it is possible that China plans to use only some to house ballistic missiles while remaining silos are used to confuse adversaries (Korda and Kristensen 2021).

Completion of Nuclear Triad

Another key part of China's modernization is its nascent nuclear triad. China currently has four operational nuclear-powered submarines (SSBNs) outfitted with submarine-launched ballistic missiles (SLBMs) and plans to add two additional SSBNs to its nuclear forces (DoD 2019). Each SSBN can carry up to 12 SLBMs, with an estimated single nuclear warhead per missile (Funaiole, Bermudez, and Hart 2021). China has commissioned two additional SSBNs and is developing a new type of ballistic missile (Kristensen and Korda 2021).

Unlike US ballistic missile submarines, China's do not go on regular armed patrols. For this reason, while some US analysts characterize China as having a credible, sea-based nuclear deterrent, others disagree. If launched from Chinese waters, China's existing SLBMs are capable of reaching only Guam, Hawaii, and Alaska, but not the US mainland. It would be incredibly difficult for China to maneuver its SSBNs into a position to reach the continental United States without detection. The current class of SSBNs is also noisy and highly vulnerable to US antisubmarine warfare capabilities, which may be why they do not go on armed patrols. However, China is reportedly developing a next generation SSBN that may be quieter and able to carry a new generation of longer-range missiles.

On the air-based side of the nuclear triad, China has upgraded its H-6K bomber to make it nuclear capable, is developing air-launched ballistic missiles that may have nuclear capabilities, and has reassigned a nuclear mission to its bombers (Kristensen and Korda 2021). It is also possible that China has nuclear (or nuclear-capable) cruise missiles. China may also be developing a new, stealthier, nuclear-capable strategic bomber (Talmadge 2019).

New Technologies

One of China's key concerns is US missile defense and its potential for eliminating China's second-strike capability. China has long had penetration aids that are capable of defeating US missile defense. It is also developing and may deploy other technologies that make missile defense more challenging. These include MIRVs, which deploy multiple warheads that can strike separate targets, and maneuverable re-entry vehicles, which are maneuverable after launch.

China's existing intermediate-range missiles are dual-capable, meaning both conventional and nuclear weapons can be deployed, obscuring the type of payload the missile is carrying. Given the dangers, China has traditionally taken steps to help adversaries identify nuclear from conventional payloads. Still, misperception remains a real and growing danger as more modern dual-capable delivery systems are deployed.

China is also experimenting with hypersonic glide vehicles and hypersonic cruise missiles, although both may be more vulnerable to interception by missile defenses because they travel longer in the atmosphere and for that reason are slower and more visible for longer periods of time to radar and other sensors than traditional ballistic missiles. China currently possesses one operational hypersonic missile and has tested several others designed to hit land, sea, and air targets (Bernstein and Hancock 2021). In a 2021 test, China's hypersonic missile circled the earth twice before just missing the target (Bugos and Reif 2021). Whether China is developing these technologies to hedge against US missile defense is a matter of debate—some US observers believe China is experimenting with hypersonic missiles in order to better understand the technology and avoid a technological surprise (G. Kulacki, personal communication, January 26, 2022).

It is important to note that even with China's nuclear modernization and increased number of weapons, its nuclear arsenal does not and likely will not come close to achieving parity with the United States. The measured pace of China's nuclear modernization, however, suggests that parity is not its intention. From China's perspective, US modernization could be perceived as offensive in nature, especially with improvements being made in weapons precision and ability to evade detection, dual-use capabilities that can obscure intent, and improved missile defense that could be construed as emboldening a US first strike.

I.B. US Nuclear Forces and Modernization

In contrast to China, estimates put the US nuclear stockpile at 5,550 total nuclear warheads, with approximately 3,800 active nuclear warheads, although some of these are in storage for loading onto missiles and aircraft as needed.[4] The remaining 1,750 warheads are retired and awaiting dismantlement.

In 2016, the Obama administration initiated a large-scale program to modernize almost all parts of the US arsenal, including delivery systems; warheads; and command, control, and communications (NC3). Modernization extends the life of US nuclear weapons and helps to maintain a strong deterrent. The 2010 Nuclear Posture Review (NPR) stated that the United States would not engage in new testing, warhead design, or military capabilities as part of the modernization program. Although the Trump administration continued with its predecessor's modernization plan, the 2018 NPR also highlighted the need for a flexible and varied range of options to tailor its deterrence options and introduced the development of new types of weapons. The Biden administration released the declassified version of its NPR to the public on October 27, 2022, which was similar in tone to the Obama administration's NPR. Two key changes from the Trump administration's NPR include canceling the development submarine-launched cruise missiles, although Congress may still fund this program, and retiring the B83-1 megaton gravity bomb. The United States has refrained from nuclear weapons testing since 1992 and has not developed new warheads since the late 1980s, choosing instead to extend the life of the warheads through life extension programs.

There are three legs to the US nuclear arsenal, known as the nuclear triad, which includes ground-based, sea-based, and air-based weapons. The nuclear triad provides security to the US nuclear arsenal to ensure second-strike capability. Using a variety of delivery systems and keeping nuclear weapons stockpiles spread out reduces the potential for an adversary to take out the US arsenal in a first strike.

Ground Leg

The ground leg consists of ICBMs carrying nuclear warheads. ICBMs are based in silos in North Dakota, Wyoming, Montana, Nebraska, and Colorado. These weapons are responsive, can reach their target within minutes, and remain on high-alert readiness so they can be launched upon warning of an impending attack. The United States currently deploys 400 Minuteman III (MMIII) ICBMs, carrying one warhead each, although they can carry up to three. ICBMs carry either the 300-kiloton (KT) W87 warhead or the 335 KT W78 warhead (Kristensen and Korda 2021).

As part of the modernization program, over the past 15 years, the United States has extended the life of the ICBM stockpile to 2030. Although a second life extension is possible, the United States instead intends to replace the current ICBM force after 2030 with the Ground Based Strategic Deterrent (GBSD), to be deployed through the 2070s (Bugos 2022). The GBSD consists of LGM-35A Sentinel missiles, with one warhead per missile planned, although each could potentially deploy two or three warheads. These missiles are lighter than the MMIII ICBMs, allowing them to carry greater payloads and providing more flexibility (CRS 2022). The new missiles are also expected to have a greater range than the MMIII. The United States is also in the process of replacing W78 warheads with new, more powerful W87-1 warheads (Kristensen and Korda 2021).

Sea Leg

The sea leg consists of SSBNs armed with SLBMs containing nuclear warheads. SSBNs are mobile and hard to detect, making SLBMs more survivable. The United States maintains a fleet of 14 Ohio-class SSBNs, of which 12 are operational and four or five believed to be on hard alert. Each sub carries 20 Trident II D5 SLBMs, typically armed with four or five warheads, although each missile can carry up to eight warheads (Kristensen and Korda 2021). Beginning in 2030, Ohio-class SSBNs will be replaced with Columbia-class SSBNs, which will carry up to 16 SLBMs (Bugos 2022) and are expected to be significantly quieter (Kristensen and Korda 2021). As of 2017, the Trident II D5 missiles have been undergoing life extension and upgrades, including new guidance systems that provide flexibility

4 *Approximately 1,800 are deployed, 1,400 on ballistic missiles and 300 at strategic bomber bases (Kristensen and Korda 2021).*

and accuracy. In late 2019, the United States began deploying new, low-yield W76-2 warheads on SSBNs and also plans to develop a new SLBM warhead, the W93, although funding was not authorized in 2021 (Kristensen and Korda 2021).

Air Leg

The air leg consists of bombers armed with gravity bombs and air-launched cruise missiles (ALCMs) carrying nuclear warheads. The air leg provides flexibility and a clear and visible signal of US intent. The United States has 20 B-2A bombers, all of which are nuclear capable, and 87 B-52H bombers, of which 46 are nuclear capable; approximately 60 bombers are assigned to nuclear missions (Kristensen and Korda 2021). Bombers are armed with B61 and B63 gravity bombs and AGM-86 ALCMs that carry one warhead each. Approximately 200 ALCMs are deployed (Bugos 2022). The NC3 of existing bombers is being upgraded and there are plans to purchase new dual-capable, long-range penetrating B-21 bombers. The life of B61-12 gravity bombs is being extended, and the extension includes improvements to make the bombs more accurate. The Air Force is also developing a new Long Range Standoff Weapon, to be armed with refurbished W80-4 warheads (Bugos 2022).

In addition to the nuclear triad, the United States is modernizing the NC3 infrastructure and plans to begin producing new plutonium pits. The National Nuclear Safety Administration (NNSA) plans to produce 80 plutonium pits per year by 2035. Whether this is achievable, however, remains in question. There are only two production facilities remaining in the United States; plutonium pits have not been manufactured since 2013. To get to 80 pits per year, the NNSA intends to expand existing production facilities and repurpose the Mixed Oxide Fuel Fabrication Facility at the Savannah River site, but there is serious doubt that this can be achieved within the proposed timetable (CACN 2021).

US nuclear modernization is an ongoing project—it is possible that some of the current plans for modernization will be changed or canceled by future administrations. However, such modernization plans and the development of new nuclear weapons, such as the low-yield SLBMs, signal that the United States intends to maintain a large nuclear arsenal and that nuclear weapons will remain a key feature of US security policy. Modernization is creating more accurate weapons and delivery systems that could potentially evade an opponent's defenses. Some delivery systems are dual-capable, meaning they can be armed with conventional or nuclear weapons, which can create confusion and exacerbate tensions, leaving the door open for miscalculation as an opponent is unsure as to whether an incoming attack is nuclear. Increasing numbers of dual-capable delivery systems also cause concern that the United States may use conventional weapons to attack an opponent's nuclear infrastructure, which would technically remain below the nuclear threshold but could lead to escalation. As noted in the 2018 NPR, new low-yield weapons provide flexible options for a president, but there is some concern that this could make choosing a nuclear option to deal with nonnuclear policy issues more likely.

I.C. Comparing Nuclear Postures

Traditional nuclear thinking in China follows Mao's premise that nuclear weapons are a "paper tiger" because their destructive power is too great to be used to fight wars. China developed nuclear weapons to prevent other states from using or threatening to use nuclear weapons against China for fear of certain Chinese retaliation. A large nuclear force is not needed to achieve that goal. The moderate development and deployment of nuclear weapons have contributed to regional strategic stability (Zhao 2020). From the inception of its nuclear weapons program, China has had a long-standing no-first-use (NFU) policy, committing to using nuclear weapons only in retaliation for a nuclear attack. It is believed that Chinese nuclear weapons on not kept on Launch on Warning or Launch on Attack status, but rather that warheads are kept separate from delivery systems during peacetime, and that they would only be brought together and made ready for launch during times of crisis (Zhao 2020). A 2009 Chinese defense white paper discussed how the operational status would change—in times of peace, China's nuclear weapons would "not be aimed at any country," while during a nuclear crisis, missiles would be placed on alert and prepared for counterattack (Kristensen 2009). Some experts argue that as new technology potentially threatens China's second-strike capability, and as Western thinking begins to influence Chinese views of nuclear strategy and policy, Chinese leaders may decide to keep Chinese nuclear forces at a higher state of alert all the time. There is some evidence to suggest that China may be more focused on early warning, such as 2015 and 2019 white papers that state one goal is to improve strategic early warning of nuclear forces.

China continues to reaffirm its commitment to NFU, most recently in October 2021 (MFA 2021). The 2019 China defense white paper "China's National Defense in a New Era" repeated two additional pillars of Chinese nuclear weapons policy: support for the eventual prohibition of nuclear weapons and China's commitment to keeping its force as small as possible in the meantime (SCIO 2019). Two important military and diplomatic implications of these commitments were explained by the Chinese Academy of Military Science. It said China does not intend to use or threaten to use nuclear weapons against nonnuclear weapons states (NNWS) or in response to conventional attacks by nuclear weapons states (NWS). China will use nuclear weapons only in response to a confirmed incoming nuclear attack (Kulacki 2015).

There are some US experts who argue that China's nuclear modernization and the construction of new missile silos are not consistent with NFU, leading to the belief that China is being disingenuous. Silo-based missiles are generally always ready to launch on very short notice, increasing the ease of first use. This argument is further strengthened by China's lack of transparency on the size and capabilities of its nuclear arsenal. The more likely reason for modernization, however, is to reduce China's vulnerability to conventional preemption and ensure China's second-strike capability. While China's minimum deterrent has always been vulnerable to a first strike, technological advancements in missile accuracy and missile defense make it more concerning now. Even the construction of 300 new silos is not evidence that China is moving away from NFU, but rather could be indicative of a "shell game," ensuring that an opponent does not know which targets to hit as not all silos contain missiles. The new silos are also spread out over considerable distances. A massive preemptive strike would be necessary to cripple China's ability to retaliate—something Chinese planners may feel confident the United States would not risk.

China made a general commitment to nuclear prohibition in its first and only major statement on nuclear weapons on the day of its first nuclear test in October 1964. However, China did not begin participating in arms control discussions until the United Nations recognized the People's Republic of China as the legitimate Chinese government in 1971.[5] Its first and only full-fledged participation in the negotiation of an international arms control treaty was the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which China signed in 1996 but has yet to ratify. China has not been willing to participate in tripartite arms reduction talks with the United States and Russia, as both have significantly larger nuclear arsenals. Within the UN system, China has indicated support for multilateral, step-by-step processes leading to the eventual prohibition of nuclear weapons. China has sponsored proposals in the UN Conference on Disarmament on the weaponization of outer space, which would affect missile defense, as well as the negotiation of a fissile material cutoff treaty to ban the future production of plutonium and weapons-grade enriched uranium used to make nuclear weapons. In the UN General Assembly, China has sponsored proposals calling on NWS to make NFU declarations, pledge to not use nuclear weapons against NNWS, and to commit to the prohibition of nuclear weapons. It has also supported efforts to establish nuclear-weapons-free zones (Wang 2016).

> China developed nuclear weapons to prevent other states from using or threatening to use nuclear weapons against China for fear of certain Chinese retaliation. A large nuclear force is not needed to achieve that goal.

The United States, on the other hand, keeps all its use options open, including first use, and keeps its nuclear weapons on a high level of alert, ready to be launched within minutes. Current US declaratory policy states, "The United States will only consider the employment of nuclear weapons in extreme circumstances to defend the vital interests of the United States, its allies and partners" (DoD 2018, p. VIII). Note that this is a somewhat vague policy—extreme circumstances and vital interests are not clearly defined; however, it does indicate that the United States will exercise

5 *Until 1971, the United Nations recognized the Republic of China in Taipei as the legitimate government.*

The US pursuit of effective missile defenses puts more pressure on China to consider enlarging and improving its nuclear forces.

considerable restraint. The policy also does not clearly state that the United States will not use nuclear weapons first or that it will not use or threaten to use nuclear weapons against NNWS. US presidents are ultimately responsible for determining US declaratory policy, leaving it open to the whims of the current president. While the Obama administration did consider a clearly stated NFU policy, ultimately the policy was left unchanged. The United States also does not have a sole purpose doctrine, or a declaration that the sole purpose of nuclear weapons is to deter a nuclear attack.

US nuclear weapons policy emphasizes two key concepts, deterrence and damage limitation. The goal of deterrence is to prevent nuclear and/or conventional attacks on the United States and its allies. A credible deterrent threatens costly retaliation for an attack. The United States also provides extended nuclear deterrence to its allies, promising to retaliate on an ally's behalf if attacked or threatened with attack.

Damage limitation differs from deterrence. Its purpose is to significantly reduce the amount of damage an adversary can inflict on the United States, through either an offensive counterforce (preemptively taking out an opponent's nuclear weapons) or a defensive missile defense (intercepting incoming missiles). Counterforces must be sufficient to eliminate or significantly reduce an adversary's second-strike capabilities, and so they require a large, flexible, and highly capable nuclear force. The point of damage limitation is not deterrence per se, but to make one's opponent think that it will suffer significantly more damage in the event of nuclear weapons exchange.

Proponents of damage limitation argue that it is necessary in case deterrence fails. However, pursuing damage limitation comes with major advantages. One challenge is that it is almost impossible to accurately calculate how many weapons are enough to provide for assured destruction. During the Cold War, Secretary of Defense Robert McNamara thought destroying 20 to 25 percent of population and 50 percent of industrial bases would be sufficient, which would require an estimated 200 one-megaton (MT) warheads. This estimate does not account for other effects, such as the destruction of infrastructure, communications, and energy systems. More recent estimates reduce the number to 40 1 MT warheads (Glaser 2016). Even if these estimates are accurate, they still do not truly show how much damage an opponent is willing to suffer or how much damage it is able to inflict in return.

Damage limitation strategies encourage arms races, as any moves to increase the arsenal size or build more capable or technologically advanced nuclear weapons will likely lead to opponents building up their own nuclear arsenals or pursuing other asymmetrical capabilities. This is how the United States and the Soviet Union developed arsenals that peaked at approximately 31,000 and 40,000 warheads, respectively. A nuclear arms race would cost trillions of dollars. In addition, by pursuing the ability to destroy a potential adversary's nuclear arsenal, the United States creates a perverse incentive for that adversary to use those weapons early so they cannot be destroyed. This is a destabilizing dynamic, making nuclear conflict more rather than less likely. Arms races can also affect perception, leading to miscalculations and accidents.

A path to a new arms race between the United States and China is already emerging. Chinese military planners once believed the mobile road missiles it started to deploy in the 1990s were difficult for the United States to find and to destroy. They were confident that enough of them could survive a US first strike and be used to retaliate. But now, because of improvements in US surveillance capabilities and the precision of US missiles, Chinese planners believe those mobile road missiles are vulnerable to preemption, even by US conventional weapons. To address this perceived problem, China is building hundreds of new silos in the deserts of western China. It can no longer hide its nuclear weapons, so it makes little sense to try, believing that it is better to build more weapons that are much more difficult to destroy. In response, some US military officers are telling Congress it must increase the size of US nuclear forces to be able to destroy all of China's silos, which will lead China to build more missiles and a nuclear new arms race would be under way.

The US pursuit of effective missile defenses puts more pressure on China to consider enlarging and improving its nuclear forces. Although current missile

defenses cannot reliably intercept a Chinese ballistic missile heading for a target in the United States, China is concerned US missile defense technology may get better, which would increase US confidence in the possibility of avoiding Chinese retaliation after a US first strike. This is leading China to develop new capabilities to counter missile defense such as maneuverable warheads, hypersonic missiles, and being able to destroy the ground-based radars used by those defenses.

Missile defense can also create a destabilizing dynamic. While the United States pursues missile defense as a defensive strategy, adversaries view it as offensive in nature. The United States could conceivably launch a first strike and use missile defense to seek to sharply limit a retaliatory attack. From this view, missile defense is as much about increasing relative power as defending against attack.

To date, the United States has refused to accept a state of mutual nuclear vulnerability with China, as it did with the Soviet Union during the Cold War. This directly affects its position and willingness to engage in arms control talks, with the United States continuing to emphasize maintaining a robust nuclear arsenal and counterforces to counter the perceived Chinese threat. Accepting vulnerability to Chinese nuclear retaliation, instead of trying to pursue a damage limitation strategy against China, is the only way to prevent a new US-China nuclear arms race.

Recommended Resources

The US-China Nuclear Relationship: Why Competition Is Likely to Intensify (Talmadge 2019)

https://www.brookings.edu/research/china-and-nuclear-weapons/

Modernizing without Destabilizing: China's Nuclear Posture in a New Era (Zhao 2020)

https://carnegieendowment.org/2020/08/25/modernizing-without-destabilizing-china-s-nuclear-posture-in-new-era-pub-82454

The Risk of Nuclear War with China: A Troubling Lack of Urgency (Kulacki 2016)

https://www.ucsusa.org/sites/default/files/attach/2016/05/Nuclear-War-with-China.pdf

Peaceworks: Enhancing US-China Strategic Stability in an Era of Strategic Competition (2021): US Perspective (Kim, pp. 17–20); China Perspective (Bin, pp. 22–24)

https://www.usip.org/sites/default/files/2021-04/pw_172-enhancing_us-china_strategic_stability_in_an_era_of_strategic_competition_us_and_chinese_perspectives.pdf

Understanding China's Nuclear Thinking (2016): China's Security Environment and the Role of Nuclear Weapons (Xu, pp. 19–50); The Development of Nuclear Weapons in China (Sun pp. 79–102); Nuclear Weapons in US-China Relations (Kulacki, pp. 251–266)

https://carnegieendowment.org/files/ChineseNuclearThinking_Final.pdf

Chickens Talking with Ducks: The US-Chinese Nuclear Dialogue (Kulacki n.d.)

https://www.armscontrol.org/act/2011-09/chickens-talking-ducks-us-chinese-nuclear-dialogue

Position Paper on China's Cooperation with the United Nations (MFA 2021)

https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/wjzcs/202110/t20211022_9609380.html

China's National Defense in a New Era (SCIO 2019)

https://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html

II. Challenges to Meaningful Dialogue and Nuclear Arms Control

Negotiating nuclear disarmament is challenging under the best of conditions. NWS are generally unwilling to give up the weapons that they believe contribute to their security and stability and give them a stronger position in the international distribution of power. From the perspective of deterrence theory, nuclear weapons provide stability to the international system, decreasing the potential for conventional armed conflict, which could escalate to nuclear conflict. Assumptions of rationality dictate that with nuclear weapons, rational calculations as to the costs and benefits of attacking a nuclear weapons state are challenging to assess, leading actors to avoid armed conflict.

In the case of China and the United States, such challenges are coupled with distrust and misperception, different perspectives on security and deterrence, and deteriorating relations. Cultural, linguistic, and ideological differences increase the possibility of mutual miscommunication and misunderstanding, eroding trust. Many defense experts believe that the United States and China are engaged in a strategic competition, with China seeking to expand its regional power and influence, displacing the United States from the region. This is not necessarily an accurate assessment of China's goals or reasons for its nuclear modernization, but the US perception of China as a revisionist state makes any US concessions to China less likely, even though such concessions are necessary to build trust and establish confidence-building measures.

In the case of China and the United States, challenges surrounding nuclear weapons are coupled with distrust and misperception, different perspectives on security and deterrence, and deteriorating relations.

II.A. Different Perspectives on Security

One of the key challenges to successful US-China bilateral dialogue on nuclear weapons is cultural and how the United States and China have different conceptualizations of the meaning of security and deterrence. Past negotiations have been hampered by a lack of trust between the two parties, exacerbated by two different perspectives on the purpose of nuclear weapons and the role such weapons play in national security policy.

National Security

The United States views national security as external threats to the security of the United States, generally of a military nature. Threats are identified and assessed based on capabilities and intentions, and policymaking to address threats builds from there. From the US perspective, China's nuclear modernization poses a quantitative threat to the United States. The United States believes China is trying to achieve nuclear parity with the United States and shift the global balance of power in its favor, which shapes its viewpoint during arms control talks. The number of nuclear weapons is a key concern for US officials, who believe maintaining a large numerical imbalance with China makes the bilateral relationship more stable. However, even after China completes the new silos currently under construction, huge differences will remain in the size of the respective nuclear arsenals. China does not currently have the capabilities to conduct first strikes on the United States—even with an expanded nuclear arsenal, China has limited long-range conventional and nuclear capabilities (Talmadge 2019).

China, on the other hand, takes a more holistic approach to national security, emphasizing national security challenges, rather than threats, or dangerous situations in which China is vulnerable (Bin 2015). Identified threats are generally situations rather than specific enemies, can be foreign or domestic, and emphasize both military and nonmilitary challenges. Chinese officials appear less concerned about numbers and more concerned about situations in which China might be vulnerable to what Mao referred to as "nuclear blackmail," which they are unwilling to accept. Although Chinese statements generally do not mention specific enemies, Chinese planners worry that US modernization is intended to negate China's second-strike capabilities. They are further concerned that new, low-yield nuclear weapons in the US arsenal will make the

United States more likely to use nuclear weapons to deter or win a conventional war without fear of Chinese nuclear retaliation. Chinese planners believe this creates a destabilizing dynamic. US withdrawal from arms control agreements during the Trump administration, such as the Intermediate Nuclear Forces treaty, the Open Skies treaty, and the Joint Comprehensive Plan of Action (a.k.a. the Iran Nuclear Deal), further undermine Chinese confidence in US intentions.

Li Bin (2015) provides an excellent example of how different conceptualization of national security can present problems in bilateral negotiations by illuminating Chinese concerns about US missile defense. The first concern is that missile defense may reduce China's retaliatory capability. If the United States were to launch a first strike, then use missile defense to successfully prevent a retaliatory strike, China would be at a significant disadvantage, leaving it open to further US strikes. As Bin notes, this concern is explained by both security perspectives, making it understandable to the United States and a subject that can be discussed bilaterally. But the second area of Chinese concern, that US missile defense may lead to greater scientific and technological advancements for the United States, widening the technology gap between the two countries, increases Chinese feelings of vulnerability. A 2008 Chinese white paper on national security identifies technological lagging as a key national security concern for China (SCIO 2008). Since the United States does not understand this perspective and the underlying approach to national security, such concerns are unlikely to be addressed in bilateral meetings.

Deterrence

China and the United States also have different understandings of the meaning of deterrence. A straightforward Western definition of deterrence is preventing attack by threatening costly, credible retaliation. For the United States, nuclear weapons serve as a deterrent against both conventional and nuclear attack. However, the United States also uses nuclear weapons for compellence, or using nuclear weapons to compel other actors to do what the United States wants. The United States views these two concepts as distinguishable from each other, as deterrence is defensive in nature, while compellence is offensive.

China views deterrence and compellence as two sides of the same coin, conceptualizing deterrence as a form of intimidation. The closest Chinese translation of deterrence means coercion (Bin 2015). Chinese leaders say their nuclear weapons will never be used to blackmail or coerce others, and they try to verify this by committing to never threatening to use nuclear weapons against NNWS or use them first against NWS. They say the purpose of China's nuclear arsenal is to prevent China from being blackmailed by another nuclear state.

Gregory Kulacki (n.d.) provides a good example of how different meanings can derail bilateral talks. In 2006, the US National Academies Committee on International Security and Arms Control (CISAC) and the Chinese Scientists Group on Arms Control formed a working group to identify areas of linguistic confusion and disagreement and to produce a bilingual glossary of key terms and concepts. They were successful in resolving many problems, but the Chinese participants refused to accept US efforts to describe Chinese nuclear doctrine using the concept of deterrence. US participants said they saw the term *limited deterrence* in some Chinese military texts, but the Chinese participants in the project, including a former director of China's nuclear weapons labs, said those military authors were indiscriminately borrowing foreign language and were not knowledgeable about the thinking of Chinese leaders (Kulacki n.d.). In the end, the AAAS agreed not to define Chinese nuclear policy using that term, noting the disagreement between the two sides (NRC 2008).

Perception

When considered in isolation, it is reasonable to assume that China's intentions are nuclear parity with the United States, regional or global hegemony, or posing other threats to US national security. China emphasizes transparency of intentions over capabilities, leading to a disconnect with the United States, which views Chinese secrecy about capabilities as nefarious regarding its intentions. During past Track 1.5 talks, US participants were unwilling to believe China's commitment to NFU. In trying to establish the credibility of China's NFU, the United States detailed numerous "what if" scenarios to determine how China would respond, such as inquiring if China would use nuclear weapons in retaliation for a conventional US strike on China's nuclear infrastructure (Zhao 2020). These types of situations make China even more distrustful of US intentions, particularly as the United States will not commit to NFU. China has trouble understanding why the United States is unwilling to make that commitment, considering the asymmetrical power distribution

and US military superiority (Kulacki n.d.). Past behavior by the United States increases these concerns. Before China conducted its first nuclear test in 1964, the United States threatened to use nuclear weapons against China several times.

These differences in thinking and meanings create an impediment to finding areas of agreement between the United States and China, as the United States has in the past ignored issues that do not fit neatly into its national security paradigm (Bin 2015). If China's concerns are not discussed and addressed, it creates an imbalance, potentially making China less willing to form agreements with the United States or continue negotiations. This in turn might make US negotiators suspicious of Chinese intentions or misperceive Chinese concerns, leading to US policies based on faulty reasoning.

II.B. Territorial Disputes

There are a number of regional disputes involving China's sovereign claims to Taiwan, islands in the South and East China Seas, and the proper demarcation of international waters. Many parties use threats and military exercises to display a willingness and the ability to enforce their claims. The United States has treaties with some nations that could oblige the United States government to intervene in a military conflict between treaty partners and China.

Taiwan

The dispute between the government in Taipei and the government in Beijing over the island's sovereign status is the issue most likely to cause a large-scale military conflict between China and the United States. The island's complicated modern history is at the core of the dispute. Japan controlled the island after taking it from the Qing Dynasty in the Sino-Japanese War of 1894–1895. The terms of Japan's surrender at the end of World War II granted control of the island to the government of the Republic of China in 1945. That government fled its capital in Nanjing for Taipei in 1948 as the Chinese Communist Party and its People's Liberation Army took control of the Chinese mainland. This created two Chinese governments that both claimed Taiwan, but the government of the Republic of China in Taipei controlled the island. Taiwan's official name remains the Republic of China (ROC) to this day.

The United Nations recognized the ROC government as the sole legitimate government of all of China, including Taiwan, until 1971, when a vote in the UN General Assembly switched UN recognition to the government of the People's Republic in China (PRC) in Beijing. The United States continued to recognize the ROC until 1979, when it finally followed the United Nations and switched recognition to the government of the PRC. US presidents Nixon and Carter both told PRC leaders they agreed that Taiwan was a part of China. Moreover, both Chinese governments always agreed that Taiwan was a part of China.

When the United States switched its recognition from the ROC to the PRC, it terminated its Mutual Defense Treaty with the ROC. Congress passed the Taiwan Relations Act in 1979 to preserve US relations, including US military assistance, to the ROC government. The PRC government objected to the US establishment of an independent military relationship with what all three governments agreed was a part of one China, which both the United Nations and the United States recognized was governed by the PRC. PRC leaders saw the act, and still see it, as a violation of China's sovereignty.

In 1995, ROC President Lee Teng-hui said that relations between the ROC and the PRC should be conducted on a "state to state" basis, implying Taiwan was a separate nation, not part of China. This was a change from the statement of all previous ROC leaders, who agreed with the PRC that Taiwan was a part of China. Lee's remark reflected the view of an increasing number of people in Taiwan who wanted the island to be independent from China. The PRC government responded with missile tests close to the island, creating a military crisis that alarmed US officials. As advocates for Taiwan independence gained greater political support on the island, PRC concerns about a declaration of independence and US support for such a declaration continued to grow. The PRC frequently expresses those concerns using ever more provocative military threat gestures.

The United States frequently responds with increased military aid to Taiwan and military threat gestures of its own. As this cycle of responses continues to accelerate, the risk of a military conflict between the United States and China over Taiwanese independence continues to grow. Some US political figures, like former Secretary of State Mike Pompeo, have expressed support for an independent Taiwan. President Biden recently announced the United States would not recognize a Taiwanese declaration of independence but

would defend Taiwan if the PRC used military force in response to such a declaration.

US doubts about its ability to prevail in a conflict with China using only conventional weapons, and its willingness to use nuclear weapons first, increase the risk that a war with the PRC over Taiwan could lead to the US use of nuclear weapons and Chinese nuclear retaliation against US military forces supporting its war effort, which are based in other countries in the region, including Japan, South Korea, and Australia.

South/East China Seas

There are many overlapping unresolved sovereign claims in the South and East China Seas. The peaceful settlement of those claims is essential to preserving the sustainability of the marine environment. The parties have managed their disputes reasonably well in the past, but the recent increase in military and economic tensions between the United States and China is undermining past agreements.

For example, when Japan and China normalized diplomatic relations in 1972 the two governments agreed to disagree about the sovereignty of a crop of uninhabited islands in the East China Sea the Japanese call the "Senkaku" islands and the Chinese call the "Diaoyu" islands. The United States controlled the islands after taking them from Japan during World War II but returned them to Japanese control, along with Okinawa, that same year. But in September 2012, the Japanese government, with US encouragement and support, announced there was no dispute between China and Japan about the islands, changing the status quo that had held since 1972. This began a slowly increasing spiral of Japanese and Chinese symbolic and military gestures intended to emphasize their claims to the islands. The Japanese Coast Guard claims that as of September 2021, Chinese Coast Guard (CCG) vessels have been in Japan's territorial waters 88 times and contiguous waters[6] 851 times.

The more complicated set of territorial disputes in the South China Sea involves a number of islands and shoals spread over a large area between China, Vietnam, the Philippines, Malaysia, Brunei, and Indonesia. Chinese interpretations of its territorial waters, which differ from US and international interpretations and are tied to claims over the islands and shoals, make a resolution of the disputes especially difficult. The Association of South East Asian Nations (ASEAN) and China signed a declaration on conduct in the South China Sea that established norms of behavior that held until tensions between China and the United States began to worsen after the Obama administration announced it was beginning a military "pivot" from the Middle East to Asia. As part of the pivot, the United States proclaimed a security interest in the South China Sea disputes for the first time during an ASEAN meeting in Hanoi in 2010. Chinese activities in defense of its claims, including the building of artificial islands and military installations in disputed areas, escalated rapidly in the wake of the meeting.

> There are a number of regional disputes involving China's sovereign claims to Taiwan, islands in the South and East China Seas, and the proper demarcation of international waters.

While these disputes are unlikely to draw the United States and China into a major military conflict that could escalate to the use of nuclear weapons, escalation is still a concern. Since 2019, CCG vessels have had a near constant presence in the contiguous waters of the South China Sea. This is compounded by two new laws passed in China in 2021, permitting the CCG to use weapons to protect China's sovereignty and requiring identification of foreign vessels before entering Chinese waters. The escalating pace of military activity reinforces mutual distrust between China and the United States, undermining mutual interest in constructive dialogue about nuclear arms control and disarmament.

There are three main concerns in these territorial disputes. First, the United States has defense treaties with Japan and the Philippines, potentially drawing the United States into a military conflict with China. If Chinese activities remain below the threshold of armed conflict, the United States must determine if or when it

6 *Contiguous waters refer to water within 12 miles of the shoreline.*

should respond. Second, increased CCG presence creates potential challenges to freedom of navigation. The United States regularly conducts freedom of navigation exercises, which could lead to a flashpoint with the CCG. This area is also home to one of the busiest shipping lanes in the world, which could give China the ability to block trade. Finally, the United States is concerned about waning regional influence, weakened alliances and extended deterrence credibility, economic challenges, and limits to US ability to promote democracy and human rights.

Recommended Resources

Understanding the Risks and Realities of China's Nuclear Forces (Brown 2021)

https://www.armscontrol.org/act/2021-06/features/understanding-risks-realities-chinas-nuclear-forces

The US Doesn't Need More Nuclear Weapons to Counter China's New Missile Silos (Geist 2021)

https://www.rand.org/blog/2021/10/the-us-doesnt-need-more-nuclear-weapons-to-counter.html

China Will Not Change Its Nuclear Policy (Yao 2022)

https://www.chinausfocus.com/peace-security/china-will-not-change-its-no-first-use-policy

Understanding Chinese Nuclear Thinking (Li and Zhao, eds. 2016)

https://carnegieendowment.org/2016/10/28/understanding-chinese-nuclear-thinking-pub-64975

The United States, China, and Taiwan: A Strategy to Prevent War (Blackwill and Zelikow 2021)

https://cdn.cfr.org/sites/default/files/report_pdf/csr90_1.pdf

Why a Cross-Strait Crisis Will Be Averted in 2021 (Sacks 2021)

https://www.cfr.org/blog/why-cross-strait-crisis-will-be-averted-2021

Video: US–China Relations Explained (Wired 2021)

https://www.youtube.com/watch?v=RUUdC6n4s2Y

Chinese-English, English-Chinese Nuclear Security Glossary (NAS 2008)

https://nap.nationalacademies.org/catalog/12186/english-chinese-chinese-english-nuclear-security-glossary

III. Overcoming Challenges to Meaningful Dialogue

The key question this simulation addresses is: How can the United States and China engage in constructive, meaningful dialogue on their respective nuclear arsenals? Your task is to determine what steps the United States and China can take to increase trust and cooperation and reduce security threats and the potential for conflict. A key aspect of this is understanding what the two sides want.

China is concerned that US modernization, technological advancements, and investment in missile defense will undermine its second-strike capability, creating a national security challenge. The Chinese government wants the United States to accept vulnerability to Chinese nuclear retaliation and to avoid taking steps to undermine it. A commitment not to use nuclear weapons first in a conflict would help. It would like the United States to ratify the CTBT before China ratifies it and to participate in international negotiations in the United Nations to prevent an arms race in outer space.

The United States does not take China at its word that China will not use nuclear weapons first, citing inconsistencies between China's NFU policy and China's unwillingness to be transparent about the number and types of nuclear warheads China possesses. China's modernization program exacerbates this distrust. From the US perspective, increasing the number of nuclear warheads, fielding more accurate and technologically advanced weapons, and shifting to a nuclear triad indicate that China is attempting to increase its power relative to the United States. This leads the United States to be concerned that China will use its nuclear weapons to intimidate its neighbors and undermine US alliances in the region. The United States would like China to be more transparent about its nuclear capabilities and to cap its modernization and expansion. It would also like China to participate in bilateral and multilateral nuclear arms control negotiations with Russia.

Both sides would like to denuclearize the Korean peninsula and to prevent other countries in the region, and the rest of the world, from developing nuclear weapons. They have also both committed to advancing negotiations in the United Nations to negotiate a treaty to control the production of the fissile materials (plutonium and uranium) used to make nuclear warheads.

Some factors you may want to consider include the following:

1. Differences in nuclear doctrines, strategic perceptions, and interests—For example, while China has historically been committed to arms control, it has been unwilling to engage in tripartite talks with Russia and the United States. China believes that the disparity between its nuclear arsenal and those of Russia and the United States makes dialogue pointless until Russia and the United States have committed to substantial cuts to their arsenals.
2. Multilateral talks are necessary—Any nuclear dialogue between the United States and China would have to include other states, such as Japan, as it would have implications for US alliances and extended deterrence.
3. Other regional challenges exist—Two other nuclear armed states in the region, India and North Korea, have the potential to throw a wrench into negotiations. A key challenge presented by North Korea is that any deterrence action taken by the United States can be viewed by China as threatening. An important part of negotiations will be finding a way to deal with North Korea without upsetting what is already a delicate balance. Negotiations are further complicated by ongoing tension between India and China; they engaged in a series of violent border skirmishes in 2020.
4. Differing perspectives on national security—China and the United States have differing perspectives on what national security means. The United States typically focuses on direct threats from enemies, assessing threats based on capabilities and intent, while China takes a more holistic view, perceiving security as both direct threats as well as indirect actions that could weaken China, such as US arms sales to Taiwan and economic policies that limit Chinese access to markets, resources, and technology.

How can the United States and China engage in constructive, meaningful dialogue on their respective nuclear arsenals?

Recommended Resources

The resources below offer suggestions for building trust between the United States and China and moving forward on meaningful dialogue.

Nuclear Weapons and US-China Relations: A Way Forward (Colby and Denmark 2013)

https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/130307_Colby_USChinaNuclear_Web.pdf

China Is Willing to Negotiate on Nuclear Arms, But Not on Trump's Terms: Here Are Four Steps that Might Bring Beijing to the Table (Kulacki 2020)

https://www.defenseone.com/ideas/2020/03/china-willing-negotiate-nuclear-arms-not-trumps-terms/164204/

Opportunities for Nuclear Arms Control Engagement with China (Zhao 2020)

https://www.armscontrol.org/act/2020-01/features/opportunities-nuclear-arms-control-engagement-china

Taking Stock: US-China Track 1.5 Nuclear Dialogue (Roberts 2020)

https://cgsr.llnl.gov/content/assets/docs/CGSR_US-China-Paper.pdf

Engage China on Arms Control? Yes, and Here's How (Kimball 2021)

https://www.armscontrol.org/act/2021-06/focus/engage-china-arms-control-yes-heres-how

Video: Engaging China in Nuclear Arms Control: A Practical Approach (Carnegie Endowment for International Peace 2021)

https://www.youtube.com/watch?v=fyavBeV5Bmc

IV. Civil Society Perspective

Civil society advocates for the complete elimination of nuclear weapons. A nuclear detonation would have catastrophic humanitarian consequences including the following:

- Massive loss of life
- Environmental contamination
- Destruction of infrastructure, including communications, transportation, health-care facilities and hospitals, electricity, and water systems
- Homelessness and displacement
- Overwhelmed emergency and medical services
- Widespread radioactive fallout that cannot be contained within national borders

Long-term consequences from radiation exposure include cancer and birth defects. Even a limited nuclear exchange of approximately 100 weapons has the potential to cause 2 billion deaths worldwide (Helfand 2018) due to contaminated crops and water sources, a cooling atmosphere that would shorten growing seasons, fuel shortages, and disruptions to the supply chain.

In 1995, the International Court of Justice, in its ruling Legality of the Threat or Use of Nuclear Weapons, determined that in pretty much every conceivable case, the threat or use of nuclear weapons violates international humanitarian law, establishing an anti-use norm.

The international regime on nuclear arms control consists of several treaties, and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is considered the cornerstone of the regime. The NPT establishes principles of disarmament, nonproliferation, and peaceful use, determining which states may or may not possess nuclear weapons. Five NWS[7] are permitted to maintain nuclear arsenals, on the condition that they negotiate disarmament faithfully, while all remaining members are categorized as NNWS that must forgo nuclear weapons. It is important to note that three additional countries that possess nuclear weapons (India, Pakistan, and Israel) are not signatories to the treaty; North Korea withdrew from the treaty in 2003. A major issue here is that more than 50 years after the NPT's entry into force (EIF), there has been little progress on disarmament. NNWS believe that NWS are not upholding their end of the bargain, creating a growing disconnect between the two groups on the issue of nuclear weapons.

Since 2010, there has been a surging international trend to view nuclear weapons through the lens of humanitarian consequences, leading to growing support for global disarmament. The term *humanitarian consequences* was first used in the 2010 NPT Review Conference Final Document, out of which developed the Humanitarian Initiative. In subsequent years, governments and groups supporting the Humanitarian Initiative held three international conferences on this issue, where states realized that they were in no way prepared for a nuclear attack and that the damage and loss of life would be catastrophic. In his summary from the First Conference on the Humanitarian Consequences of Nuclear Weapons, conference chair Espen Barth Eide stated, "It is unlikely that any state or international body could address the immediate humanitarian emergency caused by a nuclear detonation in an adequate manner and provide sufficient assistance to the affected" (Eide 2013).

At the same time, support for a global nuclear ban was growing, leading to the negotiation of the Treaty on the Prohibition of Nuclear Weapons (TPNW) (or Nuclear Weapons Ban Treaty) in 2017, a total ban on nuclear weapons in the world. Evidence of a growing antinuclear weapons norm can be seen in the Nuclear-Weapon-Free Zones treaties that have been ratified in many regions and in the EIF of the TPNW on January 22, 2021, after 50 states ratified it. A total of 86 countries have signed the treaty, but not any NWS, NATO member, or other states that rely on US extended deterrence.

Civil society advocates for the complete elimination of nuclear weapons. A nuclear detonation would have catastrophic humanitarian consequences, including massive loss of live, environmental contamination, and more.

7 *The NWS are the United States, the United Kingdom, France, Russia, and China.*

Recommended Resources

Legality of the Threat or Use of Nuclear Weapons (International Court of Justice 1995)
https://www.icj-cij.org/en/case/95

Treaty on the Non-Proliferation of Nuclear Weapons (UN 1968)
https://www.un.org/disarmament/wmd/nuclear/npt/text

2010 NPT Review Conference Final Document (UN 2010)
https://www.un.org/en/conf/npt/2010/

Treaty on the Prohibition of Nuclear Weapons (UN 2017)
https://www.un.org/disarmament/wmd/nuclear/tpnw

Unspeakable Suffering: The Humanitarian Impact of Nuclear Weapons (Acheson 2021)

https://www.reachingcriticalwill.org/images/documents/Publications/humanitarian-impact-nuclear-weapons-2nd-edition.pdf

Changing the Discourse on Nuclear Weapons: The Humanitarian Initiative (Minor 2015)

https://international-review.icrc.org/articles/changing-discourse-nuclear-weapons-humanitarian-initiative

The Real Value of the Nuclear Ban Treaty (Robichaud and Kamel 2021)

https://thebulletin.org/2021/02/the-real-value-of-the-nuclear-ban-treaty/

V. Role Guides

Three groups are represented in the simulation: US delegation, Chinese delegation, and civil society delegation. Your instructor will assign you to a delegation. Throughout the simulation, you are expected to act in a manner consistent with your role. You will engage in both intra-group negotiations with your delegation and inter-group negotiations between the delegations.

V.A. US Delegation

The US delegation consists of representatives from the US defense, intelligence, state, and military apparatus, as well as US arms control experts. The documents below provide a deeper understanding of the US perspective on arms control, in general and specific to China, and key security threats the United States has identified. As part of talks, you will want to consider the security, military, and diplomatic implications of any recommendations. You will also want to consider the bigger picture—what are the implications for US alliances/extended deterrence and for non-security issues, such as trade/economic and political/human rights issues. Some questions to consider as you prepare for the simulation include the following:

- Does China's nuclear modernization affect US national security? In what ways?
- What are the costs and benefits of changing US nuclear policies, such as declaratory policy, alert status, missile defense, modernization, and new weapons?
- How do US extended deterrence commitments and alliances affect US policy options?
- How can the United States and China build trust? What can the United States do differently?
- What steps can the United States take to address China's concerns about nuclear intimidation, preemptive strikes (both conventional and nuclear), and missile defense?
- How can the United States and China maintain strategic stability without an overreliance on nuclear weapons?
- What steps can be taken to ensure security while not posing a threat to China?
- Are current US nuclear policies conducive to reductions in nuclear arsenals?

Recommended Resources

2018 Nuclear Posture Review (DoD 2018).

https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF

The Biden Nuclear Posture Review: Obstacles to Reducing Reliance on Nuclear Weapons (Mount 2022).

https://www.armscontrol.org/act/2022-01/features/biden-nuclear-posture-review-obstacles-reducing-reliance-nuclear-weapons

The Biden Nuclear Posture Review: Defense, Offense, and Avoiding Arms Races (Pifer 2022).

https://www.armscontrol.org/act/2022-01/features/biden-nuclear-posture-review-defense-offense-avoiding-arms-races

Military and Security Developments Involving the People's Republic of China, 2021 (DoD 2021).

https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF

Projected Costs of US Nuclear Forces, 2021 to 2030 (CBO 2021).

https://www.cbo.gov/publication/57240

V.B. Chinese Delegation

The Chinese delegation consists of representatives from the Chinese Foreign Ministry, the People's Liberation Army, and the Chinese nuclear weapons labs. Decisionmaking authority rests with the representatives from the labs and the army. Foreign Ministry representatives play an advisory and public relations role. Their advice should be confined to China's commitments under existing treaty obligations, and the likely diplomatic consequences of agreeing or failing to agree on future obligations. The documents below provide a deeper understanding of China's views and goals on security and nuclear weapons policy. As part of talks, you will want to consider the security, military, and diplomatic implications of any recommendations. You will also want to consider the bigger picture—what are China's goals regarding regional and global influence, and what are the implications for multilateralism in non-security areas, such as trade and economic issues. Some questions to

consider as you prepare for the simulation include the following:

- Does US nuclear modernization affect China's national security? In what ways?
- What are the costs and benefits of changing China's nuclear policies, such as transparency in warhead numbers and delivery systems?
- What can China do to lend credibility to its NFU policy?
- What steps can China take to address US concerns about the construction of new silos, the status of Taiwan, and freedom of navigation?
- How can China and the United States build trust? What can China do differently?
- How can the United States and China maintain strategic stability without overreliance on nuclear weapons?
- What steps can China take to ensure security without encouraging the perception that China is engaging in strategic competition or an arms race?

Recommended Resources

In Their Own Words: China's National Defense in the New Era (SCIO 2019)

https://www.airuniversity.af.edu/Portals/10/CASI/documents/Translations/2019-07%20PRC%20White%20Paper%20on%20National%20Defense%20in%20the%20New%20Era.pdf

Science of Military Strategy (Xiao, Lou, Kang, and Cai 2020)

https://www.airuniversity.af.edu/Portals/10/CASI/documents/Translations/2022-01-26%202020%20Science%20of%20Military%20Strategy.pdf

China's Endeavors for Arms Control, Disarmament, and Non-proliferation (SCIO 2005)

https://nuke.fas.org/guide/china/doctrine/armscontrol.html

China's Nuclear Doctrine: Debates and Evolution (Xia 2016)

https://carnegieendowment.org/2016/06/30/china-s-nuclear-doctrine-debates-and-evolution-pub-63967

Understanding Chinese Nuclear Thinking (2016): China's No First Use of Nuclear Weapons (Pan, pp. 51–78); How China Practices and Thinks About Nuclear Transparency (Wu, pp. 219–250)

https://carnegieendowment.org/2016/10/28/understanding-chinese-nuclear-thinking-pub-64975

V.C. Civil Society Delegation

The task of the civil society delegation is to present participants with an overview of the humanitarian consequences of nuclear weapons and to work with delegates to create recommendations that put the United States and China on the path to disarmament. Some questions to consider as you prepare for the simulation include the following:

- What steps can the United States and China take that put them on the path to disarmament?
- How can the United States and China be encouraged to renounce nuclear weapons and join the TPNW?
- How can civil society address the security concerns of the United States and China?

Recommended Resources

Report of the Canberra Commission on the Elimination of Nuclear Weapons (Commonwealth of Australia 1996)

https://www.dfat.gov.au/about-us/publications/international-relations/Pages/the-canberra-commission-on-the-elimination-of-nuclear-weapons

Treaty on the Prohibition of Nuclear Weapons (United Nations 2017)

https://d3n8a8pro7vhmx.cloudfront.net/tectodevms/pages/2417/attachments/original/1571248124/TPNW-English1.pdf?1571248124

Nuclear Weapons Solutions (Union of Concerned Scientists n.d.)

https://www.ucsusa.org/nuclear-weapons/solutions

International Campaign to Abolish Nuclear Weapons

https://www.icanw.org/

Back from the Brink

https://preventnuclearwar.org/our-five-policy-solutions

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