# Youth Engagement in a Nuclear World after the Demise of the Intermediate-Range Nuclear Forces Treaty

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#### Abstract

Ever since the bombings of Hiroshima and Nagasaki, the world now has a heightened vigilance for potentially catastrophic nuclear activities, and until nuclear nonproliferation begins, no country will dare to lower its guard. In a more interconnected world where international relationships and cooperation are increasingly important, multilateral action to combat rogue agents has kept any further nuclear bombings from occurring. Yet the problem has not been fully addressed and tens of thousands of nuclear weapons are operational at any moment. Comprehensive disarmament will be difficult, but as tensions escalate, it will become all the more necessary and imperative.

The recent termination of the Intermediate-Range Nuclear Forces (INF) Treaty by the U.S. and Russia, has shaken up the post cold-war security environment. Now, there are no longer any constraints over the ability to produce intermediate range nuclear missiles. The escalating political tensions and failure of diplomacy and treaties show signs of the beginnings of a new nuclear arms race. Unfortunately, the threat of nuclear weapons is rising and we currently have approximately 13,890 nuclear weapons in the world. Moreover, China is building its nuclear arsenal, North Korea is expanding its nuclear capabilities, the U.S. and Russia are modernizing their portfolio with new technologies like hypersonic missiles, cyber technologies, and underwater drones capable of carrying nuclear weapons, and India, Pakistan, and Iran are the rising stars not bound by any treaty. Nuclear proliferation is a very real issue facing us today and we should take all steps necessary to ensure the survival of the human race. With the demise of INF, mutual trust, diplomacy, restraint, and continuous constructive dialogue is critical to maintaining world peace. Unity of NATO will be put to test as the potential deployment of ground-based intermediate-range missile systems will become a part of the transatlantic security discussions. In this global world, we need multilateral treaties which include all new advancing technologies and creative solutions for strict enforcement of full and verifiable compliance of treaties.

In a future where the youth live in a digital world, online education is the most potent and pragmatic channel to generate awareness and communicate the issue of non-proliferation of nuclear weapons. In the past decade, the youth have risen together in various movements to protest issues such as gun violence, gender inequality, and climate change, garnering support and inspiring each other in a rippling effect through the use of all types of social media platforms. Their call to action is not only rapid, but effective. From then eight-year-old Mari Copeny whose letter paved President Obama's aid to clean water in Flint, Michigan, to now 16-year-old climate change activist Greta Thunberg, youth's outreach towards policy-making adults and activism on social media has inspired millions to join their cause. Therefore, by promoting and sharing the humanitarian impact of nuclear weapons and the urgency for nuclear nonproliferation and disarmament on social media platforms, the youth of today can not only bring these issues to the attention of adults who can make sustainable changes, but they will become leaders of a safer world without nuclear weapons.

## I. History and current status of nuclear weapons

The current Non-Proliferation of Nuclear Weapons Treaty (NPT) Nuclear Weapon States (NWS) are China, France, Russia, U.S., and the UK. While these states' nuclear weapons are recognized by the Treaty on the NPT, the treaty specifically delineates these states to eventually eliminate nuclear weapons.

China began its program during the Korean War, has nuclear policies focusing on a no-first-use policy and the third line construction policy (to construct all essential industries within the country). In total, China is estimated to have 280 warheads. France has a total of about 300 warheads and has undergone a recent revamping of nuclear weapons. It is a part of the Comprehensive Test Ban Treaty (CTBT), supports the Fissile Material Cutoff Treaty (FMCT), and is active in dismantlement efforts. Russia, as of August 2018, has a total stockpile of 7,000 warheads. By 2026, it hopes to eliminate all legacy systems (from the Soviet Union). The U.S. started its nuclear weapons program during World War II and carried out the nuclear bombings of Nagasaki and Hiroshima. It had the highest number of weapons in 1967 totaling 31,255. As of 2017, the estimated number of deployed war-heads is 1,740. The United Kingdom had its first nuclear test on October 3, 1962 and its nuclear program was started by British scientist William G. Penney who worked on the Manhattan Project. Much of the UK's nuclear program is based on U.S. technology and has a strong partnership with the U.S.A's of 2015, the UK only has sea based nuclear forces.

Non-NPT NWS states are not considered nuclear weapon states under the NPT. Typically, these states have declared possession of nuclear arms or are believed to be in possession of nuclear arms. The current global states include India, Pakistan, Democratic People's Republic of Korea (DPRK), and Israel.

India and Pakistan have been embroiled in a decades-long tension over nuclear weapons starting in the 1970s when India tested its first nuclear device known as the "Smiling Buddha." Pakistan followed suit soon afterwards and ramped up its own nuclear program. Tensions reached a peak in 1998 when both parties demonstrated their provess in a flurry of tests. Nevertheless, India has maintained a policy of no-first use as its nuclear doctrine for the past 20 years. Both countries are believed to have approximately 140 warheads in their arsenals.

North Korea as a nuclear power has been a point of political focus ever since the Cold War. The government of the DPRK started developing nuclear technology in the 1950s, running dozens of tests in recent years. Most notably, the DPRK has detonated what is believed to be a thermonuclear device in 2017, causing criticism and disapproval among other international powers. Tensions are slowly being defused as U.S. President Trump and Chairman Kim met for the first time in 2018 and have just met again in another summit this past month. In total, North Korea is estimated to have 10-20 nuclear warheads available.

Israel is the most quiet about its nuclear weapons program. The country has not publicly tested a nuclear device or weapon and does not confirm or deny possession. It is almost universally believed, however, that they have nuclear warheads, although Israel has stated that it will not be the first to introduce nuclear weapons into any conflict. Israel's arsenal is estimated to have around 80 active warheads.

During the Second World War, the U.S. developed two types of nuclear weapons, Uranium-235 based and Plutonium-239 based. The underlying principles of these weapons were the same; they both used nuclear fission. During this process, the nucleus of the atom, either Uranium or Plutonium, splits into two smaller nuclei, neutrons, gamma rays, and heat energy. This fission process is initiated by a high-energy neutron in a process termed nuclear bombardment. The neutron is directed towards the nucleus of the element to produce an unstable element which undergoes nuclear fission.

Apart from these fission based nuclear weapons, there are also fusion based weapons; thermonuclear weapons or hydrogen bombs. These nuclear weapons are powered by the nuclear fusion reactions of deuterium and tritium, isotopes of hydrogen. Modern thermonuclear weapons are built around the Teller-Ulam design which uses the energy released from fission reactions to power these fusion reactions.

## **II. Nuclear terminology**

To better grasp the historical context and current situation regarding nuclear weapons and nuclear proliferation worldwide, it is first important to define the key terms that are necessary for a thorough and nuanced analysis. Among these, arms control, nonproliferation, disarmament, and abolition are critical to our understanding of the nuclear world.

Arms control are measures, typically treaties, used to reduce the likelihood and potential devastation of war. Usually, these treaties delineate or outline limitations on the building, experimentation, and use of weapons through bilateral or multilateral action. When such treaties are violated by one party, or another party accuses them of violations, the mutual agreement can quickly devolve or fall apart.<sup>1</sup>

Nonproliferation, therefore, is the short term goal of many arms control treaties and agreements. Nonproliferation is defined as the prevention of an increase in weapons and their delivery mechanisms (by plane, submarine, or ground launch). A discussion of nonproliferation also must examine current methods of proliferation as well. There are many cases of both vertical and horizontal proliferation, vertical meaning the stockpiling of nuclear weapons by one country that already has it, while horizontal proliferation meaning the spread of nuclear weapon capabilities to countries that previously did not have nuclear weapons.<sup>2</sup>

In the long term, disarmament is the broader goal of nuclear agreements in achieving a world free of nuclear weapons. Disarmament is the process of reducing the number of nuclear weapons maintained to potentially achieve a nuclear weapon-free world. Though national security interests of the nuclear weapon-possessing states certainly have made and continue to make this goal difficult, it is in all countries' interests to limit the vast and unnecessarily large number of nuclear weapons worldwide.

Abolition is the final stage of nuclear disarmament, signifying the complete elimination of nuclear weapons. Since 1946, the United Nations has maintained this as one of its foremost goals in preserving

<sup>&</sup>lt;sup>1</sup> "Glossary," Nuclear Threat Initiative, last modified 2020, accessed March 2, 2020, https://www.nti.org/learn/glossary/.

<sup>&</sup>lt;sup>2</sup> "Glossary," Nuclear Threat Initiative.

global peace and security.<sup>3</sup> It is important to note that abolition does not mean a total elimination of the usage of any nuclear technology — it focuses on the use of nuclear technologies as weapons of mass destruction. The peaceful uses of nuclear energy, on the other hand, are acceptable under this framework and sometimes even encouraged.

# III. Selected international treaties related to disarmament and nonproliferation - current status and challenges

As a method of encouraging nonproliferation and ultimately disarmament and abolition, many international nuclear treaties have been created to address the potential hazards of nuclear warfare. These treaties have been critical in reducing the tensions between major military powers and have allayed fears of new nuclear weapon states from arising.

The most significant international nuclear treaty to date is the NPT (Nuclear Non-Proliferation Treaty). This treaty outlined which states would be designated nuclear weapon states (NPT NWS) and which would be non-nuclear weapon states (NPT NNWS). It allowed for nuclear weapons among the nuclear weapon states but aimed to restrict access from the NPT NNWS. From the onset, the NPT has always had a very clear goal as outlined by the UN: "The NPT is a landmark international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament."<sup>4</sup>

Every five years there is a new review of the NPT, and the 2020 conference faces a multitude of new challenges. In previous years, the NPT has been largely successful in restricting the spread of nuclear weapons. However, in the aftermath of the U.S.' recent withdrawal from a nonproliferation agreement with Iran (known as the JCPOA) and the ambiguity of the situation in North Korea, which has made promises but has yet to uphold them, the review conference will need to create an international consensus on the best approach to action. The 2020 conference will need to reinforce the very principles that encouraged agreement and collaboration in the first place: by forgoing nuclear weapons, NPT NNWS have the opportunity to develop peaceful uses of nuclear energy with partnerships with NPT NWS to improve their economy.<sup>5</sup>

Another important example of progress is the Treaty on the Prohibition of Nuclear Weapons (TPNW), which is the first legally binding international treaty to prohibit nuclear weapons; eventually with the goal of abolition. This treaty was led by non-nuclear weapon states frustrated by the inaction of larger more powerful nuclear weapon states. It outlines the prohibition of nuclear development and production for non-peaceful intent and provides a timeline for verifiable, non-reversible abolition, unlike the NPT which

<sup>&</sup>lt;sup>3</sup> "UNODA — United Nations Office for Disarmament Affairs," United Nations, last modified 2020, accessed March 2, 2020, https://www.un.org/disarmament/.

<sup>&</sup>lt;sup>4</sup> "Treaty on the Non-Proliferation of Nuclear Weapons (NPT)," United Nations, last modified 2020, accessed March 2, 2020, https://www.un.org/disarmament/wmd/nuclear/npt/.

<sup>&</sup>lt;sup>5</sup> Sérgio Duarte, "Unmet Promise: The Challenges Awaiting the 2020 NPT Review Conference," Arms Control Association, last modified 2018, accessed March 2, 2020,

https://www.armscontrol.org/act/2018-11/features/unmet-promise-challenges-awaiting-2020-npt-review-conference.

has no time table or concrete milestones. However, this treaty has not gone into effect, as only 35 states have ratified the treaty when it needs 50. All nuclear weapon states and most NATO states did not vote or ratify the treaty.<sup>6</sup>

## IV. Current major challenges & crises in nonproliferation

## U.S. - Russia (INF/New START)

The Intermediate-Range Nuclear Forces (INF) Treaty was a bilateral treaty signed between the U.S. and former Soviet Union in 1987. The INF Treaty was historic as it called for the elimination of a whole category of nuclear weapons that were already deployed. This treaty was critical to ending the Cold War and the arms race. During the cold war era between 1947 and 1991, the U.S and Soviet Union had accumulated 70,000 nuclear warheads at its peak in the 1980s.<sup>7</sup>

The INF treaty required the U.S. and Soviet Union to destroy ground-launched cruise missiles (GLCMs) with a range between 500 and 5,000 km and prohibited their reintroduction, manufacture, flight testing, and depot storage. This treaty was successful in eliminating a total of 2,692 missiles - 846 U.S. and 1,846 Soviet INF systems by May 1991.<sup>8</sup> Things started normalizing and this historic agreement created an environment conducive to more arms reduction treaties which led to a wave of reduction in nuclear stockpiles from 70,000 in 1986 to under 15,000 nuclear weapons today.<sup>9</sup>

<u>Pros of the Treaty</u>: As a symbolic value, the treaty deepened the trust between two rival superpowers and brought the end of the Cold War. For its military significance, the treaty eliminated all land-based ballistic and cruise missiles already deployed. By incorporating strict enforceable inspection and verification standards, the treaty reformed arms control efforts and benefited European security.

<u>Challenges to the Treaty</u>: After on-site verification inspections ended in 2001, the treaty started weakening with noncompliance issues. Verification by satellite surveillance led to suspicion and lack of trust. Also, the rise of China's military power added geopolitical security concerns. Advancements in technology and rising nationalism also imposed additional challenges to the treaty.

<u>Reasons for withdrawal by U.S and Russia</u>: The U.S, followed by Russia, withdrew from the treaty in 2019. Russia was motivated by geo-political factors; new nuclear powers with INF capabilities have emerged in South and East Asia. Concerned about the changing security situation in Eurasia with proliferation of medium and intermediate range missiles by China, North Korea, India, Pakistan, and Iran, Russia had raised concerns in 2005 and proposed a joint withdrawal with the U.S. from the INF treaty in

<sup>&</sup>lt;sup>6</sup> "Treaty on the Prohibition of Nuclear Weapons," United Nations Office of Disarmament Affairs, last modified 2017, accessed March 2, 2020, https://www.un.org/disarmament/wmd/nuclear/tpnw/.

<sup>&</sup>lt;sup>7</sup> Lori Esposito Murray, "What the INF Treaty's Collapse Means for Nuclear Proliferation," *Council on Foreign Relations*, August 1, 2019.

<sup>&</sup>lt;sup>8</sup> Wolfgang Richter, "The End of the INF Treaty is Looming: A New Nuclear Arms Race Can Still be Prevented," *Stiftung Wissenschaft und Politik*, January 2019, 1-8, accessed March 1, 2020.

<sup>&</sup>lt;sup>9</sup> Murray, "What the INF Treaty's"

2005.<sup>10</sup> Since then, Russia violated terms of the INF treaty not to produce, possess, or flight-test a ground-launched intermediate-range cruise missile system.

In recent times, the rise of China's military capabilities has shifted military balance and affected global strategic stability. Not being bound by the INF treaty, China is building its arsenal of nonnuclear weapons such as the DF-21 and DF-26 with conventional and nuclear precision strike capability. DF-26, with its range between three and four thousand kilometers, has the capability to attack the U.S air base at Guam.<sup>11</sup>

Perceiving China's growing military power as a threat, the U.S. is pressured to match China's rising ambitions with its own ground-based, intermediate-range missile systems. After withdrawing from the INF treaty, the U.S is now free to neutralize China's advantage and will be able to better deter China. The U.S. can now improve deterrence by developing and deploying land-based missiles that can counter Chinese systems.<sup>12</sup>

## Post-withdrawal current status

<u>Start of another arms race</u>: The unraveling of the INF treaty has accelerated the arms race which began with new advanced technology, China's military power, and deteriorating political relations leading to increasing instability in the European and global security environment. Although NATO currently has no plans of deploying new ground-based intermediate-range missile systems(GBIRs), it has to evaluate other ways to increase its security defense with the addition of intelligence enhancements and conventional capabilities. <sup>13</sup>

<u>New deployment of U.S. missiles in Europe</u>: The U.S. did not consult with any of its allies before the decision to withdraw from the INF treaty. Even though the U.S. had given Russia a six month warning to be compliant under the terms of the INF treaty, the allies were surprised with U.S's announcement to withdraw and it is unclear if the allies are willing to host the GBIRs. This decision can lead to fragmentation of U.S. allies leading to discord or disunity amongst the NATO members. The U.S. will likely face political challenges and obstacles without domestic support from the countries where the GBIRs would be based. It is a very difficult decision for any country to house missiles and it could lead to destabilization in the region. Additionally, China can effectively pressure these countries with its economic and military might. This deployment debate can lead to a division among the NATO countries and a further divide between the nuclear have and have-not countries. Additionally, within the U.S, GBIR development will result in political debates of defense budget cuts and the cost effectiveness of starting a new program versus the benefits of modernising existing platforms.<sup>14</sup>

<sup>&</sup>lt;sup>10</sup> Frank A. Rose, "The End of an Era? The INF Treaty, New START, and the Future of Strategic Stability," *Brookings*, February 12, 2019.

<sup>&</sup>lt;sup>11</sup> Zachary Keck, "China's DF-26 'Carrier-Killer' Missile Could Stop the Navy in Its Track (Without Firing a Shot)," The National Interest, last modified April 20, 2018.

<sup>&</sup>lt;sup>12</sup> Alexander Lanoszka, "The INF Treaty: Pulling Out in Time," *Strategic Studies Quarterly* 13 (May 2019):48-67, accessed March 2, 2020.

<sup>&</sup>lt;sup>13</sup> Murray, "What the INF Treaty's," 4.

<sup>&</sup>lt;sup>14</sup> Pranay Vaddi, "Leaving the INF Treaty Won't Help Trump Counter China," *Carnegie Endowment for International Peace*, January 31, 2019, accessed March 1, 2020.

#### Lessons Learned

The INF was very effective in banning a full class of weapons. Its success led to the passage of other arms control and disarmament treaties, especially START (Strategic Arms Reduction Treaty). The fallout of the treaty has highlighted the significance of conflict resolution in how to deal with noncompliance and violation of a treaty. Continuous constructive dialogue with involved parties, mutual trust, diplomacy and restraint is the key to the success of any treaty. Also, early and transparent communication with U.S. allies would have been smart to avoid discord and fragmentation among the allies. Additionally, since full and verifiable compliance is critical in enforcement, collective use of satellite monitoring, open skies agreement, and on-site inspections should be considered.

In this global world where more nations and non-state actors have access to nuclear technology, multilateral treaties will replace bilateral treaties. Flexibility is essential to incorporate new actors like China as an essential party in any treaty. Adaptability and inclusiveness of new advanced technologies is also critical for successful arms control agreements.

## After INF, what will happen to New START?

The term of New START ends in February 2021. This is the final bilateral treaty between the two major superpowers. It caps the U.S. and Russian deployments of strategic nuclear warheads at 1,550 intercontinental ballistic missiles, submarine-launched ballistic missiles, and heavy bombers at 700. If New START expires, there will be no active arms control agreement between the two major players to hold them in check. Unlike agreements which deal with tactical nuclear weapons, New START deals with the U.S. and Russia's strategic nuclear weapons which have much higher yields and the capability to hit long-range targets and hence is very critical for the security of the world.<sup>15</sup> To avoid a catastrophe, the U.S. and Russia should extend the New START for a minimum period of five years and within that time frame resolve any open issues regarding its renewal or revise the treaty with more players. Through the verification compliance of the new START treaty which includes data exchanges, routine notifications, and onsite inspections, the U.S. would continue to gain critical information about Russia's nuclear arsenal and reduce uncertainty and avoid miscalculations.<sup>16</sup>

The withdrawal of the U.S from other international agreements such as the Iran deal in 2018, the Anti-Ballistic Missile Treaty with Russia in 2002, and finally the INF treaty in 2017 reveals a more fundamental issue and shifts in the security environment. The current political mistrust and lack of credibility between the U.S. and Russia will hamper negotiations and diplomatic efforts for the renewal of the new START treaty.

## Middle East (Israel & Persian Gulf)

In the Middle East, the Israel-Iran conflict has escalated after the withdrawal of the U.S. from the JCPOA agreement in 2018. The tensions continue to rise leading to a potential crisis brewing in the Middle East. So far only the U.S. has withdrawn from the deal hoping that its "maximum pressure" campaign and renewed trade embargoes will put Iran under economic pressure for favorable negotiations. The EU has

<sup>&</sup>lt;sup>15</sup> Lara Seligman and Robbie Gramer, "What Does the Demise of the INF Treaty Mean for Nuclear Arms Control," *Foreign Policy*, August 2, 2019.

<sup>&</sup>lt;sup>16</sup> Ibid.

been unable to provide sanctions relief to Iran per the JCPOA agreement giving Iran the reason to restart its Uranium enrichment. Iran is already violating some of the terms of the JCPOA agreement by bringing new facilities online, increasing inventory of nuclear material, and enriching some of it to 4.5%.<sup>17</sup> On one hand Iran continues its aggression with its support to Syria, militants in Iraq and Yemen, and on the other hand, Saudi Arabia and the UAE are spending heavily on military expenditures and Israel is already a NWS. There is an unrestrained arms race between all regional countries in the Middle East for conventional weapons, missiles, militias, cyber armies, and advanced technological weapons. This race has resulted in an imbalance in the regional balance of power and there are higher chances of miscalculation and the possibility of triggering an unwanted war.

## Korean Peninsula

North Korea is a rogue actor and it continues to develop its nuclear weapons program. North Korea has conducted six nuclear tests between 2006 and 2017.<sup>18</sup> It also accelerated its ambitious program conducting ICBM tests in July and November 2017.<sup>19</sup> The U.S under the Trump administration initially tried to put "maximum pressure" by increasing economic sanctions. After the "fire and fury" and "little rocket man" exchanges, the Singapore summit between President Trump and North Korean leader Kim Jong-Un gave a very promising start to achieving "complete denuclearization of the Korean Peninsula". Unfortunately, since then, there has been no clarification around the process of complete and verifiable denuclearization. Additionally, the Hanoi summit to be held in February 2019 was cancelled and currently all talks are at a standstill.

## V. Recommendations

The times seem to be uncertain and at a time when we should be strengthening our efforts on nuclear nonproliferation, we seem to be moving closer to another arms race after the demise of the INF Treaty.

Since the 1990s, China has held the position that major nuclear powers would have to scale down to the same levels as smaller powers before they would consider participating in multilateral nuclear disarmament treaties.<sup>20</sup> This issue continues to be a challenge in negotiating multilateral agreements and something that the current NWS states should consider.

U.S Support to other Treaties: At a time when agreements are failing, the U.S. can take one step forward to give its support to the Protocol to the Treaty on Nuclear-Weapon-Free Zone in Central Asia by ratifying the treaty and Protocols I and II to the African Nuclear-Weapon-Free Zone Treaty. The Protocol to the Central Asian Nuclear Weapon Free Zone (CANWFZ) Treaty provides legally binding assurances not to use or threaten to use nuclear weapons againstCANWFZ Treaty parties Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan who are legally bound to not manufacture, acquire, test, or possess nuclear weapons. The African Nuclear-Weapons-Free Zone Treaty, also known as the Treaty of

<sup>&</sup>lt;sup>17</sup> Tom Allinson, "Israel-Iran Conflict to be Major Middle East Issue in 2020," Deutsche Welle, last modified February 1, 2020, accessed March 5, 2020.

<sup>&</sup>lt;sup>18</sup> Daniel Connolly and Alexander M. Hyund, "Learning to Share? A Cold War Solution for Denuclearizing the Korean Peninsula," *North Korean Review* 15, no. 2 (Fall 2019): 5-22.

<sup>&</sup>lt;sup>19</sup> Ibid.

<sup>&</sup>lt;sup>20</sup> Richter, "The End of the INF Treaty," 6.

Pelindaba, was signed by 47 of the continent's 53 states, and prohibits states from conducting research on, developing, manufacturing, stockpiling, acquiring, possessing, or having control over any nuclear explosive device by any means anywhere.<sup>21</sup> Parties are also banned from receiving assistance on research or development, and cannot station any nuclear explosive device on their territory.

Although public statements by the presiding nuclear weapon states indicate that they support nuclear-weapon-free initiatives in theory, their actions seem to indicate otherwise. The U.S. and other nuclear states should participate in a legally binding pledge by signing appropriate protocols to the treaties not to threaten or attack such zones with their nuclear weapons.<sup>22</sup>A continuing lack of support from the U.S. only reinforces the belief that the U.S. not only lacks an interest in their own disarmament but also blocks important disarmament initiatives of others. Support of the U.S. to the treaty would demonstrate that it respects universal disarmament and nonproliferation norms and values; the same respect they expect from every other nation.

## Restoring Middle East peace

Regional cooperation is the key to bringing stability to the Middle East. A regional order which includes Iran instead of excluding/containing it will bring stability in the Middle East. Even though there exists deep distrust, diplomatic talks with Iran and the regional governments in the Middle East which recognize Iran's legitimate interest in the Arab world would ease the tensions in the region. There are currently two ongoing efforts on this front. Iranian President Hassan Rouhani has proposed first steps in collective security for the Persian Gulf by proposing the Hormuz Peace Endeavor, non aggression pacts and peace talks with rival Saudi Arabia.<sup>23</sup> Russia too sees an opportunity to mediate peace and strengthen its foothold in the region. Hoping to fill in for the U.S.'s wavering commitment to the Middle East, president Putin has offered to conduct diplomatic talks towards a peace agreement.<sup>24</sup> It is time to implement president Obama's recommendation of a "shared neighborhood" to restore cold peace in the Middle East with a pact of nonaggression, non-interference, and economic cooperation.<sup>25</sup> Supporting a regional order which improves regional stability will enable the U.S. to withdraw its presence in the Middle East.

#### Humanitarian approach

Appeal to the humanitarian impact of nuclear weapons.

## Denuclearization of the Korean Peninsula

North Korea's nuclear weapons assimilation is a major proliferation problem. Incentive based proposals to denuclearize the DPRK with a combination of economic benefits and security guarantees in exchange for disarmament have not been successful on account of lack of trust and cooperation between the U.S. and the DPRK. Additionally, the DPRK considers it more valuable to hold on to its nuclear weapons for

<sup>&</sup>lt;sup>21</sup> "African Nuclear-Weapons-Free Zone Treaty," Arms Control Association, last modified March 15, 2020, accessed March 15, 2020.

<sup>&</sup>lt;sup>22</sup> Togzhan Kassenova, "The Struggle for a Nuclear-Weapon-Free Zone in Central Asia," Bulletin of the Atomic Scientists, last modified December 22, 2008.

<sup>&</sup>lt;sup>23</sup> Vali Nasr, "A New Nuclear Deal Won't Secure the Middle East but Regional Cooperation Could, and Washington Should Support It," *Foreign Affairs*, February 7, 2020, accessed March 2, 2020.

<sup>&</sup>lt;sup>24</sup> Ibid.

<sup>&</sup>lt;sup>25</sup> Ibid.

deterrence, national pride, international prestige, and the ability to negotiate better financial deals and hold political power over the U.S. and its allies.<sup>26</sup> It is a very high risk strategy to consider the use of military force to dismantle North Korea's nuclear weapons program. Moreover, even if the military effort succeeded it would be at a huge cost since North Korea would retaliate with its existing weapons of mass destruction, North Korea has the ability to rebuild its nuclear program in a very short time.<sup>27</sup> Multilateral nuclear sharing as a form of extended deterrence has been effectively used in the past between the U.S. and its allies to prevent proliferation. An innovative compromise called the "reverse sharing" approach based on the nuclear sharing model has been proposed.<sup>28</sup> The reverse sharing approach would relocate North Korea's nuclear weapons to Northeast China for storage while giving North Korea the ability to retain control of its weapons. Even though this will not ensure denuclearization, it will prevent nuclear escalation and proliferation in the Korean peninsula.

#### VI. Youth engagement

For youth across the world, issues such as "climate change, gun violence, or health care" resonate with much more importance than the words "non-proliferation of nuclear weapons." In comparison to an "outdated" nuclear culture, these issues are much more millennial and real, with growing numbers of advocates pushing for their community of youth to join them in fighting for change. "According to the report, a majority of millennials (45%) believe that a nuclear attack will occur within the next decade. Yet those same respondents simultaneously ranked nuclear weapons as the "least important" out of 12 global issues."<sup>29</sup>

Social Media is vital to increase youth engagement in nuclear disengagement involvement. Platforms such as Facebook, Twitter, LinkedIn, and Instagram are not only wildly popular in teen pop culture, but are becoming increasingly versatile. According to a report by Duncan Kavanagh on Global Web Index, "45% of 13-17 year-olds say they're online on a 'near-constant basis."

Social media platforms have become a lifestyle for "influencers," who use their platforms to promote advertisements, trends, and much more.<sup>30</sup> The impact is twofold: not only do youth, a majority of these influencers' amassed followers, become aware of the news and trends promoted by the people they follow, but the news is then simultaneously spread across the platform and within social media circles, inevitably growing in popularity.

<sup>&</sup>lt;sup>26</sup> Connolly and Hyund, "Learning to Share?," 9.

<sup>&</sup>lt;sup>27</sup> Connolly and Hyund, "Learning to Share?," 9.

<sup>&</sup>lt;sup>28</sup> Connolly and Hyund, "Learning to Share?," 16.

<sup>&</sup>lt;sup>29</sup> Korda, Matt. "Do Young People Care about Nuclear Weapons?" Inkstick, February 27, 2020. Accessed March 14, 2020. https://inkstickmedia.com/ do-young-people-care-about-nuclear-weapons/.

<sup>&</sup>lt;sup>30</sup> Kavanagh, Duncan. Teenagers and Social Media: What Every Marketer Should Know. May 9, 2019. Accessed March 14, 2020. https://blog.globalwebindex.com/ trends/teenagers-and-social-media/.

Social Media has shown to create an increase in awareness and involvement in U.S. politics and national news. Notorious youth climate activist, 16-year-old Greta Thunberg, is a primary example of how social media impacts teens and their peers in fighting for societal issues. Business Insider cited a study that studied the attitudes of UK children aged 5 to 15 through social media use in 2019 through 3,500 interviews with British children and parents. Children's support of social causes increased from 12% to 18% in comparison to 2018 -- the increase now known as "The Greta Effect."<sup>31</sup>

#### Youth activists

https://www.insider.com/young-activists-climate-change-guns-greta-thunberg-2019-9#desmond-is-amazing-12-lgbtq-youth-visibility-9

#### Youth-led marches

## March for our lives

According to Outreach, many adults and children know very little about the impact of nuclear weapons. Therefore, to increase awareness of nuclear engagement outreach, education is a necessary first step, such as research on the history of nuclear weapons, the threat of nuclear terrorism, and nonproliferation and disarment. Donations towards and volunteering for different nonproliferation groups such as Global Zero and ICAN, who create grassroots movements and activate the international community to work together to create change, are also impactful ways of benefiting the community. The main focus of these groups is to encourage and inspire regular citizens, who do not have prior information on the nuclear weapons and nonproliferation community, to join the cause and fight for change. Youth, who are easily notified by their online communities, are a pragmatic channel to influence the adult community as well (https://outrider.org/nuclear-weapons/articles/what-you-can-do/). Furthermore, communication with district officials causes a ripple effect towards national government policies. Sending letters and emails and tagging on social media, such as Twitter, shows the district representatives the citizens' concerns and emphasis on the importance of nuclear protection.

In November of 2017, U.S. Senator Ben Cardin of Maryland said: "Of late, I've been getting more and more questions about, 'Can the president really order a nuclear attack without any controls?' That question is asked more and more by the American people."

<sup>&</sup>lt;sup>31</sup> Wood, Charlie. "The UK Media Regulator Says a 'Greta Thunberg Effect' Means More Children Are Engaging in Online Activism." Business Insider. Accessed March 15, 2020. https://www.businessinsider.com/ greta-thunberg-effect-uk-children-online-activism-spikes-2020-2.

## Bibliography

"African Nuclear-Weapons-Free Zone Treaty." Arms Control Association. Last modified March 15, 2020. Accessed March 15, 2020.

Allinson, Tom. "Israel-Iran Conflict to be Major Middle East Issue in 2020." Deutsche Welle. Last modified February 1, 2020. Accessed March 5, 2020.

Anderson, Justin V., and Amy J. Nelson. "The INF Treaty: A Spectacular, Inflexible, Time-Bound Success." *Strategic Studies Quarterly* 13 (May 2019): 90-122. Accessed March 1, 2020.

Audenaert, Didier. *The End of the INF Treaty: Context and Consequences*. Issue brief no. 111. July 10, 2019. Accessed March 11, 2020.

Connolly, Daniel, and Alexander M. Hyund. "Learning to Share? A Cold War Solution for Denuclearizing the Korean Peninsula." *North Korean Review* 15, no. 2 (Fall 2019): 5-22.

Duarte, Sérgio. "Unmet Promise: The Challenges Awaiting the 2020 NPT Review Conference." Arms Control Association. Last modified 2018. Accessed March 2, 2020. https://www.armscontrol.org/act/2018-11/features/unmet-promise-challenges-awaiting-2 020-npt-review-conference.

"Glossary." Nuclear Threat Initiative. Last modified 2020. Accessed March 2, 2020. https://www.nti.org/learn/glossary/.

Gramer, Robbie, and Lara Seligman. "The INF Treaty is Dead. Is New START Next?" *Foreign Policy*, February 1, 2019.

Kassenova, Togzhan. "The Struggle for a Nuclear-Weapon-Free Zone in Central Asia." Bulletin of the Atomic Scientists. Last modified December 22, 2008.

Kavanagh, Duncan. *Teenagers and Social Media: What Every Marketer Should Know*. May 9, 2019. Accessed March 14, 2020. https://blog.globalwebindex.com/trends/teenagers-and-social-media/.

Keck, Zachary. "China's DF-26 'Carrier-Killer' Missile Could Stop the Navy in Its Track (Without Firing a Shot)." The National Interest. Last modified April 20, 2018.

Korda, Matt. "Do Young People Care about Nuclear Weapons?" *Inkstick*, February 27, 2020. Accessed March 14, 2020. <u>https://inkstickmedia.com/do-young-people-care-about-nuclear-weapons/</u>.

Lanoszka, Alexander. "The INF Treaty: Pulling Out in Time." *Strategic Studies Quarterly* 13 (May 2019): 48-67. Accessed March 2, 2020.

Murray, Lori Esposito. "What the INF Treaty's Collapse Means for Nuclear Proliferation." *Council on Foreign Relations*, August 1, 2019.

Nasr, Vali. "A New Nuclear Deal Won't Secure the Middle East but Regional Cooperation Could, and Washington Should Support It." *Foreign Affairs*, February 7, 2020. Accessed March 2, 2020.

Pasandideh, Shahryar. "The End of the 'INF Treaty' and the US-China Military Balance." *The Nonproliferation Review* 26, nos. 3-4 (2019): 267-87. Accessed March 1, 2020.

Richter, Wolfgang. "The End of the INF Treaty is Looming: A New Nuclear Arms Race Can Still be Prevented." *Stiftung Wissenschaft und Politik*, January 2019, 1-8. Accessed March 1, 2020.

Rose, Frank A. "The End of an Era? The INF Treaty, New START, and the Future of Strategic Stability." *Brookings*, February 12, 2019.

Seligman, Lara, and Robbie Gramer. "What Does the Demise of the INF Treaty Mean for Nuclear Arms Control." *Foreign Policy*, August 2, 2019.

"Treaty on the Non-Proliferation of Nuclear Weapons (NPT)." United Nations. Last modified 2020. Accessed March 2, 2020. https://www.un.org/disarmament/wmd/nuclear/npt/.

"Treaty on the Prohibition of Nuclear Weapons." United Nations Office of Disarmament Affairs. Last modified 2017. Accessed March 2, 2020. https://www.un.org/disarmament/wmd/nuclear/tpnw/.

"UNODA — United Nations Office for Disarmament Affairs." United Nations. Last modified 2020. Accessed March 2, 2020. https://www.un.org/disarmament/.

Vaddi, Pranay. "Leaving the INF Treaty Won't Help Trump Counter China." *Carnegie Endowment for International Peace*, January 31, 2019. Accessed March 1, 2020.