Forum: The Disarmament Commission

Issue: Providing a resolution for a possible nuclear crisis

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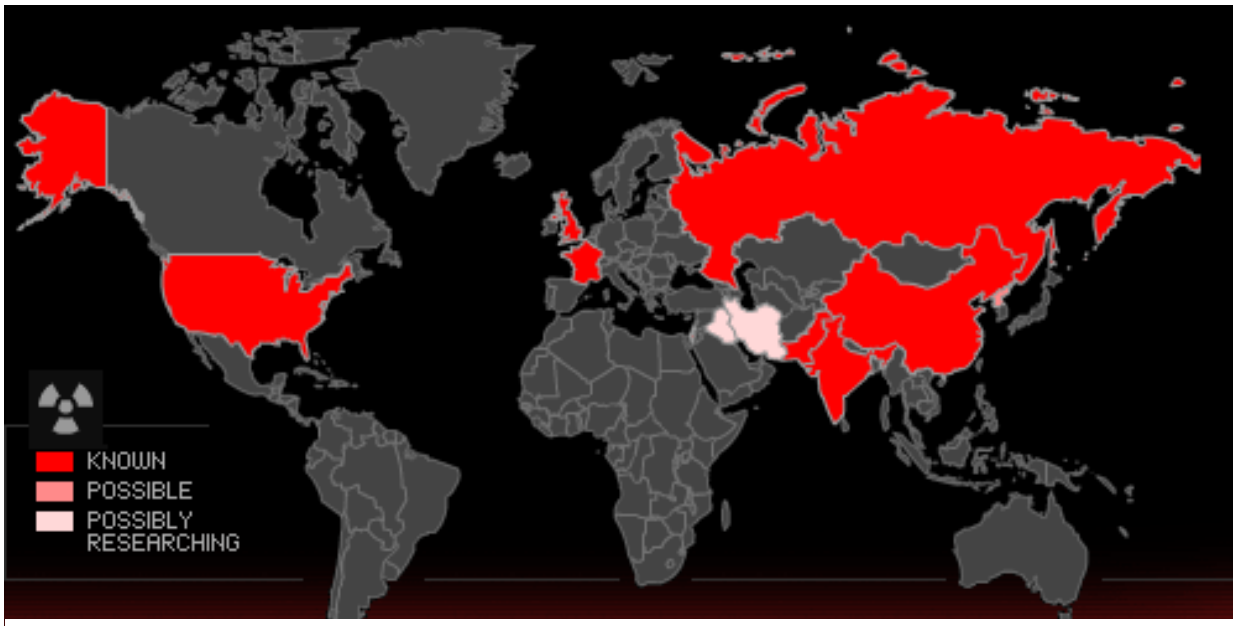
Position: Chair of the Disarmament Commission

Introduction



Caption 1: A pictorial representation of nuclear proliferation in the world

In the Second World War, the equivalent of nearly 200 kilotons of explosives was dropped over Japan through nuclear weapons on two occasions. Today, nearly 10,000 nuclear warheads exist, each carrying at least 100 kilotons-equivalent of explosives of nuclear power.

By 2017, the world saw the Democratic People's Republic of Korea's (DPRK) sixth nuclear testing in a decade. Kim Jong-Un, now under international spotlight for his provocative missile and nuclear testing, showing off his arsenal of 60 nuclear weapons, a figure provided by a top South Korean official, in Seoul's first public comment on the size of the North's nuclear arsenal. After talks with United States President Donald Trump during the summer of 2018 in Singapore, Kim agreed to halt nuclear development. This is, however, currently doubtful since no definitive agreement was made during the summit.

Nuclear crises do not only mean the possibility of a nuclear weapon attack but also irresponsible use of radioactive material, such as illegal trade and leaks like those in Fukushima, caused by the 2011 tsunami in Japan, that could trigger nuclear reactions, harming a vast

majority of people. This was seen in Iran, whereby the International Atomic Energy Agency (IAEA) Board of Governors found Iran in "non-compliance" with its Comprehensive Safeguards Agreement in 2005, and the UN Security Council passed seven resolutions demanding that Iran halt its enrichment and reprocessing activities.

Because of the potential for vast destruction that a nuclear crisis carries, it is important that regulations are put in place to deter irresponsible use of nuclear weapons. However, cases in history have shown us that at times, states do find ways to justify for nuclear attacks, in which the Disarmament Commission must intervene and come up with a contingent resolution in case of a nuclear crisis.

Definition of Key Terms

Nuclear bomb

An explosive device that derives its destructive force from a chain of nuclear reactions, either fission, or from a combination of fission and thermal reactions.

Crisis

An event that sparks instability and danger in a specified region, affecting civilians and individuals in the area. Nuclear crises are such events that involve the use of nuclear power to threaten or to cause harm.

Dirty bomb

A nuclear weapon improvised from radioactive waste materials and conventional explosives. For example, it could be a nuclear weapon made by Non-State Actors (NSAs), built from stolen radioactive materials or those materials acquired illegitimately, such as through a black market.

Nuclear fission chain reaction

Where neutrons released in fission produce an additional neutron in at least one further nucleus, in which the nucleus produces another neutron and the process repeats. This is the primary way nuclear power plants and weapons alike produce energy.

Fissile material

Materials used in nuclear engineering that had withstand a nuclear fission chain reaction Known fissile materials are plutonium-239 and uranium-235. These are required for the production of nuclear weapons and power plants.

General Overview

The Second World War

The first ever deployed nuclear weapon was dropped from an American B-29 bomber, over the Japanese city of Hiroshima. 80,000 people were vaporized immediately, after which tens of thousands died due to the subsequent radiation exposure. Three days later, another bomb was dropped over Nagasaki and killed another 40,000 men, women and children. The then-Japanese Emperor Hirohito announced Japan's unconditional surrender in the Second World War, having faced the devastating power of two cruel bombs.

The two bombs, namely Little Boy and Fat Man, dropped over Hiroshima and Nagasaki respectively were developed through the Manhattan Project. This project was led by a group of American scientists in 1940, who were gathered in the midst of Nazi Germany's development of nuclear weapons. By July 16 1945, they saw fruition of their efforts and successfully tested an atomic (fission) bomb, made from plutonium and uranium, just outside of New Mexico in Los Alamos. Little Boy was loaded with 9000 pounds of uranium, carrying the impact of about 12 to 15 thousand tons of TNT explosives. Despite causing 80,000 deaths of innocent civilians, the Japanese refused to surrender and announced that they would fight to the last man. Fat Man, a 10000 pound, 120 kiloton explosive bomb, was loaded onto another B-29 bomber on 9 August 1945.

There has always been controversy regarding this. The United States (US) notably used nuclear weapons against innocent civilians who did not have had direct relation with the war. Effectively, they were holding innocent lives ransom for Emperor Hirohito to surrender. From a disarmament view, this should be curbed, because innocent lives should not be used as trading chips during wars.

Iran

The nuclear programme of Iran began after then-US President Dwight D. Eisenhower made his "Atoms for Peace" speech at the United Nations (UN) General Assembly (GA), seeking to provide educational and technological support to those allies willing to develop a nuclear technology for peace and the betterment of civilian lives. Iran, being one of the close allies of

the US, was one of the beneficiaries from this programme, beginning 1957. By 1974, the US invited over some Iranian nuclear scientists to the Massachusetts Institute of Technology (MIT) to train and develop Iran's civilian reactors.

Iran ratified the NPT in 1970, thus allowing its facilities to be verified and inspected by the International Atomic Energy Agency (IAEA).

However, the idyllic development of this programme was halted when Ayatollah Khomeini took power after the Iranian Revolution. When he took power, Iranian students stormed to the US Embassy and took its diplomats for hostage, leading to a diplomatic breach, and only released these hostages 444 days later when then-President Ronald Reagan took office.

During the first Gulf War led by the US to fight against Iraq's Saddam Hussein in 1991, Iran increased its funding into its research and development of nuclear weapons and sought help from Russia. By the beginning of the 21st century, Iran was accused of developing a "secret" nuclear weapons plan. In 2003, when their incompliance towards the NPT was reported by the IAEA, Iran promised that they would suspend all nuclear fuel processing and reprocessing work.

There is potential of a nuclear crisis here because of US President Donald Trump's decision on the Iran nuclear deal, which he had pulled out of. This meant that two rounds of sanctions were imposed on Iran, despite their compliance repeatedly verified and certified by the IAEA. The Iran nuclear pact signified greater peace between Iran and the Western powers, which, could now be an issue because the US had just revoked this pact.

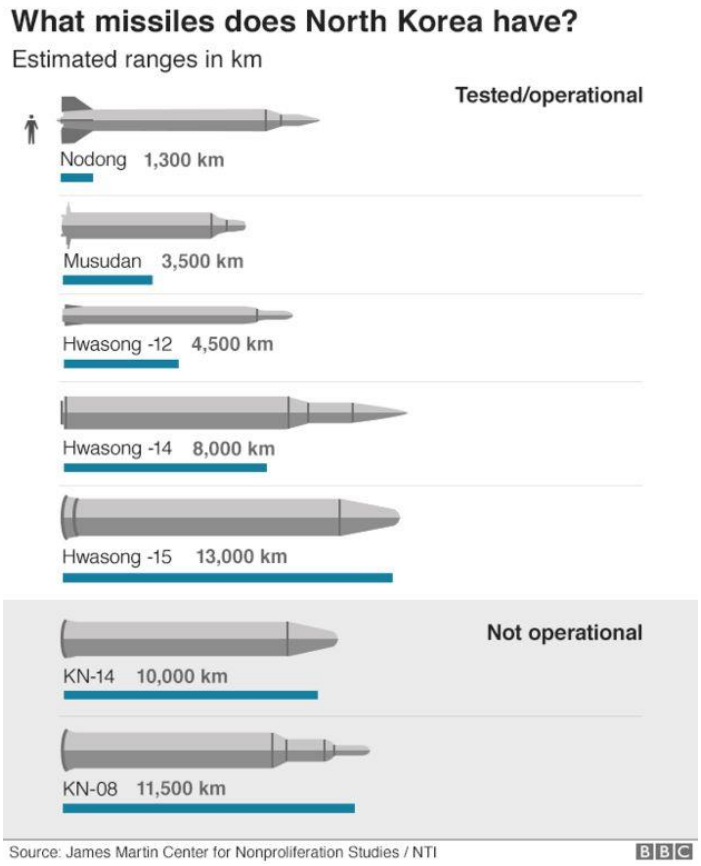
India-Pakistan – Jammu-Kashmir (J&K)

The Kashmir conflict is a territorial dispute between India and Pakistan. It rooted since history when Indian subcontinent was partitioned by religion and princes of the individual states of the original subcontinent had to choose which independent country, India or Pakistan, to join. The problem in Jammu-Kashmir (J&K) was that Maharaja Hari Singh, the ruler of J&K, was Hindu, while the people residing in the area were predominantly Muslim. As a result, he was undecided and remained neutral. Neutrality did not last long however before Pakistan sent troops into Kashmir, hoping to annex them. Hari Singh immediately requested for India's military assistance and they signed the Instrument of Accession, ceding Kashmir to India on the 26th October, 1947. Pakistan ignored the UN mandate of Kashmir's accession to India and continued fighting. Decades of fighting ensued and a red-line was formed – the Line of Control (LOC).

In May 1998, India and Pakistan both tested their nuclear weapons. Subsequently in April 1999, India tested its nuclear weapon delivery system, to which Pakistan responded by testing its Ghauri II missile, following India's testing of their long-range missiles Agni II. Despite these exchanges of nuclear tests, both sides refuse to concede to each other. Instead, continued fighting spread to even greater areas like Kargil. The conflict paused only when Bill Clinton, the then-US President, and Nawaz Sharif, the then-Pakistani President, met on 4th July 1990. Pakistan found themselves strategically at a disadvantage and did not want to risk their soldiers. Therefore, both sides, India and Pakistan withdrew their forces from the warzones and stopped fighting. However, as it is still a pending conflict, and vulnerable to provocation from both sides. It is important for the UN to consider to moderate their respective nuclear weapons so as not to cause innocent harm from escalation of violence.

The Korean Peninsula

It is now highly possible and conclusive that the Democratic People's Republic of Korea (DPRK), also known as North Korea, possesses strong nuclear abilities.



The Korean War, being a proxy war between Russia and the United States, meant that Russia would try its best to oust its rival, the US. In aim of this, the Soviet Union began training North Korean scientists and engineers, passing them knowledge regarding nuclear energy to initiate a weapons programme in 1956. Later in 1959, DPRK signed a nuclear cooperation agreement with Russia which led to the opening of the first nuclear weapons research centre in DPRK, the Yongbyon Nuclear Scientific Research Centre. This centre had a reactor used for research that reached 4MW of energy by 1974, which was further increased after uranium mining was initiated between the 1970s and 1990s.

However, in 1989, financial support and resources that the Soviets had been providing them for more than 40 years came to a halt as the Soviet Union lost its control over Central Asia and

Eastern Europe. It was the same year that US Intelligence realized, through satellite imaging, that DPRK was building nuclear weapons despite signing the Non-Proliferation Treaty (NPT) in 1985.

After the US withdrew its nuclear weapons, which peaked at 960 warheads in South Korea, from the South in 1991, the North Koreans, for the first time, allowed for inspections by the International Atomic Energy Agency (IAEA) in 1992. The inspections did not go well as inspectors were blocked from inspecting the reactors and evidence was shown that DPRK was not revealing the "full extent" of its plutonium production. DPRK then threatened to withdraw from the NPT the following year but suspended its withdrawal after US negotiations.

Towards the end of the twentieth century, the IAEA was not satisfied with the proceedings regarding DPRK, there were many ambiguities that still existed. There was still no clear, consistent declaration of the specific amount of plutonium that the North possessed and too much time for the North to begin complying with the "Agreed Framework," signed with the US in 1994, which meant that DPRK had to "freeze operation" in nuclear weapons in exchange for two "proliferation-resistant" nuclear reactors.

The issue in the Korean Peninsula has seen progress when both leaders from the North and South met each other in 2018, and from the increase in communication by the DPRK's leader, Kim Jong-un, to the world. However, there is still possibility for potential escalation of the situation once again as seen by the state-issued statement on the 1st of January, 2019, that stated that the regime would consider "new acts" if the US continues to impose "one-sided" policies against Kim's regime. Since the beginning of the 21st century, the US has imposed multiple sanctions against DPRK, such as oil shipment restrictions and retraction of humanitarian aid. This possibility still exists because the DPRK still does not seem to bow down to all of the policies imposed by the US, more so if they are one-sided. Moreover, the world has seen DPRK shutting down communications and conducting provocative nuclear tests when they are not satisfied with unfair policies.

To promote communication and peaceful discussion and negotiation, the Six-Party talks were held. These meetings "were a series of multilateral negotiations held intermittently since 2003 and attended by China, Japan, North Korea, Russia, South Korea, and the United States for the purpose of dismantling North Korea's nuclear program. The talks were hosted in Beijing and chaired by China. North Korea decided to no longer participate in the six-party process in 2009. In subsequent years, other participants, notably China, have called periodically for a resumption of the process."

The year 2014 saw an escalation to a crisis as the North and South enter a heated exchange of missiles and fighter jets near the water. In 2015 and 2016, threats increased as North Korean think tank claims that the country has the nuclear capability to strike the "heart of the US" and later the boasting of a hydrogen bomb to their arsenal, although doubted by US National Security Council. On September 9 2016, DPRK claimed to have detonated a nuclear warhead, which, according to the South Korea Meteorological Administration, the blast was estimated to have had the explosive power of 10 kilotons. To exacerbate pre-existing tension, DPRK also claimed to be able to miniaturize nuclear weapons into ballistic missiles, which Kim Jong-un claimed on 1 January 2017 that North Korea could soon test an "intercontinental ballistic missile". Right after that, the US responded by installing sea-based radar systems, allowing them to track any launches of intercontinental ballistic missiles (ICBMs). In July, the North Korea-based state-run Korean Central News Agency (KCNA) reported that the country is ready to launch an ICBM against the US if it attempted to remove Supreme Leader Kim Jong-un from power. Tensions increased even further when the US was accused of "trying to drive the situation of the Korean peninsula to the brink of nuclear war" after the UN Security Council passed more sanctions unanimously, DPRK responded to that swiftly in two days and announced plans to examine plausible operations of launching medium to long-range missiles to US-territory Guam. This followed US President Donald Trump's warning to Pyongyang, that if it continued to threaten the United States, it would face "fire and fury like the world has never seen'. The regime had not seemed to retreat; on September 3 2017, North Korea test launches its sixth nuclear weapon, causing a 6.3 magnitude seismic event, as reported by the US Geological Survey (USGS). Pyongyang claimed that it was a hydrogen bomb, which nuclear scientists reported that it had been eight times more powerful than those dropped over Hiroshima in 1945.

2018 was a particularly peculiar year for this crisis as it saw the Trump-Kim Summit in Singapore. The meeting between the two leaders left "with no answers, only questions" as uncertainty is now stronger than ever. Although it was

deemed "successful" by President Trump, no definitive action has been taken by both parties since then.

Russia

Russia became the world's second nuclear state on 29 August 1949 after a successful test of its first device in Kazakhstan. They are one of five recognized states under the Treaty on Non-Proliferation of Nuclear Weapons (NPT), after inheriting both strategic and tactical nuclear weapons from the USSR. Although Russo-American diplomatic tensions have risen recently due to controversial election tampering claims that have surfaced, Russia has historically participated in arms control agreements with the US. An example of this is the Strategic Arms Reduction Treaty (START), signed between the Russian Federation and the United States in 2010. According to the US Department of State, Secretary for Arms Control and International Security, the US and Russia had to meet three aggregate limits – "700 deployed intercontinental ballistic missiles (ICBMs), deployed submarine-launched ballistic missiles (SLBMs), and deployed heavy bombers equipped for nuclear armaments; 1,550 nuclear warheads on deployed ICBMs, deployed SLBMs, and deployed heavy bombers equipped for nuclear armaments (each such heavy bomber is counted as one warhead toward this limit) and lastly, 800 deployed and non-deployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments. Such bilateral initiatives helped reduce Russian warheads from a Soviet-era peak of 40,000 warheads to 4,350 according to Nuclear Threat Initiative (NTI).

Non-State Actors (NSAs)

Since the beginning of the 21st century, the world has witnessed several terrorist attacks, committed by Non-State Actors (NSAs) such as the Islamic State of Iraq and Levante (ISIL) and al-Qaeda. When news of the attacks broke out to the public, many questioned how these NSAs managed to access these weapons and equipment used in their attacks. The answer to this is that during the wars fought in the Middle East, originating since the First Gulf War, during the Cold War, both the US and the USSR supplied rebel forces with such weapons and equipment to fight alongside them. These weapons have subsequently been traded amongst rebel groups, and have been supplemented by further arms smuggling.

This is a concern for a potential nuclear crisis because there are two possibilities. The first one being that NSAs could acquire nuclear devices from states with existing nuclear facilities and

the second possibility being that NSAs could construct their own nuclear weapons from illegitimately acquired nuclear material such as uranium.

UN Involvement, Relevant Resolutions, Treaties and Events

From the United Nation's perspective, "disarmament is the best protection against such dangers, but achieving this goal has been a tremendously difficult challenge". Several multi-lateral treaties have been established by the UN since 1945, specifically regarding non-proliferation of nuclear weapons. These include the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Treaty Banning Nuclear Weapons Tests in the Atmosphere, In Outer Space and Under-Water, which is also known as the Partial Test Ban Treaty (PTBT), the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which was signed in 1996 but not in force yet, and the Treaty on the Prohibition of Nuclear Weapons (TPNW), opened for signature in 2017 but has yet to enter into force.

The NPT was 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" according to the United Nations Office for Disarmament Affairs (UNODA). Since May 1995, treaty's validation was extended indefinitely with 191 states joining it. Although it is a significant step into global unity in the non-proliferation of nuclear weapons, there are some drawbacks and flaws to this treaty. The NPT is arbitrary and discriminatory in its current state because it conforms with the status quo inequality between superpowers and other countries for several reasons. Firstly, it allows those nations who have possessed nuclear weapons before 1965 to retain them, which does not really facilitate the mandate of the treaty of non-proliferation. By maintaining these nuclear weapons, the risk of a nuclear treaty does not decrease as there is still a potential risk. In fact, the NPT could further increase the risks of a nuclear crisis because of its provisions. According to the NPT, nuclear states are still allowed to trade nuclear energy and related materials, whereas others are not. Ignoring the fundamental fact that this does not promote non-proliferation, it also promotes an imbalance of power among nations which could be another potential cause of conflict.

The PTBT is the result of the United States', the Soviet Union's and the United Kingdom's Conference on the Discontinuance of Nuclear Tests in Geneva in 1958, after India first proposed an end to nuclear testing in 1954. The reason why it was called "partial" and not "complete" was because the three states could not agree on verification procedures, which is

still its weakness today. Lack of international verification means that the PTBT does not act as an effective deterrence to nuclear proliferation because all of the provisions stated within it are not enforced.

The PTBT has now been succeeded by the Comprehensive Nuclear-Test-Ban Treaty (CTBT). While the PTBT lacked international verification to enforce its provisions, the CTBT held more authority over non-proliferation through its structure which included International Monitoring Systems (IMS), On-Site Inspections (OSI), and Confidence-Building Measures (CBMs). The CTBT bans all nuclear weapon testing explosion and contains compliance measures, such as sanctions and depending on severity, bring it to the attention of the United Nations (UN) as stated in Article V of the Treaty. However, the United States (US) and the People's Republic of China (PRC) have not ratified the CTBT. The CTBT is an exemplar treaty because it has the power to enforce its mandate and not only that, it also has compliance measures which further enhances its positive effect on non-proliferation of nuclear weapons.

Timeline

Date	Description of event
August 1942	Manhattan Project is established in the US
16 July 1945	US conducts first ever nuclear test
6 and 9 August 1945	US drops atomic bomb over Hiroshima and Nagasaki respectively
29 August 1949	Soviet Union tests its first nuclear bomb
1 November 1952	US tests the first hydrogen bomb
1 December 1959	Nuclear tests banned in Antarctica
13 February 1960	France tests its first nuclear weapon in the Sahara desert
30 October 1961	"Tsar Bomba," largest nuclear bomb test conducted by the Soviet Union

16 to 29 October 1962	Cuban Missile Crisis occurs, brings US and Soviet Union to the brink of nuclear war
5 August 1963	PTBT opens for signature
16 October 1964	China conducts its first nuclear weapon
14 February 1967	Latin-America is nuclear-free as the Treaty of Tlateloco is signed by all Latin American countries, except for Cuba, who signed between 1995 and 2002.
1 July 1968	Treaty for Non-Proliferation of Nuclear Weapons (NPT) is signed
18 May 1974	India conducts its first nuclear test
6 August 1985	South Pacific becomes nuclear-free as a result of the Treaty of Rarotonga, proposed by New Zealand
8 December 1987	Intermediate-range missiles are banned after the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles (INF Treaty)
15 December 1995	Southeast Asia becomes nuclear-free as a result of the Southeast Asian Nuclear-Weapon-Free-Zone Treaty, also known as the Bangkok Treaty
8 July 1996	International Court of Justice (ICJ) rules nuclear weapons illegal, everywhere under its jurisdiction, which means every member of the UN
24 September 1996	CTBT is signed

May 1998	India and Pakistan tensions rise and both countries test nuclear weapons
9 October 2006	DPRK tests its first nuclear weapon
27 March 2017	Nuclear ban treaty negotiations begin
7 July 2017	The UN adopts nuclear weapon ban treaty

Possible Solutions

Firstly, communication is paramount to any negotiation, using soft power and avoiding acts of violence that could potentially trigger a war. This means that communication tunnels between the protagonist state(s) and antagonist state(s) must be maintained.

As only some existing non-proliferation-related treaties are equipped with compliance measures, any future treaty or pact regarding nuclear non-proliferation must have such measures, and should include provisions such as economic sanctions and expulsion from any pre-existing beneficiary programmes. Enforcement is the most crucial step to ensure that all agreements are adhered to and that signatory states are following the relevant guidelines.

Negotiation meetings like the Six Party Talks should be hosted when a nuclear crisis emerges as it allowed major stakeholders in the area to negotiate and agree on a pact, such as food aid in exchange for the abolition of nuclear tests. Furthermore, non-partisan third parties should also be able to witness such meetings and moderate them, such as the International Court of Justice (ICJ).

To fend against NSAs in nuclear processing plants, all nuclear-energy-related facilities should have their security increased. This also includes increased security in material transportation. Moreover, states that have ratified the NPT should constantly maintain contact with the IAEA which can provide support to them such as training personnel which would help in making sure that all operative personnel are aware of the uses of all equipment they come into contact with, to prevent the events of Chernobyl to repeat itself. In this day and age, in the event of something

similar to Chernobyl, there is possibility for NSAs or any non-legitimate party to take advantage.

Bibliography

Ernest, Moniz J. "Today's Global Nuclear Threats." *Nuclear Threat Initiative - Ten Years of Building a Safer World*, NTI, 12 Jan. 2018, www.nti.org/analysis/speeches/todays-global-threats/.

History.com, Editors. "Bombing of Hiroshima and Nagasaki." *History.com*, A&E Television Networks, 29 Aug. 2018, www.history.com/topics/world-war-ii/bombing-of-hiroshima-and-nagasaki.

Davenport, Kelsey. "The Six-Party Talks at a Glance." *Can the U.S. and Russia Avert a New Arms Race? | Arms Control Association*, June 2018, www.armscontrol.org/factsheets/6partytalks.

Martin, James. "Russia." *Nuclear Threat Initiative - Ten Years of Building a Safer World*, James Martin Center for Nonproliferation Studies at the Middlebury Institute of International Studies at Monterey , 2018, www.nti.org/learn/countries/russia/nuclear/.

"New START." *U.S. Department of State*, U.S. Department of State, www.state.gov/t/avc/newstart/.

Davenport, Kelsey, and Kingston Reif. "Fact Sheets & Briefs." *Can the U.S. and Russia Avert a New Arms Race? | Arms Control Association*, June 2018, www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat.

"Legality of the Threat or Use of Nuclear Weapons." *Latest Developments | Legality of the Threat or Use of Nuclear Weapons | International Court of Justice*, www.icj-cij.org/en/case/95.