Forum: The General Assembly

Issue: Measures to negotiate non-proliferation of nuclear weapons and nuclear waste

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Introduction

The names Hiroshima and Nagasaki are synonymous with the first usage of nuclear weapons the world has ever seen. Decades later, images of the devastating effects on the cities still serve as a grim reminder of the effects of weapons of mass destruction of the nuclear nature. Dropped with the consent of the United Kingdom under the Quebec treaty, the bombings killed at least 129,000 people. The acute effects of the bombings killed between 90,000 - 146,000 people in Hiroshima, and 39,000 - 80,000 in Nagasaki, with half of the deaths occurring in the first day. Following that, a substantial number of people died from burns, radiation sickness, illness, and malnutrition among other injuries and effects caused by the explosion and its resulting nuclear fallout. Many of the deaths were civilians.

To this day, the world still reels from the horrors the two nuclear bombs brought to Japan. However, military use of nuclear energy is not the only way that utilization of nuclear energy can end in catastrophe.

The Chernobyl disaster of 1986 is another devastating example of how nuclear energy can impact everything in its surroundings when mishandled. On the 26th of April, 1986, the fourth reactor at the Chernobyl Nuclear Power Plant near Pripyat of the USSR. The blast itself resulted in 2 deaths within the faculty, and another 29 deaths in the days after due to acute radiation syndrome. The accident involved over 500,000 workers, and cost about 18 billion rubles. Approximately 100,000 squared kilometres was heavily contaminated due to fallout, and impacted the regions of Belarus, Ukraine, and Russia significantly. Its effects even reached the Alps, Welsh mountains, Sweden, Norway, and Scottish Highlands, where

adiabatic cooling resulted in black rain. Mutations all sorts of living creatures have been documented, and the images are widespread on the internet, serving as another grotesque reminder to the might of nuclear technology.

Definition of Key Terms

Nuclear Proliferation

Defined as the spread of nuclear weapons, materials, and knowledge, nuclear proliferation has been a concern since the initial development of nuclear weapons technology in 1945 by the Manhattan Project of the United States.

Treaty on the Non-Proliferation of Nuclear Weapons

Known as the Nuclear Nonproliferation Treaty or NPT, the international treaty has been signed by 190 countries in May of 1995, with 5 countries that remain as non-signatories. India, Israel, Pakistan, North Korea, and South Sudan. Five states are recognized by the treaty as nuclear-weapon states, the United States of America, the Russian Federation, the United Kingdom, the People's Republic of China, and the French Republic. It has been a key pillar in geopolitical stability, and it one of the most abided by international treaties.

Nuclear Fallout

Nuclear fallout, or just fallout, is when residual radioactive material is propelled into the upper atmosphere following a nuclear blast of reaction conducted in an unshielded facility, named because the radioactive material falls out of the sky. It is also referred to as radioactive dust and ash, created when nuclear weapons explode, or when nuclear plants are damaged. It can also result in black rain, as the fallout can get mixed with the products of a pyrocumulus cloud. It is a highly dangerous substance, and results in radioactive contamination.

Nuclear disarmament

Nuclear disarmament refers to the act of reducing or eliminating nuclear weapons, and to the end state of a nuclear-weapons-free world, where nuclear weapons have been completely eliminated.

Key Issues

Lack of transparency

Due to the sovereign rights of each country, the exact number of nuclear weapons remains a secret, with most countries publishing estimates. The accuracy of such estimates is contested, as various parties publish a wide range of estimates. Due to this, speculation is often made, resulting in tension between nation states.

Mishandling of nuclear materials

Perhaps the biggest issue with the spread of nuclear technology is the mishandling of its raw materials. As seen in the case of the nuclear bombings of Hiroshima and Nagasaki in 1945, nuclear weapons have a devastating effect on everything within its vicinity. As it does not emit greenhouse gasses, nuclear energy is a clean and sustainable way to power homes and meet energy demands. Mishandling such a potent material has severe consequences, as seen in the cases of Fukushima and Chernobyl. There are also health and safety concerns when storing radioactive waste. While in recent years, safety precautions and changes in nuclear energy technology has made the energy quite safe to use, nuclear power plants still generate tons of waste material each year, which is very difficult to shift due to its volatile and hazardous nature.

Limitations of the Treaty on the Non-Proliferation of Nuclear Weapons

Even though the treaty has effectively prevented proliferation, 5 countries still sit outside its policies, and all have been able to develop nuclear weapons of the their own. There is also criticism that the treaty is biased in favour of the five authorized nuclear states, as they still have 22,000 nuclear warheads in their combined stockpile. Limited progress has been made on disarming these five countries, especially the United States and Russia due to their reluctance. High ranking officials within the UN have also stated that there is little to they can do to stop the production of nuclear weapons from nuclear reactors.

Nuclear terrorism

Nuclear terrorism ranges from sabotage of a nuclear facility to the detonation of a nuclear device. However, definitions are often disagreed upon, except that it is an offence committed by an unlawful individual or terrorist organization with the intention of using radioactive material to cause death or injury, and damage to property of the environment. With nuclear weapons materials being on the black market, detonation of crude nuclear devices by terrorist parties has become a global concern. Groups such as al-Qaeda and ISIS have demonstrated ambition and efforts to carry out nuclear attacks.

Major Parties Involved

The Democratic People's Republic of Korea

In 1985, North Korea consented to the treaty, withdrawing 18 years later. It announced and then conducted nuclear test in 2006, 2013, and 2016. The IAEA Director General Mohamed ElBaradei indicated in April of 2009 that North Korea had become a "fully fledged nuclear power". January 6th of 2016, North Korea declared that it had tested a hydrogen bomb fully capable of "wiping out the whole territory of the US all at once". Both allied and non-allied countries have condemned North Korea for its nuclear testing, with the country having threatening nuclear strikes on South Korea and the United states in numerous occasions.

The Unites States of America

As the first nation state to develop nuclear weapons, it also stands as the only country that has ever used them in a war. It is estimated to have 7,000 nuclear weapons in its stockpile. Before November of 1962, a large portion of nuclear tests were aboveground, resulting in over $1.2 billion dollars being paid to compensate citizens that had been exposed to nuclear hazards due to the testing program. Concerns have also been voiced over its new president, Donald Trump, and his stance on nuclear weapons. During his campaign, he mentioned that 'more countries should acquire nuclear weapons' multiple times. Due to his statements, questions have been raised regarding his commitment to the Nuclear Non-Proliferation Treaty.

The Russian Federation

The Federation of American Scientists estimate that as of 2016, Russia possessed 7,300 nuclear warheads, of which 1,790 are strategically operational. It reached peak stockpile with 45,000 nuclear weapons in 1988. According to its military doctrine, Russia is willing to use utilize those weapons if weapons of mass destruction, including nuclear weapons, are used against it or its allies. In any cases of aggression that threaten the existence of Russia as a state, nuclear weapons will also be deployed. Russia has had nuclear sabotage allegations, with a defector from Russia's Main Intelligence Agency (GRU) describing Russian plans for using nuclear weapons for sabotage against the United States in the instance of war. He described the bombs being smuggled into the United States as portable and extremely durable, as well as easy to smuggle into the country. However, law-enforcement officials have never found nuclear weapons on the coaches he described as being a mean of smuggling.

The International Atomic Energy Agency

The IAEA is an international autonomous organization that promotes the peaceful usage of nuclear energy, and the inhibiting of its use for any and all military purposes. The IAEA reports to both the United Nations General Assembly and Security Council. It serves as a forum between government for countries to cooperate in the peaceful usage of nuclear technology and nuclear power. The current Director General of the IAEA is Yukiya Amano.

Timeline of Relevant Resolutions, Treaties and Events

Date	Description of Event
August 1942	The Manhattan Project is established in the United states
July 1945	The United States conducts the first ever nuclear test
August 1945	Atomic bombs are dropped on Hiroshima and Nagasaki
24 January 1946	The first resolution of the UN General Assembly calls for the complete elimination of nuclear weapons and creates a commission to deal with atomic discovery
October 1952	The United Kingdom conducts first nuclear weapon test in Australia
1 November 1952	The United States tests its first hydrogen bomb
	Bertrand Russell, Albert Einstein, and other leading scientists issued a manifesto warning of the dangers of nuclear war, urging all governments to resolve disputes peacefully
17 February 1958	The United Kingdom disarmament campaign is formed
1 December 1959	Nuclear tests banned in Antarctica
13 February 1960	France tests its first nuclear weapon
October 1962	Cuban Missile crisis occurs, where the United States discovers Soviet missiles in Cuba and blockades it for 13 days. The Soviet Union and US come to the brink of nuclear war.
5 August 1963	Partial Test Ban Treaty opens for signatories
16 October 1964	China conducts its first nuclear test
14 February 1967	Latin America becomes nuclear-free
1 July 1968	Non-Proliferation Treaty is signed

18 May 1974	India conducts first nuclear test, falsely claimed to be peaceful.
22 September 1979	Nuclear explosion in Indian Ocean, thought to have been conducted by South Africa with the assistance of Israel.
6 August 1985	South Pacific becomes nuclear-free
30 September 1986	Israel's nuclear programme is revealed to have 200 nuclear weapons
8 December 1987	The Soviet Union and United States sign the Intermediate-Range Nuclear Forces Treaty
10 July 1991	South Africa joins Non-Proliferation Treaty
15 December 1995	Southeast Asia becomes nuclear-free
11 April 1996	Africa becomes a nuclear-free zone
1 June 1996	Ukraine becomes nuclear free
8 July 1996	ICJ hands down advisory opinion stating that the threat or use of nuclear weapons would generally be contrary to international law
24 September 1996	The Comprehensive Nuclear Test Ban Treaty is signed at the UN. China, France, the UK, Russia, and the US all sign. India does not sign the treaty.
May 1998	India conducts three underground nuclear tests, with one being thermonuclear. Pakistan responds with six nuclear weapon tests.
October 2006	North Korea conducts nuclear tests, provoking international condemnation.
12 January 2016	North Korea claims that it has successfully created a hydrogen bomb that can wipe out the whole US territory

Previous Attempts to Solve the Issue

The most significant attempt at halting the nuclear nonproliferation treaty has to be the Nuclear Nonproliferation Treaty, which to its credit, has halted a majority of nuclear proliferation. However, it does stop nuclear materials from entering into the black market. While the treaty does make it difficult for the materials to be obtained illegally, it does not make it impossible, leading to concerns over nuclear terrorism.

The Partial Test Ban Treaty (PTBT) of 1963, abbreviated from Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, prohibits all test detonations of nuclear weapons except for those conducted underground. At one point, negotiations focused on a comprehensive ban, but it was abandoned dye to technical questions surrounding the detection of underground tests, and the Soviet Union's concerns over the intrusiveness of verification methods being proposed. This has effectively reduced concerns over fallout and contamination, and is credited with slowing proliferation due to the greater cost of underground tests. However, with China and France being amongst the non-signatories, criticism has been made with the speed of effectiveness of the treaty.

Possible Solutions

One of the more controversial, and perhaps ultimatum like solutions to end nuclear proliferation would be the complete disarmament of nuclear weapons. However, countries such as Russia or the United States would argue that this imposing this is against their national sovereignty, as they have been unwilling to diminish their nuclear stockpiles. Implementing this in itself poses a challenge.

Treaties can be enacted and used to persuade and coerce countries into disarming, however, in order to be successful, countries must have an incentive in order to do so. Destroying nuclear weapons may leave countries feeling vulnerable if their adversaries are not disarming themselves. Certain nations are unlikely to back down and diminish their nuclear stockpiles due to this.

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