

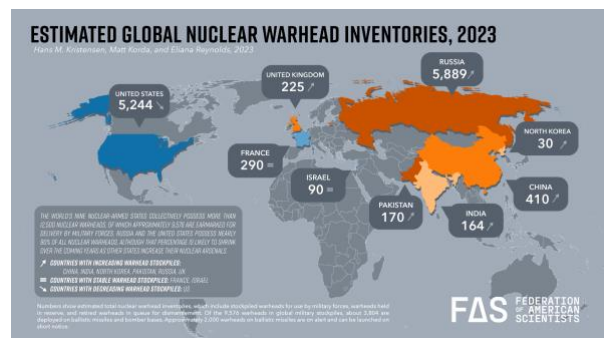
FORUM:	Disarmament Commission
ISSUE:	Measures to Regulate Mutual Assured Destruction and the Development of Nuclear Arms
STUDENT OFFICER:	Hyunsuh (Gina) Lee
POSITION:	President of Disarmament Commission

Introduction

The dropping of a single nuclear bomb can yield devastating consequences. The energy from one bomb can demolish as much as 80 square miles of land, leading to immediate casualties and long-term deaths resulting from exposure to radiation or contamination. Bombings in Hiroshima and numerous threats over usage in the Cold War explain the destructiveness of this weapon. Despite the dangers, there are already nine countries globally known to be possessing nuclear forces or technology, and even currently, there may be secretive nuclear developments worked on but not yet discovered. There are numerous other issues regarding the development of nuclear arms, including the rapid increase of nuclear stockpiles and the detrimental impacts nuclear forces have on the environment. Nuclear-weapon nations are using these arms as a military strategy known as Mutual Assured Destruction (MAD), straining to prevent counterattacks from other countries. As the Disarmament Commission, the House must resolve this ongoing issue concerning nuclear weapons to achieve military disarmament worldwide.

Background

Nuclear power was first discovered in the 1900s. Since then, nuclear weapons have evolved and have become the most dangerous arms today. Currently, nine countries are known to own nuclear arms: the United States, Russia, the United Kingdom, France, China, Pakistan, India, the Democratic People's Republic of Korea (DPRK), and Israel. Israel does not publicly acknowledge its possession of nuclear weapons, but it is widely accepted that the nation does possess warheads. The strategy of Mutual Assured Destruction, also called “deterrence,” impacts the military stances of nuclear countries by keeping watch of one another.



Nations worldwide that currently own nuclear weapons



TIANMUN

The term “Mutual Assured Destruction (MAD)” was coined by Donald Brennan, a military analyst. MAD began to arise during the Cold War when there existed great tension between the United States and the Soviet Union. One prominent example of MAD during the Cold War was the Bay of Pigs Invasion in October 1962, a conflict between Cuba and the Soviet Union against the United States. After discovering that the Soviet Union was secretly transporting nuclear weapons to Cuba, the United States intervened and obstructed the trade. The Soviet Union was enraged at this movement, accepting the United States’ actions as a sign of war. Subsequently, the Soviet Union wrote to the United States, stating that the act of naval blockade was an indication of aggression that may very likely lead to war. The next few days following this letter were very intense; however, the nuclear war did not occur. This was due to the knowledge of Mutual Assured Destruction on both sides of the conflict.

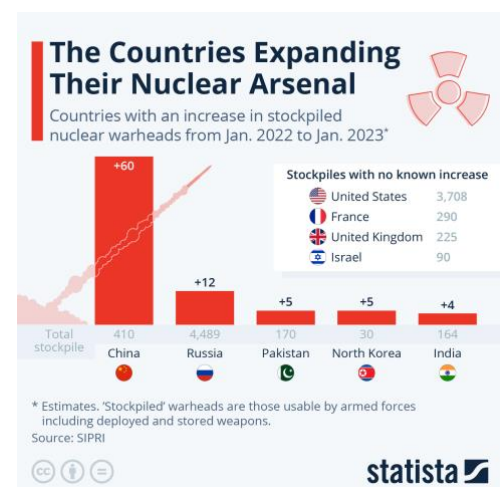
After the great tension and stress during the Cold War, nuclear weapon numbers began to decline, and nations signed and ratified treaties concerning nuclear arms. The Partial Test Ban Treaty (PTBT) in 1963, for example, was created to limit nuclear tests and explosions, preventing potential damage or civilian casualties. In addition, beginning in 1967, many countries and territories became nuclear-free zones, including the Caribbean, South Pacific, and South Africa. As the Cold War ended, it appeared as if nuclear arms were also arriving at the dusk of their existence.

This, however, was not the case. Although the number of nuclear weapons had reduced since the Cold War, the number recently began to increase again. Presently, Russia owns the greatest number of nuclear weapons, estimated at nearly 6,000 bombs. Russia's weapons are followed by that of the United States, which is estimated to possess about 5,000 bombs. Similarly, nations such as Russia, the UK, DPRK, China, India, and Pakistan have increased their numbers of nuclear weapons compared to previous years. Hence, nuclear weapons are still a prominent weapon in the defense industry today.

Problems Raised

Increase of Nuclear Stockpiles

As noted previously, nuclear weapon numbers in some countries are rapidly growing: recent trends show that nuclear arms may show more prompt increases in the following years. Many countries are updating and modernizing their nuclear weapons to be readily prepared for defense against any potential attack. Some nations are assembling large arsenals for the future, regardless of going



Statistics of recent nuclear arsenal expansions by nation



TIANMUN

against the basic principles of some treaties they have signed.

If countries begin to increase the number of nuclear arms, other nations may detect this development and follow, leading to a vicious cycle of producing weapons. Moreover, countries that did not previously retain nuclear technology may accept this as a threat, searching for ways to develop nuclear arms themselves. A widespread retainment of nuclear technology poses a danger in warfare.

Environmental Impacts and Civilian Casualties

Possessing nuclear weapons also demands regular testing to inspect whether the bombs still function properly. There have been over 2,000 nuclear tests globally since 1945, ensuing on land, underwater, and in the air. Radiation and exposure to contamination from these weapons can lead to detrimental outcomes, influencing the ecosystem and environments across the globe. Indeed, these are only considerations from the impacts of nuclear tests, not potential nuclear attacks.

In addition, nuclear weapons are non-renewable resources. The main chemicals that fuel nuclear arms are radioactive metals such as plutonium and uranium. Thus, nuclear weapons are toxic to the environment.

Civilian casualties cannot be overlooked as well. The detonation of nuclear arms can pose a threat in ethical matters, as even a small number of bombs can induce immediate casualties. Not to mention, impacts after the denotation can cause damage to millions of unwary civilians. Not only do nuclear weapons affect military and defense against other nations, but vulnerable civilians and the environment are a factor of consideration as well.

Secretive Nuclear Developments

Over the past years, some countries have been found secretly expanding their nuclear technology. Covert development is the only remaining option for nations that do not possess nuclear weapons or any access to “nuclear umbrellas.” Although it is a risky option, with countries such as Libya, Syria, and Iraq already discovered, some nations still take the risk.

South Africa is a notable example of a nation that was

confidentially generating nuclear weapons. Because the country is located in the southern hemisphere, countries such as the United

States or Russia were not able to closely examine warfare in South Africa. Moreover, the country was exceptional in disguising its nuclear developments. Although South Africa publicly acknowledged having nuclear weapons in 1989, this event proves the capability of countries secretly developing nuclear technology. This can lead to global instability, especially if an “unexpected nation” were to develop such



Devastating impact in civilian society after the bombing in Nagasaki

a powerful weapon, not to mention diplomatic aspects that may result between nations, such as economic sanctions.

International Actions

The NPT treaty was opened in 1968 with the goal of complete nuclear disarmament across the globe and accommodating international peace. As the treaty entered into force in 1970, nearly 200 nations decided to sign the NPT, including the five official countries to be holding nuclear weapons. The NPT has prevented new countries from developing nuclear arms since the treaty has been open, significantly reducing the potential for nuclear technological advancements.

International Day for the Total Elimination of Nuclear Weapons

The International Day was established in December 2013 by the General Assembly, which agreed that September 26 would annually be a day to remember and advocate the absolute elimination of nuclear weapons across the globe. This day, established to raise public awareness, aims to connect with citizens globally and communicate the dangers of nuclear weapons. It also hopes for international peace and global security, a goal that has strived for many decades.



Displays for spreading awareness about the danger of nuclear weapons

Key Players

United States of America

The United States accounts for an estimated 5,500 nuclear weapons, with nearly half of the bombs deployed and ready to fire at order. The nuclear arms are stored in submarines, air force bases, and missile silos. The United States has signed numerous treaties with Russia regarding nuclear forces, including the Strategic Arms Limitation Talks (SALT) and the Strategic Arms Reduction Treaty (START). However, there continues to be tension in nuclear forces between the two nations.

Russian Federation

Russia currently holds nearly 6,000 nuclear weapons, possessing nearly ninety percent of the world's entire nuclear weapon supply. Of the 6,000 warheads, about 1,500 are stationed. Entered into force in February of 2011, Russia signed a treaty known as Measures for the Further Reduction and



Limitation of Strategic Offensive Arms, also called the New START treaty, written to observe and limit the nuclear forces in Russia. However, in February of 2023, Russia decided to withdraw from the treaty, although it was expected to last until February of 2026. Because of its tension with the United States since the Cold War, Russia is projected to continue to own a considerable number of nuclear arms.



Vladimir Putin, President of Russia, announcing withdrawal from the New START treaty

United Kingdom

The United Kingdom currently accounts for about 120 nuclear arms, about 40 of which are stationed. Announcing its plans to increase the number of nuclear weapons, the United Kingdom is projected to possess 260 nuclear bombs in total.

France

France possesses an arsenal holding an estimated 300 stationed warheads, most of which are stored in submarines. While France claims that its purpose for nuclear arms is for defense, it claims that it may utilize nuclear forces if there is a dangerous situation and nuclear weapons are needed for self-defense.

People's Republic of China

Developing warheads since the end of the Cold War, China possesses about 350 nuclear arms. Unlike France, China is relatively conserved and currently does not claim that it will first use nuclear forces by any means. As of now, China is continuing to develop its nuclear weapons to maintain self-defense.

Democratic People's Republic of Korea (DPRK)

The DPRK is estimated to hold nearly 50 nuclear weapons, but there is a lack of certainty about the accuracy of this number. The country is also known to be developing its nuclear arsenal by producing quality uranium, but its advancements, again, are unclear. The DPRK initially signed the NPT but decided to withdraw from it in 2003, resulting in uncertainty about its current nuclear forces.

Possible Solutions

Nuclear Transparency



TIANMUN

Because some countries are concealing their nuclear developments, it is significant to closely regulate secretive research to prevent sudden notice of developments in countries. However, infiltration of privacy must also be taken note of, as not all aspects of the military can be exposed. Moreover, current stockpiles of nuclear weapons for countries that already own warheads should also be transparent. This is to avoid any incorrect numbers of nuclear forces that a country claims to own, whether intentional or accidental.

Nuclear Waste Management

The impacts of nuclear weapons on the environment must be regulated, including the waste of radioactive products and the contamination of vital resources for civilians. Some organizations implement solutions regarding safe waste management, such as Fortum, the World Nuclear Association, and the Nuclear Waste Management Organization (NWMO).



Organizations working towards safe, long-term nuclear fuels

Glossary

Deployment

Moving nuclear weapons or any ordnance in place for military action.

Deterrence

A strategy that utilizes the threat of counterattack to prevent nuclear attacks or aggression from other nations.

First Use

The nation that first uses a nuclear weapon in a conflict (“No First Use” defines as a nation pledging not to commit first use).

Mutual Assured Destruction (MAD)

A military strategy employed between two nations with nuclear forces that are in conflict. Both sides know that if they attack first, the other side can make a counterattack.

Nonproliferation



Actions to prevent the spread of weapons or technology capable of causing mass destruction.

Nuclear Umbrella

Guarantee from a nuclear-weapon state to ensure deterrence to allies without nuclear weapons.



Sources

Albright, David. “South Africa’s Secret Nuclear Weapons.” *ISIS REPORT*, May 1994, www.isis-online.org/publications/southafrica/ir0594.html.

“The Cuban Missile Crisis, October 1962.” *U.S. Department of State*, history.state.gov/milestones/1961-1968/cuban-missile-crisis#:~:text=The%20Cuban%20Missile%20Crisis%20of,came%20closest%20to%20nuclear%20conflict. Accessed 12 July 2023.

Davenport, Kelsey, and Daryl G. Kimball. “Sections: Fact Sheets & Briefs.” *U.S.-Russia Nuclear Forces and Arms Control Agreements* / *Arms Control Association*, June 2023, www.armscontrol.org/taxonomy/term/136.

Dizikes, Peter. “A Look at How Countries Go Nuclear - and Why Some Do Not.” *MIT News* / *Massachusetts Institute of Technology*, 11 Jan. 2022, news.mit.edu/2022/how-countries-go-nuclear-and-why-some-do-not-0111.

“The Energy from a Nuclear Weapon.” *The Energy from a Nuclear Weapon*, www.atomicarchive.com/science/effects/energy.html#:~:text=Thus%201%20bomb%20with%20a,carry%20multiple%20warheads%20(MIRVs). Accessed 12 July 2023.

Gaille, Louise. “16 Pros and Cons of Nuclear Weapons.” *Vittana.Org*, 16 Dec. 2019, vittana.org/16-pros-and-cons-of-nuclear-weapons.

“Glossary of Nuclear Terms.” *Technical Difficulties*, 30 Jan. 2019, uk.usembassy.gov/glossary-of-nuclear-terms/.

“International Day for the Total Elimination of Nuclear Weapons.” *United Nations*, www.un.org/en/observances/nuclear-weapons-elimination-day. Accessed 12 July 2023.

KIM, HYUNG-JIN. “The US Flies Nuclear-Capable Bombers in a Fresh Show of Force against North Korea.” *Encyclopædia Britannica*, 30 June 2023, www.britannica.com/news/421827/ab6d5649f6d171ed8817a971bffe11be.

Kristensen, Hans, et al. “Status of World Nuclear Forces.” *Federation of American Scientists*, 22 June 2023, fas.org/initiative/status-world-nuclear-forces/.



“Long Term Impact.” *ICAN*, www.icanw.org/catastrophic_harm_long_term_impact. Accessed 12 July 2023.

Metcalf, Tom. “What Is Mutual Assured Destruction?” *LiveScience*, 18 Mar. 2022, www.livescience.com/mutual-assured-destruction.

“Mutual Assured Destruction.” *Encyclopædia Britannica*, 19 June 2023, www.britannica.com/topic/mutual-assured-destruction.

“Nuclear Weapon.” *Centers for Disease Control and Prevention*, 16 Dec. 2019, www.cdc.gov/nceh/multimedia/infographics/nuclear_weapon.html.

“Nuclear Weapons by Country 2023.” *Nuclear Weapons by Country 2023*, worldpopulationreview.com/country-rankings/nuclear-weapons-by-country. Accessed 12 July 2023.

“Nuclear Weapons Worldwide.” *Union of Concerned Scientists*, www.ucsusa.org/nuclear-weapons/worldwide#:~:text=Israel-,Nuclear%20weapons%20are%20still%20here%E2%80%94and%20they’re%20still%20an,is%20close%20to%2013%2C000%20weapons. Accessed 12 July 2023.

“Partial Test Ban Treaty (PTBT).” *The Nuclear Threat Initiative*, 7 May 2022, www.nti.org/education-center/treaties-and-regimes/treaty-banning-nuclear-test-atmosphere-outer-space-and-under-water-partial-test-ban-treaty-ptbt/.

Roser, Max, et al. “Nuclear Weapons.” *Our World in Data*, 6 Aug. 2013, ourworldindata.org/nuclear-weapons.

Simple History. “Mutually Assured Destruction (Cold War -).” *YouTube*, 18 Apr. 2022, www.youtube.com/watch?v=QrPAqHPInWI.

TED-Ed. “The History of the Cuban Missile Crisis - Matthew A. Jordan.” *YouTube*, 26 Sept. 2016, www.youtube.com/watch?v=bwWW3sbk4EU.

TLDR News Global. “Why Are Some Countries Allowed Nuclear Weapons and Not Others? - TLDR News.” *YouTube*, 5 June 2021, www.youtube.com/watch?v=0cNt3Ae7adM.

“Treaty on the Non-Proliferation of Nuclear Weapons (NPT).” *United Nations Office for Disarmament Affairs*, disarmament.unoda.org/wmd/nuclear/npt/. Accessed 12 July 2023.



“What Are the Effects of Nuclear Accidents? .” *What Are the Effects of Nuclear Accidents? - World Nuclear Association*, world-nuclear.org/nuclear-essentials/what-are-the-effects-of-nuclear-accidents.aspx#:~:text=The%20most%20serious%20nuclear%20accident,have%20caused%20fatalities%20from%20radiation. Accessed 12 July 2023.

“What Happens If Nuclear Weapons Are Used?” *ICAN*, www.icanw.org/catastrophic_harm. Accessed 12 July 2023.

