



Research Report

GA1

Addressing the Deployment of nuclear weapons and the associated danger in conflicts.

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Introduction

Addressing the deployment of nuclear weapons refers to the strategies and policies surrounding the use of nuclear arms. Nuclear weapons have the ability to cause mass destruction, and the deployed nuclear weapons in today's society pose a significant threat, particularly during conflicts between nations. In recent years, tensions have been rising which could ultimately lead to nuclear conflicts, which makes the debate around nuclear weapons more urgent. As countries continue to develop and maintain these weapons, the risk of dangerous consequences increases, particularly in the context of military confrontations within our current society.

Addressing this deployment and the associated dangers during conflicts is a crucial and very complex issue. The existence of nuclear weapons and the potential misuse of nuclear arsenal poses a persistent threat to both the nations that possess them and to all international communities. Understanding the meaning of nuclear deployment is essential for fostering dialogue, promoting disarmament, and ultimately working towards a safer world, as the problem lies in the potential case of miscommunication, miscalculation, or even misuse of nuclear weapons that could lead to worldwide destruction and loss of life. Additionally, the proliferation of nuclear weapons can destabilise nations and undermine all current efforts for peace and cooperation.

The historical context of nuclear warfare highlights the urgent need for disarmament efforts. Ever since the invention of the nuclear weapon, the effects of nuclear usage have been awful. On August 6, 1945, the United States fired a nuclear weapon which exploded in the Japanese city, Hiroshima, and only three days later, fired a nuclear weapon in the Japanese city of Nagasaki. Even though the instances of Hiroshima and Nagasaki remain the only two instances of nuclear weapons used in combat, there is still a risk of nuclear weapons used during warfare. These instances have resulted in immense loss of life and laid the groundwork of a new era of military strategy. Treaties such as the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) aim to prevent the dangers of nuclear arms and promote disarmament. However, there are still challenges with countries who did not

First General Assembly

sign such treaties, or who withdrew from such treaties. Understanding the historical background of nuclear weapons is crucial for addressing nuclear deployment and global commitment to peace and security.

Definitions of Key Terms

Deployment of nuclear weapons:

The process of positioning and making nuclear weapons operational and ready for potential military use.

Nuclear proliferation:

The spread of nuclear weapons, nuclear weapons technology, or fissile material to countries that do not already possess them.

Nuclear Deterrence:

The strategy in which a country maintains nuclear weapons to discourage opposing countries from attacking, under the threat of mass destruction.

Mutually Assured Destruction (MAD):

A concept of nuclear strategy in which a full-scale use of nuclear weapons by opposing sides would result in complete destruction of both the attacker and defender, serving as a deterrent.

Nuclear Non-Proliferation Treaty (NPT):

An international treaty aimed at preventing the spread of nuclear weapons and nuclear technology, promoting peaceful use of nuclear energy, and fostering nuclear disarmament.

No First Use (NFU) Policy:

A policy in which a nuclear-armed state commits to not using nuclear weapons unless first attacked by another nuclear-armed state using such weapons.

Disarmament:

The process of reducing or eliminating a country's nuclear weapons in pursuit of a safer and nuclear-free world.

General overview

What the issue is about:

Addressing the deployment of nuclear weapons and the associated danger in conflicts is about managing the risks that arise when nuclear weapons are operational and ready for potential use. This issue encompasses the challenges of any situations which could lead to fatal outcomes. Various countries have access to deployed nuclear weapons, which are nuclear warheads such as missiles or aircrafts, that are actively positioned for potential use, which raises tensions and risks potential danger.

There are a few possible reasons for a country to own deployed nuclear weapons, such as nuclear deterrence, which means that one country attempts to discourage other states to launch an attack. This is because of the concept of Mutually Assured Destruction (MAD) which aims to ridicule the idea that in a nuclear war, or even a large conventional conflict, each side should be prepared to destroy the other's cities and society. Nuclear deterrence aims to inform opposing states that a nuclear war would lead to mass destruction on both sides of the conflict, and wipe entire communities. Another reason for owning nuclear weapons is for a country's sovereignty, which implies that owning nuclear weapons can safeguard a country's sovereignty and territorial integrity by deterring any existential threats, which makes a country feel secure in case of risk of a nuclear war. However, owning nuclear wars could be extremely damaging and dangerous for society. There are plenty of risks that come with owning nuclear arms. Such risks could be the potential for accidental or unauthorised nuclear launches or the risk for misuse of private nuclear programs, which are nuclear activities or projects that are managed by non-governmental entities, such as private companies or organisations, rather than by state governments or military bodies. These programs are typically focused on peaceful applications of nuclear technology, such as energy production, medical uses, and scientific research. However, this nuclear energy can be misused and pose a danger to society.

There are currently multiple treaties and policies that refrain countries from spreading and firing nuclear weapons, including the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). *“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.” (Treaty on the Non-Proliferation of Nuclear Weapons (NPT) – UNODA, n.d.)

The International Atomic Energy Agency (IAEA) Safeguards. *“The IAEA works with its 164 Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear energy. Through technical cooperation programmes the IAEA assists its Member States and promotes the exchange of scientific and technical information between them.” (The International Atomic Energy Agency, n.d.)*

The No First Use (NFU) Policies. *“No First Use” is a commitment to never use nuclear weapons first under any circumstances, whether as a preemptive attack or first strike, or in response to non-nuclear attack of any kind.” (No First Use FAQs, n.d.)*

And multiple Security Council resolutions, aimed at the disarmament of nuclear weapons. Despite numerous treaties, policies, resolutions, and agreements, nuclear tensions still seem to rise and there is still a potential danger for a nuclear war. This could originate from various positions, such as long-standing tensions between major powers, that continue to fuel mutual suspicion. That even with treaties in place, countries may doubt each other's intentions, leading to arms buildups. Another threat to global safety is the non-compliance and withdrawal of such treaties, which creates distrust and worsens tensions.

History of the issue:

The history of nuclear weapons is very complex. The developments of nuclear activity started in 1896, when the first radioactivity was discovered by Henri Becquerel, which led to more research and development of nuclear/radioactive energy by scientists Marie Curie and Ernest Rutherford. In 1938, nuclear fission was discovered, which meant that significant amounts of nuclear energy could be released. This discovery laid the foundation of the development of nuclear weapons.

During World War II, the United States initiated the Manhattan Project to develop atomic bombs, these bombs dropped on Hiroshima and Nagasaki in August 1945. These were the first and only use of nuclear weapons during warfare. After World War II, tensions between the United States and the Soviet Union rose, which led to the Cold War. The Soviet Union and the United States developed and stocked thousands of nuclear weapons, which significantly impacted global security. In 1949, the Soviet Union tested its first atomic bomb, which had an estimated yield of 20 kilotons. This yield is comparable to the atomic bomb dropped on Nagasaki, Japan, which had a yield of about 21 kilotons.

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) was entertained in 1970. This treaty prevented the spread of nuclear weapons, it promoted peaceful uses of nuclear energy, and worked toward nuclear disarmament. 5 years later, in 1975, the first NPT review conference was held, establishing a framework for review of the treaty's effectiveness. The DPRK withdrew from the NPT in 2003 and had six nuclear tests since 2006, ever since then, DPRK's nuclear behaviour has raised significant concerns among nations.

Over time, missile technology has always been actively developed, and missile technology is evolving rapidly, the continued development of these technologies raises important concerns for international security, stability, and the effectiveness of existing arms control agreements.

The current situation:

Currently, there are still some tensions within society, for example, the relationship between the United States and Russia, which has worsened due to the conflict in Ukraine. Additionally, both of these nations have continued modernising their nuclear weapons, which raises concerns on global stability and safety. Furthermore, the DPRK also continues to develop its nuclear weapons, though it is unclear why it has been 7 years since its last weapon test.

Many nuclear-armed states are modernising their nuclear weapons. This modernisation is often deemed as necessary for maintaining a position within nuclear deterrence, but it raises concerns about the potential increased tensions and miscalculations. These concerns are also due to the rapid development of hypersonic weapons, cyber capabilities, and advanced missile defence systems.

Regional conflicts, such as those in the Middle East, South Asia, and the Korean Peninsula, continue to increase the risks associated with nuclear weapons. The nuclear weapons in these regions often raise concerns. Most of these states emphasise nuclear deterrence as a key element of their national security strategies, but this reliance on nuclear weapons for deterrence creates a dangerous situation where any conflict escalation could eventually lead to nuclear confrontation.

Additionally, there is a growing awareness and activism surrounding the dangers of nuclear weapons, this awareness and activism is mainly fueled by fears of possible nuclear wars and environmental impacts. NGOs and international movements advocate for nuclear disarmament and the prevention of nuclear war. Some political leaders and organisations are calling for a reassessment of nuclear policies and treaties, emphasising the importance of international cooperation in addressing nuclear threats.

Major parties involved

The United States of America:

A leading nuclear power and major party in arms control negotiations. The United States maintains a policy of nuclear deterrence and has various security alliances which extend nuclear protection to allied nations.

The Russian Federation:

Russia is involved in modernisation of its nuclear power and has arms control negotiations with the United States. Relations between Russia and the United States have greatly influenced global nuclear dynamics.

The People's Republic of China:

China is rapidly expanding its nuclear arsenal, and increasingly involved in nuclear policy discussions and modernization efforts.

Other nuclear armed states:

France, the United Kingdom, India, the DPRK, and Pakistan. With India, The DPRK, and Pakistan not being signatories of the NPT.

The State of Israel:

Although it is still uncertain if the State of Israel owns any nuclear heads, it is widely believed to possess nuclear weapons.

International Atomic Energy Agency (IAEA):

Responsible for monitoring nuclear programs and ensuring the peaceful use of nuclear energy. The IAEA also conducts inspections to verify compliance with non-proliferation commitments.

Nuclear Non-Proliferation Treaty (NPT):

An international treaty aimed at preventing the spread of nuclear weapons and promoting peaceful uses of nuclear energy.

Timeline of Key Events

1896 - The first radioactivity was discovered.

1938 - Nuclear fission was invented.

1945 - The United States drops atomic bombs on Hiroshima and Nagasaki.

1949 - The USSR successfully tests its first atomic bomb.

1952 - The United States tests its first hydrogen bomb, demonstrating a significant increase in destructive capability.

1965 - Negotiation of the NPT begins, aimed at creating a treaty to prevent the spread of nuclear weapons and promote disarmament.

1968 - The NPT opened for signature.

1970 - The NPT enters into force and establishes the distinction between nuclear-armed states and non-nuclear-armed states.

1991 - The End of the Cold War

1996 - The CTBT is adopted by the United Nations General Assembly, prohibiting all nuclear explosions.

2003 - DPRK announces it will no longer be bound to the NPT treaty.

2005 - NPT review conference, marked by concerns over the nuclear programs of North Korea and Iran.

2022 - NPT review conference, marked by ongoing tensions, particularly concerning Russia's invasion of Ukraine and its implications for nuclear security.

Previous attempts to solve the issue

1. The Non-Proliferation Treaty of Nuclear Weapons (NPT), which is an international treaty that aims to prevent the spread of nuclear weapons and promote the peaceful use of nuclear energy. The NPT is based on three factors. Non-Proliferation, disarmament, and peaceful use of nuclear energy.
2. The Partial Test Ban Treaty (PTBT) from 1963, which prohibits nuclear tests in the atmosphere, outer space, and underwater, aiming to reduce nuclear fallout and curb the arms race.
3. And the NPT review conferences, which assess the NPT, discuss challenges, and seek to reinforce commitments to disarmament and non-proliferation. It aims to solve any rising tensions and issues regarding nuclear programs.

Possible solutions

1. One of the possible solutions to this issue could be the renewing, or changing the format of the NPT, which would need commitment from both nuclear-armed and non-nuclear states to the NPT's. This could include more consultations and measures to ensure compliance with disarmament propositions; by including both nuclear-armed and non-nuclear states into this renewed treaty, tensions will most likely not rise as quickly.
2. Another possible solution is enhancing monitoring and verification technologies. In order to develop and implement more effective verification measures for treaties like the NPT and CTBT to ensure compliance and build confidence among states. These technologies could include satellite monitoring, inspections, and data-sharing protocols.
3. One more possible solution could be the increased transparency by nuclear-armed states about their nuclear policies, stockpiles, and disarmament efforts, which would foster trust and reduce fears.

Further Readings

1. The United Nations Office for Disarmament Affairs (UNODA)

Provides information about disarmament efforts, treaties, and related resources:

<https://disarmament.unoda.org>

2. The Stockholm International Peace Research Institute (SIPRI)

Offers research and analysis on disarmament, arms control, and international security.

<https://www.sipri.org/>

3. The Nuclear Threat Initiative (NTI)

Which is an organisation focused on reducing global nuclear- and biological threats.

<https://www.nti.org/>

Bibliography

(n.d.). International Atomic Energy Agency | Atoms for Peace and Development. Retrieved November 3, 2024, from <https://www.iaea.org/>

(n.d.).

https://www.icanw.org/soviet_union_tests_its_first_nuclear_bomb#:~:text=29%20August%201949%20%7C%20Soviet%20Union%20tests%20its%20first%20nuclear%20bomb&text=The%20Soviet%20Union%20explodes%20a,successfully%20test%20a%20nuclear%20device.

(n.d.). International Campaign to Abolish Nuclear Weapons: ICAN. Retrieved November 3, 2024, from <https://www.icanw.org/>

Bennett, B. W. (2024, May 31). *North Korea's October Surprise: A Nuclear Weapons Test?*

RAND. Retrieved November 3, 2024, from

<https://www.rand.org/pubs/commentary/2024/05/north-koreas-october-surprise-a-nuclear-weapons-test.html>

Blankenship, B., & Lin, E. (n.d.). *Deterrence theory*. Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Deterrence_theory

A Brief History of Nuclear Weapons States. (n.d.). Asia Society. Retrieved November 3, 2024, from <https://asiasociety.org/education/brief-history-nuclear-weapons-states>

Civilian Nuclear Programs | Science Programs. (n.d.). Science & Innovation. Retrieved November 3, 2024, from

<https://science-innovation.lanl.gov/science-programs/civilian-nuclear-programs/>

DEPLOY definition and meaning | Collins English Dictionary. (n.d.). Collins Dictionary.

Retrieved November 3, 2024, from

<https://www.collinsdictionary.com/dictionary/english/deploy>

Disarmament in the Security Council – UNODA. (n.d.). UNODA. Retrieved November 3,

2024, from <https://disarmament.unoda.org/institutions/security-council/>

First General Assembly

- Disarming the world | United Nations.* (n.d.). the United Nations. Retrieved November 3, 2024, from <https://www.un.org/en/peaceandsecurity/disarming-world>
- Elliot, G., & Gorbachev, M. (n.d.). *Cold War*. Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Cold_War
- FAQ Nuclear Weapons in the Middle East - ICAN.* (2024, April 19). International Campaign to Abolish Nuclear Weapons. Retrieved November 3, 2024, from https://www.icanw.org/faq_nuclear_weapons_middle_east
- Fat Man.* (n.d.). Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Fat_Man
- Fermi, E. (n.d.). *The Discovery of Nuclear Fission | Max Planck Institute for Chemistry.* Max-Planck-Institut für Chemie. Retrieved November 3, 2024, from <https://www.mpic.de/4469988/die-entdeckung-der-kernspaltung>
- The International Atomic Energy Agency.* (n.d.). the United Nations. Retrieved November 4, 2024, from <https://www.un.org/en/conf/npt/2015/pdf/IAEA%20factsheet.pdf>
- Jervis, R. (2009, November 9). *The Dustbin of History: Mutual Assured Destruction.* Foreign Policy. Retrieved November 3, 2024, from <https://foreignpolicy.com/2009/11/09/the-dustbin-of-history-mutual-assured-destruction/>
- Lieber, K. (n.d.). *Mutual assured destruction.* Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Mutual_assured_destruction
- Little Boy.* (n.d.). Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Little_Boy
- Munro, A., & Freedman, L. D. (n.d.). *Nuclear proliferation | Military, Arms Control & International Security.* Britannica. Retrieved November 3, 2024, from <https://www.britannica.com/topic/nuclear-proliferation>
- No First Use FAQs.* (n.d.). Global Zero. Retrieved November 3, 2024, from <https://www.globalzero.org/no-first-use-faqs/index.html>

First General Assembly

No First Use FAQs. (n.d.). Global Zero. Retrieved November 4, 2024, from <https://www.globalzero.org/no-first-use-faqs/index.html>

NPT Review Conferences and Preparatory Committees – UNODA. (n.d.). UNODA. Retrieved November 4, 2024, from <https://disarmament.unoda.org/wmd/nuclear/npt-review-conferences/>

Nuclear Non-Proliferation Treaty - United States Department of State. (n.d.). State Department. Retrieved November 3, 2024, from <https://www.state.gov/nuclear-nonproliferation-treaty/>

The Nuclear Threat Landscape. (n.d.). The Nuclear Threat Initiative. Retrieved November 3, 2024, from <https://www.nti.org/area/nuclear/>

Nuclear Warfare Risk at Highest Point in Decades, Secretary-General Warns Security Council, Urging Largest Arsenal Holders to Find Way Back to Negotiating Table | Meetings Coverage and Press Releases. (2024, March 18). Meetings Coverage and Press Releases. Retrieved November 3, 2024, from <https://press.un.org/en/2024/sc15630.doc.htm>

Nuclear weapon. (n.d.). Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Nuclear_weapon

Nuclear weapons and Israel. (n.d.). Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Nuclear_weapons_and_Israel

Nuclear weapon - Soviet Union, Cold War, Arms Race. (2024, October 12). Britannica. Retrieved November 3, 2024, from <https://www.britannica.com/technology/nuclear-weapon/The-Soviet-Union>

Nuclear Weapons Solutions. (n.d.). Union of Concerned Scientists. Retrieved November 4, 2024, from <https://www.ucsusa.org/nuclear-weapons/solutions>

Nuclear Weapons – UNODA. (n.d.). UNODA. Retrieved November 3, 2024, from <https://disarmament.unoda.org/wmd/nuclear/>

First General Assembly

Ofman, D. (2024, August 12). 'There almost is no relationship': Nuclear tensions growing between US, Russia - The World from PRX. Retrieved November 3, 2024, from <https://theworld.org/stories/2024/08/12/there-almost-is-no-relationship-nuclear-tensions-growing-between-us-russia>

Partial Test Ban Treaty (PTBT). (n.d.). The Nuclear Threat Initiative. Retrieved November 4, 2024, from <https://www.nti.org/education-center/treaties-and-regimes/treaty-banning-nuclear-test-atmosphere-outer-space-and-under-water-partial-test-ban-treaty-ptbt/>

Rutherford, E., & Pauling, L. (n.d.). *History of nuclear weapons*. Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/History_of_nuclear_weapons

Rutherford, E., & Reeves, R. (n.d.). *Ernest Rutherford*. Wikipedia. Retrieved November 3, 2024, from https://en.wikipedia.org/wiki/Ernest_Rutherford

Timeline of the Nuclear Nonproliferation Treaty (NPT). (n.d.). Arms Control Association. Retrieved November 3, 2024, from

<https://www.armscontrol.org/factsheets/timeline-nuclear-nonproliferation-treaty-npt>

Topic: NATO's nuclear deterrence policy and forces. (2023, November 30). NATO.

Retrieved November 3, 2024, from https://www.nato.int/cps/en/natohq/topics_50068.htm

Topic: NATO's nuclear deterrence policy and forces. (2023, November 30). NATO.

Retrieved November 3, 2024, from https://www.nato.int/cps/en/natohq/topics_50068.htm

Treaty on the Non-Proliferation of Nuclear Weapons (NPT) – UNODA. (n.d.). UNODA.

Retrieved November 3, 2024, from <https://disarmament.unoda.org/wmd/nuclear/npt/>