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HUMAN RIGHTS IN THE SHADOW OF NUCLEAR WEAPONS

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ABSTRACT

The presence and potential use of nuclear weapons cast a long and devastating shadow over human rights, posing existential threats to life, security, health, and environmental sustainability. Nuclear weapons have an unparalleled destructive capacity, with humanitarian and legal implications that remain central to international peace and security debates. While international law has made efforts to regulate the proliferation and use of these weapons through treaties such as the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Comprehensive Nuclear-Test-Ban Treaty (CTBT), and the Treaty on the Prohibition of Nuclear Weapons (TPNW), their effectiveness remains limited due to the resistance of nuclear-armed states and geopolitical complexities. The Geneva and Hague Conventions, as pillars of international humanitarian law, offer important guidelines on warfare and the protection of civilians, yet their applicability to nuclear weapons remains contested. This paper critically examines the intersection of nuclear weapons and human rights, focusing on both the legal and humanitarian dimensions of nuclear policies. It explores the historical evolution of nuclear weapons, from their development during World War II to the Cold War arms race and the current geopolitical landscape. A key aspect of this research is the analysis of nuclear states' policies, including the United States, Russia, China, the United Kingdom, France, Pakistan, North Korea, and Israel, as well as India's nuclear doctrine, given India's unique stance on non-proliferation and its history of nuclear testing.

Beyond legal considerations, the study assesses the humanitarian impact of nuclear weapons, including long-term environmental degradation, radiation exposure, genetic disorders, displacement of communities, and socio-economic consequences. It argues that existing legal frameworks inadequately address the human rights implications of nuclear weapons, particularly concerning the right to life, health, and a safe environment. The paper employs a

doctrinal research methodology, analyzing legal instruments, treaties, case studies, and policy documents to provide a comprehensive understanding of the subject. The findings highlight that despite global disarmament efforts, nuclear states continue to prioritize strategic deterrence over humanitarian concerns, thereby exacerbating the risks to future generations. The research concludes by advocating for stronger human rights protections within nuclear governance frameworks and recommending a human-rights-centric approach to disarmament. It underscores the urgent need for global cooperation to ensure that nuclear policies align with international human rights and humanitarian law, ultimately working toward a safer and more secure world for future generations.

Keywords:

Nuclear Disarmament, Human Rights Violations, International Humanitarian Law, Nuclear Non-Proliferation

INTRODUCTION

"The unleashed power of the atom has changed everything save our modes of thinking, and thus we drift toward unparalleled catastrophe." — Albert Einstein

Weapons of mass destruction (WMDs) represent the most catastrophic instruments of war ever developed, capable of annihilating entire cities, contaminating ecosystems and threatening global security. Among them, nuclear weapons stand out due to their immense destructive capacity and long-term consequences. The advent of nuclear weapons marked a turning point in human history, shifting the nature of warfare, diplomacy, and global power structures. While these weapons were initially developed for military superiority, their implications extend far beyond the battlefield, raising profound legal, ethical, and humanitarian concerns.

Weapons of mass destruction generally encompass nuclear, chemical and biological weapons, each capable of inflicting mass casualties and widespread devastation. While chemical and biological weapons have been extensively regulated under international law, nuclear weapons remain at the center of geopolitical tensions. Nuclear weapons have been a defining feature of global politics since their inception in the mid-20th century. Their destructive potential has not only reshaped military strategies but also raised profound ethical, legal, and humanitarian concerns. The development and use of nuclear weapons during World War II marked a turning point in human history. The bombings of Hiroshima and Nagasaki in 1945 demonstrated the

catastrophic humanitarian consequences of nuclear warfare, leading to a global reckoning with the ethical, legal, and political implications of these weapons. In the decades that followed, the Cold War saw an arms race between superpowers, resulting in the stockpiling of thousands of nuclear warheads.

Today, nine states possess nuclear weapons, and the threat of nuclear conflict remains a pressing concern. While global efforts have aimed at disarmament, challenges such as the nuclear ambitions of North Korea, growing tensions between nuclear-armed states, and the risk of nuclear terrorism continue to threaten international peace. Furthermore, as nuclear technology advances, the ethical and legal debates surrounding its use remain more relevant than ever. Given the intersection of nuclear weapons and human rights, it is crucial to examine their impact through the lens of international law, humanitarian principles, and global security policies. This study aims to explore these issues, highlighting the need for a human rights-centric approach to nuclear governance, focusing on the legal frameworks that govern their use and the impact they have on global security and humanitarian principles. The research begins with a historical overview of nuclear weapons, their development during World War II, and their role in the Cold War. It then examines the current position of nuclear-armed states, their policies, and the implications for international law and human rights. It also emphasizes the humanitarian and human rights implications of nuclear weapons, arguing that their continued existence poses a grave threat to humanity. The paper concludes with practical suggestions for promoting peace and security in a world shadowed by the threat of nuclear annihilation.

1. THE EVOLUTION OF NUCLEAR WEAPONS AND IT'S GLOBAL IMPACT

1.1. The Birth of Nuclear Science and the Road to the Atomic Bomb

The origins of nuclear weapons can be traced back to the early 20th century, when scientists first uncovered the immense energy potential within the atom. The discovery of nuclear fission in 1938 by German scientists Otto Hahn and Fritz Strassmann laid the foundation for nuclear weapon development.¹ This discovery, later confirmed and explained by Lise Meitner and Otto

¹ Otto Hahn & Fritz Strassmann, Concerning the Existence of Alkaline Earth Metals Resulting from Neutron Irradiation of Uranium, 124 Naturwissenschaften 756 (1938).

Frisch, demonstrated that splitting the nucleus of a heavy atom like uranium could release enormous amounts of energy.²

As World War II escalated, concerns grew over Nazi Germany's potential development of nuclear weapons. Albert Einstein, along with physicist Leó Szilárd, wrote a letter to U.S. President Franklin D. Roosevelt in 1939, warning that Germany might be working on an atomic bomb and urging the United States to accelerate its own research.³ This letter played a crucial role in initiating the Manhattan Project, the secret U.S. program to develop nuclear weapons.

1.2.The Manhattan Project and the Development of Nuclear Weapons

Under the leadership of General Leslie Groves and physicist J. Robert Oppenheimer, the Manhattan Project brought together some of the greatest scientific minds of the era. The project, headquartered in Los Alamos, New Mexico, also involved facilities in Oak Ridge, Tennessee, and Hanford, Washington.⁴ The effort resulted in the first successful detonation of a nuclear bomb on July 16, 1945, during the **Trinity Test** in the New Mexico desert.

1.3.World War II and the Use of Nuclear Weapons

The attack on Pearl Harbor on December 7, 1941, by the Imperial Japanese Navy prompted the United States to enter World War II.⁵ By 1945, with Nazi Germany's surrender on May 8, following Adolf Hitler's suicide on April 30, the war in Europe had ended. However, Japan refused to surrender despite facing devastating losses.

On July 26, 1945, the Allied powers issued the Potsdam Declaration, demanding Japan's unconditional surrender. The declaration warned: ***"We call upon the government of Japan to proclaim now the unconditional surrender of all Japanese armed forces, and to provide proper and adequate assurances of their good faith in such action. The alternative for Japan is prompt and utter destruction."*** Japan ignored the ultimatum, leading to the U.S. decision to deploy nuclear weapons.

On August 6, 1945, the U.S. dropped the first atomic bomb, "Little Boy," on Hiroshima, killing approximately 80,000 people instantly, with tens of thousands more dying from radiation

² Lise Meitner & Otto Frisch, *Disintegration of Uranium by Neutrons: A New Type of Nuclear Reaction*, 143 Nature 239 (1939).

³ Letter from Albert Einstein to President Franklin D. Roosevelt (Aug. 2, 1939), in *The Einstein File* (Fred Jerome ed., 2002).

⁴ Richard Rhodes, *The Making of the Atomic Bomb* 489 (1986).

⁵ Samuel Eliot Morison, *The Rising Sun in the Pacific 1931 – April 1942* 87 (1948).

exposure.⁶ Three days later, on August 9, the second bomb, "Fat Man," was dropped on Nagasaki, killing an estimated 40,000 people instantly. The overwhelming destruction led Japan to surrender on August 15, 1945, effectively ending World War II.⁷

1.4.The Cold War and the Nuclear Arms Race

With World War II over, geopolitical tensions between the United States and the Soviet Union escalated, marking the beginning of the Cold War. The Soviet Union successfully tested its first nuclear bomb in 1949, igniting a nuclear arms race. Both superpowers engaged in rapid nuclear stockpiling, leading to the development of hydrogen bombs, intercontinental ballistic missiles (ICBMs) and nuclear submarines.

One of the most dangerous moments of the Cold War was the Cuban Missile Crisis of 1962, when the Soviet Union placed nuclear missiles in Cuba, just 90 miles from the U.S. mainland. The crisis brought the world to the brink of nuclear war before diplomatic negotiations led to the removal of the missiles.⁸ The threat of Mutual Assured Destruction (MAD) created fear. In 1983, Soviet officer Stanislav Petrov played a crucial role in preventing a potential nuclear conflict. He correctly identified a false alarm in the Soviet early-warning system, preventing a retaliatory nuclear strike against the United States that could have led to World War III.

1.5.The End of the Cold War and Arms Control Efforts

The Cold War gradually came to an end in the late 1980s with the dissolution of the Soviet Union. Arms control agreements such as the Strategic Arms Reduction Treaty (START) and the Intermediate-Range Nuclear Forces (INF) Treaty aimed to reduce nuclear stockpiles.⁹ The Nuclear Non-Proliferation Treaty (NPT), signed in 1968, sought to prevent the spread of nuclear weapons and promote disarmament, though challenges to its effectiveness persist.¹⁰ Other key treaties include the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which aims to ban nuclear testing, and various bilateral agreements between nuclear powers.¹¹ However,

⁶ Potsdam Declaration, Jul. 26, 1945, available at [U.S. National Archives](https://www.archives.gov/historical-resources/potsdam-declaration).

⁷ Richard B. Frank, *Downfall: The End of the Imperial Japanese Empire* 304 (1999).

⁸ Michael Dobbs, *One Minute to Midnight: Kennedy, Khrushchev, and Castro on the Brink of Nuclear War* 25 (2008).

⁹ Arms Control Association, *The U.S.-Soviet Arms Control Agreements*, available at www.armscontrol.org.

¹⁰ Treaty on the Non-Proliferation of Nuclear Weapons, Jul. 1, 1968, 21 U.S.T. 483.

¹¹ Comprehensive Nuclear-Test-Ban Treaty, Sept. 24, 1996, U.N. Doc. A/50/1027.

ongoing tensions among nuclear-armed states, the emergence of new nuclear players like North Korea, and concerns over nuclear terrorism continue to pose global security threats.

2. INTERNATIONAL LEGAL FRAMEWORK GOVERNING NUCLEAR WEAPONS

2.1. The Role of Bilateral Treaties: Salt, Start, And New Start

Bilateral treaties between nuclear superpowers, primarily the United States and Russia, have played a crucial role in controlling nuclear proliferation and limiting the development of nuclear arsenals.

1. **Strategic Arms Limitation Talks (SALT):** Initiated in 1969 between the U.S. and the Soviet Union, SALT I (1972) and SALT II (1979) aimed to cap the number of strategic ballistic missile launchers. SALT I resulted in the Anti-Ballistic Missile Treaty (ABM), but SALT II was never ratified due to Cold War tensions.¹²
2. **Strategic Arms Reduction Treaty (START):** It was Signed in 1991, START I reduced deployed strategic warheads by 80%. Its successor, START II (1993), sought further reductions but was never implemented.¹³
3. **New START:** It was Signed in 2010. Warheads are counted using the provisions of the New START agreement, which was extended for 5 years in January 2021. Russia suspended its participation in the treaty on Feb. 21, 2023, in response, the United States instituted countermeasures limiting information sharing and inspections. However, both the U.S. and Russia have committed to the treaty's central limits on strategic force deployments until 2026.¹⁴

2.2. Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

The NPT was opened for signature in 1968 and entered into force in 1970 with the goal of preventing nuclear proliferation, promoting disarmament, and encouraging the peaceful use of nuclear energy. The NPT is the cornerstone of the global nuclear non-proliferation regime. It aims to prevent the spread of nuclear weapons, promote peaceful uses of nuclear energy, and further the goal of nuclear disarmament. The treaty divides states into nuclear-weapon states

¹² [U.S. Department of State - SALT I and SALT II](#)

¹³ [Arms Control Association - START I and START II](#)

¹⁴ [U.S. Department of State - New START](#)

(NWS) and non-nuclear-weapon states (NNWS), with NWS committing to disarmament under Article VI. It applies to 191 state parties, making it one of the most widely accepted arms control agreements. However, India, Pakistan, and Israel never signed it, and North Korea withdrew in 2003. While it has slowed proliferation, the lack of enforcement mechanisms and the failure of nuclear states to disarm weaken its credibility. The existence of non-signatories with nuclear capabilities also limits its universal effectiveness.¹⁵

2.3. Comprehensive Nuclear-Test-Ban Treaty (CTBT)

Adopted in 1996, the CTBT bans all nuclear explosions for military or civilian purposes. It has been signed by 185 countries and ratified by 178. However, key states, including the U.S., China, India, Pakistan, and North Korea, have not ratified it, preventing it from entering into force. The CTBT's effectiveness relies on voluntary compliance. Its verification system, the International Monitoring System (IMS), has proven capable of detecting tests, yet the lack of legal force remains a major weakness.¹⁶

2.4. Treaty on the Prohibition of Nuclear Weapons (TPNW)

The TPNW was adopted in 2017 and entered into force in 2021, aiming to completely eliminate nuclear weapons. The TPNW is the first legally binding international agreement to comprehensively prohibit nuclear weapons, including their development, testing, production, possession, and use. However, nuclear-armed states and many of their allies have not joined the treaty. It applies to 93 signatories and 69 ratifying states but lacks the support of nuclear-armed countries and NATO members. While it establishes a strong normative stance against nuclear weapons, its practical impact remains limited due to the absence of major nuclear states.¹⁷

2.5. The Role of the United Nations and the International Atomic Energy Agency (IAEA)

The **United Nations (UN)** plays a central role in nuclear disarmament through its organs such as the UN General Assembly and the UN Security Council, which impose sanctions on nuclear proliferation. The UN General Assembly has adopted numerous resolutions calling for nuclear disarmament and non-proliferation. It also supports forums like the Conference on Disarmament (CD) and the UN Office for Disarmament Affairs (UNODA) to advance global

¹⁵ <https://disarmament.unoda.org/wmd/nuclear/npt/>

¹⁶ CTBTO - Comprehensive Nuclear-Test-Ban Treaty Available at <https://www.ctbto.org/>

¹⁷ ICAN - Treaty on the Prohibition of nuclear weapons Available at <https://www.icanw.org/>

disarmament efforts.¹⁸ The UNSC has the authority to address threats to international peace and security, including nuclear proliferation. It has passed resolutions imposing sanctions on states like North Korea and Iran for their nuclear activities. The UNSC also oversees the implementation of non-proliferation measures.¹⁹

The **IAEA**, established in 1957, monitors compliance with nuclear treaties and ensures that nuclear energy programs are not diverted toward weapons development. It conducts inspections and monitors nuclear facilities to ensure that nuclear materials are not diverted for weapons purposes. The IAEA also promotes the peaceful use of nuclear technology.²⁰

2.6.The Role of the International Court of Justice (ICJ) Advisory Opinion

In its 1996 advisory opinion, the **ICJ stated that the threat or use of nuclear weapons would generally be contrary to international law**, particularly the laws of armed conflict. However, the court refrained from declaring nuclear weapons illegal under all circumstances, highlighting the lack of a comprehensive legal prohibition. In response to a request from the UN General Assembly, the ICJ issued an advisory opinion on whether the threat or use of nuclear weapons is permitted under international law. The Court concluded that while there is no specific prohibition of nuclear weapons in customary or conventional international law, their use would generally be contrary to the principles of international humanitarian law (IHL), particularly the principles of distinction, proportionality, and the prohibition of unnecessary suffering. The ICJ also emphasized that the threat or use of nuclear weapons would be lawful only in extreme circumstances of self-defense where the survival of a state is at stake, though it did not explicitly endorse such use. The opinion highlighted the obligation of states to pursue nuclear disarmament in good faith under Article VI of the NPT.²¹

The advisory opinion has been influential in shaping the legal and moral arguments against nuclear weapons. It has been cited by advocates of nuclear disarmament, including in the negotiations leading to the Treaty on the Prohibition of Nuclear Weapons (TPNW). The opinion also reinforced the role of international law in addressing nuclear weapons and underscored the need for states to comply with their disarmament obligations.

¹⁸ Available at: <https://www.un.org/disarmament>

¹⁹ Available at: <https://www.un.org/securitycouncil>

²⁰ Available at: <https://www.iaea.org/>

²¹ ICJ Advisory Opinion, 1996 <https://www.icj-cij.org/>

3. NUCLEAR POLICIES OF KEY NUCLEAR STATES

The nuclear policies of key nuclear states reflect their strategic doctrines, deterrence postures, and geopolitical ambitions. These policies are shaped by historical experiences, security concerns, and international diplomatic engagements. The five recognized nuclear-weapon states under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the United States, Russia, China, France, and the United Kingdom—adopt different approaches to nuclear deterrence, while non-NPT nuclear states like Pakistan, North Korea, and Israel present additional proliferation concerns and regional instability. The United Nations, through agencies like the International Atomic Energy Agency (IAEA) and the United Nations Security Council (UNSC), plays a crucial role in monitoring nuclear compliance and proliferation risks.

The United States follows a policy of nuclear deterrence and extended deterrence, ensuring security commitments to its allies through alliances such as NATO. The U.S. nuclear doctrine is based on the principles of flexible response, counterforce targeting, and second-strike capability. In recent years, shifting geopolitical threats from Russia and China, coupled with North Korea's advancing missile capabilities, have led to modernization efforts in U.S. nuclear forces, including the development of low-yield nuclear warheads and hypersonic missile technologies. The U.S. remains a signatory of the New START Treaty with Russia, but its withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty in 2019 reflects tensions in arms control diplomacy.

Russia maintains the largest nuclear arsenal in the world and adheres to a nuclear posture based on deterrence, preemption, and escalation control. Its nuclear doctrine emphasizes a strong retaliatory posture and includes the concept of “escalate to de-escalate,” which suggests the potential use of tactical nuclear weapons in regional conflicts. The ongoing Ukraine war has heightened nuclear tensions, with Russia issuing deterrent warnings against NATO involvement. Russia has also suspended its participation in the New START Treaty, citing concerns over U.S. military developments in Europe.

China follows a doctrine of minimum deterrence and maintains a no-first-use (NFU) policy, meaning it pledges not to use nuclear weapons unless attacked first with nuclear weapons. However, China has been expanding its nuclear arsenal, constructing additional missile silos, and developing hypersonic glide vehicles, raising concerns among global powers. Recent tensions over Taiwan and the South China Sea have influenced China's nuclear posture, with increasing emphasis on survivability and second-strike capabilities. The lack of formal arms

control agreements between China and other nuclear states presents a challenge to strategic stability.

France operates an independent nuclear deterrent under its “Force de frappe” policy, which focuses on strategic autonomy. France maintains air and submarine-based nuclear capabilities and has reaffirmed its commitment to nuclear deterrence amid growing European security concerns following Russia’s aggression in Ukraine. It actively participates in NATO’s nuclear planning while retaining an independent decision-making framework regarding nuclear use.

The United Kingdom maintains a sea-based nuclear deterrent through its Trident missile system. The UK has adopted a policy of minimum credible deterrence and maintains ambiguity regarding the precise conditions under which nuclear weapons might be used. In 2021, the UK announced an increase in its nuclear warhead cap, citing rising threats from Russia and China, which marked a departure from previous disarmament commitments.

Pakistan follows a nuclear doctrine of full-spectrum deterrence, which includes strategic, operational, and tactical nuclear weapons. It does not adhere to a no-first-use policy, emphasizing nuclear deterrence against India. Pakistan has been rapidly expanding its nuclear arsenal and developing short-range battlefield nuclear weapons to counter India’s conventional military superiority. Border tensions and military skirmishes, particularly after incidents such as the Pulwama attack in 2019, have heightened the risk of nuclear confrontation in South Asia.

North Korea has pursued an aggressive nuclear weapons program, conducting multiple nuclear and ballistic missile tests despite international sanctions. The country views nuclear weapons as essential for regime survival and deterrence against the United States and South Korea. North Korea’s withdrawal from the NPT and its continued missile testing have led to UN Security Council sanctions and diplomatic negotiations, though denuclearization talks have largely stalled.

Israel follows a policy of nuclear ambiguity, neither confirming nor denying its nuclear arsenal. It is believed to possess nuclear weapons but remains outside the NPT framework. Israel’s nuclear policy is driven by existential security concerns, particularly threats from Iran and regional adversaries. The ongoing tensions over Iran’s nuclear program, as well as shifting Middle Eastern alliances, continue to influence Israel’s strategic calculations.

The United Nations Security Council (UNSC) and the International Atomic Energy Agency (IAEA) are the primary bodies overseeing global nuclear security. The IAEA ensures

compliance with safeguards agreements and monitors non-proliferation commitments, while the UNSC enforces sanctions and diplomatic measures against violators. However, geopolitical rivalries often limit the effectiveness of enforcement mechanisms, as seen in the cases of North Korea and Iran.

3.1.India's Nuclear Policy

In 1954, India's Prime Minister **Jawaharlal Nehru** became the first statesman to call for a **"standstill agreement"** on nuclear testing, advocating for a halt to the development and testing of nuclear weapons. This marked India's early commitment to global nuclear disarmament and non-proliferation, reflecting its principled stance on maintaining global peace and security. Nehru's proposal was rooted in the belief that nuclear weapons posed a grave threat to humanity and that their proliferation should be curtailed through international cooperation.²²

The development of India's nuclear program was shaped by key figures such as Dr. Homi J. Bhabha, often referred to as the "father of India's nuclear program," and Dr. A.P.J. Abdul Kalam, who played a pivotal role in the 1998 tests. The untimely death of Lal Bahadur Shastri, India's second Prime Minister, in 1966, and Homi J. Bhabha in the same year, were significant setbacks to the program. However, their contributions laid the groundwork for India's eventual emergence as a nuclear weapons state.²³

1974: The Peaceful Nuclear Explosion

India conducted its first nuclear test in 1974, codenamed **"Smiling Buddha,"** at the Pokhran test site. The Indian government described this test as a **peaceful nuclear explosion**, emphasizing its intention to use nuclear technology for developmental purposes rather than for military aggression. The test demonstrated India's technological capabilities but also drew international criticism and sanctions. Despite this, India maintained that its nuclear program was defensive and aligned with its broader commitment to peaceful uses of nuclear energy.²⁴

1998: Declaration as a Nuclear Weapons State

²² Jawaharlal Nehru, Speech to the Indian Parliament (1954), reprinted in Documents on India's Nuclear Policy 45 (1972).

²³ Raj Chengappa, Weapons of Peace: The Secret Story of India's Quest to Be a Nuclear Power 234-235 (2000).

²⁴ Government of India, Press Release on the Pokhran Test (May 18, 1974), reprinted in India's Nuclear Policy: Documents and Analysis 78 (1975).

In 1998, India conducted a series of nuclear tests at Pokhran under Prime Minister **Atal Bihari Vajpayee**, formally declaring itself a **nuclear weapons state**. These tests were justified as necessary for maintaining **minimum credible deterrence** in the face of security threats, particularly from neighboring nuclear-armed states. The tests had significant **geopolitical implications**, leading to widespread international condemnation and sanctions. However, they also solidified India's position as a major player in global nuclear politics. The tests were orchestrated by key scientists and strategists, including **Dr. A.P.J. Abdul Kalam**, who later became India's President, and built on the foundational work of **Dr. Homi J. Bhabha**, the father of India's nuclear program.²⁵

India's Nuclear Doctrine: No First Use and Strategic Deterrence

India's nuclear doctrine, formalized after the 1998 tests, is centered on a "**No First Use**" (NFU) policy, which states that India will not use nuclear weapons first in a conflict but retains the right to respond with nuclear weapons if attacked with such weapons. This policy is part of India's broader strategy of **strategic deterrence**, aimed at maintaining regional stability and preventing nuclear aggression. The doctrine emphasizes **minimum credible deterrence**, ensuring that India's nuclear arsenal is sufficient to deter threats without engaging in an arms race.²⁶

India's Stance on Nuclear Disarmament and Non-Proliferation

Despite its nuclear tests, India has consistently advocated for **global nuclear disarmament** and criticized the **Nuclear Non-Proliferation Treaty (NPT)** for being discriminatory. India argues that the NPT perpetuates a divide between nuclear "haves" and "have-nots" and has refused to sign the treaty unless it leads to universal nuclear disarmament. India's stance reflects its commitment to a world free of nuclear weapons while maintaining its own nuclear capabilities for defensive purposes.²⁷

²⁵ Atal Bihari Vajpayee, Statement to the Indian Parliament (May 27, 1998), reprinted in India's Nuclear Doctrine: Evolution and Implementation 112 (2003).

²⁶ National Security Advisory Board, Draft Nuclear Doctrine (1999), reprinted in India's Nuclear Policy: A Reader 156 (2001).

²⁷ India's Statement at the United Nations General Assembly (2006), reprinted in India and the NPT: A Critical Perspective 89 (2007).

4. IMPACT OF NUCLEAR WEAPON ON HUMAN RIGHTS

"Nuclear weapons and human rights are irreconcilable; the existence of one threatens the very essence of the other."

4.1.Right to Life

Nuclear weapons pose an existential threat to life itself, violating the most fundamental human right, the right to life (Article 6, International Covenant on Civil and Political Rights, ICCPR). The Universal Declaration of Human Rights (UDHR), in Article 3, also guarantees the right to life, liberty, and security of person, which nuclear weapons inherently threaten. The detonation of a nuclear weapon results in immediate mass casualties due to the explosive force, extreme heat, and radiation. The atomic bombings of Hiroshima and Nagasaki in 1945 killed over 200,000 people, many within seconds. Survivors, known as hibakusha, suffered long-term health complications and social discrimination, illustrating how nuclear weapons deny individuals their right to live with dignity.

Beyond the direct deaths, nuclear weapons also contribute to prolonged suffering through displacement and destruction of communities. The Geneva Conventions (Common Article 3) prohibit weapons that cause unnecessary suffering, yet nuclear weapons, by their nature, inflict pain that lasts generations. The Marshall Islands, where the United States conducted nuclear tests between 1946 and 1958, saw entire communities displaced, with many never able to return due to radioactive contamination. This displacement violates the rights of indigenous peoples as enshrined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), particularly Article 10, which protects them against forced removal from their lands. Nuclear weapons testing and use disproportionately affect marginalized and indigenous communities, undermining their right to development as recognized in the UN Declaration on the Right to Development (1986). Indigenous communities in Nevada (U.S.) and South Australia were subjected to nuclear testing without their consent. The tests caused displacement, loss of traditional lands, and long-term health and economic consequences.

4.2.Right to Health

Nuclear weapons have devastating consequences on health, both immediate and long-term. Radiation exposure leads to acute radiation syndrome, cancers, genetic mutations, and psychological trauma. The Universal Declaration of Human Rights (UDHR), in Article 25, guarantees the right to an adequate standard of health, which is systematically denied to nuclear

survivors. The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the Treaty on the Prohibition of Nuclear Weapons (TPNW) emphasize the necessity of addressing humanitarian consequences, yet survivors continue to suffer without sufficient redress.

The intergenerational impact of radiation exposure particularly affects children. The Convention on the Rights of the Child (CRC) in Article 6 recognizes every child's inherent right to life and survival. The Soviet Union conducted over 450 nuclear tests at the Semipalatinsk site, affecting over 1.5 million people. Studies have shown increased rates of cancer, birth defects, and other health issues among the local population, children are still being born with severe congenital disabilities due to radioactive exposure. This reality also highlights the principle of intergenerational equity, which the 1992 Rio Declaration on Environment and Development (Principle 3) acknowledges, ensuring that future generations inherit a healthy and livable planet.

4.3.Right to clean Environment

The environmental destruction caused by nuclear weapons is irreversible, violating the right to a clean and healthy environment (Article 24, African Charter on Human and Peoples' Rights). Nuclear explosions produce vast amounts of radiation, contaminating air, water, and soil, which leads to long-term ecological damage. The **Environmental Modification Convention** (ENMOD, Article 1) prohibits the use of environmental destruction as a weapon, yet nuclear testing and warfare blatantly disregard this principle.

The displacement of indigenous communities due to nuclear testing, as seen in the Bikini Atoll, demonstrates the violation of their land rights and cultural heritage. The Paris Agreement on Climate Change, though primarily aimed at reducing carbon emissions, underscores the necessity of protecting vulnerable ecosystems. Nuclear detonations exacerbate climate instability by injecting soot and radioactive particles into the atmosphere, disrupting weather patterns and food security.

Furthermore, nuclear debris and waste pose long-term pollution hazards. The Geneva Convention's Additional Protocol I (Article 35) prohibits the use of weapons and methods of warfare that cause unnecessary suffering, superfluous injury, or severe environmental damage. Despite this, nuclear testing sites, such as those in Nevada and French Polynesia, remain dangerously contaminated, making them uninhabitable for centuries. The Stockholm Declaration of 1972 (Principle 21) affirms that states have the responsibility to ensure that

activities within their jurisdiction do not cause environmental harm to other nations, yet nuclear fallout has transboundary effects, impacting populations far beyond the detonation sites.

These impacts disproportionately affect vulnerable groups, such as children, women, and indigenous communities living near test sites or areas impacted by radioactive fallout. In the broader context, the mere threat of nuclear warfare undermines the right to peace, security, and development, creating a climate of fear and instability that impedes human dignity and social progress. Beyond the direct effects of radiation and devastation, the fear and psychological trauma associated with living under the constant threat of nuclear war infringe upon the right to mental health and peace of mind. Their use or threat of use fundamentally challenges the very principles of human dignity, the right to life, and the right to an environment conducive to health and well-being. The deployment of nuclear weapons disrupts the balance between state security and the protection of human life, leading to existential threats that render all other rights fragile.

5. CONCLUSION

The continued existence of nuclear weapons represents one of the greatest paradoxes of modern civilization—while nations strive for peace and development, they simultaneously hold onto weapons capable of annihilating life as we know it. Despite the overwhelming evidence of their catastrophic impact, major nuclear-armed states like the United States, Russia, China, France, and the United Kingdom have refused to ratify treaties such as the Treaty on the Prohibition of Nuclear Weapons (TPNW). Their justification often lies in deterrence theory, the belief that possessing nuclear weapons prevents large-scale wars. However, history has repeatedly shown that the mere existence of these weapons brings humanity closer to irreversible destruction, not safety. The Cold War, the Cuban Missile Crisis, and the persistent threats of nuclear escalation serve as chilling reminders that reliance on these weapons is a gamble with human survival. The need for robust discussions on nuclear weapons policy is more urgent than ever. These policies are not just about geopolitics and military strategy; they are about people- the millions who suffer from the long-term effects of nuclear testing, the communities displaced from their homelands, and the generations yet unborn who will inherit a planet scarred by radioactive contamination. The principle of intergenerational justice, enshrined in international law, demands that we act now to protect future generations from the mistakes of the past. Just as a

farmer planting a tree does so knowing he may never sit in its shade; we must work towards a nuclear-free world even if we may not immediately witness its realization.

As I delved into this research, I realized that nuclear weapons are not merely weapons of war; they are weapons of injustice. They violate human rights at every level- denying people their right to life, health, a safe environment, and a future free from fear. The stories of Hiroshima, Nagasaki, the Marshall Islands, and Semipalatinsk are not just historical events; they are living scars on humanity's conscience, reminding us that every second we allow these weapons to exist, we fail as a civilization. As global citizens, we must raise our voices against nuclear proliferation. Disarmament is not just the responsibility of governments and diplomats; it is a moral duty for all of humanity. If war is inevitable, then let it be a war against ignorance, complacency, and the false belief that nuclear weapons bring security. We must ensure that such weapons are never used again- not by chance, not by miscalculation, and certainly not by choice.

After all, war too has rules.

6. SUGGESTIONS

1. Nuclear-armed states must commit to ratifying and enforcing the Treaty on the Prohibition of Nuclear Weapons (TPNW) to close legal loopholes that allow for continued possession and modernization of nuclear weapons and to ensure meaningful disarmament.
2. The Non-Proliferation Treaty (NPT) should be reinforced with stricter compliance mechanisms, ensuring that nuclear states do not indefinitely delay their disarmament obligations. Nations that refuse to engage in disarmament discussions or violate existing agreements should face diplomatic and economic consequences, including targeted sanctions.
3. International legal bodies like the International Criminal Court (ICC) and the International Court of Justice (ICJ) should recognize nuclear weapon use as a crime against humanity.
4. Establish a global compensation fund under the UN Human Rights Council for communities affected by nuclear tests, similar to the UN Compensation Commission (UNCC).
5. Amend the Geneva Conventions to explicitly criminalize the use and testing of nuclear weapons as a violation of international humanitarian law (IHL).

6. Encourage regional treaties like the Treaty of Tlatelolco (Latin America) and Treaty of Rarotonga (South Pacific) to expand to new regions, especially the Middle East and Northeast Asia.
7. The International Atomic Energy Agency (IAEA) should be given more authority to conduct independent inspections of past and present nuclear testing sites for environmental and human rights violations.
8. Future agreements under the UNFCCC should explicitly include nuclear disarmament as part of global environmental protection strategies.
9. Ban on Uranium Mining for Weapons Purposes, a global moratorium should be placed on uranium mining that contributes to nuclear weapons production, protecting indigenous land rights and environmental sustainability.
10. Promote Youth and Public Engagement for Nuclear Disarmament. Governments and academic institutions should integrate nuclear non-proliferation studies into global education curricula to raise awareness and strengthen public advocacy. Civil society organizations, research institutions, and non-nuclear states must strengthen diplomatic efforts to push for a nuclear-free world, emphasizing the principle of intergenerational justice and the need to protect future generations from nuclear devastation.

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