

# INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

---

Volume 7 | Issue 4

---

2024

© 2024 *International Journal of Law Management & Humanities*

Follow this and additional works at: <https://www.ijlmh.com/>

Under the aegis of VidhiAagaz – Inking Your Brain (<https://www.vidhiaagaz.com/>)

---

This article is brought to you for “free” and “open access” by the International Journal of Law Management & Humanities at VidhiAagaz. It has been accepted for inclusion in the International Journal of Law Management & Humanities after due review.

In case of **any suggestions or complaints**, kindly contact [Gyan@vidhiaagaz.com](mailto:Gyan@vidhiaagaz.com).

---

**To submit your Manuscript** for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to [submission@ijlmh.com](mailto:submission@ijlmh.com).

---

# Nuclear Disarmament and International Law: Contemporary Developments and Challenges

---

VIDHYAVATHY N.<sup>1</sup>

## ABSTRACT

*Human beings have the right for healthy and safe life in a flourishing environment. For centuries the agendas of the population and people in power kept changing, and with big leaps of two world wars, nations witnessed the dynamic shifts in their policies. The ending of world war II with atomic bombing on Japan, revealed the scientific development of the nuclear weapon and its catastrophic impact, Followed by cold war and nuclear threats, global community understood the need for Nuclear disarmament, and safe handling of nuclear materials. There is an acknowledged tension among the world population, on the presence of devastating nuclear weapon, even the scientists who are in the field are terrified by the extent of the damages the usage of such weapons could cause, all the above have created the movement and active campaign, diplomatic works towards the nuclear disarmament. The article will explain the capacity, effect and various upgradation of nuclear weaponry, and the International legal instruments addressing the nuclear disarmament. Also the approaches taken by International law, international institutions along with the contemporary developments and challenges. The work further emphasizes the need for the complete ban of nuclear weapons; safe and harmonious process of nuclear disarmament, in the tensed geopolitical climate. The article will have a multidisciplinary approach, identifying the, social, economic, and human impacts, that shall be severe, irreversible if not a complete nuclear disarmament is achieved paving way for the real sustainable development, in a nuclear weapon free world.*

**Keywords:** Nuclear disarmament, International Law, Disarmament law, Nuclear Weapon.

## I. INTRODUCTION

Humans along with the environment and the biome, have right for peaceful and harmonious life. From the early civilization the steps to upgrade life for ease of things through invention and discovery are witnessed. Due to the geopolitical tensions, trans-border issues and the power struggle among the global nations, some of the scientific yet deadly weapons, arms and

---

<sup>1</sup> Author is a Research Scholar at Department of International Law, Tamil Nadu Dr. Ambedkar Law University Chennai, India.

ammunition were invented. Nuclear weapon is one such, which started as an arms race, but ended up into devastating catastrophic attack, that shocked the whole world in even reconsidering the arms and weapon manufacturing. What started as competitive scientific and political policy today stands a life threat to the planet and its entire species. Growing global tensions among nations, especially nuclear powered nations and non nuclear or nuclear supported nations are escalating into severe war situations. There were incidents of nations using terms indicating nuclear threats, creating a global concern. On other side there has been decades of struggle by international institutions such as United Nations and other subsidiary organisations, NGOs such as ICAN (The International Campaign to Abolish Nuclear Weapons), individual activists, working hard into negotiations for convincing nations towards the nuclear disarmament. The International treaty regime is also getting upgraded, along with environmental activists stressing on the destruction level on the usage of the possible nuclear weapon today. This paper will attempt to identify and analyse the contemporary developments in the nuclear weapon and the challenges towards its disarmament in the International Law.

## **II. NUCLEAR WEAPON AND ITS IMPACTS**

Nuclear Weapon are the most lethal, cruel, and indiscriminate weapons ever made. They are unlike any other weapon in the extent of the destruction they inflict as well as in the way their radioactive fallout is genetically destructive, persistent, and spreading.<sup>2</sup> A single nuclear bomb, if been detonated over a city shall kill millions at a stretch, turning everything into ashes, with no trace but all grounded. Assuming five, tens, or more than hundreds of such nuclear bombs will completely disturb the environmental behaviour and the global climate, creating severe famine, and other climatic disasters.

Any weapon that makes use of nuclear energy is regarded as a nuclear weapon. Nuclear energy. Nuclear reactions can release energy through fusion or fission. Atoms fuse together to generate bigger atoms during nuclear fusion. Atoms split during nuclear fission, releasing energy in the process to create smaller atoms. Nuclear fission is the energy source used in nuclear power plants. Nuclear fusion, fission, and chemical explosives are the three main components of modern nuclear weapons. Nuclear material undergoes fission as a result of the explosive's compression; this process releases enormous amounts of energy in the form of X-rays, which produce the high pressure and temperature required to start fusion.<sup>3</sup>

In simple, those that directly produce a massive explosion using nuclear energy, as the atomic

---

<sup>2</sup> What happens if nuclear weapons are used?, ICAN, [https://www.icanw.org/catastrophic\\_harm](https://www.icanw.org/catastrophic_harm) (Assessed on 04-08-2024)

<sup>3</sup> How Do Nuclear Weapons Work?, Union of Concerned Scientist, Published Sep 29, 2016 Updated Aug 23, 2023

bomb, the bombs dropped on Hiroshima and Nagasaki in 1945 (the "Little Boy" and "Fat Man" bombs) were fission weapons; and the ones who power their vehicles with nuclear energy, the first successful hydrogen bomb test was conducted by the United States in 1952, and such weapons are much more powerful than fission bombs.

The key components of the Nuclear weapon are the one, Fissile Material the Isotopes that can support a fission chain reaction are found in the weapon's core. Nuclear materials that are frequently used are plutonium-239 and uranium-235. Two, Explosive Lens System: In order to compress the fissile material into a supercritical state and start a chain reaction, conventional explosives are arranged in a certain way in fission weapons. Finally, Thermonuclear weapons employ fission bombs as triggers to produce the severe conditions required for fusion.<sup>4</sup>

### **(A) Effects of Nuclear Weapons**

Nuclear weapons, bring out devastating and long lasting effects, highly irreversible damages to both human and environment, statistics from Japan and the other nuclear accidents prove that not only the physical and environmental effects but the psychological trauma, economic disruption, and global instability that follow further underscore the urgent need for nuclear disarmament to prevent such catastrophic consequences. Some of the immediate and long term effect are as follows<sup>5</sup>:

#### **a. Immediate Effects:**

Blast Wave will creates a massive shock wave that destroys buildings and infrastructure, within seconds, The exponential heat generates intense heat, causing fires and severe burns over a large area, shall bring things and humans to ashes in a short span.

The Radiation releases both initial radiation (gamma rays and neutrons) and residual radiation (fallout), which can cause acute radiation sickness and long-term health issues, due to its severity in the level of mixing into the earth in every possible way, even the smallest contact with nuclear shall create deep impact on any being.

#### **b. Long-Term Effects:**

Foremost is the Environmental Damage; Nuclear explosions will result in long-lasting radioactive contamination of air, soil, and water, affecting the generations to come with deep impact, in disturbing the patterns of climatic behaviour.

---

<sup>4</sup> The Basics of Nuclear Weapons: Physics, Fuel Cycles, Effects and Arsenal, Hans M. Kristensen Director, Nuclear Information Project Federation of American Scientists, February 8, 2016.

<sup>5</sup> Glasstone, Samuel, and Dolan J. Philips, eds. The effects of nuclear weapons. Department of Defense, 1977.

Health Impact of the survivors are they shall experience increased rates of cancers, genetic mutations, and other health problems, the impact is so deep in disturbing the DNA and cells in the body, not only current victims, but even their yet to be born babies, and their generations will undergo irreversible damage.

The most evident Nuclear Winter impact a large-scale nuclear conflict, soot and debris could block sunlight, leading to severe climate changes and potential global agricultural collapse in one go, no level of preparedness will help, to escape unaffected from such impacts.

### **III. INTERNATIONAL LEGAL DEVELOPMENTS**

The international community felt the strong need towards the disarmament once the Hiroshima and Nagasaki attacks took place. The strength and severity of the atomic bomb came as a threat to the whole humanity. Although many were known about the scientific experiments towards the atomic bomb creations, none knew its capability unless the usage on Japan during the world war II.

The United Nations Charter of 1945: Basic principles of UN Charter promotes Peace and security as its foundation and have been working towards assisting nations to achieve an understanding through peaceful settlement of disputes during a conflict situation, and advising, instead of choosing use of force or threat to use of force against each other.

The Treaty Banning Nuclear Weapons Tests in the Atmosphere, in outer space and Under Water -Partial Test Ban Treaty/Moscow Treaty – in 1963 discuss about the Treaty that prohibits all tests of nuclear weapons except those conducted underground. U.S.-Soviet test-ban talks began after concerns arose in the 1940s and '50s about the dangers of radioactive fallout from above-ground nuclear tests. Later replaced by CTBT in 1996.

Treaty on the Non- Proliferation of Nuclear Weapons (NPT)- in 1968 a multilateral treaty aimed to limit the spread and usage of Nuclear Weapons, it stressed on non -proliferation, disarmament and peaceful use of nuclear energy. States without nuclear weapons will not acquire, States with Nuclear weapon shall work on disarmament plans, While All States can access nuclear technology for peaceful purposes, under safeguards.

Comprehensive Test Ban Treaty (CTBT)- in 1996 the treaty establishes a global network of monitoring facilities and allows for on-site inspections of suspicious events. CTBT aims to eliminate nuclear testing, which is crucial for curbing the development and enhancement of nuclear weapons. The treaty's goal is to contribute to global security and non-proliferation efforts.

International Convention for the Suppression of Acts of Nuclear Terrorism-2007: adopted in 2005 and entering into force in 2007, is a key international treaty aimed at combating nuclear terrorism. The convention aims to criminalise nuclear terrorism and strengthen international cooperation in the prevention and response to such attacks. It prohibits the unauthorised purchase, use, and threat of nuclear weapons and radioactive materials with the goal to damage or instill terror. The pact creates a legal framework for the prosecution and extradition of anyone implicated in nuclear terrorism. It further promotes international collaboration through measures such as mutual legal assistance, information sharing, and joint efforts to secure and safeguard nuclear materials and facilities. The State parties are required to adopt appropriate measures within their jurisdictions to implement the treaty's provisions.<sup>6</sup>

Treaty on a Nuclear-Weapon-Free Zone in Central Asia (CANWFZ): The treaty signed in 2009 and entering into force in 2010, is a pivotal international agreement aimed at promoting nuclear non-proliferation and disarmament in the Central Asian region. The treaty designates Central Asia as a nuclear-free zone, with the purpose of preventing the spread and deployment of nuclear weapons in the region.<sup>7</sup>

Treaty on the Prohibition of Nuclear Weapons<sup>8</sup> : On July 7, 2017, the United Nations (UN) Conference adopted the "Treaty on the Prohibition of Nuclear Weapons" (the "TPNW"), which aims to outlaw nuclear weapons and eventually eliminate them. This is the first treaty that prohibits all nuclear weapons and aims for universal applicability. The TPNW seeks to prohibit all activities related to nuclear weapons, including their development, testing, production, acquisition, possession, stockpiling, use, and threat of use. The ultimate goal is the complete elimination of nuclear weapons. The treaty prohibits a wide variety of nuclear weapons-related actions, including deployment, transfer, and aid in their creation or use. It prohibits nuclear explosions in any context, emphasizing a comprehensive ban on all forms of nuclear tests. While the TPNW does not have its own verification mechanism, it relies on existing international frameworks and cooperative measures from other organs and institutions in achieving the objective.

The development of the international instruments are in progress for half a century and are in perfectly right direction, the most recent TPNW is the complete ban that are being convinced among nations for ratification and implementations into their domestic legislation too.

---

<sup>6</sup> Odette Jankowitsch-Prevor, *International Convention for the Suppression of Acts of Nuclear Terrorism*, 76 *NUCLEAR L. BULL.* 7 (2005).

<sup>7</sup> Assembly, UN General. "Treaty on a Nuclear-Weapon-Free Zone in Central Asia: resolution/adopted by the General Assembly." (2022).

<sup>8</sup> *Treaty on the Prohibition of Nuclear Weapons*, 18 *ISIL Y.B. INT'L HUMAN. & REFUGEE L.* 295 (2018-2019).

## IV. INTERNATIONAL INSTITUTIONAL WORKS

### (A) United Nations role in Nuclear Disarmament

The United Nations (U.N.) was established after World War II to prevent worldwide strife in the future. To avoid any form of violence, between nations, through well-framed plans, developed mechanisms to resolve disagreements through negotiations instead of going into any more severe wars. During the formation of the United Nations, the United States unleashed two atomic bombs on Japan, transforming warfare from devastation to annihilation. This made UN a crucial player in the fight against nuclear weapons. The first U.N. General Assembly Resolution aimed to eliminate atomic bombs and other weapons capable of mass devastation from national arsenals worldwide. The United Nations has from then remained active in its efforts to achieve disarmament since then.<sup>9</sup> Although there have been some accomplishments, the world still faces the threat of over 20,000 nuclear weapons.<sup>10</sup> More than 4800 nuclear weapons are operational, with approximately 2000 on high alert and ready to strike within minutes of an order.<sup>11</sup> The UN supports research and studies on the humanitarian impact of nuclear weapons, including potential global consequences of a nuclear war, to highlight the importance of disarmament. International Day for the Total Elimination of Nuclear Weapons is celebrated on September 26 each year, this day is used to promote awareness and action towards achieving a world free of nuclear weapons. Further, UN facilitates informal dialogues and expert panels to explore disarmament strategies and build consensus among member states.<sup>12</sup>

**UN Office for Disarmament Affairs (UNODA)** promotes and supports international efforts to reduce and finally abolish nuclear weapons. It contributes to the negotiation, implementation, and monitoring of significant nuclear disarmament treaties such as the Non-Proliferation Treaty (NPT) and the Comprehensive Nuclear-Test-Ban Treaty (CTBT). It conducts research and makes policy recommendations on nuclear disarmament concerns. Further, they encourage the formulation and execution of disarmament policies and programs.

**International Atomic Energy Agency (IAEA):** Although an independent organization, the IAEA works closely with the UN to ensure that nuclear activities are for peaceful purposes. It

---

<sup>9</sup> Establishment of a Commission to Deal with the Problem Raised by the Discovery of Atomic Energy, G.A. Res. 1(I), U.N. GAOR, 1st Session.

<sup>10</sup> Shannon N. Kile, Vitaly Fedchenko, Bharath Gopaldaswamy & Hans M. Kristensen, *Armaments, Disarmament and International Security, 2011 SIPRI YEARBOOK 7* (Stockholm International Peace Research Institute 2011).

<sup>11</sup> Status of World Nuclear Forces, fas.org, <https://fas.org/initiative/status-world-nuclear-forces/> accessed 08-08-2024.

<sup>12</sup> A/RES/70/33: The United Nations Disarmament Yearbook, 2023, <https://digitallibrary.un.org/record/4023443?v=pdf> accessed on 07-08-2024

conducts inspections and verification to ensure compliance with nuclear non-proliferation commitments. The IAEA implements safeguards to verify that nuclear materials and facilities are not diverted from peaceful uses to weapons development. This involves rigorous inspections and monitoring to ensure compliance with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and other agreements.<sup>13</sup>

**ICAN:** The International Campaign to Abolish Nuclear Weapons (ICAN) is a well-known global organisation dedicated to nuclear disarmament. It led a global movement for the negotiation and adoption of the Treaty on the Prohibition of Nuclear Weapons, which seeks to entirely eliminate nuclear weapons. Their efforts were critical to the treaty's approval in 2017. The group disseminates information to the public and decision-makers regarding nuclear disarmament concerns and the humanitarian fallout from nuclear weapons through the publication of reports, fact sheets, and other educational materials. ICAN has effectively established a worldwide coalition of civil society organisations in under 15 years of operation, bringing renewed attention to and momentum for the concept of nuclear prohibition and leading to the ratification of a global prohibition treaty. This took place in the context of decades-long international failures to accomplish responsible global governance of nuclear weapons, much less an ambitious treaty like this one.<sup>14</sup> ICAN was awarded the Nobel Peace Prize in 2017 for its efforts to achieve a treaty banning nuclear weapons and its contribution to the global disarmament movement.

**ICRC:** The International Committee of the Red Cross (ICRC), sole humanitarian goal of the is to be impartial, neutral, and autonomous organisation, to defend the lives and dignity of victims of armed conflict and other violent situations and to offer them assistance. ICRC has released publications that illustrate the disastrous humanitarian effects of nuclear weapons, stressing the dire ramifications for environmental degradation, public health, and safety in the event of a nuclear explosion. Further, integrates a humanitarian perspective into disarmament debates, stressing the need for comprehensive measures to protect civilians and mitigate the humanitarian impact of nuclear weapons.<sup>15</sup> The ICRC collaborates with non-governmental organizations, UN agencies, and other stakeholders to advance nuclear disarmament and humanitarian issues, leveraging collective expertise and advocacy.

---

<sup>13</sup> The Statute of the IAEA, <https://www.iaea.org/about/statute> accessed on 06-08-2024.

<sup>14</sup> Miller, John. "Towards a Global Nuclear Ban Treaty: ICAN's Anti-Nuclear Triad." *Global Governance and International Cooperation*. Routledge India 73-88.

<sup>15</sup> Schroeder, Linh. "The ICRC and the Red Cross and Red Crescent Movement: Working Towards a Nuclear-Free World since 1945." *The 2017 Nuclear Ban Treaty*. Routledge, 2020. 123-135.



The institutions are actively working to bring in the disarmament plan a reality, its not an easy task to unite the nations to discuss hard and complex topics, but having the collective mentality of the institutions helps achieve the small targets towards the nuclear disarmament.

## **V. CONTEMPORARY GLOBAL TENSIONS AND CHALLENGES**

Nuclear Disarmament Stagnation in spite of clear legal duties, we can notice the development and testings of nuclear warhead missiles. The advancement in the field of science and technology into the upgrade of the weapon system, is faster as well as very dangerous. Some of the Modernized nuclear missiles are Intercontinental Ballistic Missiles (ICBMs), Submarine-Launched Ballistic Missiles (SLBMs), Hypersonic Missiles mostly created and owned by the USA and Russia.<sup>16</sup>

Geo-political Tensions in the following areas are giving us the fear of whether the nations will take the nuclear choice in their defense plans, it should never happen, yet still the threat is very direct in their public speeches on cross border and national security preparedness.

The Russia-Ukraine conflict going for more than 800 plus days, creating tension between the NATO States and Russia. The media speeches by the spokespersons are often very tensed and creating the doubts of the mentions of nuclear weapons, there were instances when the words did had the mentions of the nuclear in itself, generating a possibility of nuclear usage.<sup>17</sup>

The continuous missile testing in the Korean Peninsula again and again, where, North Korea was reported to have tested 36 missiles in 2023, the most of which were short- and medium-range, with the most recent display of an ICBM in July 2023 – however, North Korea frequently tests numerous missiles at the same time, so the true number is likely greater.<sup>18</sup> On January 14, the North conducted its first missile test of 2024, launching a suspected intermediate-range ballistic missile equipped with a hypersonic glide vehicle into waters between the Korean peninsula and Japan. On January 24, it tested a new cruise missile type.

The international deal over Iran's nuclear programme known as the Joint Comprehensive Plan of Action (JCPOA) has stalled, with the country's enriched uranium stockpile now more than 20 times over the agreed limit, The Under-Secretary-General for Political and Peace building Affairs expressed sadness that negotiations to restore the Plan have stagnated, despite the fact

---

<sup>16</sup> Arms Control Association, Federation of American Scientists, International Panel on Fissile Materials, U.S. Department of Defense, U.S. Department of State, and Stockholm International Peace Research Institute.

<sup>17</sup> <https://www.aljazeera.com/news/2024/6/5/putin-warns-west-over-ukraine-armaments-nuclear-arsenal-in-news-conference#:~:text=Russian%20President%20Vladimir%20Putin%20has,sovereignty%20or%20territory%20were%20threatened> accessed on 02-08-2024.

<sup>18</sup> Fact Sheet: North Korea Missile Test Activity, Center for Arms Control and Non-Proliferation, 2024

that all participants, including the United States, have reiterated that "a return to the full and effective implementation of the Plan" was the only viable option.<sup>19</sup>

Leadership crisis in the global scenario are another pressing issue, in handling the nuclear disarmament, Leadership crises can undermine or derail international agreements and treaties. Changes in administration, for example, can lead to the withdrawal of international treaties or agreements, such as the United States' departure from the Paris Agreement under President Donald Trump. Further, frequently intensifying regional conflicts or contribute to new ones, making conflict resolution and peace building more difficult. For example, political unrest in Venezuela and Libya has hampered international efforts to negotiate and resolve conflicts.

Economic Challenges are heavy as the development of State goes side by side along with the Nuclear disarmament as welfare policy. According to a traditional economic model, states must be convinced that disarmament is more beneficial than maintaining nuclear weapons, including the "warm glow" of doing good for the public.<sup>20</sup> Ensuring compliance with disarmament treaties necessitates significant investment in verification and monitoring technology like as satellite surveillance, on-site inspections, and advanced detection systems. For a complete transitions States need to help each other, financial support for international disarmament programs, particularly help to underdeveloped nations in their non-proliferation efforts, necessitates major international contributions and cooperation in every process and phase of the disarmament. This shall not stay stable given global political climate, yet are highly effective.

Usage and Impact of Nuclear Weapon, in any warfare shall destruct the global economic growth, there will be large vacuum for the victim nations, to rise up and rebuild devoid of any radioactive impacts in their population and their ability to perform and build the nation again, tedious and hardest economic phase, the impact on the health of the population and the generations to come would be deeply affected to return to the normalcy, the economic burden to invest to start from scratch with psychologically traumatised population and to rekindle hope is biggest challenge.

## **VI. NEED FOR COMPLETE BAN**

State responsibility and sovereignty has always taken the forefront while discussing the nuclear disarmament, as most nations try to defend their security policies rather than working for the humanity at large, this raises the concern of any given day a nuclear weapon state shall always

---

<sup>19</sup> Iran nuclear deal: Despite differences, still 'best available option', Security Council hears, 2023, <https://news.un.org/en/story/2023/07/1138432> accessed on 07-08-2024.

<sup>20</sup> Stefano DellaVigna, Psychology and Economics: Evidence from the Field, 47 J. ECON. LITERATURE 315, 338 (2009)

try to utilize one way or another the warhead stockpiled. This in itself is a legit threat, for which a complete ban is highly been pressed upon. If a state posses an arm it will use it in their dire need or to showcase the power, both ways, the nuclear usage will bring a catastrophic situation.

Politicization of Scientists in the filed of nuclear armament is never ethical, the creation can be scientific in nature but to keep upgrading the nuclear weapon technology day by day, creates a divide among the scientists, on whether the humanity and the planet should be put on risk, and is there really a dire need to create a technology with massive large scale damaging abilities. The science suppose to help humans live better, but rather scientists are being pushed for political agendas, some voluntary some by orders, shows how the nuclear disarmament is still a long dream, as there is serious nuclear building on other side. All the above reasons are quite pressing, on how the nuclear disarmament must be handled.

The victims of the Nuclear weapon usage and testings, are still not compensated in many parts of the world, the trauma and the physical damages shall never be compensated, devastation scale is unsure no amount of preparedness will help to save people in a nuclear war. Also avoiding the creation of nuclear war victims anymore must be the only agenda, hence the ban is much requested from the earlier victims.

The Sustainable Development Goals, set are all for the improvement and development, yet another nuclear attack would bring devastating damage that, every works towards the goals shall be shattered, and the safe transition of this earth and goodness to next generation will be defeated, with nuclear weapons, only the ban and safe dismantling will help for the sustainable growth and development.

## VII. CONCLUSION

*“The nuclear threat will not end as long as nations continue to claim that nuclear weapons are essential for their national security. -(Nagasaki Peace Declaration, 2017).*

Nuclear weapons is not necessary for today's security challenges, as it detracts from other military needs and cannot be justified in the current financial context. Although all governments at the U.N. recognize the dangers of more nuclear weapons, effective action has not been taken. Many states and civil society professionals debate the effectiveness of using weapons of mass destruction to address traditional security concerns. Nuclear weapons are ineffective in solving current issues like poverty, health, climate change, terrorism, and transnational crime.

Nuclear disarmament is an important goal in international law, demonstrating the worldwide commitment to reducing the threat posed by nuclear weapons while promoting peace and

security. Despite the numerous challenges—such as economic expenses, verification procedures, and political opposition—the pursuit of disarmament remains a cornerstone of international efforts to create a safer world.

International law has development in slowly but quite effectively, all through the decades to achieve the current status of bringing nations to discuss on the complete ban, and in the drafting an signing of a complete ban TPNW treaty, which in itself a big milestone, from here with the help of international institutions and the collective works of scientific community, the NGOs and the victims, marching ahead towards the safe and successful nuclear disarmament, must be the goal.

Humanity has crossed complex situations, and it's the collective responsibilities of the States and the assisting organs to protect and prevent any escalations, that will open the threat of nuclear usage until the disarmament is achieved. The peaceful settlement of dispute shall be encouraged, and the programs and policies promoting complete nuclear weapons ban, along with nuclear disarmament shall be the future agenda.

Moving forward, the international community must strengthen efforts to address the remaining challenges of disarmament, including engaging both nuclear-armed and non-nuclear states in meaningful negotiations. Emphasizing the shared benefits of a nuclear-free world can help build consensus and drive progress towards a safer and more secure global environment.

\*\*\*\*\*

## VIII. REFERENCES

1. Alexander S. Rinn, A Behavioral Economic Approach to Nuclear Disarmament Advocacy, 46 VAND. J. TRANSNAT'L L. 969 (2013).
2. Alicia Godsberg, Nuclear Disarmament and the United Nations Disarmament Machinery, 18 ILSA J. INT'L & COMP. L. 581 (2012).
3. Brad Roberts, *On Creating the Conditions for Nuclear Disarmament: Past Lessons, Future Prospects*, 42 WASHINGTON Q. 7 (2019).
4. Glasstone, Samuel, and Dolan J. Philips, eds. *The effects of nuclear weapons*. Department of Defense, 1977.
5. ICAN, Nuclear Weapons. "The effects of nuclear weapons under international law." (2014)
6. Masahiko Asada, Treaty on the Prohibition of Nuclear Weapons and Japan, 63 JAPANESE Y.B. INT'L L. 258 (2020).
7. Miller, John. "Towards a Global Nuclear Ban Treaty: ICAN's Anti-Nuclear Triad." *Global Governance and International Cooperation*. Routledge India 73-88.
8. Odette Jankowitsch-Prevor, International Convention for the Suppression of Acts of Nuclear Terrorism, 76 NUCLEAR L. BULL. 7 (2005).
9. Paolo Cotta-Ramusino, Next Steps to Universal Nuclear Disarmament, Pugwash Conferences on Science and World Affairs
10. Ronald McCoy, "The International Campaign to Abolish Nuclear Weapons," International Campaign to Abolish Nuclear Weapons,
11. Schroeder, Linh. "The ICRC and the Red Cross and Red Crescent Movement: Working Towards a Nuclear-Free World since 1945." *The 2017 Nuclear Ban Treaty*. Routledge, 2020. 123-135.
12. *The Basics of Nuclear Weapons: Physics, Fuel Cycles, Effects and Arsenals*, Hans M. Kristensen Director, Nuclear Information Project Federation of American Scientists
13. Treaty on the Prohibition of Nuclear Weapons, 18 ISIL Y.B. INT'L HUMAN. & REFUGEE L. 295 (2018-2019).
14. UN Disarmament Yearbook 2023, Volume 48, <https://yearbook.unoda.org/en-us/2023/>
15. United Nations Office for Disarmament Affairs, Nuclear Weapons ,<https://disarmament.unoda.org/wmd/nuclear/>

16. United Nations, Transforming Our World: The 2030 Agenda for Sustainable Development, A/RES/70/1, 2015, <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

\*\*\*\*\*