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International Law and Nuclear Right

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Abstract: The global imperative to curtail the proliferation of nuclear weapons and ultimately achieve their total elimination has precipitated the adoption of a strategic framework that incentivizes and facilitates the use of nuclear technology for peaceful purposes. This policy has demonstrably mitigated the risk of widespread atomic weapons development on a global scale. Nonetheless, recent uranium enrichment and reprocessing activities by non-nuclear-weapon states have generated profound international disputes. These states contend that deficiencies and gaps in the safeguards administered by the International Atomic Energy Agency (IAEA), as well as limitations within the Treaty on the Non-Proliferation of nuclear weapons (NPT), should not be invoked to obstruct their legitimate pursuit of peaceful nuclear technology.

Under the NPT, non-nuclear-weapon states are categorically precluded from acquiring nuclear weapons and are bound to rigorously comply with the obligations articulated in Articles 2 and 3 of the Treaty. These obligations include the coordination and adherence to IAEA monitoring and verification mechanisms to ensure that nuclear activities remain exclusively for peaceful purposes. In return for assuming these stringent responsibilities, non-nuclear-weapon states are entitled to fully realize the benefits and privileges of treaty membership, including unimpeded access to nuclear technology for peaceful applications.

Keywords: *Nuclear Energy, Sovereign Rights, Peaceful Use, Non-Proliferation Treaty (NPT).*

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Introduction

The utilization of nuclear energy for non-military and peaceful purposes represents one of the most critical challenges of the contemporary era. This challenge cannot be solely attributed to the ambition or power-seeking tendencies of developed nations, particularly the superpowers. Rather, it arises from a combination of realistic global concerns regarding the expansion of peaceful nuclear energy, including the imperative to prevent nuclear weapons proliferation and the obligations imposed by international legal frameworks, which empower certain states to implement specific security and monitoring measures under defined circumstances.

Historically, the pursuit of nuclear energy can be segmented into four distinct periods: from the mid-World War II era to the mid-1960s, the 1980s, the 1990s, and from the late 1990s to the present. During the first period, nations engaged in global conflict intensely pursued the production of nuclear weapons, prioritizing military applications of atomic energy over non-military uses. Notably, Nazi Germany, under the leadership of Werner Karl Heisenberg and Erich Schumann, attempted to develop atomic bombs but ultimately failed. In contrast, the United States successfully produced atomic weapons through the Manhattan Project, led by J. Robert Oppenheimer in collaboration with Albert Einstein and Enrico Fermi. On August 6 and 9, 1945, the United States deployed the atomic bombs "Little Boy" and "Fat Man" on Hiroshima and Nagasaki, respectively, creating unprecedented global awareness of nuclear devastation.

These events produced two critical global realizations: first, the world recognized the catastrophic potential of nuclear weapons; second, certain nations, predominantly Western, emerged as nuclear powers, establishing an enduring asymmetry in nuclear capabilities. The second period, spanning the mid-1960s to the 1980s, was marked by significant developments, including the 1968 adoption of the Treaty on the Non-Proliferation of nuclear weapons (NPT) by 158 states. The NPT pursued three objectives: preventing the spread of nuclear weapons, promoting peaceful uses of nuclear energy, and advancing nuclear disarmament. The treaty emerged from U.S. President Eisenhower's "Atoms for Peace" initiative, which sought to redirect global nuclear ambitions toward peaceful applications while discouraging weapons development.

Despite the NPT's intent, the pursuit of comprehensive nuclear disarmament remained elusive. The adoption of the Irish Resolution by the United Nations General Assembly replaced the goal of disarmament with a strategy of arms control, a pragmatic yet widely debated approach that continues to shape international discourse. From a geopolitical perspective, Eisenhower's doctrine effectively restricted the nuclear ambitions of developing nations while consolidating the strategic advantage of established nuclear powers. Countries such as India and Pakistan, outside the NPT

framework, successfully developed nuclear weapons, and Israel, with clandestine support from certain European states, acquired nuclear capabilities, circumventing NPT prohibitions.

The Chernobyl nuclear disaster in 1986 catalyzed a global reevaluation of nuclear energy, intensifying public scrutiny and opposition toward nuclear power. Challenges to the development of peaceful nuclear energy include proliferation concerns, gaps in the NPT, reluctance of nuclear-armed states to disarm, unresolved nuclear waste management, difficulties in fuel supply, and sensitive nuclear activities such as uranium enrichment and reprocessing.

Nevertheless, a paradigm shift has emerged in recent decades. The potential applications of peaceful nuclear energy in agriculture, water resource management, electricity generation, healthcare, environmental protection, poverty alleviation, and food security have prompted nations worldwide to reconsider and recalibrate their strategic and policy frameworks concerning nuclear energy (Adamantiades & Kessides, 2008).

Legal Challenges of Peaceful Nuclear Energy

The evolving global recognition of the inextricable link between sustainable development and emerging technologies, including nuclear energy, has precipitated new political and legal challenges, particularly for developing countries. From a geopolitical perspective, the expansion of nuclear energy has historically been met with skepticism and apprehension, especially from established nuclear-weapon states. Consequently, the initial question surrounding any country's pursuit of nuclear energy often centers on its motivations, strategic rationale, and economic justification, rather than on its formal entitlement to the peaceful use of nuclear energy.

The prevailing discourse on nuclear issues in international politics reflects a structural bias: the development of nuclear energy by any state is often viewed with suspicion by nuclear-armed nations. This skepticism can largely be traced to the inherent weaknesses of the Treaty on the Non-Proliferation of nuclear weapons (NPT), which institutionalized a discriminatory framework between member states—a framework that Western powers have preserved and reinforced through successive policies.

For Third World and developing countries, historical circumstances such as colonization, economic underdevelopment, and systemic poverty have intensified interest in nuclear technologies, not merely as instruments of energy generation but as catalysts for socio-economic advancement. The acceptance of the NPT by these nations was frequently motivated by the prospect of accessing the benefits conferred under Article 4, which guarantees the right to develop and utilize nuclear energy for peaceful purposes. However, this framework has also generated a series of legal and political challenges, exemplified by nuclear crises in North Korea, Iraq, Libya, and Iran, which continue to shape forecasts of potential global disputes.

The Non-Aligned Movement (NAM) Summit, attended by approximately 120 United Nations General Assembly member states, has consistently highlighted the objections of non-nuclear-weapon states to the restrictions imposed by nuclear-armed states on peaceful nuclear energy. During the NPT Review Conference, Indonesia, for instance, issued a strongly worded statement asserting: "There are still unjustifiable restrictions and constraints imposed on non-nuclear-weapon States in relation to full access to nuclear technology for peaceful purposes" (Bailey et al., 2000). These challenges primarily arise from the reluctance of nuclear-weapon states either to provide assistance or to allow the transfer of materials and technologies to non-nuclear-weapon states under various pretexts.

This dynamic has crystallized into a persistent geopolitical and legal tension: nuclear-weapon states frequently allege that non-nuclear-weapon states harbor clandestine intentions to develop atomic weapons under the guise of peaceful nuclear activities, whereas non-nuclear-weapon states contend that they are being coerced into permanently abandoning legitimate technological pursuits through restrictive measures. Moreover, some analysts argue that by promoting nuclear energy as a substitute for fossil fuels, global powers are strategically consolidating their dominance over energy supply chains, particularly in the provision of nuclear fuel. The issue of fuel supply for nuclear power plants thus emerges as a central challenge.

A critical legal question arises: should all member states have the sovereign right to supply fuel for their nuclear facilities independently, regardless of economic considerations, or should the international community, in recognition of the proliferation risks, prohibit indigenous enrichment and reprocessing, instead establishing an international nuclear fuel bank? Non-nuclear-weapon states have expressed legitimate concerns that such a global fuel bank, if controlled predominantly by Western powers, could be subject to political exploitation, especially given the current structural limitations of the United Nations and its affiliated bodies.

At the core of the legal debate is the interpretation of the rights of non-nuclear-weapon states under the NPT. Specifically, to what extent can a state that has fulfilled its obligations under the Treaty exercise the rights enshrined in Article 4? Does this include uranium enrichment, reprocessing, and the complete domestic nuclear fuel cycle, or is the entitlement restricted to the operation of nuclear power plants without fuel autonomy? The divergence in interpretation between nuclear-weapon and non-nuclear-weapon states primarily revolves around this issue: nuclear-weapon states argue that the NPT permits non-nuclear-weapon states to operate nuclear power plants with related technologies but not to independently supply fuel, since such capabilities could facilitate the development of nuclear weapons.

As Mohamed ElBaradei, former Director General of the International Atomic Energy Agency, remarked, "A country that has the right to enrich uranium on its territory should be regarded as a potential nuclear bomb holder." This statement encapsulates the central tension between legal rights to peaceful nuclear energy and international security concerns, underscoring the enduring complexity and sensitivity of the global nuclear governance regime.

Legal Interpretation of the NPT

The renewed interest of both developed and developing countries in expanding nuclear activities as part of macroeconomic strategies grounded in sustainable development has given rise to profound disagreements among NPT member states regarding the interpretation of Article 4, particularly concerning the phrase "inalienable right."

Article 4 of the NPT explicitly recognizes the "inalienable right" of non-nuclear-weapon States to "develop research, production, and use of nuclear energy for peaceful purposes without any discrimination and in accordance with Articles 1 and 2 of the Treaty" (NPT, Article 4). However, significant divergences persist between nuclear-weapon and non-nuclear-weapon States concerning the scope and limits of this right, particularly regarding sensitive nuclear activities (Moussavi & Hatami, 2000). Non-nuclear-weapon states contend that Article 4 encompasses all peaceful nuclear activities, including uranium enrichment, reprocessing, and other sensitive operations (Zarate, 2007). Conversely, nuclear-weapon states argue that the Treaty does not confer the right to conduct indigenous uranium enrichment or reprocessing activities (Ford, 2007).

A historical contextualization of Article 4 clarifies these tensions. The United Nations General Assembly, in Resolution (XXI) 2156, explicitly urged the international community to convene a conference on "how nuclear energy can be used exclusively for peaceful purposes" (Resolution 2156, 1966). The aim of this conference was to provide a legal and policy framework enabling states to derive maximum benefits from peaceful nuclear energy, particularly for non-nuclear-weapon states. Accordingly, the NPT was conceived with three primary objectives:

1. Achieve the ultimate goal of nuclear disarmament.
2. Facilitate the peaceful use of nuclear energy to meet the needs of non-nuclear-weapon states.
3. Prevent the proliferation of nuclear weapons globally in the short term (Resolution 1756, 1960).

Within this framework, Article 4 assumes particular significance. By granting an "inalienable right" to peaceful nuclear energy, it seeks to deter non-nuclear-weapon states from pursuing nuclear armament while simultaneously incentivizing exclusive engagement in peaceful nuclear activities. In this sense, Article 4 fulfills a dual role:

- **First**, it provides a comprehensive legal framework enabling non-nuclear-weapon states to develop and utilize nuclear energy for peaceful purposes.
- **Second**, it serves as a normative mechanism to dissuade these states from seeking nuclear weapons, thereby contributing to global peace and security.

It is critical to recognize that Article 4 emerged from extensive negotiations between nuclear-weapon and non-nuclear-weapon states. Under Article 2, non-nuclear-weapon states pledge never to develop nuclear weapons, and under Article 3, they commit to the IAEA safeguards to ensure non-diversion of nuclear activities (Philosophical, 1995). In exchange, Article 4 guarantees that non-nuclear-weapon states may enjoy the benefits of peaceful nuclear energy at minimal economic cost and without discrimination (Scott, 2004).

Specifically, Article 4, Sections 1 and 2 of the NPT provides:

1. **Non-Interference:** Nothing in this Treaty shall affect the non-transferable right of any State Party to develop, research, produce, and use nuclear energy for peaceful purposes without discrimination and in accordance with Articles 1 and 2.
2. **Cooperation:** All States Parties shall facilitate the broadest possible exchange of equipment, materials, and scientific and technological information for peaceful purposes. States shall also contribute individually or collectively to the development of nuclear energy for peaceful purposes, with particular consideration for the needs of developing regions.

The adoption of this provision as an "inalienable right" reflects a compromise between divergent positions. For instance, the former Soviet Union advocated a restrictive interpretation prohibiting any activities preparatory to nuclear weapons production under Article 2. This proposal was rejected by non-nuclear-weapon states, who feared such restrictions would impose excessive constraints on legitimate peaceful nuclear activities (Zhang, 2006). Non-nuclear-weapon states subsequently insisted that the Treaty should explicitly enable the development of all forms of peaceful nuclear energy (Zhang, 2006).

Two enduring questions arise from the conclusion of the Treaty: first, how should peaceful nuclear activities be distinguished from non-peaceful activities; and second, under what circumstances could even ostensibly peaceful nuclear activities be deemed non-peaceful? Addressing these questions requires a nuanced analysis of fundamental principles, including the right to self-determination, non-discrimination, peacefulness, and the principle of maximum cooperation.

The Doctrine of Non-Proliferation and the Rejection of the Good Faith Interpretation

Global policies anchored in the "Doctrine of Non-Proliferation," primarily advanced by superpowers such as the former Soviet Union and the United States, have exerted a profound influence on the practical implementation of Article 4 of the NPT, particularly regarding the inalienable right of States Parties to enjoy peaceful nuclear energy.

Although the NPT was originally designed to prevent the proliferation of nuclear weapons, Western powers have consistently sought to impose extensive restrictions on the Treaty under the pretext of preventing nuclear proliferation. Bertrand Goldschmidt, former Chairman of the Board of Governors of the International Atomic Energy Agency, observed:

"Until the mid-1970s, the provisions of the IAEA and the policies of the Non-Proliferation Treaty were largely free from technical limitations. At that time, the Treaty could be summarized in a single sentence: nuclear explosions are prohibited, and everything else is permitted. Nothing in the NPT prevented member states from pursuing the technical methods of their choosing" (Moussavi & Hatami, 2000).

In other words, prior to the strategic shift of the United States in the 1980s and the imposition of restrictions on sensitive nuclear activities, non-nuclear-weapon states enjoyed the full benefits enumerated in Article 4 without fear of economic sanctions or security threats.

This arbitrary approach, which has contributed to serious global political, security, and military crises, has arguably placed world peace and security under unprecedented threat. The nuclear crises involving Iraq, Libya, North Korea, and Iran can largely be traced to unilateral interpretations and restrictive applications of the NPT's provisions. The United States' *Nuclear Posture Review Report* explicitly recommends: "Strong restrictions should be

placed on the transfer of dual-use enrichment and reprocessing technologies to non-nuclear-weapon states" (Nuclear Posture Review Report, 2010).

The report underscores U.S. foreign policy efforts to establish global consensus on limiting the transfer of dual-use technologies such as uranium enrichment and reprocessing. At the same time, it is critical to distinguish between an "absolute right" and an "inalienable right."

No "absolute right" exists under the NPT for non-nuclear-weapon states to develop nuclear energy without limitations, as Article 4(1) conditions peaceful use on compliance with Articles 1 and 2. The Treaty explicitly guarantees an "inalienable right" to peaceful nuclear energy, but implementation is contingent upon regular IAEA inspections and safeguards to ensure non-diversion of nuclear activities, and full compliance with the Treaty's obligations (Blix, 1989). In other words, an "inalienable right" is intrinsically linked to the obligations of Articles 1, 2, and 3, whereas an "absolute right" would exist independently of these obligations.

Articles 2 and 3 mandate that non-nuclear-weapon states refrain from pursuing nuclear weapons and accept IAEA monitoring to prevent diversion of nuclear technology to military uses. Article 1 obligates nuclear-weapon states to refrain from transferring nuclear weapons or related assistance to non-nuclear-weapon states.

A key criticism by nuclear-weapon states is that many interpretations of Article 4 have been constitutive rather than declaratory, contradicting principles of treaty law. Proper treaty interpretation should clarify the meaning of existing provisions in good faith without revising the Treaty itself (Ziaei Bigdali, 2016). As Professor Zhang notes:

"The policies and interpretations of Article 4 have created a situation where the Treaty is being effectively rewritten" (Zhang, 2006).

Consequently, the "right" in Article 4 differs markedly from the so-called absolute right claimed by some Western states seeking to impose additional restrictions on non-nuclear-weapon states. The consistent narrative by these powers—that perceived loopholes in the NPT enable potential nuclear weapons development—has served as a rationale for constraining the peaceful nuclear activities of developing countries.

The Treaty, however, seeks to establish a mechanism that balances non-proliferation with the promotion of peaceful nuclear energy. The three key principles embedded in Article 4—**non-discrimination, peacefulness, and maximum cooperation**—are designed to eliminate ambiguity and reinforce the Treaty's primary objective: preventing nuclear weapons proliferation while encouraging peaceful nuclear energy.

The term **"non-discrimination"** emphasizes the commitment of States Parties to avoid unequal treatment in facilitating the development and use of peaceful nuclear energy. It explicitly prohibits arbitrary restrictions on nuclear activities. Similarly, the term **"for peaceful purposes"** ensures that non-nuclear-weapon states may conduct sensitive nuclear activities without undue limitations, provided these activities align with the Treaty's objectives.

Finally, Article 4, Sections 1 and 2, must be interpreted alongside the Preamble's provisions on **maximum cooperation**, which mandate that:

"The benefits and advantages derived from the peaceful uses of nuclear technology, including all by-products of the technology that nuclear-weapon States may obtain from the development of nuclear explosive devices, shall be available for peaceful purposes to all Parties to this Treaty, whether or not they are nuclear-weapon States" (Paragraph 6, Preamble, NPT).

This principle underscores the commitment to equitable access, scientific collaboration, and practical cooperation, ensuring that the peaceful use of nuclear energy is fully respected for all States Parties.

Conclusion

The conclusion of the NPT was accompanied by the goodwill of non-nuclear-weapon states in accepting the legal obligations imposed by IAEA safeguards and the broader non-proliferation regime. This acceptance was driven by the expectation that such states would be able to maximize the benefits of peaceful nuclear energy. If, as some Western countries claim, the non-proliferation regime exists solely to prevent the development of atomic weapons, then it raises a fundamental question: why would countries voluntarily remain in a treaty that imposes legal obligations without providing reciprocal benefits?

Such a narrow interpretation of the Treaty is untenable. Both the historical negotiations leading to the NPT, the language and terminology used in the Treaty, and prevailing doctrinal interpretations demonstrate that while non-proliferation was a core principle, the drafters recognized that the only sustainable method to achieve it was through the development of peaceful nuclear energy.

From the outset, non-nuclear-weapon states emphasized that sensitive nuclear activities should not be treated as taboo nor exploited as a mechanism to impose additional restrictions on the inalienable right of member states to access peaceful nuclear energy. Using such restrictions as a justification effectively rewrites established international agreements and norms. Non-nuclear-weapon states maintain that any weaknesses or limitations within IAEA safeguards or the NPT framework should not serve as pretexts to curtail their access to the benefits of peaceful nuclear technology.

Historical practice underscores this principle. Following attempts by certain Western countries to impose restrictions or obstruct peaceful nuclear programs, subsequent NPT Review Conference documents explicitly reaffirmed that no State Party should engage in activities that hinder or restrict the peaceful nuclear activities of other states.

In sum, the NPT's architecture reflects a careful balancing of competing objectives: the prevention of nuclear weapons proliferation, the promotion of peaceful nuclear energy, and the principle of equitable treatment among states. The Treaty's language—emphasizing **non-discrimination, peaceful purposes, and maximum cooperation**—ensures that non-nuclear-weapon states retain meaningful access to nuclear technology while fulfilling their obligations under the non-proliferation regime. By upholding these principles, the NPT continues to provide a legal and practical framework for the responsible development of nuclear energy worldwide.

References

1. Adamantiades, A., & Kessides, I. (2008). Nuclear power for sustainable development: Current status and future prospects. *Journal of Energy Policy, 37*(12).
2. Bailey, E., Guthrie, R., Howlett, D., & Simpson, J. (2000). *Programme for Promoting Nuclear Non-Proliferation Briefing Book* (6th ed.). London: Mounbatten Center for International Studies.
3. Blix, H. (1989). The role of the IAEA in the development of international law. *Nordic Journal of International Law*.
4. Dehghanian, M. H. (1998). *The Mystery of Security and the Proliferation of Nuclear Weapons* (Master's thesis, University of Tehran).
5. ElBaradei, M. (2003, October 16). Towards a safer world. *The Economist.* https://www.economist.com/node/2137602.
6. Falsafi, H. (1995). Inequality of states in accepting and implementing the Treaty on the Non-Proliferation of Nuclear Weapons. *Legal Journal of the Office of Legal and International Services of the President, Issues 18–19*. https://tinyurl.com/239eue5b.
7. Ford, A. C. (2007). Nuclear Technology Rights and Wrongs: The NPT, Article IV, and Non-Proliferation.
8. Jamshid Mumtaz & Amirhossein Ranjbarian (2011). *International Law of Mass Murder*. Mizan Publishing. https://tinyurl.com/2wkxykch.
9. Moussavi, S. F., & Hatami, M. (2010). Studying the peaceful use of nuclear energy in the light of international law. *Law Quarterly, Journal of the Faculty of Law and Political Sciences, 40*(3). https://tinyurl.com/59nh65pn.
10. Scott, V. S. (2004). *International Law in World Politics.* London: Lynne Rienner Publishers.
11. Zarate, R. The NPT, IAEA safeguards and peaceful nuclear energy: An "inalienable right," but precisely to what? Non-Proliferation Policy Education Center (NPEC).
12. Zhang, X. (2006). The riddle of "inalienable right" in Article IV of the Treaty on the Non-Proliferation of Nuclear Weapons: International ambiguity. *Chinese Journal of International Law.* https://chinesejil.oxfordjournals.org/content/5/3/647.full.
13. United Nations General Assembly Resolutions: GA Res. 2156 (XXI), 22 November 1966; GA Res. 1756 (XV), 20 December 1960; GA Res. 2373 (XXII), 12 June 1968.
14. Vienna Convention on the Law of Treaties (23 May 1969; entered into force 27 January 1980). 1155 U.N.T.S. 331.
15. 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Draft Final Document, UN Doc. NPT/CONF.2010/L.2.