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## A Critical Appraisal of Nuclear Non-Proliferation Treaty (NPT)

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### Abstract

*This work focused on a critical appraisal of the nuclear non-proliferation treaty (NPT). Nuclear weapons proliferation is of major concern to the international community. As such many observers believe that the issue of nuclear proliferation is likely to be one of the most important issues facing the world today and it is also likely that nuclear proliferation is likely going to be the one issue to face the world for many years to come. Aside terrorism, nuclear proliferation is probably the single biggest political issue in the world today. This paper examined the workings of the nuclear non-proliferation treaty (NPT). The work also focuses on the structural operations and the need for the strict adherence by all countries to its provisions and the articles of the treaty is also mentioned. The paper, thus, argues that the NPT, notwithstanding its global acceptability and compliance has some loopholes which are exploited by some countries. Also some countries are very reluctant in disarming or eliminating their stockpiles of nuclear weapons. It makes use of secondary sources due to the dearth of primary materials.*

**Keywords:** *Critical, Appraisal, Nuclear, Non-Proliferation, Treaty.*

### Introduction

In the years immediately after 1945, the United States together with two of her wartime allies, the United Kingdom and Canada, began efforts at banning the use of nuclear bombs. They also had early ideas about curtailing the spread of such weapons. As such they tried to limit the use and spread of the technology used in making nuclear bombs by keeping it as a secret to themselves. Also the growing hostilities and tensions between the United States and Union of Soviet Socialist Republics (USSR) over territorial ambitions in Europe as well as “Sphere of influence” sort of convinced the US government to keep such bombs in case if the Russians (The USSR) tried to push their luck too far. This was meant to be used as leverage for dealing with the

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Russians. In 1949, Russia developed and tested its own nuclear bomb, thus bringing them at par with the US. This development came as a rude shock not just to the US but the world as a whole. Thus the era of mutual hostilities and tensions between east and west came to be perpetuated and termed “cold war”. With Russia having tested its own nuclear bomb, the era of nuclear proliferations was born.

Early efforts at a worldwide non-proliferation drive started in 1953 with the atom for peace programme. But it was not until in 1957, when, in order to forestall the proliferation of nuclear weapons technology by too many states, the United States, Russia (The Soviet Union) and 22 other countries which possessed nuclear energy as well as the technology signed and ratified the statute which created the International Atomic Energy Agency (IAEA) on July 27<sup>th</sup> of that year. The Agency was the direct result of US president Dwight Eisenhower’s dramatic proposals of December 8, 1953 when he made his famous “Atoms for peace” speech that year. But its objectives, after 3 years of negotiation were somewhat more modestly phrased than the president’s original objective.<sup>1</sup> With this Agency created, it had as its primary objective, the prevention of nuclear weapons proliferation by safeguarding fissile radioactive material as well as inspecting nuclear installations. This it did in a bid to forestall proliferation by seeing to it that fissile material and isotopes were not diverted for weapons making. In order to do this effectively, it had to be backed legally, not just with the consent of member countries. Thus came the nuclear non-Proliferation Treaty (NPT) which provided legal backing for the IAEA to carry out its activities.

Both the IAEA and the NPT were meant to start and carry out a regime of non-proliferation and both were primary the ideas of the US, which was seriously seeking a way to prevent other countries, especially third world developing countries from either acquiring the bomb or the

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technology to make one. It is difficult and debatable also, to understand precisely why the Soviet Union, after subsequent bilateral exchange of notes, the UN General Assembly discussion and the multi-state meetings and conferences, eventually decided to participate in the creation of the Agency.<sup>2</sup> The determination of the US to create the IAEA with or without the Soviet Union and to proceed on parallel front with bilateral agreements, almost surely persuaded the Soviet Union that she could further her interest more effectively inside the organisation than outside.<sup>3</sup>

Against this backdrop, EL Baradei sees four critical areas or aspect of non-proliferation regime that must be strengthened. These are: firstly, the development of a more effective approach for dealing with proliferation threats; secondly securing existing nuclear materials stockpiles and tighten controls over transfers and production of nuclear material; thirdly, strengthening the verification authority and capability of the IAEA and fourthly, the need to find a way for disarmament to be given the prominence and priority it deserves.<sup>4</sup>

David B. Walter in his article entitled ‘Managing the nuclear dilemma sees nuclear technology as a dilemma which countries are faced with. To him, the pressing issue is how to further develop and promote peaceful application of nuclear technology while at the same time prevent the spread of weapons technology. This is the current nuclear dilemma. He sees the IAEA as an organisation central to a global nuclear enterprise.<sup>5</sup> Tariq Rauf in his article “The Long Road to a Nukes-free world”, views the NPT as the best option in preventing proliferation. Although the IAEA is not a party to the NPT, it is entrusted with key roles and responsibilities under it.<sup>6</sup>

Fischer in his article on “Nuclear safeguards Evaluation and the future”, provides an insightful overview of international nuclear safeguards. In it, Fischer focuses on the steps to strengthen the

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global nuclear verification regime. To him, safeguards aim to verify that nuclear material and technology are only used for peaceful purposes.<sup>7</sup>

It is important to mention at this juncture that with the creation of the IAEA, the first step at curtailing nuclear proliferation was taken. With the signing and ratification of the NPT treaty, began the non-proliferation regime as seen in the world today.

The paper is divided into seven parts. The first part is introduction. This is followed by the conceptual clarification of some words used in the work that may look ambiguous to the reader. The third section deals with the theoretical framework on which the work derives its analysis. This is followed by an analysis of the nuclear non-proliferation treaty. The fifth part discusses pillars of the treaty. The sixth part highlights the major articles of the treaty. The penultimate section looks at the merits of the NPT treaty. The last part is the conclusion. The argument tends to suggest that nuclear non-proliferation treaty has achieved a lot in the fight against nuclear proliferation. The NPT is the most widely adhered to treaty in the world and this is significant because countries are bound by its provisions and thus are barred from manufacturing or acquiring nuclear weapons. However, the existence of the NPT notwithstanding, the world has continued to witness the quest by some countries to acquire nuclear weapons despite its prohibition costs as well as the catastrophic consequences of its utilisation.

### **Conceptual Clarification**

This work has some terms which, for some, are scientific in nature and definition. But they could be applied in politics. Some of such terms have now come to take up political meaning and interpretations. Some of such terms are:

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**Nuclear proliferation** – Is a term now used to describe the spread of nuclear weapons, fissile material and weapons – applicable nuclear technology and information, to nations which are not recognised as nuclear weapon states by the Nuclear Non-Proliferation Treaty (NPT).<sup>8</sup>

**Radioactive Isotope** – These are atoms of an element which have the same proton (atomic number) but different nuclear (mass) number. In this case their nucleons or atoms are unstable.<sup>9</sup>

**Radioactivity** – This is the phenomenon characterised by the spontaneous emission of radiation from a substance, in this case an element.<sup>10</sup>

**Nuclear Energy** – This is the energy released when a nuclear reaction or a radioactive decay occurs. It is characterised by large amounts of energy and heat.<sup>11</sup>

**Nuclear Fission** – is the process in which a nuclear bombardment of a nucleus of a heavy nuclide by particles such as neutrons results in the splitting of the nucleus into two smaller nuclei with a release of huge amounts of energy.<sup>12</sup>

**Nuclear Fusion** – is the process in which light nuclides combine to give heavier nuclides. Mass is lost in the process and large amounts of energy is released.<sup>13</sup>

**Highly Enriched Uranium** – This is a form of the element called uranium. In this case an isotope of the uranium atom (Uranium 235) has been enriched. Highly enriched uranium is uranium in which one type of unstable uranium atom, an isotope known as uranium 235 has been artificially concentrated.<sup>14</sup>

**Nuclear Safeguard** – This is a set of instrument which the IAEA uses in order to contain the spread of nuclear weapons proliferation and ensure that countries do not expose nuclear

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installations to great risk. They are essentially arrangement to account for and control the use of nuclear material.

### **Theoretical Framework**

The theoretical conception of this work is based on the system theory. System theory basically is a theory in which the world or international community is seen as a system.<sup>15</sup> According to Joshua Goldstein, one of the proponents of this theory views the world as an international system based on a set of relationships among the world's states, structured according to certain rules and patterns of interactions. Some of such rules are explicit, some implicit. They include who is a member of the system, what rights and responsibilities the members have and what kind of actions and responses normally occur between states.<sup>16</sup> Going by this view of the world as an international system, then theoretically, this system is divided into sub-system. Each sub-system makes up the complete international system. These subsystems are represented by actors, in this case nation state actors while an international organization, in this case International Atomic Energy Agency (IAEA) represents the main system.<sup>17</sup>

In system theory, any problem or defect in the sub-system affects the rest of the system as a whole. The nation state actors are members of the IAEA and have decided collectively to abide by its statute in order to protect global security. Going by this analogy of the IAEA being the system or the representatives of their own individual or regional systems, therefore, any problem or potential problem within the various sub-systems would inadvertently affect the general system. The IAEA is an international organization made of states that are member of it. The IAEA of the representative of the international system tries to forestall any problem or breakdown of global security by preventing states, both members and non-members states of the

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IAEA from proliferating nuclear weapon, then it becomes a problem which will affect the international security (in this case the IAEA) as it would lead to political and military tensions which ultimately, would lead to a breakdown of global peace and security. The IAEA thus tries to uphold the values of the international system through its functions. It also tries to uphold peace and security in the international system.

### **The Nuclear Non-Proliferation Treaty (NPT)**

The Nuclear Non-Proliferation Treaty or NPT is an international treaty to limit the spread of nuclear weapons. The treaty was opened for signing on July 1st, 1968. There are currently 189 states that are party to the treaty, five of which have nuclear weapons. The five nuclear weapons states are the United States, United Kingdom, France, Russia and China. Only four countries are not yet signatories to the treaty and they are India, Pakistan, Israel and North Korea. India and Pakistan both possess and have openly tested nuclear bombs. Israel has a policy of opacity regarding its own nuclear weapons while North Korea ratified the treaty, violated it and later withdraw from the treaty.

The impetus behind the NPT was the growing concern for the safety of a world with many nuclear weapon states. It was recognised that the Cold War deterrent relationship between just the United States and the then Soviet Union was fragile. More nuclear players reduced security for all, multiplying the risks of miscalculation, accident or unauthorised use or through the escalation of a small nuclear conflict.<sup>18</sup>

The treaty was proposed by Ireland and was opened for signature in 1968. Finland was the first country to sign it. The treaty came into force in 1970. By 1992, all five then declared nuclear powers had signed the treaty. The treaty was renewed in 1995 followed by the (Comprehensive

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Test Ban Treaty in 1996). Several NPT signatories have given up nuclear weapons or nuclear weapons programmes.<sup>19</sup> Among such countries was South Africa which undertook a nuclear weapons programme, allegedly with the assistance of Israel signed the treaty in 1991, after completely destroyed its small nuclear arsenal. Other states which have since renounced their nuclear programmes include Libya, Brazil, Argentina, Sweden and Former Soviet Republics.

### **Pillars of the Treaty**

Although, the NPT itself does not make any mention of pillars. However the treaty is divided into 3 parts which many scholars have referred to as its pillars.

The first pillar of the treaty deals with non-proliferation. Under the treaty, five states are recognised as Nuclear Weapons States or NWS. These states are: France (signed in the treaty in 1992), China (signed in 1992), the Soviet Union (signed in 1968 but its obligations and rights are now assumed by Russia), the United Kingdom (signed in 1968) and the United States (signed in 1968). The US, UK and the Soviet Union were the only states openly possessing such weapons among the original rectifiers of the treaty, which entered into force in 1970. These 5 nations are also the 5 permanent members of the United Nations Security Council. These 5 countries or Nuclear Weapons states agree not to transfer “nuclear weapons or other nuclear explosive devices and not in any way assist, encourage or induce” a Non-Nuclear Weapon States (NNWS) to acquire nuclear weapons (Article 1).<sup>20</sup>

Non-nuclear weapon states parties to the NPT agree not to “receive, manufacture or acquire” nuclear weapons or to “seek or receive any assistance in the manufacture of nuclear weapons” (Article II).<sup>21</sup> Non-nuclear weapon states also agree to accept safeguards by the International



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Energy Agency (IAEA) to verify that they are not diverting nuclear energy from peaceful uses to nuclear weapons or other explosive devices.

The five nuclear weapons states (NWS) parties have made undertakings not to use their nuclear weapons against a non-nuclear weapon state (NNWS) party except in response to a nuclear attack, or a conventional attack in alliance with a nuclear weapon state. However, these undertakings have not been formally incorporated onto the treaty.

The second pillar of the NPT deals with disarmament. The NPT's preamble contains language affirming the desire of treaty signatories to ease international tension and strengthening international trust so as to create someday, the conditions for a halt to the production of nuclear weapons and in general, complete disarmament that liquidates, in particular nuclear weapons and their delivery vehicles from national arsenals. The NPT's article VI elaborates on the preamble language, urging all state parties to the NPT, both nuclear weapon states and non-nuclear weapons states, "to pursue negotiations in good faith on effectively measure relating to cessation of the nuclear arms race at an early date and to nuclear disarmament and in general, the complete disarmament under strict and effective international control."<sup>22</sup>

The third pillar of the treaty focuses on the peaceful use of nuclear energy. Since very few of the nuclear weapons states and states using nuclear reactors for energy generation are willing to completely abandon possession of nuclear fuel, the third pillar of the NPT under Article IV provides other states with the possibility to do the same, but under conditions intended to make it difficult to develop nuclear weapons. The treaty, under this pillar, recognises the inalienable right of sovereign states to use nuclear energy for peaceful purposes, but it restricts this right for NPT

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parties to be exercised “in conformity with Article I and II”, both of which deals with non-proliferation obligations.<sup>23</sup>

### **Major Articles of the Treaty**

The nuclear non-proliferation treaty has 12 articles. But for the purpose of space, only the six most important articles are listed and briefly summarised.

**Article I:** Each nuclear weapons state (NWS) undertakes not to transfer to any recipient, nuclear weapons, or other nuclear explosive devices, and not to assist any non-nuclear weapon state (NNWS) to manufacture or acquire such weapons or devices.<sup>24</sup>

**Article II:** Each non-nuclear weapon state party undertakes not to receive from any source, nuclear weapons, or other nuclear explosive devices, not to manufacture or acquire such weapons or devices and not to receive any assistance in their manufacture.

**Article III:** Each non-nuclear weapons state party undertakes to conclude an agreement with the IAEA for the application of its safeguards to all nuclear materials in all of the state’s peaceful nuclear activities and to prevent diversion of such material to nuclear weapons or other nuclear explosive devices.

**Article IV: 1.** nothing in this treaty shall be interpreted as affecting the inalienable right of all parties to the treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and conformity with Article I and II of this treaty.

2. All the parties to the treaty undertake to facilitate and have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the treaty in a position to do so shall also co-operate in

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contributing alone or together with other states or international organisations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear weapon states party to the treaty, with due consideration for the needs of the developing areas of the world.

**Article VI:** States undertakes to pursue “negotiations in good faith on effective measures to or relating to cessation of the nuclear arms race at an early date and to nuclear disarmament and towards a treaty on general and complete disarmament under strict and effective international control”.

**Article X:** Establishes the right to withdraw from the Treaty giving 3 months’ notice. It also establishes the duration of the treaty (which lasts for 25 years before it was extended indefinitely at the 1995 treaty extension initiative).<sup>25</sup>

These are the major articles which define and explain the treaty in detail. They are only summarised here.

### **Merits of the Nuclear Non-Proliferation Treaty (NPT)**

The nuclear non-proliferation treaty has achieved some success in its over 50 years history. For one, the treaty is the most widely accepted and widely adhered to treaty in the world with 189 countries being signatories to the treaty. This is in fact almost all the sovereign independent countries of the world. Although 3 countries: India, Pakistan and Israel are only non-signatories, it nevertheless enjoys wide popular support and is a significant achievement.

Another of the treaty’s merits is that it encourages the countries that are signatory to it to work towards disarmament. This is equally focused on the 5 nuclear weapons states which are legally

recognised by the treaty as possessing nuclear weapons prior to 1965. The treaty aims at putting pressure on these 5 countries to reduce or totally destroy all their existing nuclear arsenals. It also aims at bringing countries to work towards a treaty for disarmament. Although so far none of these 5 countries are willing to completely disarm, yet efforts have been made by them to reduce some of their existing nuclear arsenal. For example, the US and Russia (then Soviet Union) signed several treaties between them limiting their strategic nuclear arsenals examples of such treaties include SALT (Strategic Arms Limitation Talks), START (Strategic Arms Reduction Treaty) and the ABM (Anti-Ballistic Missile) treaty. With these treaties or agreements reached, the objective of disarmament as elicited by the NPT has been achieved.

The Nuclear Non-Proliferation Treaty goes a step further in combating nuclear proliferation by compelling countries that are signatories to submit their nuclear facilities to the IAEA for inspections and safeguards. This is for the purpose of preventing nuclear proliferation and ensuring transparency in signatory parties to nuclear programmes and policies.

Finally, another merit of the treaty is that it makes provision for cooperation in the area of civilian nuclear technology. This is in a bid to promote the peaceful application of nuclear technology. Developing countries have benefited variously from the peaceful application of nuclear technology in solving pressing humanitarian problems.

## **Conclusion**

The International Atomic Energy Agency (IAEA) has so far been able to curtail the spread of nuclear weapon proliferation.<sup>26</sup> Through its safeguards and verification programme, a lot of countries have instead opted to use nuclear power to generate electricity and carrying out

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research on medical, agricultural and industrial uses. The Nuclear Non-Proliferation Treaty (NPT) has achieved a lot in the fight against nuclear proliferation.

The NPT is the most widely adhered to treaty in the world and thus is significant because countries are bound by its provision and thus are barred from manufacturing or acquiring nuclear weapons. Both the IAEA and the NPT through the cooperative effort of some countries notably the United States of America work hand in hand in order to achieve a proliferation free world.

In conclusion, the IAEA and its efforts at nuclear non-proliferation need to be better supported and equipped to face the arduous challenge of keeping the world safe from nuclear weapons. Through mutual cooperation and dialogue, the IAEA would be in a better position to encourage countries to resist the temptation of making nuclear weapons in order to ensure global peace and security.

The loopholes in the NPT should be closed or amended and only countries which are signatories of the NPT's Additional Protocol should be allowed to import equipment for civilian nuclear reactors. Non-proliferation initiatives such as the Proliferation Security Initiative (PSI) should be improved upon and expanded to allow more countries to participate in it. Research into the peaceful application of nuclear energy in the fields of medicine and agriculture should continue. Also, less developed countries of the world should be allowed to benefit from this. The best way to defeat a man in a battle is to cripple his economy.<sup>27</sup> The economy of the less developed countries can be boosted when allowed to participate in research into the peaceful application of nuclear energy in the fields of medicine and agriculture.<sup>28</sup>

Finally, it is recommended that countries being investigated for alleged NPT violations should be barred from holding positions of influence in the IAEA. Moreover, countries which

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possess nuclear weapons like the USA, Russia etc., should disarm stop, gun-boat stratagem and engage in disarmament negotiations to ensure cooperation, equity as well as security.<sup>29</sup>

## Endnotes

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<sup>2</sup>Kramish, *The Peaceful Atom in Foreign Policy* 232

<sup>3</sup>Kramish, *The Peaceful Atom in Foreign Policy* 232

<sup>4</sup> Mohammed EL Baradei, “Nuclear Non-Proliferation: The Security Context”, *Statements of the Director-General*, [www.iaea.org/newscenter/statements/2007/ebasp2007n016.html](http://www.iaea.org/newscenter/statements/2007/ebasp2007n016.html)

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