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Article IV of the NPT Treaty and Legitimacy of Sensitive Nuclear Activities

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Abstract

Recently, ambiguity determining the scope of nuclear activities has been posed serious challenges to the world security. Indeed, what has exacerbated the international concerns regarding sensitive nuclear activities in the legal and technical weaknesses and shortcomings that prevent the control of these activities in the best and possible way. These weaknesses and shortcomings can pave the way for building nuclear bombs under the guise of a peaceful nuclear plan or the threat of terrorist groups access of sensitive nuclear materials. Anyway, multilateralization of nuclear fuel cycle has been suggested as a strategy for the elimination of these weaknesses and concerns to International society. These proposals generally should be considered as an appositive step in preventing the proliferation of nuclear weapons, and improving global security to the benefit of all state parties. However, these constructive proposals need serious modifications to encourage nations to comply with it. This paper seeks to shed light on the crises created by the nations' nuclear activities disguised under peaceful nuclear activities with the focus on Article IV of the Non-Proliferation Treaty (NPT), its legal interpretation, scope and disputes between various countries on how to interpret it. The second part of the paper examines the similarities and differences between the two concepts of 'inalienable right' and 'absolute right'. Finally, we review the strategies proposed by the international community for the mitigation of the threats posed by sensitive nuclear activities.

Keywords: inalienable right, sensitive nuclear activities, peaceful application

1. Introduction

In recent years, there has been a resurgence among the developed and developing nations towards the acquisition of peaceful nuclear energy as a useful and favorable source of energy and as an infrastructure for the sustainable development in various economic fields. (Adamantiades & Kessides, 2008) The most important reasons perceived for this growing interest go back to the multifold applications of nuclear energy in industries such as pharmaceutical or power generation industries as well as its use as a substitute fuel. To these one can add the role played by China and India in the proliferation of the nuclear energy. Since 2009, twelve nuclear power plants have been built nine of which belong to the People's Republic of China. (BBC News, 2011)

As far as developing nations are concerned, it can be said that it plays an undeniable role in their sustainable development, and there is a close relationship between the concept of sustainable development and proliferation of nuclear energy. (NPT Review Conference, 2010) Based on this theory, the growth and development of nations significantly depends on the qualitative and quantitative satisfaction of energy needs of these nations. Due to its distinctive features, nuclear energy can be used as an inexpensive fuel in lieu of fossil fuels. Therefore, nuclear age can be thought of as the age of achieving sustainable development for these nations. In his first visit to Fukushima nuclear power plant that took place after the earthquake and tsunami that had led to the meltdown of three nuclear reactors, Yukiya Amano, head of the IAEA, explicated that this event could not decrease the global tendency towards the deployment of nuclear energy, though he admitted that this event can somehow decelerate the spread of this industry. (BBC News, 2011)

Anyway, this certainty is not permanent and definite, because the fear of the spread of nuclear weapons under the disguise of peaceful nuclear activities (e.g. North Korea), fundamental weaknesses in the IAEA safety

standards of nuclear power plants against natural disasters (Fukushima, Japan accident), the threat of terrorist groups access to sensitive nuclear materials (Abdolghadir khan Group in Pakistan), protracting Iranian nuclear crisis and finally spread of nuclear competition in the middle east has cast its heavy shadow over the economic and industrial advantages of nuclear energy. For example, after Fukushima disaster, the European Union issued orders for a revision in the safety standards of nuclear power plants. (The Guardian, 2011) In a provisional step, Germany announced it had stopped following the deployment of nuclear energy, and Japanese Prime Minister Naoto Kan supported the idea of nuclear-free Japan.

2. Sensitive Nuclear Activities

Historical analysis of NPT treaty reveals that the dream of nuclear disarmament and nuclear weapons-free world came to an end in practice with the ratification of Irish Resolution as if the international community had come to the conclusion that practical and realistic solutions should be found for the realization of nuclear arms control and prevention of the spread of nuclear weapons. (Bailey et al., 2000) It proved to be the most important reason for the ratification of the NPT treaty. Indeed, the Irish Resolution of the UN General Assembly calls all state parties to find ways to delimit the proliferation of nuclear weapons and bars more countries from the use, acquisition and transfer of atomic bombs. (UNGA, 2028 XX) The logical result of the Irish Resolution was the serious renewal of global negotiations over the ratification of the NPT treaty. In this process, the UN General Assembly defines 5 principles for the ratification of the NPT protocol some of which are:

1) the Treaty should not have any loop-holes which may permit nuclear weapon states parties or non-nuclear weapon states parties to manufacture, use or proliferate nuclear weapons in any form;

2) the Treaty must contain an acceptable balance regarding the rights and obligations of both nuclear and non-nuclear weapon states parties;

3) the last goal of Treaty should be the achievement of general and complete nuclear disarmament;

This is an undeniable reality that the Treaty proved unsuccessful with respect to all its adopted goals and principles. (Richard Falk, 1997) Despite the first principle that reads, 'The treaty should be void of any loopholes that might permit nuclear or non-nuclear powers to proliferate nuclear weapons in any form', North Korea developed nuclear bombs under the disguise of quite peaceful nuclear program in 2005. (Cristian DeFrancia, 2012) The third principle is also out of practical value because the control over the disarmament has been assigned to Nuclear Weapon State Parties and it does not fix any deadline for this purpose. The second principle, undoubtedly, is the most challenging principle of the treaty, in particular, with respect to the rights and duties of Non-Nuclear Weapon State Parties (NNWSP). This principle, one can say, is highly important for NNWSPs. This is intricately linked to the Article IV of the NPT Treaty. This article reiterates the inalienable right of the NNWSP to peaceful deployment of nuclear energy within the framework of obligations stipulated in the Treaty and its legal mechanism that involve the supervision and verification of nuclear activities under International Atomic Energy Agency (IAEA).

Anyway, there is a lot of debate between NWSP and NNSWP regarding the scope of the legal authorities of NNSWP, especially legal provisions related to the duties and authorities. Actually, the problem is which interpretation is nearer to the will of the drafters of NPT. The NNWSPs in general believe that the Treaty lacks a balance between the rights and obligations of these countries. On the one hand, NNSWPs are barred from acceding the NSWPs, and on the other they commit themselves to the obligations stipulated in Article III of the treaty, that is to comply with all the security measures of the IAEA to make sure that they won't divert their activities and keep to the rules explicated in the treaty. (Shirley Scott, 2004) In exchange for undertaking such intricate commitments NNWSPs expect to benefit from the advantages of their signature and implementation in full of the treaty that and enjoy the right of peaceful application of nuclear energy. Here there is a serious dispute between the two groups of nations in the interpretation of Article IV with respect to the benefits of the accession to the Treaty and implementation of the Treaty. According to Article 4 of the NPT Treaty, the NNWSPs are inalienably entitled to the development, research, generation and use of nuclear power for peaceful purposes within the framework defined in the treaty without any discrimination among the nations and in compliance with the obligations imposed on member states. This right includes utmost involvement of the member states in the exchange of equipment and facilities, materials and scientific and technological information needed for the peaceful nuclear development. (NPT Treaty, Article IV)

As such, the NNSWPs believe that Article IV of the Treaty has recognized and allowed the all forms of the peaceful nuclear activities including enrichment uranium, reprocessing activities and other sensitive nuclear fuel making activities under the NPT treaty. (Charles Van Doren, 1995) Consequently, they object to the serious restrictions imposed for the full implementation of this article. In fact, they believe these restrictions arise rather

from the expediencies of NWSP countries rather than being legal and originating legally from the accepted principles in the International Law, and obligations mentioned in Article IV per se. For instance, in the Third Preparation Committee for the '1995 NPT Review' Indonesia submitted a document prepared by the group of the Non-Aligned and other states that there continue to exist "unjustified restrictions and constraints imposed on developing NNWSP's regarding full access to nuclear technology for peaceful purposes." (1995 NPT Review Conference, Bailey et al., 2000).

In contrast, NWSP's emphatically oppose with the claim that all NPT member states are entitled to full access to peaceful nuclear energy, because they find it in contradiction with the approach adopted by UN Charter that emphasizes on the necessity to maintain international peace as the most important way to prevent hostilities among nations and asks the international community to make its greatest effort to reduce international disputes through the creation of mechanisms to improve cooperation among the nations in security. This idea creates a sort of contradiction between 'the nations natural right' and 'world expediency'. The natural right of countries certainly comes from the international conventions ratified by the international community and supported in the International Law. While, world expediencies mostly refer to the approaches and strategies that emerge in a global dynamic structure.

Anyway, this contradiction between the countries' natural rights and world expediencies can conspicuously be found in the works of Senators Richard Lugar and Evan Bayh who say that the US should not allow by any means any new nation to develop uranium enrichment technology, even if that country followed peaceful goals. In fact, this idea believes that 'world expediencies must be prioritized over the 'world rights' as stipulated in international conventions. This idea does not have anything to do with the goals of the nations with respect to developing uranium enrichment technology – peaceful or not – but considers the enrichment technology itself to be the instance of an unacceptable approach that can lead to the spread of nuclear weapons. It may be the reason why the U.S. Nuclear Posture Review Report (2010) announces that the US must devise mechanisms to impose serious restrictions for the transfer of technologies with possibly dual – peaceful and non-peaceful – usages to NNWSPs. (Nuclear Posture Review Report, 2010)

However, the basis of the reasoning made by NWSPs is the Principle 1 of the Resolution 2028 of the UN General Assembly that stipulates, "the Treaty should be void of any loop-holes which might permit nuclear or non-nuclear powers to proliferate nuclear weapons in any form " but the reality is that this treaty contains a lot of gaps that paved the way for North Korea to develop nuclear weapons under the guise of peaceful nuclear activities.

This question has always been in the minds of NNSWP's delegations of how it is possible to prevent unnecessary restrictions on the rights of the nations to develop all-out peaceful nuclear energy. This question seeks to expand the circle of prohibited activities of the NNSWPs that could create serious restrictions for NNSWP's to develop nuclear energy even for peaceful purposes. Indeed, most of the debates that was running at the time of the development of the treaties on nations' development of nuclear energy went around the idea that no grounds should be created to delimit peaceful nuclear activities on the pretext of the threat of nuclear weapons spread and the natural rights stipulated in the convention be ignored. In this respect, the Swiss delegates emphasis on the fact that uranium reprocessing activities must not be perceived as the extra-conventional activities that could result in making atomic bombs. That was the reason why the Swiss delegate put forward a proposal that specified non-peaceful atomic activities. This proposal could have prevented many problems. (Ford, 2007)

Despite the fact that this proposal was declined by the negotiating countries, the treaty does not explicate anything about this matter. The 1967 draft proposal made by NNWSPs regarding Article IV reads, "We base ourselves on the assumption that a treaty … should enable [NNSWP] to develop their peaceful atomic industries and all forms of the peaceful use of nuclear energy" (Zhang, 2006). Anyway, as mentioned before, the final proposal was totally rejected. As a result the case was left ambiguous as it is right now. In fact, it should be emphasized that the provisions of the convention about the right of uranium enrichment is so ambiguous that it is not possible to recognize in full the rights of the NNSWPs on the one hand, and it is not possible to confirm the claims made by NWSPs who say such rights do not exist. This ambiguity today has provided NSWPs with the pretext to announce as illegal any uranium enrichment and its associated technologies. (Ford, 2007; Zarate 2007)

This claim can be readily refuted if the proposal made by the former Soviet Union at the time the convention was being signed and its disapproval by NNSWPs is taken into account. This proposal who considered "preparedness for the production of nuclear weapons" as the instances of criminal behaviour of the NNSWPs was met with strong disagreement by NNSWPs because it could pave the way for other ridiculous pretexts to interpret any

peaceful nuclear activities as preparation for making atomic bombs and create a lot of restrictions for the NNSWPs.

In this respect, UN Resolution 2373 should be paid attention to, which declared UN's serious support of the inalienable rights of NNSWPs to do research and make use of this technology for peaceful purposes at the climax of the East and the West horrible confrontation. This resolution also emphasized that these nations must be able to use all their capacities for the development of this technologies in their countries. This convention can be taken into account in many ways. First, this convention was signed at a time when the threat of a nuclear confrontation between the two superpowers was becoming higher and higher, and drew the attention of the world community to the fact that the human life could be seriously endangered as a consequence. Second, this convention recognizes the rights of the NNSWPs to acquire special fissionable materials and all enrichment facilities, reprocessing activities and use of nuclear technology for peaceful purposes. (Andem, 1995).

Consequently, with a degree of uncertainty, it could be announced that under the International Law, and Non-Nuclear Weapons Proliferation Regime, nuclear activities by all NNSWPs are legally permissible as long as these activities are under IAEA's control and other security safeguards and seek peaceful objectives. In this respect, it is not possible to exclude nuclear activities such as uranium enrichment, reprocessing, recycling and fuel production technologies and consider then as extra-conventional. (Spies, 2006; Bajema & Nikitin, 2004)

The most significant reason specified by NNSWPs, which appears to be rightful indeed, is the fact that discrimination between sensitive nuclear activities and non-sensitive nuclear activities is actually almost impossible, because sensitive nuclear activities are the inseparable follow-ups of the non-sensitive nuclear activities. Indeed, technologically, it is not possible to segregate these two types of activities and it is not possible to follow certain approaches to them. For example, ownership of the house, confirms the ownership of the superstructure of the house as well. In fact the ownership of the superstructure of the house is the continuation of the ownership of the house and they cannot be separated logically and practically. In fact, NPT treaty does not distinguish between sensitive and non-sensitive nuclear activities and there are no clues in the treaty that sensitive nuclear activities are different from non-sensitive nuclear activities. (Bajema & Nikitin, 2004)

All these disputes should be attributed to the special nature of the treaty, which is in shortage of a regular firm structure enough to strike a balance between the rights and obligations of NNSWPs and NSWPs. The reality is that NPT is the result of the grand bargain between NNWSPs and NWSPs such that NNSWPs agreed never to pursue the production of nuclear weapons on one hand and on the other they had to accept IAEA safeguards under Article III obligations in order to verify their compliance with the treaty. In exchange, these countries could benefit from the right to indiscriminately benefit from nuclear energy. (Scott, 2004) Indeed, after China's nuclearization in 1966, the international community decided to prevent the spread of nuclear weapons and negotiations over the ratification of the treaty went on too rapidly to address these ambiguities and they were left unclear. (Zarate, 2007) The reality is that this treaty unbelievably suffers from the problem of discrimination between NNSWPS and NSWPs with not only legal gaps, that lets NNSWPs to develop nuclear bombs under the guise of peaceful nuclear activities, but also this gap can pave the way for imposing illegal unreasonable pressures by some NSWPs as witnessed in the Iraq case.

3. Absolute Right or Inalienable Right?

In recent years, the term 'inalienable right' was frequently heard, which implies the undeniable rights of the NNSWPs to use nuclear energy for peaceful purposes. Anyway the application of this term entailed ambiguities in the meaning, interpretation and scope of this term. This dispute arises from the comparison of this term with terms such as 'unqualified right' or 'absolute right'. (Zhang, 2006; Zarate, 2007) The question frequently asked is, "is the term 'inalienable right' used in the Article IV of the NPT Treaty the same as 'absolute right' or 'unqualified right'? and if not, basically, what is the difference between these two concepts?" In Article IV of the treaty this term refers to the 'legal right' of the NNSWPs to use nuclear energy for peaceful purposes. So, inalienable right is entitlement of a 'legal right' that has been given to one party by the other against the adoption and signing of the treaty on one hand, and full all-out compliance with the obligations stipulated in the treaty on the other. (Zhang, 2006) So, it should be interpreted within the framework of the logical structure of the treaty not something beyond that.

In case this matter is looked at on the basis of a reasonable interpretation of the convention, the result thus concluded would be that the convention has avoided granting an unconditional and absolute right to NNSWPs to use this technology and has restricted each right to certain obligations. Article 4 of the convention says that NNSWPs are entitled to the full access to this technology without any discrimination and other countries, especially NSWPs must respect this right. However, Article 4 subjects this grant of rights to two conditions: first

all nuclear activities of NNSWPs must seek peaceful objectives, and their commitment to this objective should be conspicuous. Though this condition appears to be overly general and ambiguous, but it has a very important position in the convention and it is possible to discourage the activities performed by countries that to some extent deviate from this high objective.

In fact, this condition enables IAEA to bar any nation from nuclear activities by noticing the slightest deviation from that condition. However, this point also should be borne in mind that these ambiguities in this article can by themselves create many problems as it has been seen so far. But, the second condition which is more specific and tangible, is the fact that the activities performed by NNSWPs must conform to Articles 1 and 2 of the convention. This condition greatly ties the hands of IAEA to oversee the activities that are out of the framework of this article, but its advantage is that it legalizes the monitoring and controlling of the activities performed by these countries in technical and legal terms, and can prove very effective in settling the disputes between IAEA and certain countries in the satisfaction of the public opinion and render the ideas of the organization more reasonable and documentary.

Therefore, it is dangerous to accept that NNSWPs can have an absolute right to peaceful application against the condition of not building a nuclear weapon. In fact, not building an atomic bomb is the most basic obligation the state parties must undertake, but, undoubtedly this obligation cannot be assumed the only commitment they have to undertake. NNSWPs have to undertake other commitments that are obligatory towards the main obligation and purpose of the treaty in fact, Article 1 imposes a certain obligation on NSWPs, and this obligation is that those countries commit themselves not to transfer any nuclear weapons or other explosive devices to other countries by any means or incentives or approaches. This article seeks to deter the transfer of nuclear materials or nuclear weapons in the world even for specific motivations. The second part of this convention goes even further and announces that NSWPs are not allowed to contribute, encourage and force NNSWPs to produce and employ nuclear weapons. This obligation, though apparently too general with no certain criteria, is very effective and can create serious drawbacks for the spread of nuclear weapons.

This article has included obligations for NNSWPs as well that can be summarized as follows: 1. Avoiding the acquisition of nuclear weapons from any country – whether rich or poor – either directly or indirectly. This part of the article emphasizes on both rich and poor countries and it must not be interpreted in a way that as if NNSWPs are entitled to acquire atomic bombs from NNSWPs. This part of the article seeks to bar any third country from playing the role of an intermediate in such a transaction. The terminal inclusion of the adverb 'indirectly' confirms this point. 3. The third obligation of NNSWPs consists of the commitment not to receive any assistance from other countries for the production of nuclear weapons. (NPT Treaty, Article II). Therefore, it should be accepted that the 'inalienable right' mentioned in Article 4 is essentially different from what is said to be the 'absolute right' and they cannot be placed at the same level.

In other words, the term inalienable right mentioned in Article 4 is indicative of a sort of right which lies in direct or indirect inseparable relation with the obligation of IAEA member states, so that the exercising of this right will be subject to meeting the obligations mentioned in Articles 1 and 2 and security safeguards of this international organization. In this respect, member states have to adhere to the security safeguards of the organization as well. Article 3 of the treaty also confirms this point in a way that security safeguards seek the special objective of examining and monitoring the good performance of the obligations by member states in order to prevent the deviations of the activities performed by the countries towards the production of nuclear weapons. On the other hand, it should be borne in mind that the term 'inalienable right' is directly related to the main goal of the treaty which is to prevent the spread of nuclear weapons. In other words, the international community has devised a mechanism through which countries are encouraged to use nuclear technology for peaceful purposes so that the natural tendency to use the nuclear technology as a preventive measure for their national security is reduced in a civilized way. This term was designed to prevent the production of nuclear weapons as even a deterrence measure, and direct the countries towards this insight that world security is not achievable by the spread of nuclear weapons even when they are deployed for preventative measures as is thought to be in line with their national interests, and that they will be better off if they avoid making nuclear weapons even as such a measure. This entailed a stimulating factor to pave the way for the reduction of the production of nuclear weapons in a world wide scale. (NPT Treaty, Article III.1). In fact, it is unacceptable to compare inalienable rights of states parties to entire all forms of peaceful nuclear energy with seeking absolute right.

4. Logical Strategy and Reasons behind It

Historically, in the international treaties, nothing can be discovered to explicate that any of all forms of

enrichment, whether enrichment of uranium or reprocessing activities and local nuclear fuel cycle, should be banned for the NNSWPs and the case becomes even more complicated when we find out that there is no explication to emphasize over NNSWP's not having such a right. Maybe the most important reason behind so wide a dispute among the nuclear and non-nuclear weapon states regarding the possession or non-possession of the right to sensitive nuclear activities is the lack of a legal explication of the ban in the treaties and conventions issued so far as far as nuclear disarmament is concerned. (ELBaradei, 2003) In such circumstances we must pursue strategies in a way that the global peace and security is not jeopardized. Frequently, international researchers have specified numerous reasons for the development of mechanisms to reduce sensitive nuclear activities in order to prevent the spread of nuclear weapons. (Franceshini & Muller, 2011)

These reasons fall into the following general categories: The nature of nuclear activities is such that it can simultaneously be used for both peaceful and military ends. In this regard, the essential problem is related to uranium enrichment in which the percentage composition of uranium 235 has been increased through the process of isotope separation. In fact, uranium enrichment should be considered as the most challenging part of nuclear power plants because enrichment of uranium with high concentration (90% uranium 235) that are used in nuclear reactors can also be used for military purposes including the development of atomic bombs, while low concentration (5% uranium-23) can only be used for peaceful purposes. This does not pose any problems in itself and will not start a panic among nations, but this panic is created when we know that the IAEA safeguards are not capable of timely and accurate detection of nuclear diversion in State Parties, especially in the field of sensitive nuclear activities. (Zarate, 2007)

In fact, the attention getting problem here is that it is too hard to verify and oversee the enrichment of uranium under IAEA safeguards for the prevention of the deviation of these activities, because the conversion time for the conversion of fissile material to be used in a nuclear explosive device is considerably short. This has had many consequences, e.g. IAEA safeguards have not been yet able to discover the underground nuclear activities performed by Iraq in 1990, and, of course, it provided good grounds for the U.S. and its allies to attack this country in 2009. This point is so important that Dr. Mohammed El-Baradei, the former general secretary of IAEA considered NNSWPs virtual nuclear weapons state parties, because the examination of the deviation of the nuclear activities of the countries, particularly uranium enrichment is very hard and will create numerous problems for both the international community and IAEA. (Zarate, 2007; Ford, 2007).

Thus, we face two serious problems here the first of which relate to IAEA safeguards that cannot detect the countries diversion from peaceful nuclear activities in a timely and accurate manner. This problem in turn comes from the two legal and technological weaknesses of IAEA safeguards. Legally speaking, if this is investigated, it will be found out whether the realm and executive scope of the IAEA security safeguards are limited to the identification and detection of the deviation of the member states ordinary nuclear activities. In more accurate words, IAEA security safeguards are not capable enough to verify all nuclear activities of the member states and cannot oversee the wide range of these activities. Of course the ratification of the Additional protocol could partially compensate this weakness, however, it was by no means successful in solving this problem to the full, and still security measures have not been able to discover the covert activities of many countries. This is a serious challenge for these measures do not work if the state parties do not cooperate properly. While it appears that measures should be devised by means of which they can duly monitor the states nuclear activities even if they refrain from showing goodwill and committed cooperation.

The second concern relates to the technical problems of IAEA safeguards or the complexity of discovering the nuclear deviations of states because this is a really difficult painstaking task. The problem that precisely exists here is that many facilities and devices used in nuclear reactors have dual uses and they can be used for both quite peaceful purposes and production of a nuclear bomb. In other words, the tools and devices needed for the production of a nuclear bomb are the same as tools and devices needed for the production of nuclear energy for peaceful purposes. The well-known example is the hot cell technology that can be used for the separation of plutonium and take a long step towards the production of an atomic bomb on one hand, and on the other for the production of radioisotopes. (ELBaradei, 2003) Moreover, both civil and military applications of nuclear energy technology may completely follow the same process, with hardly any significant difference. In this regard, most of the designs for civilian nuclear power reactors require low-enrichment fuels, but many research-specific reactors require highly enriched uranium to operate.

5. Multilateral Nuclear Approaches

All of these reasons lead IAEA to seek strategies to on one hand meet the inalienable rights of the NNSWPs in terms of enjoying and accessing peaceful nuclear energy, and on the other categorically mitigate the risk of the

spread of nuclear weapons and clog any loopholes that might lead to some countries' clandestine development of nuclear weapons. In fact, we face two groups of contradictory interests: one consists of countries who are seriously in pursuit of nuclear activities as explicated in the principles and goals of the Treaty and the second is the group of states that also pursue a ban on the spread of nuclear weapons. The result of this debate between these two groups has lead in recent years to the proposition of multilateral nuclear approach by IAEA and member its states. What has been known as 'multilateral nuclear approach' is indeed development of policies and approaches that are capable of significantly reducing the threat of spreading the nuclear weapons through legal gaps found in international treaties while provides guarantees to NNSWPs access to peaceful nuclear energy. These approaches emphasize the procurement of nuclear fuels through multilateral cooperation among IAEA state parties under the supervision of the IAEA. In general, it should be admitted that taking such multilateral approaches with one organization as the coordinator offers numerous benefits that can compensate the weaknesses of the Treaty's weaknesses and shortcomings in the long run in an acceptable way and can contribute to the attainment of the international community in the mitigation of the nuclear arms spread and will help countries in their efforts to use peaceful nuclear energy through increased trust and transparency among nations.

Yet, there are caveats to these policies and approaches the most important of which is that though they have been devised as incentives for NNSWPs to avoid indigenous nuclear fuel cycle in their own homeland. In practice, there are too many obligations imposed to NNSWPs that is needed. Indeed, one can say that this goal have been set in a way that they contradict with the concept of 'multilateral approach' and imposes 'unilateral' obligations on NNSWPs. For example, NNSWPs have to sign protocols such as the following in order to benefit from the nuclear fuel: Additional protocol, Convention on Nuclear Safety, Convention on the Physical Protection of Nuclear Materials (Rauf, 2004). To these you can add the need for the fulfillment of other IAEA requirements. Anyway, these restrictions cannot be judged as fair or reasonable, because it can lead to the discouragement of NNSWPs to cooperate. It is the elevation of the global safety and security in the provision of nuclear fuels within the framework of legal mechanisms on the basis of which obligations are imposed on the states which can be acceptable provided that these obligations do not jeopardize the concept of multilateral approach. Indeed, an environment should be created in which NNSWPs can access nuclear fuel with the minimum of obligations. This leniency will reduce the tendency of the nations to have their own nuclear fuel cycle.

The other problem that is raised here is the existence of common interests between the holders and recipients of nuclear fuels. The holders of the nuclear energy mind the financial and economic aspects of the project while they are committed to the non-proliferation of nuclear weapons, whereas the recipient of the nuclear fuel minds the creation of a mechanism to ensure the receipt of nuclear fuel. Indeed, the problem originates from the fact that there is no multilateral cooperation between the holders and recipients of nuclear fuels on the one hand and pertinent organizations such as IAEA on the other, and the nuclear fuel supply process has been delegated to the mutual wills of the nations. This cannot meet the interests of the recipient countries of nuclear fuels, because there is no guarantee for the provision of a fuel under a reliable mechanism. As a result, the recipient countries of nuclear weapons, like Iran, are obliged to produce the fuel on their own and avoid being dominated by holders of nuclear fuels. The Eurodif model sets a good example of this situation. In this model, France is the only holder of nuclear fuel and naturally is the supplier of nuclear fuel to member states of the project. The member states are only involved in the manufacture, management, and operation of the uranium enrichment technology without benefiting from the technology transfer advantages. (Franceshini & Muller, 2011).

And ultimately, it should be borne in mind that there is a sort of distrust between the holders and recipients of nuclear fuels in the way that the recipient countries fear that the supply of the fuel will tie their economy to the will of the holders of nuclear fuel. In fact, at present, there is no mechanism in the international community to give an objective guarantee to the recipients of nuclear fuels that their receipt of nuclear fuels will not be faced with double standards and discrimination, and they will be at any time able to be hopeful about the receipt of their fuels. Many proposals given to IAEA ignore this fact and they only refer to the guaranteed supply under urgent conditions such as political turmoil, with no reference to economic and technical turmoil. Consequently, it is asked whether IAEA is able to design a mechanism with no double standards and discrimination among the countries that encompasses permanent supply of nuclear fuels.

6. Conclusion

To move towards the serious reduction of nuclear weapons and ultimately destroy the nuclear arsenals was posed after the World War II and Japanese nuclear disasters. In fact, the world community saw in Hiroshima, Japan how a man could endanger the human life by his insane will. During the cold war period, this hysteria was tangible more than before because the superpowers constantly threatened each other of a nuclear war. In the post cold war era, the idea that capacities lying in the nuclear technology must be used for peaceful purposes on the

one hand, and the idea of other nations to join the nuclear club on the other has created many deterrent and encouraging mechanisms within the framework of the international laws and regulations. Today this idea is widely believed that increased number of countries holding a nuclear weapon will not only increase the world security, but also it will pave the way for nuclear rivalry among countries, which is in turn a great threat to human peace. On the other hand, the idea of peaceful use of nuclear energy can serve as an incentive to direct the countries away from making nuclear bombs.

In recent years, sensitive nuclear activities of some countries have become one of the most challenging debates at the global level. Indeed, what has exacerbated these concerns is the tactical and legal weaknesses that exist in the international instruments that reduce the possibility of close monitoring of these activities. What is unfortunate is the possibility of the spread of nuclear weapons under the guise of a peaceful nuclear program and the threat of terrorist groups access to sensitive nuclear materials. Anyway, multilaterization of nuclear fuel cycle has been proposed as a strategy to mitigate these weaknesses and global concerns about the danger of nuclear weapons spread by the international community. Though a positive step, but these constructive proposals need serious modifications if they are to urge nations to comply with it. Indeed, the establishment of a nuclear bank can elevate the role of the IAEA in the global developments and increase the power of this organization in overseeing the nuclear activities of countries and prevent the deviation of their nuclear activities, and lead to a global satisfaction in the peaceful use of nuclear energy. Anyway, this approach will be fruitful if the existing restrictions in the peaceful application of nuclear energy are reduced and member states of IAEA have their fuel supplied without double standards and discrimination. The world community must address this problem in a substantive way to find out whether it is possible to be hopeful of the prevention of the spread of nuclear weapons on the one hand, and at the same time prevent the peaceful growth of this technology by exercising discrimination, non-transparency and restricting the peaceful growth of this technology. An intelligent answer to this question can pave the way for the creation of approaches and strategies to avoid bias and extremism in the structure of the world order and to avoid swapping the tiny interests and claims of some nations with such worldwide benefits.

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