NEAR EAST UNIVERSITY

GRADUATE SCHOOL OF SOCIAL SCIENCES

MASTER OF LAW IN INTERNATIONAL LAW PROGRAMME LL.M

MASTER'S THESIS

NUCLEAR NON-PROLIFERATION FROM AN INTERNATIONAL PERSPECTIVE TOWARDS DISARMAMENT

Karwan Tahseen Ismael

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We certify the thesis is satisfactory for the award of degree of Master of

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I am....Karwan Tahssen Ismael....., hereby declare that the dissertation entitled "Nuclear Non Proliferation from an international Perspective towards disarmament....." has been prepared myself under the guidance and supervision of "Assoc. Prof. Derya Aydin Cakir" In partial fulfillment of The Near East University, Graduate School of Social Sciences regulations and does not to the best of my knowledge breach any Law of Copyrights and has been tested for plagiarism and a copy of the result can be found in the Thesis.

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ABSTRACT

The international communities and all nations around the world have a high level of concern on the matter of weapons of mass destruction. More specifically, the nuclear weaponry and means and matters around the nuclear utilization is a vital aspect of weapons of mass destruction subject. The international movement tends to move towards a safe and peaceful manner in regard to the nuclear energy. Although, international movement also endeavors to decrease the number of nuclear reactors, which can be used for military means and are considered as armed weapons of mass destruction. Disarmament, and issuance of new rules and regulations as well as setting new frameworks for safeguarding the facilities, which contain nuclear reactors is the main concern of all nations and specially those, which do not possess any type of nuclear energy facility and/or weaponry.

The necessity of this research is that the world without nuclear weaponry and to extension, no weapons of mass destruction can be a place for sustainable advancement, equality, healthcare, better quality of life, and open, yet trust-consisting negotiations and trade amongst all the nations on a global scale. This will create a distinguished life routine for all humankind and may lead the way towards the Utopia, which was described by the great philosopher Socrates and was noted and written by his fellow Plato. A world where there are no weapons of mass destruction and more specifically nuclear weapons, which have devastating results for all types of life form on earth, can be achieved via internationally established governing laws. Hence, this study tends to examine and investigate different aspects of the topic at hand, hoping to create a better understanding on the subject for further advancement on the path towards a peaceful, nuclear-free world.

Keywords: Nuclear weapons, Nonproliferation, Weapons of Mass Destruction, International Law

ÖZ

Uluslararası toplum kitle imha silahları konusunda büyük bir endişe duymaktadır. Daha spesifik olarak, nükleer silahlar, nükleer enerji kullanımının sağladığı imkanlar ve ilgili konular, kitle imha silahları konusunun hayati önem taşıyan bir yönünü oluşturmaktadır. Uluslararası hareket, nükleer enerji konusunda güvenli ve barışçıl bir yönde hareket etme eğilimindedir. Bu hareket, aynı zamanda, askeri amaçlar için kullanılabilen ve kitle imha silahlı silahları olarak kabul edilen nükleer reaktörlerin sayısını azaltmaya çalışmaktadır. Silahsızlanma ve yeni kural ve yönetmeliklerin çıkartılması ve tesislerin nükleer reaktör içeren yeni çerçevelerinin oluşturulması, tüm ulusların ve özellikle herhangi bir nükleer enerji tesisi ve/veya silahına sahip olmayan ülkelerin taşıdığı ana kaygılardan biridir.

Bu araştırmanın gerekliliği, nükleer silahların olmadığı bir dünyanın, kitle imha silahlarına sahip olmadan da sağlanabilen sürdürülebilir gelişim süreci, eşitlik, sağlık hizmetleri, daha iyi yaşam kalitesi ve uluslar arasında yapılabilecek pazarlık ve ticaret için açık ancak güvene dayalı bir yer olabileceğine olan inançtan kaynaklanmaktadır.

Böyle bir süreç, tüm insanlık için daha huzurlu bir yaşam kalitesi yaratabilecek ve insanoğlunun büyük filozof Sokrates tarafından tanımlanmış olan ve ayni zamanda Platon'un kaleme aldığı Ütopya'ya doğru ilerlemesini sağlayacaktır. Yeryüzünde her türlü yaşam biçimi için yıkıcı sonuçlar veren kitle imha silahları ve özellikle nükleer silahların olmadığı bir dünya, uluslararası çapta kurulmuş yönetişim yasaları ile yaratılabilir Dolayısıyla, bu çalışma, barışçıl, nükleerden arınmış bir dünyaya doğru giden yolda ilerleme kaydedilmesi konusunda daha iyi bir anlayış yaratmayı umut etmekte ve konuyu farklı açılardan incelemeyi ve araştırmayı amaçlamaktadır.

Anahtar Kelimeler: **Nükleer Silahlar, Nükleer Silahların Yayılmasını Önleme, Kitle İmha Silahları, Uluslararası Hukuk**

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DEDICATION

I would like to dedicate this paper to my father, who has always motivated, encouraged, empowered and supported me throughout my life and especially my higher education. He who has always been a reliable source and has given me necessary means for prospering in life as well as mentoring me in all stages of my life regardless of obstacles, difficulties and hard times. Despite, his occupation and immense responsibilities in the area, he has been always a vital role in my life. Therefore, it is only a mere appreciation to all his endeavors for making me a better person that I dedicate the fruit of my higher education to this amazing man. May he live a long, prosperous and happy life, so I can benefit from his consultancy.

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LIST OF ABBREVIATIONS

NPT	Nuclear Nonproliferation Treaty
WMD	Weapons of Mass Destruction
IAEA	International Atomic Energy Agency
UN	United Nations
SC	Security Council
ILA	International Law Association
NATO	North Atlantic Treaty Organization
CSA	Comprehensive Safeguards Agreement
LWR	Light Water Reactor
ENDC	Eighteen Nation Committee on Disarmament

CHAPTER ONE
INTRODUCTION

1. Literature

This chapter tends to give a brief overview on the objectives of this research as well as a brief overview on the relevant literature on this subject. Moreover, this chapter provides the guidelines and chapters of this research in terms of methodology and perspective.

1.1. Relevance of the Topic and Approach

The topic of nuclear weapons and relatively nuclear nonproliferation is a topic, which affects all nations worldwide. The matter of nuclear energy and its various hazards as well as means of peaceful usage is a concern of scholars in this aspect of research. Moreover, this topic is among the main topics of research within the past years, due to the advancements and improvements of technologies as well as the political shifts, which have been taking into the action the transformation of laws and international concerns upon the matter of nuclear weaponry and other explosive devices and weapons of mass destruction and subsequently the cease and/or nonproliferation of such weapons.

After an extensive overview on the existing literature upon the subject of Nuclear Nonproliferation and relevant topics, this research has taken the descriptive approach, which seems adequate for such studies as the main researchers and experts in this field have taken the descriptive approach for the topics related to the nuclear nonproliferation and its subsequent laws and regulations. This topic requires further investigation and all the relevant aspects of such important and worldwide topic need comprehensive attention and thorough understanding

whether by scholars in terms of research or politicians and authorities in terms of the issuance of rules, laws, regulations and/or obligations. Therefore, a descriptive approach in terms of research methodology seems adequate for the topic at hand as a thorough understanding on different aspects of the subject seems of necessity. In addition, a cohesive and full comprehension on the subject of nuclear nonproliferation can a better common understanding on the subject and its complex nature.

The researcher tends to use only the most recent publications on the topic of nuclear nonproliferation in regard to their relevance to the study with hopes of creating a better understanding on this subject.

1.2. Study Objective, Implementations and Topic Overview

There are numerous reports and committees and studies, from which it can be interpreted that the phenomenon at hand require much more attention and further studies to clear the pathway and enhance the methods of negotiations as well as understanding the laws and applicable rules for controlling the aforementioned acts while maintaining the safety on a global basis (i.e. Committee on Nuclear Weapons, non-proliferation and Contemporary International Law, Report on Legal Aspects of Nuclear Disarmament, 2014; and Committee on Nuclear Weapons, non-proliferation and Contemporary International Law, Report on Legal Aspects of Nuclear Disarmament, 2004). Hence, this paper tends to comprehensively look into the subject and gather and collect relevant information from the literature and previous studies to create a better understanding on the topic at hand.

[1]The objective behind this study is to look at the legal responsibility for non-proliferation acts and the incurred consequences. From this perspective, the study aims at exploring the possibility of establishing an integrated international judiciary, executive and legal body working towards the

objective of streamlining the international responsibility of possessing and using such weapons being acts exercised by the state within limits of its mandate or whether those acts are in violation of the international obligations prohibiting acquisition and use of these weapons that are causing a variety of physical and moral damages bearing in mind that there is currently an international trend to limit the acquisition and use of such weapons. This study is initiated on the basic hypothesis of international legal liability arising from the acquisition and use of weapons of mass destruction and the incurred implications. This can further lead to the advancement of the quality of life for the whole humanity as one kind and further provide a more sustainable elemental balance of life, which is beneficial for the planet earth as one country for humans.

This study endeavors to further create a better understanding on the complexity of the existing situation regarding the matter of weapons of mass destruction and more specifically the nuclear weapons and their non-proliferation acts, which are for the benefit of humans regardless of geographical location, ethnicity, color, or names. Without further ado, the global movement requires a holistic bloc with the scope of merely looking into the international framework with the mission of creating a nuclear weapon free world. The literature asks for further investigations

[1] Black-Branch J.L., Fleck D. Nuclear Weapons, Non-Proliferation and Disarmament: A Comprehensive Audit of Relevant Legal Issues and International Concerns. In: Black-Branch J., Fleck D. (eds) Nuclear Non-Proliferation in International Law - Volume I. 2014. T.M.C. Asser Press, The Hague , pp 1-21

with hopes of creating new pathways towards a more sustainable approach for the negotiations among the countries[2].

Additionally, the amount of debate and existing data (and mass data) on this subject exceeds the boundaries of this paper and the time-bound of this study. Thus, this research tends to link and gather some of the most recent studies, which have been conducted in the past years while maintaining the relevance of the topics. This study further puts an effort to observe the current trends on this subject and the sub-topics, which can relate to the nuclear non-proliferation acts on a global basis. This will enable the researcher to cohesively comprehend the matter at hand. This study also conducts a comparison study on the topic among the countries with nuclear weapons (armed or not) as well as those countries who possess weapons of mass destruction.

Furthermore, this paper raises and follows the important questions, which have arisen in this manner, such as, whether or not the withdrawal clauses in the manner of nuclear proliferation and nuclear weaponry should be processes and/or specifically noted; how the security council can further be in action and take a more coherent role?; what are the responsibilities of the Secretary General of the IAEA in the aforementioned regard? These issues are in consensus and have emerged from the existing literature and previous studies, which have been conducted by the experts in this area of study (i.e. Pascal, V., Prulhiere, G., Vanier, M., Fontaine, B., & Varaine, F. 2015; Pascal, V., Prulhiere, G., Vanier, M., Fontaine, B., Devan, K., Chellapandi, P. and Semenov, M. 2015; Takano, K., Mouri, T., Kishimoto, Y., & Hazama, T. 2015).

[2] Esfandiary, D.). In the Middle East, Get Rid of Chemical Weapons First. Arms Control Today Washington, DC, 2014. 22.11.2017

CHAPTER TWO

Chapter Overview

This chapter is looking into the topic of proliferation and weapons of mass destruction on a global basis while trying to make a comprehensive understanding on the topic. This chapter also tends to make a comparative overview on different aspects of the subject. This study tends to make new pathways that may enhance the negotiations on the topic on a global scale with hopes that the superpowers and other countries enriching their military with weapons of mass destruction would move towards a safer world where there are no weapons of mass destruction and all nations are united.

2.1. Non-Proliferation and Legal Issues

Since the improvement of science and more specifically the theoretical physics and subsequently the development of the nuclear weapons after the missiles and bombs (whether land or those to be carried by flying carriers), the world has been affected extremely and has taken a shift of transformation relatively. The law and international laws as well as international communities have a high number of debates and arguments on the topic of regulating and controlling the capacity of nuclear weapons as well as non-proliferation and the laws for the disarmament of those states with nuclear weapons[3].

There are numerous reports and committees and studies, from which it can be interpreted that the phenomenon at hand require much more attention and further studies to clear the pathway and enhance the methods of negotiations as well as understanding the laws and applicable rules for controlling the aforementioned acts while maintaining the safety on a global basis. Hence, this

[3] Dahlitz et al, Committee on Arms Control and Disarmament Law, Final Report, in *International Law, 2004*

paper tends to comprehensively look into the subject and gather and collect relevant information from the literature and previous studies to create a better understanding on the topic at hand.

The sensitivity and vitality of this subject requires a special attention, approach, interpretation and application alongside with the relevant implications of the laws that are made or to be made. These laws and regulations should be dealt with and looked into separately from the other forms of international or domestic laws due to the high importance of the topic (whether nation-wide or internationally). Each perspective and aspect of the regulations and treaties need proper and thorough assessment and evaluation by the experts on a high density basis. The paradigm of approaching the nuclear and non-nuclear but mass destruction weaponry requires a wholesome shifting.

The Nuclear Non-proliferation Treaty or the NPT holds the five superpowers (with nuclear weapons) to increase their weaponry under this treaty. The states that are under the Nuclear Non-Proliferation Treaty are namely, the United States of America, Russian Federation, the United Kingdom, France and Republic of China (1968). This treaty has been vastly extended to the extent of 190 countries by the year 1995[4].

The NPT consists of three main foundations; non-proliferation or in other words the usage of nuclear energy in a peaceful and sustainable mean while the consideration of disarmament.

The very first foundation to mention would be the requirement of non-proliferation of nuclear weapons on an effective yet sufficient basis. Those states, which do not possess nuclear weaponry have also agreed to not proliferate and/or manufacture or develop nuclear weapons or any other type of nuclear tool explosiveness.

[4] Further information is found from Committee on Nuclear Weapons, non-proliferation and Contemporary International Law, Report on Legal Aspects of Nuclear Disarmament, forthcoming in International Law Association, Report of the Seventy-Sixth Conference, Washington D.C. 2014

The next foundation of NPT is the reassurance of the spread and provision of the necessary rights for all the involved parties for development of research and subsequently to produce the nuclear energy and the safe usage of it, which is merely for purposes of energy and peaceful means. This right can be considered an inalienable one and it fosters the provision that any of the non-nuclear-weapon states are to comply with and accept and follow the framework of International Atomic Energy Agency (IAEA) for safety of usage of nuclear energy. The next and the third foundation of NPT is the disarmament. This pillar addresses all the parties and requires them to negotiate and pursue them with good faith and on an effective basis. These good faith negotiations have to be related to the cessation of the nuclear arms and weaponry on its early stages and dates and should be based on a treaty for a comprehensive and complete disarmament..

This disarmament must be under the control and full surveillance of the international control and committees[5].

For reassuring the realization and understanding all the purposes and provisions of the treaty, every five years there is a built-in review process which is held through conferences. The review conference of 2000, there was a thirteen step agreement, which was agreed among the state parties for the treaty. This agreement was to review and meet the disarmament commitments of every state. The review conference of 2010 involved a plan on action for the disarmament of nuclear weapons and consisted of solid steps for non-proliferation and subsequently the

[5] Black-Branch J., 'Opening Remarks to the Third Round Table (London) on Nuclear Weapons, Nuclear Energy and non-proliferation under International Law: Current Challenges and Evolving Norms, 2013.
see also http://www.ila-hq.org/ en/committees/index.cfm/cid/1025. Accessed at 16.11.2017

elimination of nuclear weaponry[6]. The objective behind this study is to look at the legal responsibility for non-proliferation acts and the incurred consequences. It also aims at exploring into the rules and regulations specific to banning the acquisition and use of such weapons as well as their tremendous hazards, damages and gross violations of the international norms and human rights. From this perspective, the study aims at exploring the possibility of establishing an integrated international judiciary, executive and legal body working towards the objective of streamlining the international responsibility of possessing and using such weapons being acts exercised by the state within limits of its mandate or whether those acts are in violation of the international obligations prohibiting acquisition and use of these weapons that are causing a variety of physical and moral damages bearing in mind that there is currently an international trend to limit the acquisition and use of such weapons. This study is initiated on the basic hypothesis of international legal liability arising from the acquisition and use of weapons of mass destruction and the incurred implications.

2.2. Non-proliferation of Nuclear Weapons and International Communities

The maintenance of the international safety and security under the thread of nuclear proliferation is the main concern and emphasis of the international community. This requires the development of new and legal mechanisms for holding the peace. Relatively, this will result in the decrease in the arsenal and artillery of the nuclear weapons through a set of framework that is holistically approached for the strategies that are needed for the non-proliferation of the nuclear weapons.

[6] Dhanapala J., Evaluating the 2010 NPT Review Conference, 2010

This requires a mutual trust among the nations and a joint endeavor for the same purpose that is the decrease in the nuclear weapons from possession to the acquisition on an international scale.[7]

The aforementioned assurance could be achieved via modernization and development of legal frameworks specifically addressing this issue for the denuclearization. This further requires international treaties and agreements that are solid and consensus on a global basis. Furthermore, this opens a new window of opportunity for nations to conduct a joint venture and work side by side for the benefit of all nations regardless of ethnicity. In addition, the aforementioned joint cooperation leads to the improvement of environmental protection movements. However, the joint global operation for the case of nuclear energy merely needs a worldwide effort and comprehensive collaboration for the sake of all nations, despite the conflicts and disputes that are currently ongoing. This subject is for the benefit of all nations and requires a full collaboration on this matter as the denuclearization and non-proliferation of nuclear weapons as well as other weapons of mass destruction while transforming the weapons into sustainable energy sources should be the main objective of such joint effort[8].

Nowadays, the international communities are facing various perspectives on the matter of nuclear energy, nuclear weapons, weapons of mass destruction, and the non-proliferation of weapons of mass destruction. The mentioned aspects and trends are contradictory to each other and may cause further conflicts and issues. There are viewpoints on the subject that the world needs to be free of nuclear weapons. However, other perspectives are relatively more aggressive in this regard and do not contempt to abide with the international treaties and criteria to reduce and decrease the military and nuclear proliferation in this context. This perspective comes from

[7] Mario E. Carranza, India-Pakistan Nuclear Diplomacy, Rowman & Littlefield Publishers, pg xix -270, 2006.
[8] Contemporary Security Policy, Journal, Vol.27, No.3,New York: Cambridge University Press, pg 310, 2006

the point that those with such perspective depict themselves as being above and beyond the obligations and international concerns as well as human criteria in the extent of global safety. These countries see themselves as a higher concern than other countries[9]. For instance, Israel is among the aforementioned countries with such attitude towards the international movement for the non-proliferation of nuclear and other weapons of mass destruction.

The current nuclear situation and matters of security around the subject is distinctively different than the circumstances that were in the late decades of the last century. The existing situation on the nuclear weapons and nuclear energy as well as other weapons of mass destruction is much more complicated and requires the involvement of many more influential factors due to its complex nature. This situation, which is mainly political and is skewed towards the super powers with control over the massive destructive weapons, gives new motives to these states for the proliferation of nuclear weapons and having the viewpoint against the non-proliferation acts worldwide.

The Energy Security is dedicated to the re-organization and formulating a new basis for the international relations in this matter[10]. The international policies and relevant concepts of the nuclear energy and its security have to face a significant shift of changes within the past years. Due to the rise of new concerns and the complexity of the management approach for the issue at hand, some new strategic alliances have been emerged for the main and major players on the market of energy and more specifically nuclear energy.

[9] Ware A., Nuclear Energy and Weapons: Uncontrollable in Time and Space, japan 2011
[10] Baylis J. et al, The British Nuclear Experience: The Roles of Beliefs, Culture and Identity, 2017

The cooperation and collaborative join alliance among the countries with major roles in the energy market of the world leads to a higher level of difficulty around the management of the subject. The aforementioned countries can be namely, North Korea, India, Pakistan, and Iran [11]. These countries add up to the delicacy and the concerns of the subject of non-proliferation acts and global movements towards the non-proliferation of the weapons of mass destruction. The United States of America handles the current existing situation of Iran and North Korea in regard to pursue of nuclear energy and nuclear weaponry.

The negotiations between the United States of America and North Korea in regard to its nuclear program has adopted another approach than the negotiations, which are ongoing between the United States of America and Iran, which is the sanctions being imposed on Iran due to the pursue of Nuclear Energy (whether non-military or weaponry) via the frameworks that are bind in the Security Council.

The limitations and restrictions deemed by those countries which possess the nuclear energy and weapons on a massive scale and have the capabilities will eventually face new shifts within the international environment that is concerning regarding the matter of non-proliferation of nuclear and other weapons of mass destruction. These countries will have to cope and be flexible in facing the issues of international framework regarding the non-proliferation treaties. The curbing of the proliferation of weapons of mass destruction requires the aforementioned countries to take new and modernized measures for meeting the criteria that is applied on the bilateral as well as multilateral agreements and contracts despite the traditional means.

[11] Pieper, M., Between the Democratization of International Relations and Status Quo Politics: Russian Foreign Policy towards the Iranian Nuclear Programme 2015

These terms and conditions are to effectively and conventionally reach the level of non-proliferation of weapons of mass destruction and more specifically the disarmament of the nuclear weapons[12]. Simultaneously, the surveillance and control of the nuclear activities and collaborations is vital for prevention of acquiring new weapons of mass destruction by any kind and/or developing them by those armed groups without state. This extends more particularly to the extent of which those groups with terrorist agenda and plans on a large and regional or even global scale and maintaining the security of these groups not having reached the capabilities of nuclear energy and nuclear weaponry or any other type of weapon of mass destruction[13].

To transform the world we live in from a world with more than 15, 000 nuclear weapon, which are held by the countries that are namely, The United States of America, The Russian Federation, People's Republic of China, Israel, India, Pakistan, The United Kingdom, France, and North Korea. From the aforementioned list of countries which possess nuclear weapons, Russia and the United States of America maintain the level of high-alert status for a rough number of 1,800 nuclear warhead stockpiles they possess. These can be ready to launch within minutes upon the command and in case of an alert[14]. Hence, formulating a new approach for the global communities for the sake of more consideration and new negotiations with more holistic measures and less merely beneficiary for a specific or a number of parties seems necessary in this content. Henceforth, the matter of weapons of mass destruction and whether or not the world needs this amount of nuclear weapons and more specifically nuclear warheads ready to launch?

[12] Miller, SE. and Sagan, SD., The Causes of Nuclear Weapons Proliferation ,Stanford 2009

[13] Nacos B., Mass-Mediated Terrorism: The Central Role of the Media in Terrorism and. Counter-Terrorism, 2nd Ed,2016

[14] Refer to International Institute for Strategic Studies, Hackett, James (ed.) 7 March 2012. For more information, See the Military Balance 2012. and www.icanw.org/the-facts/nuclear-arsenals/11.15.2017

This is the main question of this study and the researcher tends to provide a comprehensive review on the existing literature of this subject and further aid the international movement for non-proliferation of nuclear weapons and to extension, the non-proliferation of all weapons of mass destruction. Compliance with the acquisition and correspondence contradictions and conflicts, which arise due to this phenomenon are seemingly exhibiting more devastating outcomes than the prevention and further increasing the cease of nuclear weapons and/or denuclearizing the existing ones.

This study endeavors to further create a better understanding on the complexity of the existing situation regarding the matter of weapons of mass destruction and more specifically the nuclear weapons and their non-proliferation acts, which are for the benefit of humans regardless of geographical location, ethnicity, color, or names. Without further ado, the global movement requires a holistic bloc with the scope of merely looking into the international framework with the mission of creating a nuclear weapon free world. The literature asks for further investigations with hopes of creating new pathways towards a more sustainable approach for the negotiations among the countries.[15]

To secure the necessary means for a sustainable energy source from the nuclear energy and maintain the peaceful aspect of it, a scientific approach and cohesive advancement in the matters of technology, which relates to the subject of nuclear energy is vital and has a major role. This has to be recognized by the international movement towards the non-proliferation act of nuclear weapons (and to extension, weapons of mass destruction of all kind). This can further lead to the advancement of the quality of life for the whole humanity as one kind and further provide a more

[15] Ibid 7

sustainable elemental balance of life, which is beneficial for the planet earth as one country for humans.

The above mentioned objection is not a mere concept, which can yield into positive results by solely having verbal negotiations. As a matter of fact, an officially known and recognized, consensus, persistence, peacefully deviated, and one that requires commitment for internationally established equality and an environment, in which there is no discrimination and/or non-identical advantages. This requires a level of transparency for the nuclear activities from all the countries and subsequently their willingness towards the revealing of all relevant information (regarding the size, and number of the arsenals and artilleries and to extension, the classified military nuclear projects), from which all should be placed under the surveillance of the International Scrutiny and the Weapons of Mass Destruction.

The topic of nuclear non-proliferation in international law has an extremely complex and sophisticated nature. Additionally, the amount of debate and existing data (and mass data) on this subject exceeds the boundaries of this paper and the time-bound of this study. Thus, this research tends to link and gather some of the most recent studies, which have been conducted in the past years while maintaining the relevance of the topics. This study further puts an effort to observe the current trends on this subject and the sub-topics, which can relate to the nuclear non-proliferation acts on a global basis. This will enable the researcher to cohesively comprehend the matter at hand. This study also conducts a comparison study on the topic among the countries with nuclear weapons (armed or not) as well as those countries who possess weapons of mass destruction.

There was a major examination and revision on the Non-proliferation Treaty in the 1995. The extensive debates cleared a pathway for the discussion and negotiation for the non-proliferation treaty. Moreover, it made an opportunity to discuss the terms of the nuclear test ban treaty as well as unilateral disarmament. The role of the International Atomic Energy Agency (the IAEA) and the nuclear submarines were clarified and noted as vital. The initial step of the governing policy on the non-proliferation act was to maintain North Korean regime within the treaty of non-proliferation; next step was to preserve a profound extension for the treaty held in 1995; last was to increase the power and holding the grounds for enforcing the treaty. The aforementioned steps are entitled to be the responsibilities of the IAEA[16].

2.3. States Possessing Nuclear Weaponry and Their Obligations

Deere stated in the article that the states, which possess nuclear weapons (stated by the Article IX of NPT) are obliged for transferring the nuclear weaponry, its control and any other nuclear device to "any recipient whatsoever" (Article I NPT)[17]. As previously mentioned, the United States of America and the Russian Federation hold the most of the world's nuclear weaponry and arms within their possession and custody (estimated amount of 95%) .Within the body of NPT, despite the aforementioned states, there are other members of IAEA that are considered non-parties to the NPT, which are, Israel .

Moreover, there is the Democratic People's Republic of Korea, which made a withdrawal from the NPT. However, the request of withdrawal is asked from the Security Council for retraction, and that the Democratic People's Republic of Korea abandons all activities in regard to the

[16] Findlay T., The future of nuclear energy to 2030 and its implications for safety, security and nonproliferation, 2014

[17] Deere K, The obligations of Nuclear weapon states not to transfer Nuclear Weapons and Devices, 2014

nuclear weaponry including the current, ongoing, and existing programs of nuclear weaponry. This action from the Democratic People's Republic of Korea has to be comprehensive, to the full extent, verifiable and within an irreversible method, so there will be no ambiguity nor suspicious in this regard[18]. This is while India and Pakistan have already disclosed their nuclear programs to the public

There is a debate that this obligations in regard the subject of acquiring nuclear weaponry or to the extent, to possess and/or transferring the devices, and/or control of nuclear arms should not merely address the parties of NPT. The member of states, which have not signed the treaty of nonproliferation of the IAEA and the NPT, are four that are namely, Israel, India, Pakistan and South Sudan. The other parties, whom may not be officially bound by the NPT and the IAEA and do have the capabilities for nuclear weaponry need the same security measures to be applied on and the interests and the relevant responsibilities are subsequently the same as the other parties. However, it is noteworthy that the application of obligations on the states in regard to the existing common principle is not an easy task and may incur in specific and yet new controversy and ambiguity as well as disputes to be arisen to the global courts of justice and relevant authorities, such as IAEA[19]. The new international law that is under review and is being emerged in relation to the Security Council, and the relevant and necessary actions are in correlation with the steps undertaken for an effective interpretation of the mentioned customary laws.

In addition to the above mentioned considerations, the obligations on the states with nuclear weaponry possession, should take the rights of those states into matter of consideration on a special degree in regard to the withdrawal clause. This is in accordance to the Article X of the

[18] See Hoare, J. E., Historical dictionary of the Republic of Korea. Rowman & Littlefield, 2015
[19] Schmidt-Kuester, W. J., & Popp, NUCLEAR SCIENCE ABSTRACTS, Vol 29, 2015

NPT . In this context, the vital and critical role that the Security Council plays cannot and should not be neglected, due to its importance.

A number of various aspects can be defined and need careful and comprehensive attention towards them, such as the events, which may not be counted as ordinary and whether or not they need treaties to be defined for or they may be under the clauses of the existing treaty. Whether or not the withdrawal clauses in the manner of nuclear proliferation and nuclear weaponry should be processes and/or specifically noted; how the security council can further be in action and take a more coherent role?; what are the responsibilities of the Secretary General of the IAEA in the aforementioned regard?.

2.4. The Obligations for the States without Nuclear Weapons

Based on the Article II of the NPT, the non-nuclear weapon states are similarly under obligations as for the nuclear-weapon states in a vice versa manner. In another words, the non-nuclear weapon states, are not to accept the transfer of any nuclear weapon device, or weapon as well as the control, acquisition whether via direct contacts or indirect. This further extends to the manufacturing of nuclear weaponry as well. Moreover, the non-nuclear states are not to buy or take control and/or manufacture any type of nuclear weapon and explosive devices. However, this obligation needs a more thorough investigation in terms of clarification.

Article II of the NPT may arise some specific conflicts and controversies in terms of defining the Article. Henceforth, this article and relevant issues around it, call for a further and more comprehensive analysis undertaken thoroughly. The terms that are used in the article, such as the control over nuclear weaponry, nuclear devices, and such weapons and/or explosive devices need

to be further clarified in terms of definition[20]. In addition, the term "indirectly" is not clearly and vividly defined in this article. Considering the aforementioned issues, the fact that commitments towards the treaty need more attention on a comprehensive and thorough basis in regard to the relevance and technical specifications of each matter at hand [21].

The manner and practice of non-compliance have been creating challenges for an array of particular Security Council resolutions. This in turn will create the rise of "counter measures" ()[22]. A party within the NPT sates, which has been recognized as being non-compliance to the IAEA safety framework is Islamic Republic of Iran. Iran has also been told to have neglected or to extent, disregarded the resolutions of the Security Council[23].

The revised and new approach of the Interim arrangement states that the principle and framework for resolving such issues as previously mentioned, is that there is not agreement unless there is an agreement on all the matters and relevant matters, which is a holistic, yet comprehensive manner referring to the subject of nuclear non-proliferation. The relevant rules and laws and disputes call for a thorough, consensus and persistent investigation and analysis while reviewing the level of functionality as well as effectiveness on the methods of negotiations and approaches to the topic at hand as well as a proper and full implementation view.

[20] Pedraza, J. M.. Is the NPT an Effective International Instrument to Stop Nuclear Proliferation Without the Establishment of an International Organisation to Supervise the Implementation of its Provision?. *Public Organization Review*, *15*(2),pg 227-236, 2015

[21] Mario E. Carranza, Can the NPT Survive? The Theory and Practice of US Nuclear Non-proliferation Policy after September 11, Contemporary Security Policy, 2006 pp 489-525

[22] See Singh, S. Countermeasures and the Iranian Nuclear Issue, 2014 pp 4-10

[23] Bowen, W., & Moran, M. Living with nuclear hedging: the implications of Iran's nuclear strategy. International Affairs, 2015 pp 1-22

2.5. The Nuclear Weaponry Free Areas

The so called, Free Areas (or Zones) of nuclear weapons have been known to be Antarctica[24].

The last Conference Review of the NPT held in 2010 has clearly identified the demand for a Nuclear Free area in the Middle East (including Nuclear weapons and other weapons of mass destruction in the region)[25] Seemingly, there is an agreement in regard to the Arab League States and the Middle East region as well as Iran the Israel. Due to the conflicts that may arise from the obligations, the treaty of Pelindaba, which some of the aforementioned states are signatory to, needs thorough and comprehensive coordination[26].

In accordance to aforementioned above issue, there are other issues, which may arise in this regard and more specifically in the region of Middle East. One of which can be the fact that if the area, which is to be known as a Nuclear-weapon-free zone has any marine territorial borders. In this case, the questions arises whether or not the treaty must include the water borders and territories that are for the parties in the treaty. This can be extended from territorial waters to the economic zones of the aforementioned parties of the treaty and its exclusiveness or to extension, the inclusion of the international waters in the treaty and its clauses some in the Tlatelolco Treaty.

Notwithstanding, the major and critical waters that are located in this area, (i.e. Straits of Tiran, Hormuz) increase the level of complexities and problematic means to this context. Furthermore, the transportation, movement, and navigation of a third-party nuclear carrier or ship in these

[24] For more information see Mohagheghi, A. H., Bonin, B., & Wallace, E. A. Conceptualizing a WMD Free Zone in the Middle East*,* 2016. Pp 1-16
[25] Ibid Dhanapala
[26] Mohagheghi, A. H., Bonin, B., & Wallace, E. A.. Conceptualizing a WMD Free Zone in the Middle East: A Quantitative Approach **,** 2016. pp 1-16

waters can cause a further problem to the rights and in the whole territorial arrangements of the weapons of mass destruction free area of Middle East. In addition to the above and previously mentioned concerns, there are some other aspects, which need more care and investigation as well as more clarification and sustainable approach. The situational state of enforcement and/or withdrawal from this treaty needs further discussion, investigation and understanding.

This further extends to the case of verifying the disputes and settling measures for the enforcement of treaty, if any of the parties within the body of treaty show signs of non-compliance. As for the IAEA and its application, the requirements for the elemental aspects and verifications of the nuclear weapons, and subsequently the chemical weapons of mass destruction and their verifications is under the ensure and guarantee of the IAEA safeguards and the reference for the mentioned new treaty is the Organization for the Prohibition of Chemical Weapons (OPCW) [27].

At this stage, the existence of solid and sound grounding verifications and procedures on the biological weapons in the regional manner is absence. This requires a comprehensive and applicable system for the matter[28]. This further calls for a system and/or an organization to be established for this matter in the region for the verification. However, the establishment of such organization or special firm in the region requires a thorough approach for negotiations and to select the model for the controlling the organization is of necessity. The NPT parties show reluctance towards the recognition of the nuclear status of Pakistan and India, which are

[27] Ibid

[28] Lewis, P. M.. Tiptoe, Stride and Leap: Steps Towards a WMD-free Middle East. WMD Arms Control in the Middle East: Prospects, Obstacles and Options, 111, 2016 pp 433–450

substantially close the area of Middle East and the waterways of the region. This is due to the negativity of the security reassurance for their signatures as third States [29].

2.6. Weapons of Mass Destruction and the Threat caused by the Non-State Parties

The importance of control and surveillance over the weapons of mass destruction, from their manufacturing level to the acquisition, cannot be neglected. It is vital and crucial to consider all the means and necessary actions in this regard. This requires a holistic movement, activity, and approach from both international and regional levels. This is while there is a presumption that the nuclear states control the production and manufacture of nuclear weapons genuinely as well as controlling and surveillance of relevant materials (i.e. fissile) alongside the knowledge upon technological matters. To extension, this control and surveillance further comprehends the infrastructure of aforementioned technologies, which in turn creates a further barrier for transferring this knowledge to the non-States[30].

There is a realistic possibility, which the non-states may initiate criminal means and manners for acquiring nuclear devices, technology, and/or resources of radioactivity with hopes of transferring and possession via the black market or other illegal activities. As previously mentioned in this chapter, the NPT clearly states that transferring the nuclear devices, technology, and/or control over such mean as well as other weapons of mass destruction and more specifically explosive devices is strictly prohibited in accordance to Article I of NPT.

This prohibition as previously mentioned, strictly forbids the transfer of aforementioned means to any type of recipient in any kind. These obligations are addressed to the confined states, in

[29] See Khalid, I., & Safdar, A. Iran's Nuclear Agreement: Rethinking Pakistan's Middle East Policy, 2016. pp 347 – 366

[30] Esfandiary, D. In the Middle East, Get Rid of Chemical Weapons First. *Arms Control Today, Washington , DC,*2014

which the responsibility of reassurance in regard to the aforementioned prohibitions is due towards the states that are recognized as non-state actors.

2.7. International Law and Linkages

Considering the information and relevant data that is provided in this chapter previously, and in compliance to the topic at hand, a review on a number of aspects of international law in this topic seems adequate for this study. However, this review on the international law is limited due to the time bound and boundaries of this study and obviously the variety of relevant laws and their complex nature on this topic. The non-proliferation of nuclear weapons and other weapons of mass destruction and the relevant laws (internationally) in regarding to the control and/or disarmament, is widely and increasingly under the effects of rules and frameworks of some other relevant branches of International Law (i.e. Charter of United Nations).

The principles of International Law and relevant protocols as well as conventions that are held internationally, and more specifically the humanitarian laws (human rights), refugee rules, can all be relevant and related to this matter[31]. The rules and principles mentioned previously, are in affirmative stage by the General Assembly as well as Security Council in regard to the ensuring of all the measures undertaken by the States in facing terrorism and terrorist groups and that these actions against terrorism should be in compliance with the aforementioned rules and international laws[32]. In the light of aforementioned rules and obligations as well as means of control, the vividness and clarity of United Nations' Security Council and its resolutions seem to be highly vital for understanding the matter at hand and enhancing the pathway to a better

[31] ibid
[32] Bailey, S. *The UN Security Council and human rights*. Springer. 2016. Pg 181

understanding as well as following the new methods of negotiations and compliance on a global scale.

2.7.1. Arrangements of Voluntarily Actions

The number of countries creating joint ventures and arrangements in an informal basis for the purposes of usage of the materials and tools related to the weapons of mass destruction and/or nuclear devices (export or import and dual usage) has been increasing over the past years[33]. There are examples in regard to the light of information above, namely, the Australia Group (Missile Technology Control Regime or MTCR) ; the Wassenaar Arrangement on the Export Controls for Conventional Arms and Dual-Use Goods and Technologies. The vast number of activities and subsequently their coordination as well as the effectiveness and functionality among these movements requires a thorough understanding of all the relevant aspects as well as selection of verifiable settlements and enforcements for the disputes, which may arise and the importance of each aspect and which of them cannot be neglected by all means.

2.7.2. Verifications and Subsequent Safety Frameworks

There are general standardized means of implementation for the NPT that are stated and identified within INFCIRC/153. To further ensure the comprehensiveness of the safeguards and principles, the IAEA has additionally obliged the states with no nuclear weaponry or device to bind to the Newly Developed Model Protocol that is stated in the Article III of NPT[34].

[33] Knopf, J. W. 2016. International cooperation on WMD nonproliferation. University of Georgia Press. Pg 344
[34] Sanders, K. E., Pope, R. B., Liu, Y. Y., & Shuler, J. M. (2015). Interfaces among Safety, Security, and Safeguards (3S)Conflicts and Synergies. In *Proc. INMM 56th Annual Meeting, Indian Wells, CA* (Vol. 17

However, it is noteworthy to keep in mind that the New Model Additional Protocol of the IAEA is not conceived as a mandatory protocol and there is not agreement on the methods and means of adoption of the aforementioned Model Protocol of the IAEA by the nonnuclear weapon States[35]. The mentioned above issues require and call for a wide overview and assessment as well as evaluation on the topic and its detailed aspects. In addition, the issues which may arise in the future due to the dissensions on this problem. Furthermore, in regard to the extent of this topic, special cautious, consideration, attention, and thorough collaboration and coordination is needed to deal with the national, and regional laws of surveillance and control over the non-proliferation of the nuclear and weapons of mass destruction and explosive devices and its coherent commitment is of necessity (e.g. the European Union).

2.8. Nuclear Energy as Peaceful Alternative Energy Source

2.8.1. Civilian Nuclear Energy and its Right

The civilian Right for Nuclear Energy was emphasized as highly important and a segment of "grand bargain" (which later on yielded in the development of NPT in the year 1968) by the signatories to the International Law Association (Also known as ILA) Committee on Nuclear Weapons, Nonproliferation and Contemporary International Law [36].

The context of civil rights for nuclear energy and subsequent benefits involves the implications of these rights through Article IV in regard to the safety measures, verifications, legal considerations, access to or, enrichment rights for uranium and plutonium, and fissile materials is

[35] See Asada, M. The NPT and the IAEA Additional Protocol, 2016 pg 3-34
[36] ibid

enforced by the Article and within the body of NPT principles as well as the assurance of the effectiveness of the implications and implementations.

The rights for the reprocessing or the enrichment of fissile materials (i.e. uranium and plutonium) have to be complied with and approved by the nonnuclear States on a constant and sustainable basis for the purposes of safety and safeguard measures including the agreements on waivers (bilateral and/or multilateral)[37]. As previously mentioned, it is vital to highlight and emphasize the importance of the rules and regulations on the exchange of control and acquisition on the related tools, devices, equipment, scientific information, technology and materials in terms of peaceful utilization of the nuclear energy as well as maintaining a sustainable energy force as an alternative for the fossil fuels and their extensive and excessive use.

This shift of transformation within the capabilities of nations to use nuclear power as their main source of energy to supply the necessary energy to the facilities of a country can lead to extreme, cohesive and effective growth for the humankind. Moreover, this advancement towards maintaining and developing the technology used for the utilization of nuclear energy as a clean and peaceful source of energy (despite the radioactive hazards that exist in the nature of radioactive compounds) under the safeguards and regulations of International Committees and Humanitarian Laws as well as International Atomic Energy Agency (IAEA) can lead to a more equal level of negotiations and collaborations among the parties (yet to be increased and fully implemented requires extensive research and global movement towards a merely peaceful source of energy as in nuclear energy). The current existing technology and its daily fast-pace advancements in every aspect leads to the unity of the whole nations towards maintaining the

[37] Paul H. Nitze, 'Is It Time to Junk Our Nukes?' The Washington Quarterly, Vol.20, No.3 ,1994. Pg 97-101

existing resources as well as sustaining the means of usage, safety, environmental issues, and the emergence of humankinds regardless of their nationality and/or ethnicity.

2.8.2. Nuclear Power Stations and Standardized Safety Framework

The well-known earthquake and subsequent tsunami in March 2011 has had effects on the nuclear power station nearby Fukushima [38]. Relatively, a number of States initiated a review and recap on the laws and statutory laws around the nuclear energy and nuclear power stations. However, a number of States took a different approach (such as, Germany, Austria, Switzerland, and hesitantly Japan) to further not maintain the dependency on the nuclear energy sources within a predictable horizon and turn to alternative sources of peaceful energy. Another array of states have taken the approach of developing their level of nuclear energy sources and increase their production rates and not considering the transformation towards an alternative source of clean and less harmful energy source, if not totally harmless (green fuels). An example of such approach can be the UK's first nuclear station for power purposes in a generation, which was noted by the British Energy Secretary.

2.8.3. Waste Management of the Radioactive Waste

The harms and strength of radioactive waste is a well-known phenomenon. Hence, it requires a thorough and a vast array of activities for isolation and assurance on the containment of the biohazard radioactive waste from the atmosphere, biosphere and subsequently humans for over

[38] Keizo Nabeshima, 'What are Kim's Objectives?', The Japan Times, 14 Nov. 2006, <http://search.japantimes.co.jp/print/eo20061114kn.html accessed at 2.12.2017

centuries as the effect are long lasting and the compounds have very sustainable existence rates in terms of ray and chemical reactions[39].

The matter of radioactive waste is a crucial and vital aspect of nuclear energy and subsequently nuclear weaponry. This issue requires an extensive research and consideration for an international settlement and safety matters. The damages, which can be cause by the radioactive waste are far beyond the knowledge and current science as it seems [40](). Hence, the international scale for the standardization of the waste management process requires to be more accurate and comprehensive. The safety issues of nuclear waste or radioactive waste are entitled to be applied within all aspects from geological, environmental, technological, medical and other means. The aforementioned standardization has to be followed on a global scale for the safety measures, which influence all the planets as it happened after the incident of Chernobyl.

There are a considerable amount of countries, which do not have the sufficient requirements in the aspects of geology for maintaining and implying the safety measures and standardized storing the nuclear waste and radioactive waste that is produced from the nuclear stations and nuclear plants. This brings another aspect of this subject, which is the consideration of geological aspects for nuclear energy plants as well as the production of waste and more specifically nuclear and radioactive waste and whether or not the formal, and general laws are in fact applicable on particular conditions regarding regional and geological aspects[41]

[39] Chartier, Y. (Ed.).. Safe management of wastes from health-care activities. World Health Organization. 2014 pg 1-328

[40] See Blackman Jr, W. C. Basic hazardous waste management. 2016. Pg 1-488

[41] Carter, L. J. Nuclear imperatives and public trust: Dealing with radioactive waste. Routledge. 2015 pg 1321-1322

2.9. Disarmament of Nuclear Weaponry

The 76th ILA Conference held in Washington D. C. in April 2014, consists of comprehensive reports on the nuclear disarmament and its relevant and subsequent legal aspects, which are to be considered on a global scale. The Article VI of the NPT emphasizes on the considerations regarding nuclear disarmament, and relevant legal issues around this subject, when it addresses the decreasing process of nuclear weapons. In addition, the effects of nuclear disarmament on the matter of peaceful usage of nuclear energy as well as nonproliferation acts with having the three main pillars of the NPT as guidelines and priority framework. Regarding the disarmament of nuclear weapons, there are a number of over 20 elemental factors, which are stated in the ILA Declaration on Legal Issues of Nuclear Weapons, Non-proliferation and Peaceful Uses of Nuclear Energy.

This comprehends the nonproliferation of nuclear weaponry and the legal aspects and issues, which relate to this subject[42] It further adheres the concepts of peaceful utilization of nuclear energy as well as the enforcement laws, while involving the issues of compliance and its framework subsequently. This paper tends to investigate through the body of legal aspect and seek for a consensus approach for the topic at hand on the debate regarding nonproliferation of nuclear weaponry and other weapons of mass destruction. As a priority, nuclear disarmament of states is highly noted in this research.

2.10. Nuclear Nonproliferation Treaty and Environmental Gas Measure Verification

the progression and advancements of countries on the matter of nuclear energy and nuclear weaponry led to the measurement of radioactive gases and more specifically noble gases since

[42] Gilpin, R. American scientists and nuclear weapons policy. Princeton University Press, 2015. Pg 364

the 1940s and continued to the period of Cold War in terms of surveillance and monitoring. This has taken a more vital and influential role within the recent years as a measurement tool for the verification of nuclear activities on an international basis.

The emission of noble gases as a manufacturing product (waste) within the procedure of manufacturing nuclear energy and/or weaponry is extremely high due to the creation of the aforementioned noble gases (this can be the result of various nuclear activities, such as burn-up, nuclear reactors and their functions, nuclear fuels, irradiation, isotope production and other nuclear activities, which inevitably yield in the creation and emission of hazardous noble gases. In addition, nuclear incidents, explosions, disasters, and other outlier circumstances, which can cause the same amount of damage (whether or not held liable) can be another major source for emission of the aforementioned gases[43].

The complex chemical matters of this subject is outside the boundaries of this research. However, a basic view on this subject would be the decaying process of radioactive compounds, which happens as the noble gas has entered the atmosphere, disappears and does not chemically react with the ambient environment. This is helpful for the process of verifying nonproliferation treaties and if there are any specific nuclear activity, which has to be revealed. The main isotopes that are emitted from nuclear activities from the enrichment process of uranium and plutonium are Krypton-85, Radio-xenon, Argon-37 and Argon-41, which come to exist and are considered among the anthropogenic isotopes.

[43] Saey, P., Bowyer, T., Purtschert, R., Ringbom, A., & Schlosser, C. Environmental Low-Level Noble Gas Measurements for Nuclear Non-Proliferation Treaty Verification Purposes No. IAEA-CN--220. 2015. Pg 20-24

The analysis and measurements of the atmosphere in regard to the aforementioned noble gases can enhance the verification on nuclear nonproliferation treaty as well as detecting the gases and thereby, monitoring specific areas of nuclear activities and to extent of being necessary, cease or control them. These measurements can differ due to the nature of the above mentioned gases.

2.11. World Politics and the Impact on Internal Segmentation

As previously noted in this chapter, the number of countries within the United Nations' Security Council is a total number of nine states, from which five of them are known to be permanent signatories to the UN Security Council, which are namely, The United States of America, The Russian Federation, The United Kingdom, France, and the People's republic of China. Alongside the aforementioned countries are, Israel, India, Pakistan, and North Korea.

The above mentioned states are known as the states which possess nuclear weaponry and nuclear means of mass destruction. This number has decreases since the 199s from twelve countries possessing nuclear weapons, which were namely, Ukraine, Belarus, Kazakhstan, and South Africa. The possession of nuclear for South Africa was self-initiated and made. However, for Ukraine, Kazakhstan, and Belarus it was inherited by the ex-Soviet Union. However, all of the mentioned countries have ceased their nuclear programs and/or have stopped it due to the domestic changes and/or negotiations.

Since the mentioned year, the only state which has been added to the list of countries with nuclear weaponry possession, is the Democratic People's Republic of Korea (North Korea)[44].The nuclear program of Iran has been tamed by the Joint Comprehensive Plan of Action held in 2015. The nuclear program of Iran was raised the concerns of the NTP and IAEA. However, after the join plan, it is tamed for a period of time that is under the negotiations with the IAEA and other

[44] Ibid 23

involved parties such as the nuclear weapon possessing states mentioned earlier in this section. This shows that regarding the situation of Iran in this case, the future seems optimistic and the negotiations have so far been not fully successful but seemingly working[45].

There have been a number of times, when the Treaty of Nuclear Nonproliferation has been noted as one of the pillars of the world order[46]. In case of the absence of the Nuclear Nonproliferation Treaty, other states, which do not possess nuclear weaponry could have strived and reached nuclear weapons. With the advancement of technology and economy status of more countries on a fast-pace and routine basis, the skewness towards acquiring, manufacturing, and possession of nuclear weapons increases. It is noteworthy to emphasize that the concept of a nuclear war is not seemingly far-fetched and the NPT and IAEA has not been overly successful or effective in terms of prevention of a nuclear war.

The Nuclear Nonproliferation Treaty is a fruit of political means and action and it has been called an 'enlightenment project' by William Walker[47]. There have been over 28 countries, which have taken the matter of nuclear weaponry into consideration and have initiated the pathway towards developing, manufacturing and to extension, acquiring nuclear weapons of mass destruction.

This is while most of the above mentioned states have renounced pursue of nuclear weapons of mass destruction on a voluntary basis, being complied with the NPT and the frameworks of it. The states, which have been enforced by the NPT to withdraw their nuclear weapon programs

[45] Bowen, W., Esfandiary, D., & Moran, M. 2016. Introduction: Understanding Iranian Proliferation Behaviour. In *Living on the Edge* pp. 1-13. Palgrave Macmillan UK. Pg 1-13

[46] Muller, H., Satoh, Y. & Zaluar, A. Shared Responsibilities for Nuclear Disarmament: A Global Debate, 2017 pg 1-56

[47] ibid

have been Iraq and Syria[48]. The excessive amount of states, which do not possess nuclear weapons (NNWS) is referred to the political, strategic, and normative depictions and reasoning.

2.12. Russian Federation and Westerners

The Russian Federation and Europe have faced a decline in their relationship, which considering the fact that Russia is a nuclear superpower, the Europe shows concerns and signs of disturbance in this regard has given a brief explanation and overview in regard to the history among the European Countries and Russia during the 1990s and the negotiations, which have led to this point and the US and Germany's role in the negotiations and NATO[49]. Growth and expansion of NATO in the year 1993 faced contradictions from Russia. However, the policies have become adopted and implemented by the year 1997. Russia made a number of compensations in regard to the newly formed members of European Union on a written format within the body of NATO-Russia on a political manner. However, the clear and vivid oppositions from NATO and the United States of America against the interests of Russian Federation based on their interests and circumstantial objectives has led the compensations to a dim and placebo-type state.

A few examples of the United States acts against the interests of Russian Federation on a one-sided manner can be the withdrawal of the United States from Anti-Ballistic Missile (ABM) treaty, the expansion of NATO on a further plan based on new waves of so called 2nd and 3rd expansions. Serbian war without the United Nation's Security Council, Georgia and Ukraine's membership of NATO, and the American invasion of Iraq in 2003. The aforementioned acts undertaken by the United States' government are clearly acts against the compensations, which

[48] Hamed, N. M. 2015. The change of state practice In regards to preemptive self-defense in the presence of nuclear threat: the possibility of preemptive attack by China against North Korea, US invasion of Iraq 2003, Israel bombing Osirak in Iraq 1981 and Israel bombing Al Kibar 2007. Pg 1-73

[49] Muller, H. The Nuclear Non-proliferation Treaty in Jeopardy*? The International Spectator. Volume 52 , Issue 1. Taylor & Francis Online.2017. pg 1-16 ,* 2017

were promised by the Russian Federation and the interests of Russia in the matter of regional or international. This have led the ambiguity of the relationship among the Western Countries (especially the United States of America) and Russia to increase to a highly noticeable stage, which requires thorough and equal negotiations among the countries in order to prevent or substantially minimize the possibility of a nuclear war, which in turn will be devastating for the whole planet as a unit[50].

2.13. United States of America, Japan, India, and China

The United States of American and People's Republic of China have an extreme extent of competitive rivalry within the region of Southeast Asia. China with its military power tends to have control over the land and seas of the region with a number of eight neighboring countries[51]. The struggle between China and India in the region is mainly over the regions of Karakorum (Aksai Chin) and the Himalaya (Arunachal Pradesh). In addition, China claims to have control over the sea and water areas that are related to Malaysia, Brunei, Philippines and Vietnam. This claim is not merely on the territorial waters and expands to the territory of some islands in the region as well. The struggle further extends to the borders of South Korea and Japan over the Eastern Chinese Sea and a number of Eastern Islands.

China tends to reclaim the soil of Taiwan within a foreseeable future as the leader of People's Republic of China sees the island of Taiwan as a body part for the mother land of China. This is within their planning as they see the reunion with Taiwan as a mission to have overcome the imperialist era[52]. Within these struggles, the United States takes the role of gatekeeper or liaison in manner of protecting the region in opposition with the Chinese government. This is due to the

[50] Ibid
[51] Ibid
[52] Ibid

previously mentioned competitive rivalry between the United States and China. The United States of America tends to protect the aforementioned countries, namely, Japan, South Korea, and the Philippines. The navy and the US air force exhibit demonstrations in the waters and air of the region[53].

2.14. Issues and Problems

The main issue in regard with the Nuclear Nonproliferation Treaty (NPT) is that the membership for the treaty has not yet become a universal matter. This is while the negotiations over the refusal of withdrawal by the North Korean government from NPT is being revised and reviewed for the claims of engaging and initiation the nuclear weaponry development by the North Korean regime in the year 2003. However, India, Israel and Pakistan have never become members and signatories to the Nuclear Nonproliferation Treaty and have developed their nuclear program of weaponry after the enforcement of treaty in the 1970s[54].

The aforementioned states are seemingly nuclear weapon states. However, these states cannot be considered as members of NPT as long as they do not follow the necessary means of the treaty. The governments of these states have political infeasibilities to have joined the treaty. Despite the previously mentioned facts, the likelihood of the Indian, Pakistani, and Israeli governments to cease and be persuaded for leaving their nuclear programs (Like the South African government in 1992) is highly low, whether there is a regional or global enforcement in regard to the nuclear disarmament.

The laws governing the matters of nuclear energy and nuclear weaponry despite being comprehensive, vivid and without ambiguity, have their flaws and inefficiency when it comes to

[53] See East Asian Security", Chapter 7, *SIPRI Yearbook;* World nuclear forces" *2015. Pg 1-564*
[54] Koch and Schörnig, "Dangers of Lethal Autonomous Weapon Systems

handling issues on an international or regional scale. Prevention, control, and maintenance of nuclear deposits and technology can arise various legal issues as well as political problems that are outside of the boundaries of this research. The collection and monitoring the data driven from nuclear activities, encouragement and strengthening the structure of IAEA, involvement of all or maximum number of United Nations' members in the aspect of nuclear nonproliferation, the application and implementation of the governing laws and regulations, transparency and vividness of all the relevant activities, the responsibilities dedicated to each state and involved party and the equality of all the aspects from negotiations to the implications of such treaties are all notable and vital matters in this subject as and due to its complex and sophisticated nature.

2.15. Safeguard Frameworks and Their Progress

According to the literature, the safety measures of International Atomic Energy Agency are increasing by standards and effectiveness while maintaining a high level of efficiency in the recent years[55]. The IAEA has taken a more comprehensive approach towards the safety measures of nuclear activities in the states since 1998 in regard to the consistency and unambiguity of nuclear activities within states possessing nuclear plants (whether weaponry or energy related) and thoroughly looks into each of the programs, which is contradictory to the previously undertaken method of facility control and auditory means[56].

The new approach of IAEA in regard to nuclear activities of states possessing nuclear devices creates a holistic analysis on the consistency of their nuclear programs and if the state is in fact following the safeguards framework of the IAEA and the NPT. The examination further

[55] See Gilligan, K. V., & Gaudet, R. N.. *Oak Ridge National Laboratory Office of International Nuclear Safeguards: Human Capital Development Activity in FY16* (No. ORNL/TM--2016/510). Oak Ridge National Lab.(ORNL), Oak Ridge, TN ,United States. 2016. Pg 1-54

[56] Ibid

identifies the states' nuclear purposes and nuclear technology and devices in regard to the peaceful means of using and utilizing nuclear energy on a sole basis. Additionally, materials, tools and equipment being used in the nuclear programs are being analyzed and verified by IAEA. The surveillance and monitoring process of nuclear facilities of states have increasingly improved from a number of 14 cameras to 86 cameras from 2000 to 2004. Moreover, the new technologies have enabled the IAEA to strictly follow the plants structure and initial design (i.e. ground penetration radar).

2.16 Democratic Peoples' Republic of Korea (North Korea) Nuclear Case

The state of non-compliance by the Democratic Peoples' Republic of Korea (officially) or also known as more commonly by the name of North Korea was found by the IAEA after the North Korean government became a signatory to the Comprehensive Safeguards Agreement (CSA) in 1992. The Democratic People's Republic of Korea made the notification upon its withdrawal from the Nonproliferation of Nuclear Weapons Treaty (NPT) in the next year after the CSA with IAEA. The permission for withdrawal was in fact given and stated by the Article X of the NPT[57]. The negotiations between the North Korean government and the United States have initiated in 1994 and North Korea was to cease all nuclear weaponry activities (such as graphite-moderated reactors and fuel cycle facilities). This was due to the compensation of United States with the transfer and deliverance of 1 ton Megawatt Light Water Reactor (LWR) as well as the shipment of 500,000 tons of oil for the purposes of energy and industrial as well as heating means on an annual basis[58].

[57] Onderco, M., & Wagner, W.. The ideational foundations of coercion: Political culture and policies towards North Korea. European Political Science Review, 2017 pg 279-302

[58] Ha, E., & Hwang, C.. The US-North Korea Geneva Agreed Framework: Strategic Choices and Credible Commitments. *North Korean Review,* 2015

In return the North Korean government remained a member of the NPT and subsequently IAEA in order to permit the agency for controlling and monitoring the nuclear activities as well as the freezing process of nuclear reactors. Notwithstanding, within the agreement between the North Korean government and the United States of nuclear activities and the cease of nuclear programs of North Korea, there were provisions, which led to the ambiguous and yet seemingly dangerous state of current existing situation. The provisions consist of a clause, from which the North Korean government could restrict the surveillance and monitoring process of the CSA upon the completion of LWR. The IAEA and taking full necessary means and actions in regard to the verification of the accuracy level and extent of the North Korean reports and other nuclear data (materials and devices) would be taken into action only after the completion of the above mentioned project of LWR. This was related and in accordance to the limitations towards the monitoring process of IAEA, which led to dramatic measures in the context of First Persian Gulf war in Iraq and the consequences of IAEA not having full access to the nuclear and other weapons of mass destruction in terms of reports and other means[59].

2.17. The Iranian Nuclear Case

The nuclear program of Iran and the obligations, which were addresses to the Iranian government was under the suspicion to have not complied with the standards and the framework of safeguards that is given by the IAEA. However, the lack of evidence regarding Iran and its nuclear program and more specifically the non-compliance of Iran's nuclear program with the NPT and IAEA is still present[60].

[59] Ibid 51

[60] Kerr, P. K.. Iran's Nuclear Program: Tehran's Compliance with International Obligations. Current Politics and Economics of the Middle East, 2014 pg 1-21

The improvement and advancement rate of the Iranian nuclear program has been seemingly ambiguous and unclear due the level of unwillingness of Iranian government in terms of concessions. The negotiations, which were conducted amongst the EU-3 and Iran (France, Germany, and the United Kingdom), were highly controlled by the Iranian negotiators as well as the negotiations among Iran and the P5+1 (The United States of America, People's Republic of China, United Kingdom, Russian Federation, China, France, plus Germany). This controlled method of negotiation was maintained further for the IAEA.

The limitation of Iranian nuclear program as well as the options of it was the main source of endeavor for the Western Superpowers. Furthermore, to persuade Iran for ceasing the nuclear program and subsequently its enrichment program to strict and maximized safeguards is another main objective of the Westerns[61]. As the negotiations, which were conducted in the year 2013 among Iran and the P5+1 (February, 2013) had no solid agreement whatsoever, the Iranian governments' unwillingness towards the response to the proposals offered by the Westerners in regard to the details of the nuclear program.

However, seemingly there has been an upward cooperatively and collaboration from Iranian government since mid-2013 and after the presidential elections, from which Hassan Rouhani was the elect president of Iran. His presidency took a more open approach towards the Western compromise and initiating the bargain for an agreement, which led to the Joint Plan of Action agreement. This was a huge turn and transformation within the body structure of negotiations with Iranian government in regard to the nuclear case and nuclear activities of Iran since the early stages of the conduction span of negotiations, which began over a decade ago. The reserves

[61] James, H. Lebovic, Red Lines and Green Lights Iran, Nuclear Arms Control, and Nonproliferation, Spring, Strategic Studies Quarterly. 2016 pg 1-33

of Iranian nuclear centrifuges have developed on an extreme level throughout the years of holding the nuclear program off the hands of Westerns from 200 to an estimate number of 20,000.

Due to the strict framework and unambiguity of the agreement as well as its comprehensiveness, it resulted in the monitoring, controlling, and freezing a considerable segment of the Iranian nuclear program and its facilities. Under the terms provided within this agreement, the initiation of new centrifuges were to be ceased as well as the enrichment process of uranium, heavy water reactor, 20% enriched uranium stocks were to be purged. Moreover, the daily inspections and monitoring over the nuclear facilities, devices and plants were to be with consent. As compensation, the Westerns agreed to have unfrozen some blocs of funds and financial resources belonging to the Iranian government as well a slight lowering of the sanctions over Iranian government, which was no cohesively endorsed by the Iranian government.

Iran condemned the newly forced sanctions by the United States of American in January 2016 over the Iranian missile program. Iranian government claims that the missile program is solely due to the purpose of eerie and defensive matters and is on a conventional basis[62]. The context of Joint Comprehensive Plan of Action is not vivid and has ambiguity concerns. These clouds over the plan includes the level of commitment of the United States of American and the President elect of the United States (Current and next), the rise of disputes over the Iranian programs of non-nuclear and/or military, and the enforcement of the newly sanction on the nonnuclear matters and disputes of Iran[63].

[62] William Luers, Thomas Pickering, and Greg Thielmann, "Dealing With Iran's Ballistic Missile Program," National Interest, 2016

[63] See Ted Cruz, a Republican Presidential candidate, has pledged to "repudiate" the JCPOA as a first priority if elected as president. "Ted Cruz Calls on Next President to 'Repudiate' Iran Deal," *CNN*, March 16, 2015. Pp 1-19

The approval of the Joint Comprehensive Plan of Action was not instantly undertaken by the Iranian government. The delay for meeting the approval of Joint Comprehensive Plan of Action and other scenarios alike around the topic of Iranian Nuclear Program as well as the politics of the United States of America caused more issues on this subject. Additionally, the complex and particularity of Iran's nuclear decision-making process as well as the obligations prior to the new negotiations have added to the difficulties of this topic[64]. Furthermore, the self-consciousness of lawmakers claiming that Iran has passed the limitations and obligations. The supreme leader of Iranian government has noted the overly paid price of this contract from the perspective of Iran, despite the sending of blessings to the nuclear agreement.

2.18 Historical Background of NPT

Throughout the negotiations in the primary stage of NPT, nonnuclear states which were not protected by United States or former Soviet Union as two poles of nuclear facilities, expressed their concern about biased conditions in the future regarding to limiting nuclear powers for rest of the world. In 1965, eight members of Eighteen Nation Committee on Disarmament (ENDC)-Mexico, Brazil, Nigeria, Ethiopia, Burma, Egypt, India and Sweden proposed a vital necessity of a treaty establishment regarding non-proliferation of nuclear weapons9. The proposal accepted by the majority of the General Assembly and authorized as Resolution 2028(XX). The resolution's main principles are five but three of them are considered as the most important:

(a) The treaty should be clear and solid enough to prevent any possible legalized proliferation. It should hinder any direct or indirect loop-hole providing a ground for proliferation. It should be a real solution towards non-proliferation rather than an agreement to monopolize nuclear powers.

[64] See Appendix 1

(b) The treaty should delegate the responsibilities in the fair manner while setting a balanced set of obligations for nuclear and non-nuclear powers.

(c) The treaty's vision and mission should be completely aligned with total disarmament. The final and desirable goal is to eliminate not only nuclear weapons but all weapons of mass destruction1.

2.19 NPT and Its Duration

The preliminary version of Treaty signed by the Co-Chairmen of the ENDC at that time (United States and former Soviet Union) in 1967 and it was flawed according to its proposed principles.

The treaty was partly obscure regarding to disarmament and respective measures (World nuclear forces, 2015) and contained parts which left blank due to void of agreement upon the text related to safeguards article (David Fromkin, 1989). Even the signed parts lacked strong statements providing commitment for nuclear powers to step into non-proliferation practices. The further amendments were hard to make due to terms provided in the preamble subjecting any proposed amendments to the veto of each members of Board of Governors of the International Atomic Energy Agency (AEA) and each member of nuclear party (IAEA Statute, Article XII.A6). The draft contained a term on holding a review session five years after treaty's creation.

Preamble accounted "unlimited duration" for the Treaty; although the draft provided the right of withdrawal for the first time in multilateral disarmament treaty (IAEA Statute, Article II) and permitted each party to depart with three month advance notice to treaty parties and U.N. Security Council[65].

[65] IAEA Statute Articles

2.20. Ambiguities and Intentions

According to the Nuclear Nonproliferation Treaty (NPT), all the parties that are signatory to the treaty have equal rights for research and development, production and manufacture, as well as utilization of nuclear energy for the purposes of peaceful matters (Article I and Article II). In addition, in regard to the peaceful and harmless usage of nuclear energy, all the signatory parties to the treaty have the rights to exchange and transfer the equipment, materials, technology, and scientific information.

Furthermore, the parties involved with the treaty are entitled to cooperate and collaborate as individual or group states for the development and advancement of peaceful usage of nuclear energy and contribute to the non-nuclear weapon countries while maintaining the needs and necessities for developing states in the globe (NPT, Article I, Article II, and Article IV).

As previously mentioned in this chapter, none of the parties are to transfer nuclear weaponry related technology, information, and/or equipment of devices as well as any other type of nuclear and explosive devices whether directly or indirectly (See earlier in this chapter). Acquisition and/or development of nuclear weaponry or any other type of nuclear explosive devices is prohibited for the signatory states by the NPT[66].

The logic that exists in the body and philosophy of NPT was stated by the Director General of the IAEA, Dr. Mohamed ElBaradei in 2005, as follow:

After over three decades, which the treaty has been under use and in service, the dynamic and functioning body of treaty is evolving to adopt to the fast-pace 'changing realities'. If this

[66] Ibid 19

adaptation and shifts don't take place, the treaty and subsequently the regime will be facing issues and will go to the state of vulnerability[67].

There are aspects of the NPT, which can be questionable and concerning to the mind of scholars in regard to the terminology in some parts of the treaty. The "inalienable right" is not clearly defined and/or vividly clarified in regard to the nonproliferation activities. This has baffled the scholars and researchers on this subject since the initiation of NPT over 35 years ago[68]. The ambiguity in this regard seems to be intentional in Articles I and II of NPT. Additionally, the word "manufacture" has not been clearly defined and translated within the body of Article I and II of the NPT.

There was a consultation among the experts from Europe and the Japanese in regard to the interpretations of "inalienable right" in terms of nonproliferation. This is while the term "inalienable right' within the body structure of Article IV of NPT remains untouched in aspects of research and definition. This consists of the changes and transformational movements in the unilateral, bilateral and multilateral aspects of the Nuclear Nonproliferation Treaty[69]. The deviation of the United States policies and actions in regard to the nonproliferation treaty and more specifically the NPT has been noted by Shinsuke Sugiyama, who was among the negotiators for the Japanese-American Agreement for the Cooperation on Peaceful Usage of Nuclear Energy in 1988. Shinsuke has noted that the interference of the United States in the Japanese programs of reprocessing is not in accordance with the principles that are defined in the body of NPT.

[67] Potter, W. C. (2005). India and the new look of US nonproliferation policy. *Nonproliferation Review* pp 343-354

[68] Zhang, X.. The Riddle of "inalienable right" in article iv of the treaty on the non-proliferation of nuclear weapons: intentional ambiguity. *Chinese Journal of International Law*, *5*(3, 2006. Pp 647-662

[69] Ibid 67

In accordance to all the above mentioned details and aspects of nonproliferation treaty, nuclear weapons and its nonproliferation, weapons of mass destruction and other explosive devices, there is no consensus among the nations or to the extension, among the researchers of this subject. Some studies are being funded by governments to particularly shoot a problem and have results or analysis, which come from the aforementioned deviation and/or intentional bias. This calls for a further union of all nations in regard to the safe usage of nuclear energy and the acts and laws of nuclear weaponry and nonproliferation of nuclear weapons as well as any other type of weapon of mass destruction. In the next chapter, this study will try to find its path towards seeing the issues as well as explaining the means and necessary actions to be undertaken by states for the advancement and progress of negotiations upon the matter of nuclear nonproliferation. Moreover, this study tends to open the topic with optimism in hopes of having a world where there is no necessity for concerning and/or cautious on the matter of nuclear weaponry or other types of mass destruction weaponry whatsoever.

CHAPTER THREE

Conclusion

This chapter tends to clarify the objectives of this research as well as explaining the means and matters, which are explained in detail in the previous chapter of this paper. It is important to note that the complex and sophisticated nature of this subject does not allow a consensus and effective conclusive approach to the matter at hand as the factors and variables, which are involved in this topic are numerous and each of them can play an important role. None of these influential variables can be neglected or underestimated due the situational nexus of this topic.

3.1. Nonproliferation Objectivity

The objective behind this study is to look at the legal responsibility for non-proliferation acts and the incurred consequences. Moreover, at exploring into the rules and regulations specific to banning the acquisition and use of such weapons as well as their tremendous hazards, damages and gross violations of the international norms and human rights. Henceforth, the study aims at exploring the possibility of establishing an integrated international judiciary, executive and legal body working towards the objective of streamlining the international responsibility of possessing and using such weapons being acts exercised by the state within limits of its mandate or whether those acts are in violation of the international obligations prohibiting acquisition and use of these weapons that are causing a variety of physical and moral damages bearing in mind that there is currently an international trend to limit the acquisition and use of such weapons. This study is

initiated on the basic hypothesis of international legal liability arising from the acquisition and use of weapons of mass destruction and the incurred implications.

The aforementioned assurance could be achieved via modernization and development of legal frameworks specifically addressing this issue for the denuclearization. This further requires international treaties and agreements that are solid and consensus on a global basis. Furthermore, this opens a new window of opportunity for nations to conduct a joint venture and work side by side for the benefit of all nations regardless of ethnicity. In addition, the aforementioned joint cooperation leads to the improvement of environmental protection movements. However, the joint global operation for the case of nuclear energy merely needs a worldwide effort and comprehensive collaboration for the sake of all nations, despite the conflicts and disputes that are currently ongoing. This subject is for the benefit of all nations and requires a full collaboration on this matter as the denuclearization and non-proliferation of nuclear weapons as well as other weapons of mass destruction while transforming the weapons into sustainable energy sources should be the main objective of such joint effort.

The relevant rules and laws and disputes call for a thorough, consensus and persistent investigation and analysis while reviewing the level of functionality as well as effectiveness on the methods of negotiations and approaches to the topic at hand as well as a proper and full implementation view.

3.2. International Trends, Safety Measures and Nonproliferation

The maintenance of the international safety and security under the thread of nuclear proliferation is the main concern and emphasis of the international community. This requires the development of new and legal mechanisms for holding the peace. Relatively, this will result in the decrease in

the arsenal and artillery of the nuclear weapons through a set of framework that is holistically approached for the strategies that are needed for the non-proliferation of the nuclear weapons. This requires a mutual trust among the nations and a joint endeavor for the same purpose that is the decrease in the nuclear weapons from possession to the acquisition on an international scale.

The current nuclear situation and matters of security around the subject is distinctively different than the circumstances that were in the late decades of the last century. The existing situation on the nuclear weapons and nuclear energy as well as other weapons of mass destruction is much more complicated and requires the involvement of many more influential factors due to its complex nature. This situation, which is mainly political and is skewed towards the super powers with control over the massive destructive weapons, gives new motives to these states for the proliferation of nuclear weapons and having the viewpoint against the non-proliferation acts worldwide.

3.3. Limitations and Restrictions over Nonproliferation of Nuclear Weapons

The limitations and restrictions deemed by those countries who possess the nuclear energy and weapons on a massive scale and have the capabilities will eventually face new shifts within the international environment that is concerning regarding the matter of non-proliferation of nuclear and other weapons of mass destruction. These countries will have to cope and be flexible in facing the issues of international framework regarding the non-proliferation treaties. The curbing of the proliferation of weapons of mass destruction requires the aforementioned countries to take new and modernized measures for meeting the criteria that is applied on the bilateral as well as multilateral agreements and contracts despite the traditional means.

These terms and conditions are to effectively and conventionally reach the level of non-proliferation of weapons of mass destruction and more specifically the disarmament of the nuclear weapons[70]. Simultaneously, the surveillance and control of the nuclear activities and collaborations is vital for prevention of acquiring new weapons of mass destruction by any kind and/or developing them by those armed groups without state[71].This extends more particularly to the extent of which those groups with terrorist agenda and plans on a large and regional or even global scale and maintaining the security of these groups not having reached the capabilities of nuclear energy and nuclear weaponry or any other type of weapon of mass destruction. As previously mentioned, it is vital to highlight and emphasize the importance of the rules [72]and regulations on the exchange of control and acquisition on the related tools, devices, equipment, scientific information, technology and materials in terms of peaceful utilization of the nuclear energy as well as maintaining a sustainable energy force as an alternative for the fossil fuels and their extensive and excessive use.

3.4. Transformation and Time-Bound Era of Nuclear Energy

This shift of transformation within the capabilities of nations to use nuclear power as their main source of energy to supply the necessary energy to the facilities of a country can lead to extreme, cohesive and effective growth for the humankind. Moreover, this advancement towards maintaining and developing the technology used for the utilization of nuclear energy as a clean and peaceful source of energy (despite the radioactive hazards that exist in the nature of radioactive compounds) under the safeguards and regulations of International Committees and

[71] Ibid 24
[72] Ibid 24

Humanitarian Laws as well as International Atomic Energy Agency (IAEA) can lead to a more equal level of negotiations and collaborations among the parties (yet to be increased and fully implemented requires extensive research and global movement towards a merely peaceful source of energy as in nuclear energy). The current existing technology and its daily fast-pace advancements in every aspect leads to the unity of the whole nations towards maintaining the existing resources as well as sustaining the means of usage, safety, environmental issues, and the emergence of humankinds regardless of their nationality and/or ethnicity.

The current nuclear situation and matters of security around the subject is distinctively different than the circumstances that were in the late decades of the last century. The existing situation on the nuclear weapons and nuclear energy as well as other weapons of mass destruction is much more complicated and requires the involvement of many more influential factors due to its complex nature[73]. This situation, which is mainly political and is skewed towards the super powers with control over the massive destructive weapons, gives new motives to these states for the proliferation of nuclear weapons and having the viewpoint against the non-proliferation acts worldwide.

The relevant rules and laws and disputes call for a thorough, consensus and persistent investigation and analysis while reviewing the level of functionality as well as effectiveness on the methods of negotiations and approaches to the topic at hand as well as a proper and full implementation view.

[73] Simpson J, Ogilvie-White T (eds) NPT briefing book, vol. 1: The evolution of the nuclear non-proliferation regime. Mountbatten Centre for International Studies, 2003. pp 47-84

To transform the world we live in from a world with more than 15, 000 nuclear weapon, which are held by the countries that are namely, The United States of America, The Russian Federation, People's Republic of China, Israel, India, Pakistan, The United Kingdom, France, and North Korea. From the aforementioned list of countries which possess nuclear weapons, Russia and the United States of America maintain the level of high-alert status for a rough number of 1,800 nuclear warhead stockpiles they possess.

Hence, formulating a new approach for the global communities for the sake of more consideration and new negotiations with more holistic measures and less merely beneficiary for a specific or a number of parties seems necessary in this content. Henceforth, the matter of weapons of mass destruction and whether or not the world needs this amount of nuclear weapons and more specifically nuclear warheads ready to launch? This is the main question of this study and the researcher tends to provide a comprehensive review on the existing literature of this subject and further aid the international movement for non-proliferation of nuclear weapons and to extension, the non-proliferation of all weapons of mass destruction. Compliance with the acquisition and correspondence contradictions and conflicts, which arise due to this phenomenon are seemingly exhibiting more devastating outcomes than the prevention and further increasing the cease of nuclear weapons and/or denuclearizing the existing ones.

This study endeavors to further create a better understanding on the complexity of the existing situation regarding the matter of weapons of mass destruction and more specifically the nuclear weapons and their non-proliferation acts, which are for the benefit of humans regardless of geographical location, ethnicity, color, or names. Without further ado, the global movement requires a holistic bloc with the scope of merely looking into the international framework with

the mission of creating a nuclear weapon free world. The literature asks for further investigations with hopes of creating new pathways towards a more sustainable approach for the negotiations among the countries[74]. This can further lead to the advancement of the quality of life for the whole humanity as one kind and further provide a more sustainable elemental balance of life, which is beneficial for the planet earth as one country for humans.

3.5. Limitations, Future Recommendations and Implications

Additionally**,** the amount of debate and existing data (and mass data) on this subject exceeds the boundaries of this paper and the time-bound of this study. Thus, this research tends to link and gather some of the most recent studies, which have been conducted in the past years while maintaining the relevance of the topics. This study further puts an effort to observe the current trends on this subject and the sub-topics, which can relate to the nuclear non-proliferation acts on a global basis. This will enable the researcher to cohesively comprehend the matter at hand. This study also conducts a comparison study on the topic among the countries with nuclear weapons (armed or not) as well as those countries who possess weapons of mass destruction.

In this context, the vital and critical role that the Security Council plays cannot and should not be neglected, due to its importance.

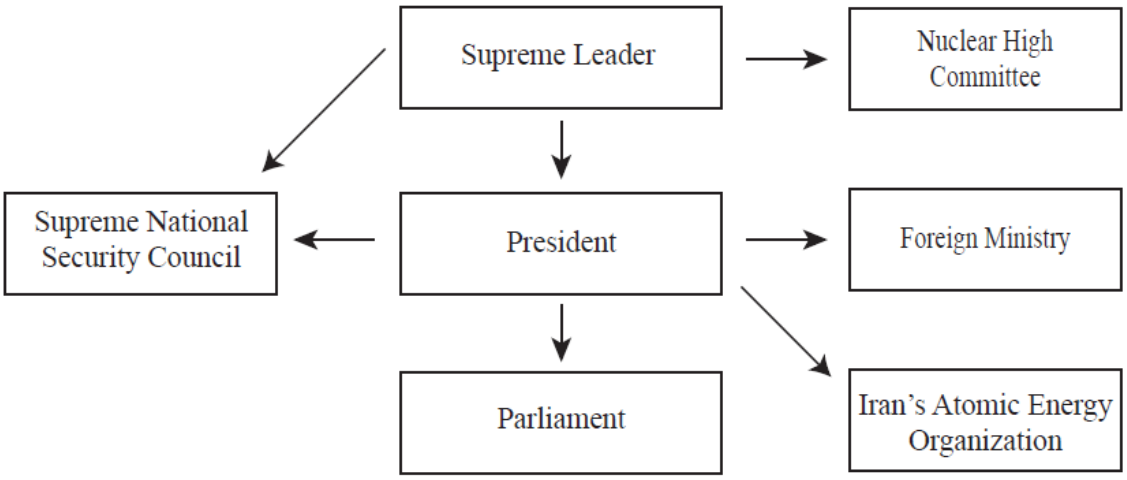
A number of various aspects can be defined and need careful and comprehensive attention towards them, such as the events, which may not be counted as ordinary and whether or not they need treaties to be defined for, or they may be under the clauses of the existing treaty. This study was further bound to the time restrictions and the access to first hand data relevant to the topic of

[74] Esfandiary, D.. In the Middle East, Get Rid of Chemical Weapons First. Arms Control Today, Washington, DC, 2014

nuclear nonproliferation and weapons of mass destruction. As previously mentioned, the implications of such study is to further overcome the obstacles and means of intentional ambiguity (See Chapter 2) in this topic for creating new pathways of negotiations, especially for the states possessing nuclear weapons and those states, which have short or long-term plans for development and/or manufacturing nuclear weaponry. Moreover, the ambiguities within the body of NPT and IAEA Articles has to take a new shift of transformation towards vividness and clarity. Furthermore, the United States of America (As mentioned in Chapter 2 of this research) has to consider a shift inside the policies regarding nuclear nonproliferation with other states as well as developing states for a brighter future negotiations as well as compensating the means of negotiations and stating the truth despite the political means and matters that are related to the complex and vital subject of nuclear weaponry.

Appendices

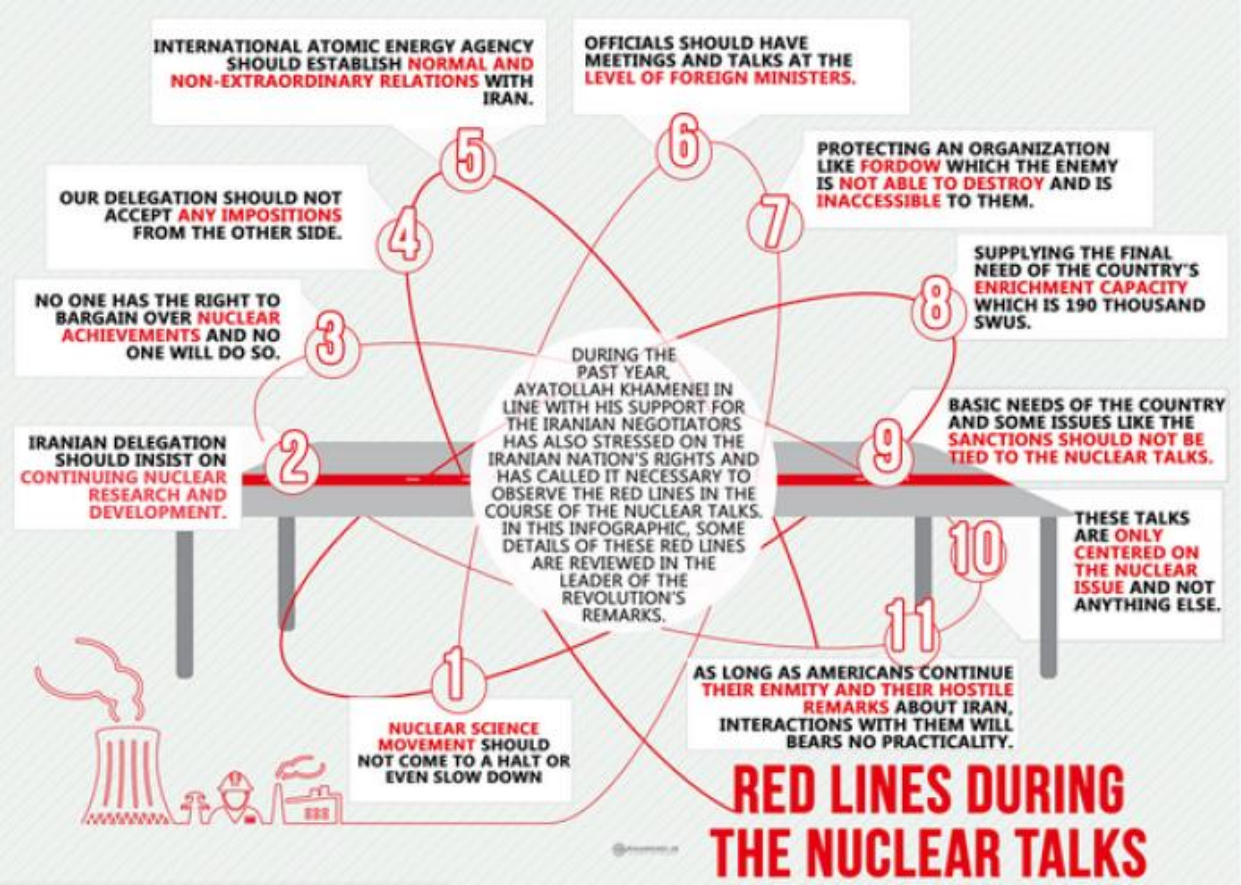
Appendix 1. Iranian Nuclear Decision Making



Nader Entessar and Kaveh L. Afrasiabi, 2015

Appendix 2

Red Lines for Nuclear Negotiations



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