



DIPARTIMENTO DI GIURISPRUDENZA

Cattedra di Diritto Internazionale

**NON-PROLIFERATION and DISARMAMENT:
NUCLEAR WEAPONS UNDER INTERNATIONAL LAW**

RELATORE:

Chiar.mo Prof.

Pietro Pustorino

CANDIDATO:

Chiara Zaia

127493

CORRELATORE:

Chiar.mo Prof.

Christopher Michaelsen

ANNO ACCADEMICO 2018/2019

TABLE OF CONTENTS

I. INTRODUCTION: THE ISSUE OF NUCLEAR WEAPONS IN THE XXI CENTURY	5
II. THE LEGALITY OF THE THREAT OR OF THE USE OF NUCLEAR WEAPONS	6
1. Introduction	6
2. Nuclear Weapons and <i>Jus ad Bellum</i>	7
<i>a) Jus ad bellum under international law</i>	7
i. Armed Attack.....	9
ii. Necessity ad bellum.....	12
iii. Proportionality ad bellum	15
iv. The temporal aspects of self-defence	18
<i>b) Use of Self-defence by means of nuclear weapons</i>	19
i. The ICJ jurisprudence on the threat or use of nuclear weapons in self-defence	21
ii. Necessity <i>ad bellum</i> and the use of nuclear weapons.....	26
iii. Use of nuclear weapons and the compliance with proportionality <i>ad bellum</i>	28
<i>c) The threat to use nuclear weapons and preventive self-defence</i>	30
i. The threat to use force and the different regime adopted for nuclear weapons.....	30
ii. Nuclear weapons and preventive self-defence	32
3. Nuclear Weapons and <i>Jus in Bello</i>	38
<i>a) Jus in bello under international law</i>	38
i. Threshold for the application of <i>jus in bello</i>	40
ii. Principles on the choice of means and methods of warfare.....	42
iii. The rule of distinction.....	45
iv. Proportionality <i>in bello</i>	47
v. Precautions in attacks	49
<i>b) To which extent the recourse to nuclear weapons can be considered as illegal under International humanitarian law?</i>	50
i. The impossibility to avoid unnecessary suffering through nuclear weapons	53
ii. Are nuclear weapons inherently indiscriminate or disproportionate?	56

4. Is the threat or use of nuclear weapons permitted under international law?	60
III. NUCLEAR NON-PROLIFERATION REGIME FROM 1968 TO THIS DATE	62
1. Introduction.....	62
2. The 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT).....	63
a) <i>The grand bargain and its controversies</i>	68
i. The Nuclear Weapons States Regime.....	69
ii. The non-Nuclear Weapons States Regime	71
iii. The NPT alleged discrimination and double standard between NWS and NNWS	74
3. The enforcement mechanisms of non-proliferation law.....	76
a) <i>The IAEA safeguard system</i>	76
i. The IAEA role in the framework of the NPT	78
ii. The limited role of the IAEA safeguard system	80
b) <i>The United Nation Security Council involvement with nuclear non-proliferation disputes</i>	84
i. The Iranian case and the Joint Comprehensive Plan of Action (JCPA).....	86
ii. North Korean withdrawal from the NPT	87
iii. Iraqis nuclear dismantlement.....	89
4. The open challenges of the NPT	91
IV. NUCLEAR DISARMAMENT: A CONVENTIONAL OBLIGATION OR A CUSTOMARY	
RULE OF INTERNATIONAL LAW?	92
1. The importance of promoting disarmament	92
2. The Conventional Obligation entailed by Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons	94
a) <i>Nature and limits of the obligation to negotiate in good faith on effective measures</i>	96
i. Article VI negotiation history and its development through time	96
ii. Does article VI entail an obligation to conclude negotiations?	100
iii. Or just an obligation to pursue negotiations in good faith?.....	101
3. Article VI of the NPT as customary norm of international law	103
a) <i>ICJ Jurisprudence, from 1996 to the Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament</i>	105

b) <i>Can the provision of a multilateral treaty generate a customary rule of international law?</i>	110
i. Article VI of the NPT as a provision of norm-creating power	112
ii. State practice and <i>opinio juris</i> on nuclear disarmament	113
4. The Treaty on the Prohibition of Nuclear Weapons	117
V. CONCLUSIONS: THE STATUS OF NUCLEAR WEAPONS UNDER 2020 INTERNATIONAL LAW	121
BIBLIOGRAPHY	124

I. INTRODUCTION: THE ISSUE OF NUCLEAR WEAPONS IN THE XXI CENTURY

Since the very beginning of the nuclear era, it was clear that nuclear weapons would have represented an incredible threat for the human mankind.

Nonetheless the 1945 atomic bombing of Hiroshima and Nagasaki showed the destructive power and the terrifying effects of these new kind of weapon of mass destruction, states, immediately after World War II preferred to start a massive nuclear arms race rather than committing themselves through nuclear disarmament. While it is true that since the end of the Cold War the number of worldwide nuclear arsenals has substantially decreased from its peak in the 1980s, there still is an handful of states (especially the most military powerful) which, proclaiming that they need nuclear weapons for their security, still practice nuclear deterrence. As Mikhail Gorbachev once stated: 'It is becoming clearer that nuclear weapons are no longer a means of achieving security; in fact, with every passing year they make our security more precarious.'

This work aims at analyzing three fundamental legal steps that should be undertaken in order to reach the gradual but still effective abolition of nuclear weapons: the affirmation of the illegality of the use or threat to use nuclear weapons; the initial step aimed at diffusing their non-proliferation, and the path towards nuclear disarmament, which is best reached through a treaty in complete and effective disarmament.

Following this journey, Chapter II will apply the law on the use of force to the use of nuclear weapons. In particular, the legality of their use or the simple threat of their use will be scrutinized under the law of the use of force in self-defence, as enshrined in the Charter of the United Nation, and under the most important principles governing International Humanitarian Law.

The following Chapter will discuss non-proliferation law and the fundamental instrument of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons, focusing on the different treatment reserved to five states allowed to possess nuclear weapons and the stricter regime imposed above the so called non-nuclear-weapons states.

Finally, Chapter IV will be discussing nuclear weapons and disarmament law, with a focus on article VI of the Treaty on the Non-Proliferation of Nuclear Weapons and the possibility that the three main obligations set forth by it may represent a customary rule of international law.

The hope of this thesis is to be able to affirm that the legal path to the prohibition of weapons so deadly as nuclear weapons is nearer than it seems.

II. THE LEGALITY OF THE THREAT OR OF THE USE OF NUCLEAR WEAPONS

1. Introduction

By a letter dated 19 December 1994, the Secretary-General of the United Nations officially communicated to the Register the decision taken by the General Assembly¹ to submit the question to the International Court of Justice (ICJ) for an advisory opinion on whether the threat or use of nuclear weapons was in any circumstance permitted under international law.²

After affirming its jurisdiction,³ in order to answer to the question put to it by the General Assembly, the Court was faced with the problem of what might be the relevant applicable law amidst ‘the great corpus of international norms available to it’.⁴

In doing so, the Court found that three main branches of law shall be analyzed: on the one hand, the law relating to the use of force as enshrined in the Charter of the United Nations (traditionally known as *Jus ad bellum*); on the other hand, the law applicable in armed conflict, (respectively known as *Jus in bello* or International Humanitarian Law), which regulates the conduct of hostilities,⁵ along any specific treaty on nuclear weapons that the Court might determine to be relevant.⁶

This chapter will analyze and contextualize the reasoning made by the ICJ in 1996, while trying to enshrine the development of international law in the latest two decades on the use and threat of use nuclear weapons, which still represent a weighty problem of today’s international relations.

¹ UNGA Res 49/75 K (9 January 1995) UN Doc A/RES/49/75 K.

² *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) [1996] ICJ Rep 1996, p. 227 [hereinafter *Nuclear Weapons Opinion*], para. 1

³ According to Article 65(1) of its Statute, the Court ‘may give an advisory opinion on any legal question at the request of whatever body may be authorized by or in accordance with the Charter of the United Nations’. The General Assembly is indeed authorized to address the Court with its request by virtue of Article 96(1) of the Charter, which provides as follows: ‘The General Assembly or the Security Council may request the International Court of Justice to give an advisory opinion on any legal question’; Statute of the International Court of Justice (adopted 26 June 1945, entered into force 24 October 1945) 33 UNTS 993; Charter of the United Nations (adopted 24 October 1945, entered into force 31 August 1965) 1 UNTS XVI [hereinafter UNC].

⁴ *Nuclear Weapons Opinion*, para 23.

⁵ *ibid* 243, para. 34.

⁶ *ibid*.

2. Nuclear Weapons and *Jus ad Bellum*

a) *Jus ad bellum* under international law

Jus ad bellum regulates when States may or may not use force in the conduct of their hostilities under international law. The primary source of the law regulating the use of force is the Charter of the United Nations.

In particular, article 2 (4) of the Charter solemnly states that: ‘All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the purposes of the United Nations’.⁷ This norm is to be considered as one of the most important milestones of the Charter. In its referral to the purposes of the United Nations, it expressly recalls those actions that Article 1 UNC describes as: the maintenance of international peace and security; the development of friendly relations among its own Nations; the achievement of international cooperation in solving international problems; the harmonization of the actions in attainment of this Purposes.⁸

Nonetheless, even before the Charter of the United Nations was written, the right of states to act in self-defence found its basis in what has been later defined the ‘*Caroline Formula*’.⁹ Particularly, in a letter by Daniel Webster (at the time the US Secretary of State) to Lord Ashburton (the UK Special Representative to the United States), dated 27 July 1842, Webster wrote:

‘It will be for the government to show a necessity of self-defence, instant, overwhelming, leaving no choice of means, and no moment for deliberation’.¹⁰

⁷ *ibid* art. 4, para 2.

⁸ *ibid* art.1.

⁹ In 1842, the United Kingdom was dealing with a rebellion in Canada, which was still under its control. In this background, British forces attacked a privately-owned US steamer, which was supporting Canadian rebels by supplying them with munitions and personnel. The incident, which led to the killing of at least one American citizen, caused an uproar in the United States. Anyway, the diplomatic response consisted only in an epistolary exchange between the US and UK government, which were focused on establishing if Britain’s actions had to be considered as undertaken in self-defence.

¹⁰ Letter dated 27 July 1842 from Daniel Webster to Lord Ashburton, (1841-1842) *British and Foreign State Papers*, pp. 144-145.

This letter is by many writers considered as the basis for the customary international law concerning self-defence.¹¹

While there is no doubt that the prohibition of use of force is not only a general principle of international law,¹² but also a customary norm of international law,¹³ article 2(4) is also usually identified as a *jus cogens*¹⁴ norm, hence, as a norm ‘accepted and recognized by the international community of states as a whole as a norm from which no derogation is permitted, and which can be modified by only a subsequent norm [...] having the same value’.¹⁵

The only two exceptions to the general prohibition of the use of force by states can be found in article 51 UNC, which affirms the inherent right of each State to self-defence¹⁶, and more generally under Chapter VII of the Charter¹⁷, which regulates military enforced actions.

While the latest authorizes the UN Security Council to take actions, including military activities, to maintain or restore international peace and security when it recognizes the existence of any threat to the peace, breach of the peace, or act of aggression,¹⁸ it does not impair its Members inherent right to of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.¹⁹

In other terms, when a State resorts to force in self- defence, an act that would be otherwise be illegal is deprived of its wrongfulness; indeed, according to Article 21 of the Draft Articles on Responsibility of States for Internationally Wrongful Acts²⁰: ‘the wrongfulness of an act of

¹¹ R Y Jennings, ‘*The Caroline and McLeod Cases*’ (1938) 32 American Journal of International Law 82, p. 92; Christine Gray, *International Law and The Use of Force* (4th edn, OUP 2018), p. 149.

¹² Nico Schrijver, ‘The Ban on the Use of Force in the UN Charter’ in Marc Weller (ed), *The Oxford Handbook of the Use of Force in International Law* (OUP 2015), para. IV.

¹³ *Case concerning Military and Paramilitary Activities in and against Nicaragua (Nicaragua v US)* (Merits) [1986] ICJ Rep 1986, p.291, [hereinafter *Nicaragua*], paras 189-190.

¹⁴ Yearbook of the International Law Commission, 1966, vol II, 270, para 1.

¹⁵ Vienna Convention on the Law of Treaties (adopted 12 May 1968, entered into force 27 January 1980) 1155 UNTS 331, art. 53.

¹⁶ UNC, art. 51.

¹⁷ *ibid* art. 39-51.

¹⁸ *ibid*, art. 39.

¹⁹ *ibid*, art. 51.

²⁰ ILC, ‘Draft Articles on Responsibility of States for Internationally Wrongful Act’ (adopted 10 August 2001) UN Doc A/56/10 [hereinafter DARS].

a State is precluded if the act constitutes a lawful measure of self-defence taken in conformity with the Charter of the United Nations'.²¹

Nonetheless, even if article 51 UNC sets forth the fundamental criterion for the exercise of a lawful self-defence, not only it fails to describe what constitutes an armed attack, but it also does not mention the two elements which according to the consistent jurisprudence of the Court are viable to lawfully act in self defence: the restrictions of necessity and proportionality.²²

Necessity and proportionality remain relevant throughout the duration of the conflict, hence any following forceful action must be monitored continuously to ensure that the objectives and methods chosen remain necessary and proportionate to the aim of the response.²³

Before analysing the definition and the limits of these two elements, it must be reminded that the final scrutiny on whether a State has acted in accordance with the UNC is left to the Security Council, which can take whatever action it determines appropriate in order to restore international peace and security when faced with a threat to the peace, breach of the peace or act of aggression (including the use of force).²⁴ Indeed, article 51 UNC requires that measures taken by states in the exercise of their right of self-defence must immediately be referred to the Security Council.²⁵ Furthermore, the Charter gives states the possibility to act in self-defence only until the Security Council takes actions.²⁶

i. Armed Attack

When analyzing the Court's decisions that relate to the correct application of states' rights under article 51 UNC, it can be observed that the Court has constantly turned to the question

²¹ *ibid*, art. 21.

²² *Nicaragua* Judgment para 176; *Case Concerning Oil Platforms (Iran v US)* (Judgment) [2003] ICJ Rep 161, [hereinafter *Oil Platform*] paras 43, 73, 74, 76; *Armed Activities on the Territory of the Congo (New Application: 2002) (Democratic Republic of the Congo v Rwanda)* (Judgment) [2006] ICJ Rep 6 [hereinafter *Armed Activities*] p. 223, para. 147; *Nuclear Weapons Opinion*, para 41. It is important to remember that article 38(1)(d) of the Statute of the International Court of Justice enlists its 'judicial decisions' between the 'subsidiary means for the determination of the rule of law'. Moreover, even though ICJ decisions are not binding for the Court itself, they are useful to clarify the point of law at stake and can contribute to the development of international law.

²³ Louise Doswald-Beck, *San Remo Manual on International Law Applicable To Armed Conflicts At Sea* (CUP 1995), pp. 76-77.

²⁴ UNC, artt. 39-42.

²⁵ *Ibid*, art. 51.

²⁶ *ibid*.

on whether an armed attack is needed and, if so, which are the characteristics of such attack, even before examining other potential requirements.²⁷

Even though the Charter fails to define what constitutes an armed attack from which the right of self-defence may arise, there are some text-book cases that leave no doubt about their qualification; a paradigm case is the invasion by regular forces of one State into the territory of another State. Furthermore, an attack on the land, sea, and air forces of a State outside its territory clearly constitutes another uncontroversial instance of armed attack.²⁸

Therefore, the jurisprudence of the ICJ has over time taken the position that the occurrence of an armed attack is the condition *sine qua non* for the exercise of the right of self-defence.²⁹

Nonetheless, in order to shed a light on those controversial cases in which doubts may arise on whether the use of force may be deemed as lawful under the ‘inherent right of individual or collective self-defence’, the Court stressed the fundamental requirements of an armed attack in some of its most prominent cases. In the *Case concerning Oil Platforms* it was held that:

‘ [...] in order to establish that it was legally justified in attacking the Iranian platforms in exercise of the right of individual self-defence, the United States has to show that attacks had been made upon it for which Iran was responsible; and that those attacks were of such a nature as to be qualified as "armed attacks" within the meaning of that expression in Article 51 of the United Nations Charter, and as understood in customary law on the use of force.’³⁰

Furthermore, after having set down the fundamental criterion for the lawful use of force, the Court has also tried to outline its contents, specifically focusing on the ‘scale and effects’ of the attack and on the intention of the attacker.

On one hand, the Court held that an armed attack must amount to a grave use of force, which must be distinguished from ‘other less grave forms’.³¹ It further added that an example of force that would not be of the scale and effects to be defined as an armed attack would be a

²⁷ James A Green, *The International Court of Justice and Self-Defence in International Law* (Hart Publishing 2009), 23-27.

²⁸ Gray (n 11), pp. 134-135.

²⁹ *Nicaragua*, para 237.

³⁰ *Oil Platforms*, para 51.

³¹ *Nicaragua*, para 191.

‘mere frontier incident’.³² It has also added that an isolated minor incident which, by the manner in which it takes place, cannot be mistaken for a threat to the safety of the State would not qualify as armed attack under article 51 UN Charter.³³ However, more recently, the Court has wondered when a series of minor attacks could cumulatively be considered as an armed attack under article 51 UNC.³⁴ Even if in the case at stake, the Court denied this reconstruction, the fact that the question has been risen in front of and analyzed by it is significant, seen the inconclusive academic opinion and the equivocal State practice.³⁵

Nonetheless, in spite of the efforts, the Court has failed to indicate whether there is a threshold that must be reached for the use of force to be qualified as an armed attack.

On the other hand, in its Judgement of the *Oil Platform* case, the Court found that the attack, in order to be qualified as an armed attack in the sense of article 51, must be taken with the ‘specific intention of harming’.³⁶ In connection to the case at stake, the Court stated that an attack by a missile or a mine which has been priorly set up in a conflict between two states, could be considered as directed through a third State only if the attack was specifically aimed at that third State. Anyway, the court neither specified the elements of the intent required in an armed attack, nor the general significance of this approach.³⁷

Given the inconclusiveness of the Court’s findings, many writers have tried to summarize the characteristics that an armed attack must have to justify an act in self-defence, linking the elements given by the Court with the relevant customary international law on the subject, finally concluding that ‘regardless of the dispute over degrees in the use of force, or over the quantifiability of victims and damage, or over harmful intentions, an armed attack even when it consists of a single incident, which leads to a considerable loss of life and extensive destruction of property, is of sufficient gravity to be considered an ‘armed attack’ in the sense of Art. 51 UN Charter’.³⁸

³² *ibid*, para 194.

³³ *ibid*, para 195.

³⁴ *Oil Platforms*, para 64.

³⁵ Karl Zemanek, ‘Armed Attack’ (2013) Max Planck Encyclopedia of Public International Law [MPEPIL] para 7.

³⁶ *Oil Platform*, para 64.

³⁷ Gray (n 11), pp. 150-153.

³⁸ Avra Constantinou, *The Right of Self-Defence Under Customary International Law and Article 51 Of The United Nations Charter* (Athènes Sakkoulas 2000), pp. 63-64.

However, difficulties concerning the concept and the definition of what constitutes an armed attack still arise, especially when dealing with actions performed by irregular forces not directly linked to a specific State.³⁹

With regard to the matter at hand, questions on the identification of the start of an armed attack may arise from the specific characteristic of certain weapons. In the *Nuclear Weapons Opinion*, the Court finds that, since the characteristics of nuclear weapons render their use potentially catastrophic (having ‘the potential to destroy all civilization and the entire ecosystem of the planet’), the Charter law on the use of force applicable to armed conflicts must be applied taking into account ‘their destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come’.⁴⁰

ii. Necessity ad bellum

Moving forward on the analysis of the requirements needed to lawfully act in self-defence, it must be noted that in the *Case concerning Military and Paramilitary activities in and against Nicaragua*, the Court affirmed that under customary law ‘whether the response to the [armed] attack is lawful depends on observance of the criteria of the necessity and the proportionality of the measures taken in self-defence’.⁴¹

Even if this fundamental limitation is not mentioned in article 51 UNC, the Court has reaffirmed that it applies to measures in self-defence taken under this provision.⁴²

³⁹ In the *Nicaragua Case*, the Court the claim by Nicaragua that the United States had supported military a paramilitary actions of ‘contra’ forces opposing the Nicaraguan Government, and that this support accounted as an armed attack. Furthermore, in the three linked application, filed to the registry in 1999 by the Democratic Republic of Congo (DRC) against Uganda, Rwanda and Burundi, DCR alleged that, in supporting rebel groups operating in the State, these three States had committed an armed aggression against the territory of DCR, in flagrant violation of the UNC.

⁴⁰ *Nuclear Weapons Opinion*, paras 35-36. The application of the traditional elements of an armed attack to any hypothetical use of nuclear weapons will be discussed below, at page x.

⁴¹ *Nicaragua*, para 194.

⁴² *Nuclear Weapons Opinion*, para 41.

In particular, the Court has regularly⁴³ underlined the existence of ‘a specific rule whereby self-defence would warrant only measures which are proportional to the armed attack and necessary to respond to it, a rule well established in customary international law’.⁴⁴

Unfortunately, there is no univocal definition of what the concepts of necessity and proportionality imply, and they seem to frequently overlap in the interpretation given by the ICJ.

As professor Christin Gray, one of the main experts on *jus ad bellum*, would tell: ‘it is not clear how far the two concepts can operate separately. If a use of force is not necessary, it cannot be proportionate and, if it is not proportionate, it is difficult to see how it can be necessary’.⁴⁵

However, while closely linked, they have to be analyzed as different requirements, both to be complied with when assessing the legitimacy of the use of force in self-defence.

In this regard, in the *Oil Platform case*, the Court usefully scrutinized the two elements separately. In particular, as previously affirmed in its judgement on the *Nicaragua case*, it underlined that the measures taken by a State in self-defence must not only tend to protect the essential security interests of the party taking them, but must also be necessary for that purpose.⁴⁶ Furthermore, it specifies that it is not a subjective judgement of the party to decide whether a measure taken falls between those which may be deemed as necessary; thus their compliance can only be assessed by the Court.⁴⁷

Similarly, in responding to the United States’ objection that a certain ‘measure of discretion should be afforded to a party’s good faith application of measures to protect its essential security interests’, the Court explained that, under international law, the requirement to take measure in self-defence is complied only when the interpretation given to the word ‘necessary’ is ‘strict and objective, leaving no room for any measures of discretion’.⁴⁸

Nonetheless, a more specific definition of what the institutes of necessity and proportionality entail can be found when looking at the common grounds between scholars’ different interpretations.

⁴³ This definition of the content of the content of the institutes of necessity and proportionality given for the first time in the *Nicaragua case* has frequently been recalled by the Court itself in numerous following judgements, as in *Oil Platform* at paragraph 76.

⁴⁴ *Nicaragua*, para 176.

⁴⁵ Christine Gray, *International Law and The Use of Force* (3rd edn, OUP 2008), p. 148-150.

⁴⁶ *Nicaragua*, para 282.

⁴⁷ *Oil Platforms*, para 43.

⁴⁸ *ibid* para 73.

First of all, it seems generally agreed that necessity *ad bellum* requires that force must be used only as last resort.⁴⁹ Hence, a State can resort to force in self-defence only if the armed attack cannot be opposed by measures not involving the use of force or by military operations of a lesser scale,⁵⁰ hence, only when there is no option left to defend itself.⁵¹ This view is not only confirmed by the jurisprudence of the ICJ, but also by State practice.

Indeed, in the *Nuclear Weapons Opinion*, the court affirmed that it could no ‘lose sight of the fundamental right of every State to survival, and thus its rights to resort to self-defence [...] when its survival is at stake’.⁵²

Furthermore, an example of State practice in this sense can be found during the Six Days War, where Israel claimed in front of the Security Council that, despite the alleged amount of threats it was receiving and the terrorist attacks against it from external sources, it firstly tried to settle the tensions peacefully, ending up using force only where no alternative remained other than the use of force.⁵³

Finally, article 25(1)(a) DARS confirms this view, by stating that: ‘necessity may not be invoked by a State as a ground for precluding the wrongfulness of an act not in conformity with an international obligation of that State unless the act is the only way for the State to safeguard an essential interest against a grave and imminent peril’.⁵⁴

Secondly, it is commonly accepted that necessity is satisfied if the harm inflicted is necessary to avert the threat faced.⁵⁵ Hence, its compliance has to be assessed in comparison with the goal that the State acting in self-defence is entitled to seek to achieve.⁵⁶ For example, if a State has been the target of an attack, under its right of self-defence, it is entitled to use force strictly to halt and repel the attack and to recover the territory eventually occupied during the attack. Therefore, the measures taken cannot be considered as necessary whether there are still alternatives other than the use of force.

⁴⁹ Roberto Ago, ‘Addendum to the 8th Report on State Responsibility’ (1980) 2 Yearbook of the International Law Commission (YILC) 52, 65-66; Green (n 27), pp. 76-80.

⁵⁰ *ibid*, 69.

⁵¹ Green (n 27), p. 78.

⁵² *Nuclear Weapons Opinion*, para 96.

⁵³ UNSC Verbatim Record (6 June 1967) UN Doc S/PV.1348, pp. 71-75.

⁵⁴ DARS, art. 25(1)(a).

⁵⁵ Seth Lazar, ‘Necessity in Self-Defence and War’ (2012) vol 40(1) *Philosophy and Public Affairs* 3, p. 4.

⁵⁶ Christopher Greenwood, ‘Self-Defence’ (2011) *Max Planck Encyclopedia of Public International Law [MPEPIL]*, para 27;

iii. Proportionality ad bellum

On the other hand, the principle of proportionality under *jus ad bellum* demands that any forceful action conducted by a State in self-defence must be proportionate.⁵⁷

Proportionality is related to the content, size and duration of an attack taken in self-defence, although these criteria also refer to necessity, leaving some doubts on the possibility of a clear distinction between the two concepts.⁵⁸ However, whether we know one variable - the quantum of defensive force used – the ICJ Jurisprudence has not given clarity onto what the use of force should be proportionate to.⁵⁹ The range of possibilities goes from the quantum of force used in the attack suffered or which is going to be suffered, to the attack's successful repulsion, to the final and decisive victory.⁶⁰

Indeed, even if the Court has discussed in its judgement upon the principles of necessity and proportionality, in most cases relating to the question on self-defence, the ICJ rejected the claim that an armed attack existed, hence not proceeding on the assessment of proportionality and necessity.⁶¹

However, it is commonly accepted that the principle of proportionality in the law of self-defence entails balancing test, which heavily depends on the facts of each case, between:

- 1) an armed attack and the military response taken against it, or
- 2) an armed attack and the aim to halt and repel it.⁶²

The balance between these tests is widely accepted, especially in front of the ICJ. In the *Nicaragua case*, the Court specified that the US use of force against Nicaragua was had been in no way proportionate to any alleged aid Nicaragua could have given to El Salvadorian *contras*.⁶³ In the *Armed Activities* case, the Court, nonetheless it still determined that 'the legal

⁵⁷ Judith Gardam, *Necessity, Proportionality and the Use of Force By States* (1st edn, CUP 2004), pp. 11-13.

⁵⁸ Gray (n 11), p. 159.

⁵⁹ Nobuo Hayashi, 'Using Force by means of nuclear weapons and requirements of necessity and proportionality *ad bellum*' in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014), pp. 21-24.

⁶⁰ *ibid*, p. 22.

⁶¹ *Nicaragua*, para 237; *Oil Platform*, para 77; *Armed Activities*, para 147.

⁶² Keiichiro Okimoto, *The Distinction and Relationship between Jus ad Bellum and Jus in Bello* (Hart Publishing 2011), p. 59.

⁶³ *Nicaragua* para 237; On 9 April 1984 Nicaragua filed an application before the ICJ against US' amounted and sustained use of force against it, which Nicaragua claimed to be contrary to international law. US indicated in its counter-memorial on jurisdictional issues that its actions with regard to Nicaragua were lawful action of use of force in collective self-defence in response to the use of force by Nicaragua against neighboring States (providing

and factual circumstances for the exercise of the right of self-defence by Uganda against the DRC were not present’, did not fail to observe that Uganda’s taking of towns and airports outside its borders could not be considered proportionate when compared to the DRC’s transborder attacks that Uganda claimed to have given rise to its right to act in self-defence.⁶⁴

This ‘double standard’ for interpreting the principle of proportionality is also supported by most scholars and State practice.⁶⁵ Indeed it goes along with the view of many experts on self-defence, which should not be retaliatory and punitive, but only aimed at repelling and halting the attack faced.⁶⁶

However, there have been instances in the past where it has been claimed that the principle of proportionality allows to take measures, not only to halt and repel the attack, but also to deter future armed attacks (particularly when self-defence is called upon to justify the destruction of the source of the armed attack). The cornerstone case is clearly represented by US attack against Afghanistan after the terrorist attacks on 11 September 2001, when, in front of the Security Council, it stated to have undertaken actions ‘designed to prevent and deter future attacks on the United States’.⁶⁷ However, even if states have proclaimed in various instances their right to act in this manner, it is still not clear whether this aim is covered by the principle of proportionality.⁶⁸

In order to make an already difficult task (the proportionality test) less contradictory, four elements are usually looked at when trying to assess the respect of proportionality *ad bellum*:

- 1) target selection;
- 2) effects on civilians;
- 3) geographical scope;
- 4) temporal scope.

as an example the support Nicaragua had given to Salvadorian rebels). The Court concluded that the scale of this help was minimal and that not enough evidence had been gathered to prove that these aids continued after 1981.

⁶⁴ *Armed Activities* para 147.

⁶⁵ See, for example, UN Doc A/2211, Annex, Agenda Item 54, para 41; *Nuclear Weapons Opinion*, Written Statement of Mexico, para 58; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion) (Written Statement of Malaysia), para 151.

⁶⁶ Gray (n 11), pp. 124-126; International Committee of the Red Cross (ICRC) ‘San Remo Manual on International Law Applicable to Armed Conflicts at Sea’ (ICRC, Livorno 1994), art. 4.

⁶⁷ UNSC ‘Letter Dated 7 October 2001 from the Permanent Representative of the United States of America to the United Nations Addressed to the President of the Security Council’ (7 October 2001) UN Doc S/2001/947.

⁶⁸ For a further discussion on the topic of preemptive (or anticipatory) self-defence, see above Chapter II(2)(c)(ii).

First of all, the Court's jurisprudence has variously affirmed that the targets that the State is aiming to attack in self-defence should be objects that are relevant to the original armed attack suffered, a topic that International Humanitarian Law (IHL, also known as *Jus in bello*) does not cover.⁶⁹

For example, in the *Oil Platform* case, the Court held that one criterion to take into account when assessing the respect of necessity and proportionality should be 'the target of the force used avowedly in self-defence'. More specifically, in order to the attack perpetuated by the United States to be lawful under *jus ad bellum*, the platforms attacked by it had to be considered as a 'legitimate military target open to attacks in self-defence',⁷⁰ which, according to the reasoning of the Court, they were not.

In addition, in the *Nicaragua* judgment, the Court, following the same reasoning, found that the US use of force was 'out of context in relation to the alleged armed attacks by Nicaragua'.⁷¹

As regard to the second element of the effects of the attack on civilians, it should be noted that, even if also this aspect is greatly regulated under IHL, it still plays a role in determining whether an attack deployed in self-defence can be considered necessary and proportionate, as it can be seen in many State practices: the 1971 India-Pakistani Conflict,⁷² 1982 Israeli attacks on Iraqi nuclear installation,⁷³ in the *Nuclear Weapons* case,⁷⁴ in the *Oil Platform* case.⁷⁵

This second element is directly linked to the first one, since the Court noted that a proportionate action in self-defence should be directed towards military objects relevant to the initial armed attack, which inherently excludes the possibility to direct an attack on civilians or requires at least to minimize the effects the attack may have on civilians.⁷⁶

On the other hand, no State consensus has been found when dealing with the third requirement: the geographical scope. Some suggest that self-defence measures should take place somewhere near the place where the first attack took place; others argue that self-defence

⁶⁹ Okimoto (n 62), pp. 62-64.

⁷⁰ *Oil Platforms*, para 51.

⁷¹ *Nicaragua*, para 237.

⁷² India, UNSC Verbatim Record (12 December 1971) UN Doc S/PV.1613, para 202; Pakistan, UNSC Verbatim record (21 December 1971) UN Doc S/PV.1621, para 108.

⁷³ Israel, UNSC Verbatim Record (12 June 1981) UN Doc S/PV.2280, para 102.

⁷⁴ *Nuclear Weapons Opinion* (Written Statement of the UK), p. 38.

⁷⁵ *Oil Platform* (Memorial of Iran) para 4.39; Counter-Memorial of the US paras 4.34, 4.35, 4.47, 4.50.

⁷⁶ Okimoto (n 62), pp. 64-66.

measures can be taken wherever the source of the initial attack may be.⁷⁷ Geographical limits are highly relevant when self-defence is invoked to occupy the aggressor's territory. Since the scope of self-defence should be to halt and repel the armed attack, it follows that measures taken by the attacked State should be aimed at driving the aggressor out of the occupied territory.⁷⁸

Lastly, with regard to the temporal scope, it is generally thought that the principle of proportionality covers both, instant and continuous self-defence.⁷⁹ The first instance refers to cases in which self-defence is evaluated in one specific use of force; on the other hand, collective self-defence entails instances in which is evaluated the 'scale of the whole operation'.⁸⁰

iv. The temporal aspects of self-defence

The 1837 *Caroline formula* provides, in addition to the criteria of necessity and proportionality, another parameter that states must follow when using force: its temporal aspect.⁸¹ This parameter can be analyzed by two different points of view: the imminence and the immediacy of the act deployed in self-defence. These two elements, even if they are analyzed separately from the necessity and proportionality requirements, are not separate as such from the ones previously analyzed.

As regard the element of imminence, it needs to be recalled that, according to the *Caroline formula*, self-defence can only be exercised when the need to respond is instant, 'leaving no [...] moment for deliberation'.⁸²

For the sake of the analysis of this paragraph, imminence has to be intended as 'the temporal proximity between the offending State's future attack and the force to which the defending State resorts'.⁸³ This notion is usually discussed when dealing with instances of the so called 'anticipatory self-defence'.⁸⁴

⁷⁷ *ibid*, pp. 66-71.

⁷⁸ *ibid*.

⁷⁹ *Nicaragua*, para 237; *Oil Platforms* para 77.

⁸⁰ *Oil Platforms*, para 77.

⁸¹ 'The *Caroline Case*' (1937) 29 *British and Foreign State Papers* 1137.

⁸² Letter of 27 July (n 10), p. 1138.

⁸³ Hayashi (n 59), p. 21; Green (n 27), p. 108. Nonetheless, the ICJ has not pronounced on this matter yet; see *Nicaragua* para 194; see also *Armed Activities* para 143.

⁸⁴ An exercise of anticipatory self-defence can be prospected in that situation in which a State claim the need to use force in self-defence to halt an attack from an alleged offending State that is somehow imminent (in contrast to the text of article 51 UNC, that requires a prior attack act in self-defence); on the manner, see below at (c).

Some authors link the imminence requirement only to the element of necessity *ad bellum*,⁸⁵ connecting the imminence of the armed attack to the absence of reasonable alternatives to using force in response.⁸⁶ The more distant in the future the attack is, the more the defending State is expected to evaluate any other means to halt it which does not employ force. The more imminent the attack is, the less exhaustively the defending State is expected to explore other alternatives, since the need to respond quickly and decisively to an attack is more pressing.

On the other hand, the criterion of immediacy will be applied when an attack has actually been suffered by the defending State, meaning that is either in progress or completed. It denotes the temporal proximity between the attack itself and the force to which the defending State resorts in response.⁸⁷ Basically, acting accordingly to the requirement of immediacy is what distinguish a lawful resort to force in self-defence from an armed reprisal, which is to be considered lawful under international law.⁸⁸

b) Use of Self-defense by means of nuclear weapons

One of the most important question of legal practitioners, when dealing with nuclear weapons, is whether their nature may render their use in any way necessary or proportionate.

This same question has famously been asked to the ICJ in two separate requests for advisory opinion, the first one by the World Health Organization⁸⁹ (WHO) and the second by the General Assembly of the United Nations.⁹⁰

As regard to the former, on the question posed by the WHO (and specifically whether ‘In view of the health and environmental effects, would the use of nuclear weapons by a State in war or other armed conflict be a breach of its obligations under international law including the

⁸⁵ Hayashi (n 59), p. 20-21; Judith Gardam, *Necessity, Proportionality and The Use Of Force By States* (1st edn, CUP 2004), pp. 149-155; Yoram Dinstein, *War, Aggression and Self-Defence* (6th edn. CUP 2017), pp. 230-234, 267-268.

⁸⁶ Hayashi (n 59) p. 20.

⁸⁷ *ibid* p. 2; Green (n 27), p. 108.

⁸⁸ Reprisal are defined by the Max Planck Encyclopedia of International Law as ‘measures undertaken by one subject of public international law to coerce another subject of public international law to abide by its legal obligations towards the first of the subjects mentioned’; Matthias Ruffert, ‘Reprisals’ (2015) Max Planck Encyclopedia of Public International Law [MPEPIL], para (A)(2).

⁸⁹ WHO Res 46/40 (14 May 1993) WHA46.40.

⁹⁰ UNGA Res 49/75 K (9 January 1995) UN Doc A/RES/49/75 K.

WHO Constitution ?’) the Court found that it was not able to give an advisory opinion.⁹¹ Indeed, the WHO’s request did not satisfy the three requirements needed in order for an UN Agency to request an advisory opinion, and in particular it found that requesting such an opinion could not arise within the scope of the activities of the requesting agency.⁹²

Nonetheless, the question on the legality of threat or use of such destroying weapons was so compelling that the General Assembly itself asked the ICJ for an opinion on whether ‘Is the threat or use of nuclear weapons in any circumstance permitted under international law?’⁹³

The question arose from the General Assembly recurrent affirmation that the complete elimination of nuclear weapons would be the only guarantee against the threat of a nuclear war;⁹⁴ indeed, since its first resolutions,⁹⁵ it has declared ‘that the use of nuclear weapons would be a violation of the Charter and a crime against humanity’.⁹⁶

As specified above, in its 1996 advisory opinion, the Court preliminary dealt with the problem of which ‘*corpus of norms*’ had to be deemed applicable to the case at stake, and found out that, within the relevant applicable law regarding the question it was seized, the law relating to the use of force enshrined in the United Nations Charter had a major role.⁹⁷

In this context, it is significant to underline that, before proceeding to the analysis of articles 2(4) and 51 UNC and their implication under *jus ad bellum*, the Court pointed out that any consideration of these kind had to be evaluated in light of the unique characteristics of nuclear weapons, and in particular of their ‘destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come’.⁹⁸ The Court further added that any hypothetical blast could cause the ‘release not only of immense quantities of heat and energy, but also powerful and prolonged radiations, that that would cause damages vastly more powerful than any other weapon known so far, and that could also destroy the entire

⁹¹ *Legality of the Use by a State of Nuclear Weapons in Armed Conflict* (Advisory Opinion) [1996] ICJ Rep 1996 p. 66, para 32.

⁹² As required by article 96(2) UNC ‘specialized agencies, which may at any time be so authorized by the General Assembly, may also request advisory opinions of the Court on legal questions arising within the scope of their activities’. *ibid* para 22.

⁹³ A/RES/49/75 K para 11.

⁹⁴ *ibid* para 5.

⁹⁵ The very first General Assembly Resolution, adopted on 24 January 1946, dealt with the establishment of a Commission to deal with the problems raised by the discovery of Atomic Energy; UNGA Res 1(I) (24 January 1946) UN Doc A/RES/1(I).

⁹⁶ UNGA Res 1653(XVI) (24 November 1961) UN Doc A/RES/1653(XVI).

⁹⁷ *Nuclear Weapon Opinion* paras 23, 34.

⁹⁸ *ibid* para 36.

ecosystem of the planet.⁹⁹ These two paragraphs are particularly important since, through them, the Court has introduced in a topic as self-defence law (which is typically limited to what is prescribed by the Charter and is, most importantly, weapon neutral)¹⁰⁰ some elements which are typically almost exclusively relevant under *jus in bello* (also known as International Humanitarian Law).

i. The ICJ jurisprudence on the threat or use of nuclear weapons in self-defence

From paragraph 34 to paragraph 49 of its 1996 Advisory Opinion, the Court analyzed the question of the ‘legality or illegality of recourse to nuclear weapons in the light of the provisions of the Charter relating to the threat or use of force’.¹⁰¹

After analyzing articles 2(4), 51 and the provisions of Chapter VII of the Charter, the Court underlined that, since the law regulating the recourse to self-defence is weapons neutral,¹⁰² nuclear weapons should be deemed as unlawful *per se* to be contrary to the provisions of the Charter. Indeed, ‘a weapon that is already unlawful *per se*, whether by treaty or by custom, does not become lawful by reason of it being used for a legitimate purpose under the charter’.¹⁰³

Considering that there was (and there is still not) a treaty binding upon the so called ‘nuclear-weapons states’¹⁰⁴ on the prohibition and the subsequent dismantlement of nuclear weapons and nuclear armaments, the Court has further briefly analyzed whether, in the view of

⁹⁹ *ibid* para 35.

¹⁰⁰ Indeed, in the words of the ICJ itself, ‘the Charter neither expressly prohibit, nor permits, the use of any specific weapon including nuclear weapons’; *ibid* para 39.

¹⁰¹ *ibid* para 37.

¹⁰² See *supra* (n 100).

¹⁰³ *Nuclear Weapons Opinion* para 39.

¹⁰⁴ Under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), nuclear-weapons States are those who have manufactured and exploded a nuclear weapon or a nuclear explosive device prior to 1 January 1967, hence China, France, the Russian Federation, the United Kingdom and the United States. Anyway, also India, Pakistan and Israel, who never joined the NPT, are known to possess nuclear weapons, in addition to the Democratic People’s Republic of Korea (DPRK), who joined the NPT in the first place, but has withdrawn from it in 2003, conducting more than six nuclear tests so far. Treaty on the Non-Proliferation of Nuclear Weapons (adopted on 1 July 1968, entered into force 5 March 1970) 729 UNTS 161, art. IX(3); Melissa Gills, *Disarmament: a Basic Guide* (4th edn, 2017 United Nations Publications), p.26-28.

the state of international law at that time, there was a norm of customary international law prohibiting the threat or use of nuclear weapons.¹⁰⁵

Indeed, even if from 1996 substantial steps toward the total elimination of nuclear weapons have been made, there is still not a legally binding treaty that prohibits nuclear weapons, as there is one for both, chemical weapons and biological weapons. In this regard, the Treaty on the Prohibition of Nuclear Weapons (TPNW), adopted on 7 July 2017, includes a comprehensive set of prohibitions on participating in any nuclear weapon activities. nonetheless, it has not yet entered into force since, according to article 15(1) of the Treaty itself, it will be so after 90 days from the deposit of the fiftieth instrument of ratification, acceptance, approval or accession, and, to this date, only 35 states are party to the Treaty.¹⁰⁶

Anyway, once it has been clarified that there is still not an actual treaty governing the threat to use and the use of nuclear weapons, the Court succeeded to analyze whether a customary norm of international law of the same content could be found.

In doing so, the Court analyzed whether the two traditional elements of state practice and *opinio juris sive necessitates*, required by its constant jurisprudence to establish the existence of a customary rule of international law exists, could be found in the case at stake.

It must be noted that, in the *North Sea* case, the Court affirmed that: ‘actions by states not only must amount to a settled practice, but they must also be such, or be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of the rule of law requiring it. The need for such a belief, i.e. the existence of a subjective element, is implicit in the very notion of the *opinio iuris sive necessitatis*. The states concerned must therefore feel that they are conforming to what amounts to a legal obligation’.¹⁰⁷ Similarly, in *Nicaragua* case, the Court stated that: ‘For a new customary rule to be formed not only must

¹⁰⁵ *Nuclear Weapons Opinion* para 64.

¹⁰⁶ Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (adopted 10 April 1972, entered into force 26 March 1975) 1015 UNTS 163 [hereinafter BWC]; Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (adopted 13 January 1993, entered into force 29 April 1997) 1974 UNTS 45 [hereinafter CWC]; Treaty on the Prohibition of Nuclear Weapons (adopted 7 July 2017 not yet entered into force) CN.475.2017.TREATIES-XXVI-9; ‘Disarmament Treaties Database: Treaty on the Prohibition of Nuclear Weapons’ [TPNW] (*UNODA United Nations Office for Disarmament Affairs*) <<http://disarmament.un.org/treaties/t/tpnw/state/asc>> accessed 26 November 2019.

¹⁰⁷ *North Sea Continental Shelf Case (Federal Republic of Germany v Denmark; Federal Republic of Germany v Netherlands)* (Judgment) [1969] ICJ Rep 3 [hereinafter *North Sea*], para 77.

the acts concerned “amount to a settled practice” but they must be accompanied by the *opinio juris sive necessitatis*.¹⁰⁸

Hence, in 1996, the Court firstly proceeded to analyze the presence of an *opinio juris* on the legality of the threat or use of nuclear weapons. In doing so, the Court noted that those states who profess the existence of an obligation toward the elimination of nuclear weapons point out that, at that time, nuclear weapons had not been used for 50 years, and in this constant practice they would see the expression of an *opinio juris* on the part of those States who possess nuclear weapons.¹⁰⁹ Nonetheless, on the contrary, in the view those states who assert the legality of the threat or use of nuclear weapons, the lack of use of such weapons did not demonstrate the existence of a custom but it merely indicated that circumstances that could justify their use had fortunately not arisen.¹¹⁰

Furthermore, the Court noted that nuclear-weapon states invoked the ‘doctrine and practice of deterrence’, according to which, even if they did not use nuclear weapons in the latest 50 years, these states reserved the right to use such weapons in the exercise of the ‘right to self-defence against an armed attack threatening their vital security interests’.¹¹¹

Although the Court decided not to pronounce over the legality of the practice of nuclear deterrence, it noted that many states adhered to such practice during the cold war and continue to do so, which did not allow it to believe that the non-recourse to nuclear weapons in the past five decades could indicate an *opinio juris* on the illegality of the use of nuclear weapons.¹¹²

Furthermore, prior in its judgement, the court had noted that the simple possession of nuclear weapons, justified by the intent of a State to exercise the practice of deterrence, even if it could suggest a preparedness to use the, could not be deemed as contrary to article 2(4) of the Charter, since their use would be unlawful only if the purpose of the use would be envisaged as directed toward the territorial integrity, political independence of a State or against the Purposes of the United Nations.¹¹³

Secondly, once found that the circumstance of non-using nuclear weapons was not relevant in the analysis of an *opinio juris*, the Court moved its attention on the variety of General Assembly Resolutions which, through time, keep affirming, with consistent regularity, the

¹⁰⁸ *Nicaragua*, para 207. The theme of how a customary rule of international law arises and its efficacy under the hierarchy of norms will be discussed below at Chapter II(2)(c)(ii).

¹⁰⁹ *Nuclear Weapons Opinion* para 65.

¹¹⁰ *ibid* para 66.

¹¹¹ *ibid*.

¹¹² *ibid* para 67.

¹¹³ *ibid* para 48; UNC, art. 2(4).

illegality of nuclear weapons.¹¹⁴ Nonetheless, even though the Court admitted that General Assembly resolutions, even if they are not binding, ‘may sometimes have normative value’,¹¹⁵ it added that to establish whether it is true of a given resolution, its content and the condition of its adoption shall be looked at.¹¹⁶ And, when looking at the General Assembly resolutions which deemed the use of nuclear weapons as a direct violation of the Charter under these lens, it found that the majority of them were adopted with substantial numbers of negative votes and abstentions; moreover, and most importantly, those states possessing or under the umbrella of nuclear weapons have always voted against such resolutions.¹¹⁷

Hence, the Court finally concluded that, even if there was the emerging desire of a very large section of the international community to prohibit the use of nuclear weapons, the formation of a customary norm on it was ‘hampered by the continuous tensions between the nascent *opinio juris* on the one hand, and the still strong adherence to the practice of deterrence on the other hand’,¹¹⁸ and it can be said that these tensions continued in the last two decades, making impossible to believe the existence of such a custom so far.

While the Court’s application of the criteria of necessity and proportionality *ad bellum* will be analyzed later, together with an evaluation on what has changed in the last two decades, it must be noted that the *Nuclear Weapons Opinion* is not the only decision of the Court on the topic of nuclear weapons.

Indeed, in 1973 both Australia and New Zealand instituted two separate proceedings against France asking to declare the atmospheric and underground nuclear tests conducted by France in the South Pacific region against international law.¹¹⁹ The request was due to the radioactive fallouts caused by the French tests in the pacific region, which by Australia and New Zealand were said to violate their sovereignty over their territory and their people and their freedom of commerce and navigation over the areas contaminated by the radioactive fallouts.

¹¹⁴ Between them, see UNGA Res 1653(XVI) (24 November 1961) UN Doc A/RES/1653(XVI); UNGA Res 55/33 (12 January 2001) UN Doc A/RES/55/33; UNGA Res 54/54 (10 January 2000) UN Doc A/RES/54/54.

¹¹⁵ *Nuclear Weapons Opinion* para 70.

¹¹⁶ *ibid.*

¹¹⁷ *ibid* paras 70-72.

¹¹⁸ *ibid* para 73.

¹¹⁹ *Nuclear Tests* (Australia v France) (Application Instituting Proceedings) [1973] <https://www.icj-cij.org/files/case-related/58/13187.pdf> accessed 27 November 2019, para 50; *Nuclear Tests* (New Zealand v France) (Application Instituting Proceedings) [1973] <https://www.icj-cij.org/files/case-related/59/9447.pdf> accessed 27 November 2019, para 28.

Hence, by an Order of 22 June 1973, the Court, at the request of Australia and New Zealand, indicated provisional measures to the effect, *inter alia*, that pending judgment France should avoid nuclear tests causing radioactive fall-out on Australian or New Zealand territory.¹²⁰ Due to France's compliance with the Court's measures and its various statements made in 1974 on the intention to cease the conduct of atmospheric tests in the South Pacific region, the Court, in its judgments of 1974, found that the objective of Australia and New Zealand was indeed been accomplished. Hence, it decided that the claims had no longer any object and that there was nothing on which to give judgment.¹²¹

Lastly, more recently, the Court dealt with a particularly interesting claim related to the matter at stake, which was brought up by the Marshall Islands on April 2014. Indeed, Marshall Islands filed an application in front of the Court against nine other states, three of which (India, Pakistan and the United Kingdom) had recognized the jurisdiction of the Court, on the lack to fulfilling their obligations relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament.¹²² Even though this particular case will be discussed in greater detail later, when dealing with the existence of a customary norm of international law on nuclear disarmament,¹²³ it is important to notice that, through this decision the Court had the occasion to pronounce on a matter so actual after 20 years from its *Nuclear Weapons Opinion*. Nonetheless, the Court did not analyze the question since it found that there was no legal dispute between the Applicant and the three Respondents, due to the lack of the respect of a new criterion introduced by the Court in these cases: the awareness test.¹²⁴ According to the Court, indeed, evidence must demonstrate that Respondent was aware, or could not have been

¹²⁰ *Nuclear Tests* (Australia v. France) (Interim Protection) (Order of 22 June 1973) I.C.J. Reports 1973, p. 99; *Nuclear Tests* (New Zealand v. France) (Interim Protection) (Order of 22 June 1973) I.C.J. Reports 1973, p. 135.

¹²¹ *Nuclear Tests* (Australia v. France) (Judgment) I.C.J. Reports 1974, p. 253, paras 61-62; *Nuclear Tests* (New Zealand v. France) (Judgment) I.C.J. Reports 1974, p. 457, paras 58-62.

¹²² In particular, see *Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament* (Marshall Islands v. United Kingdom) (Application Instituting Proceedings) <<https://www.icj-cij.org/files/case-related/160/160-20140424-APP-01-00-EN.pdf>> accessed November 2019. Indeed, Marshall Islands particularly condemned the United Kingdom for not complying to such obligations since they are both parties of the NPT.

¹²³ See above at Chapter IV.

¹²⁴ *Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament* (Marshall Islands v. United Kingdom) (Preliminary Objections) (Judgment) I.C.J. Reports 2016, p. 833, para 59(1),(2).

unaware, that its views were “positively opposed” by Applicant.¹²⁵ Hence the Court stated that:

‘none of the statements that were made in a multilateral context by the Marshall Islands offered any particulars regarding the United Kingdom’s conduct. On the basis of such statements, it cannot be said that the United Kingdom was aware, or could not have been unaware, that the Marshall Islands was making an allegation that the United Kingdom was in breach of its obligations. In this context, the conduct of the United Kingdom does not provide a basis for finding a dispute between the two states before the Court’.¹²⁶

ii. Necessity *ad bellum* and the use of nuclear weapons

Having analyzed the general considerations of the Court in the 1996 *Nuclear Weapons* Advisory Opinion, all that remains is the analysis that the ICJ conducted on the respect of the two principles of necessity and proportionality *ad bellum* in the case that nuclear weapons had to be used in self-defence.

First of all, the Court, recalling its judgment in the *Nicaragua* case,¹²⁷ underlined that the submission of the exercise of the right of self-defence to the conditions of necessity and proportionality is a rule of customary international law, which always applies to article 51 of the Charter, whatever the means through which the force is employed should be.¹²⁸

Unfortunately, the Court dedicated only seven paragraphs of its judgment on the topic of necessity and proportionality *ad bellum*, which are mainly focused on whether the threat or use of nuclear weapons could be lawful under the requirement of proportionality *ad bellum*, and on the topic of nuclear deterrence (which has previously been analyzed).¹²⁹ The reason of this particular choice is probably related to the fact that the Court had previously stated that the

¹²⁵ *ibid* paras 41, 52, 57.

¹²⁶ *ibid* para 57.

¹²⁷ *Nicaragua* para 176.

¹²⁸ *Nuclear Weapons Opinion* para 41.

¹²⁹ *ibid* paras 42-48.

provision contained in the Charter on the right to self-defence are ‘weapon neutral’,¹³⁰ and the peculiarities of nuclear weapons are irrelevant to them.¹³¹

Nonetheless, it has been noted above that the requirement of necessity *ad bellum* entails the use of force only as last resort (aimed at protecting a State’s essential interests against a grave and imminent peril) and that the harm inflicted to the attacking State must amount only to what is necessary to avert the threat faced.¹³²

In this regard, it has been suggested that nuclear weapons should only be used when conventional weapons are proven ineffective.¹³³ Hence, using force through nuclear weapons could be subjected to a ‘double necessity test’: the first one involving the use of force through conventional weapons only as last resort; the second one involving the use of nuclear weapons only as last resort amongst all weapons.¹³⁴ Consequently, if the attack suffered was with conventional weapons, the right to self-defence would only entitle to use similar weapons and the use of nuclear weapons would never respect the requirement of necessity *ad bellum*.¹³⁵

Moving the focus on the requirement that the harm inflicted must be necessary to avert the threat faced, the Court, after its thorough investigation on the question posed to it by the General Assembly, decided that:

‘in view of the current state of international law, [...] the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake’.¹³⁶

This paragraph of the Opinion, and in particular the requirement that, in order to use or threaten to use nuclear weapons in self-defence, the ‘very survival of a State should be at stake’ reveals several layers of relativity.

Although, it must be remarked that, even if the Court here failed to declare the illegality under the Charter of the use of nuclear weapons, it still could not take into account, in its

¹³⁰ *ibid* para 39; see *supra* note x.

¹³¹ Hayashi (n 59) p. 24-25.

¹³² See *supra* at Chapter IV(3)(a).

¹³³ Tarcisio Gazzini, *The Changing Rules on the Use of Force* (2006 Manchester University Press), p. 219.

¹³⁴ Hayashi (n 59) p. 25-26.

¹³⁵ Nagendra Singh and Edward McWhinney, *Nuclear Weapons and Contemporary International Law* (2nd edn. 1988 Kluwer), p.100.

¹³⁶ *Nuclear Weapons Opinion*, para 105(2)(E).

decision, the specific characteristics that differentiate nuclear weapons from any other kind of conventional weapons not prohibited under international law, because of the aforementioned potentially catastrophic consequences related to their use.¹³⁷

Nonetheless, the definition that the Court gave leaves still at least two fundamental questions:

- 1) What does exactly distinguish the circumstances in which self-defence is extreme from those in which it is not?
- 2) Which are those circumstances in which the very survival of a State could be at stake?

The answer that the Court gave seems to point out that ‘extreme’ are those cases in which the survival of a State would be at stake. Although, this vague indication leaves the question unsolved, since the very survival of State A could be threatened though a potential use of force that would not threaten the survival of State B (for example, a bigger and more diplomatically powerful State than A).¹³⁸ indeed, a core concept that distinguishes international law from municipal law is the absence of an ‘approximate equality’, in strength and vulnerability of each State as opposed to individuals.¹³⁹ According to this principle, a smaller State might be entitled to threaten and use nuclear weapons in self-defence more quickly than larger states.¹⁴⁰

Hence, the definition given by the Court in paragraph 105(2)(E) of its Opinion does not outlaw the use of nuclear weapons in self-defence.

iii. Use of nuclear weapons and the compliance with proportionality *ad bellum*

On the other hand, the Court has briefly discussed about the requirement of proportionality *ad bellum* in the 1996 *Nuclear Weapons Opinion*. Nonetheless, it mainly recalled that, even if, under proportionality *ad bellum*, nuclear weapons could be proportionate in certain circumstances, it should not be forgotten that any use of force should be deployed in compliance with the law of armed conflicts, and in particular in compliance with the requirement of proportionality *in bello*.¹⁴¹

¹³⁷ *ibid* para 35.

¹³⁸ Hayashi (n 59), pp. 26-29.

¹³⁹ Herbert Lionel Adolphus Hart, *The Concept of Law* (1961 Oxford Clarendon Press) p. 195.

¹⁴⁰ Nikolas Stürchler, *The Threat of Force in International Law* (CUP 2007) p. 89.

¹⁴¹ *Nuclear Weapons Opinion* para 42.

As previously stated above,¹⁴² the majority of the authors and some Decisions by the Court, have clarified that, under the requirement of proportionality *ad bellum*, the use of force by states should mainly be proportionate to what is necessary to halt or repel the attack suffered.¹⁴³

Indeed, as Judge Ago affirmed in his interpretation of the principle of proportionality *ad bellum*, these requirements; ‘concerns the relationship between the proportionality of the action and its purpose, namely [...] that of halting and repelling of the attack. [...] it would be mistaken, however, to think that there should be proportionality between the conduct constituting the armed attack and the opposing conduct. [...] What matters is the result to be achieved by the defensive action, and not the form, substance and length of the action itself. [...] Its lawfulness could not be measured except by its capacity of achieving the desired results.’¹⁴⁴

Nonetheless, the Court underlined that certain states, in their written submission, pointed out that the proportionality test for the use of force in self-defence should be influenced by the circumstance that the use of nuclear weapons could easily cause an escalation of nuclear exchanges, which will implicate an extremely strong risk of devastation.¹⁴⁵ On the contrary, it mentioned the claim from other states that certain types of tactical nuclear weapons could be sufficiently precise to limit those risks.¹⁴⁶

Unfortunately, the Court decided that it was not necessary to embark on the qualification of such risk and to enquire the existence of such precise weapons. Anyway, it still reminded these states that the profound risks associated with these kinds of weapons should not be undertaken and should be borne in mind by states that believe they could exercise nuclear response in self-defence in accordance with the requirement of proportionality *ad bellum*.¹⁴⁷

Hence, if the approach of the Court to the analysis of the requirement of proportionality in self-defence can be defined as confusing, if not phobic, due to its reluctance to define and analyze the dimensions of this requirement,¹⁴⁸ in its 1996 Advisory Opinion, and more

¹⁴² See *supra* at Chapter II(2)(a)(iii).

¹⁴³ Gray (n 11), pp. 124-126; San Remo Manual on International Law Applicable to Armed Conflicts at Sea (n 66), art. 4.

¹⁴⁴ Ago (n 49), para 121.

¹⁴⁵ *ibid* para 43.

¹⁴⁶ *ibid*.

¹⁴⁷ *ibid*.

¹⁴⁸ Theodora Christodoulidou and Kalliopi Chainoglou, ‘The Principle of Proportionality from a *Jus ad Bellum* Perspective’ in Marc Weller (ed), *The Oxford Handbook of the Use of Force in International Law* (OUP 2015), para I.

generally on the topic of nuclear weapons, it disappointed in not taking sufficiently into account how these requirements should have been adjusted in the view of the kind of weapons which it was analyzing.

c) *The threat to use nuclear weapons and preventive self-defence*

The majority of scholars who have written on the requirement of necessity ad bellum as applied to nuclear weapons, has mostly focused its analysis on the application of such criterion to the threat to use nuclear weapons, which is the scenario that, luckily, has most commonly interested nuclear weapons in the 75 years. Indeed, with exception of Hiroshima and Nagasaki in 1945, no State has yet used nuclear weapons intentionally against another State. Nonetheless, until the late 1980s, much of the discussion had focused on their actual use (and on use of force in general) rather than on their threat (and the threat to use force).¹⁴⁹

i. The threat to use force and the different regime adopted for nuclear weapons

As a necessary premise, it must be underlined that ‘a threat to force consists in an express or implied promise by a government of a resort to force conditional on non-acceptance of certain demands of that government’.¹⁵⁰ Some authors also added that, in order to be credible, a threat to use force should be ‘formulated in precise and direct terms to the attention of a clearly identifiable State or group of states, excluding threats which are too vague or general’.¹⁵¹

The Court, since the *Corfu Channel* case¹⁵², was faced with situation in which it had to clarify what definition of a threat to force is. In particular, in the *Nuclear Weapons Opinion*, it explained that the threat to use force is characterized by a ‘signaled intention to use force if certain events occur’ or the ‘stated readiness to use it’.¹⁵³ In this regard, the Court affirmed that any use of force by a State would be considered illegal if it had to be considered prohibited

¹⁴⁹ Ved P Nanda and David Krieger, *Nuclear Weapons and the World Court* (Ardsley N.Y: Transnational publishers 1988), p.152.

¹⁵⁰ Ian Brownlie, *International Law and the Use of Force by States* (Oxford Clarendon Press 1963) p. 364.

¹⁵¹ Bruno Simma et al (eds), *The Charter of the United Nations: A Commentary* (3rd edn, OUP 2012), p. 218.

¹⁵² *Corfu Channel* (United Kingdom of Great Britain and Northern Ireland v. Albania) (Judgement of 4 April 1949) ICJ Reports 1949 p. 4.

¹⁵³ *Nuclear Weapon Opinion*, para 47.

under article 2(4) UNC, hence against the territorial integrity, the political independence and against the purposes of the Charter itself.¹⁵⁴

Hence, when, in 1995, the General Assembly requested for an Advisory Opinion to the Court on whether, amongst other things, ‘is the threat [...] of nuclear weapons in any circumstances permitted under international law’, the Court was faced with two different points of view on the matter. Obviously, nuclear-armed states and those states which are under their ‘nuclear umbrella’¹⁵⁵ defended the awfulness *ad bellum* of threatening force with nuclear weapons.¹⁵⁶ On the other hand, those states which were neither nuclear-armed nor cover by the nuclear umbrella, maintained that ‘the use of nuclear weapons is illegal in any circumstances, even by way of self-defence and reprisal, hence the threat of use such weapons must also be illegal’.¹⁵⁷

In this regard, as noted above,¹⁵⁸ the Court affirmed that any threat to use force by nuclear weapons would only be prohibited in the case that its aim is inconsistent with article 2(4) and 51 of the Charter, and with the purposes of the United Nations.¹⁵⁹ Furthermore, three more conclusions can be drawn from its opinion, which are more ambiguous.

First of all, ‘the possession of nuclear arms may amount to a threat in the sense of article 2(4) UNC’. Second of all ‘such possession may be justified by the right of self-defence’. Finally, ‘nuclear threats to purely self-defensive reasons and to secure the very survival of a State are potentially lawful’.¹⁶⁰

Indeed, the first conclusion can be drawn from the Court *dictum* in paragraph 48 of the Opinion, where the Court finds out that the possession of weapons may indeed indicate a preparedness to use them.¹⁶¹ This affirmation is probably justified by the fact that, in the Judgment of the *Nicaragua* case, the Court made clear that the mere possession of arms is not

¹⁵⁴ UNC art. 2(4); *ibid.*

¹⁵⁵ Which can be defined as the ‘guarantee from a country or state that possesses nuclear weapons to a country that does not that they will defend them’; ‘Nuclear Umbrella’ in Collins English Dictionary (Harper Collins Publishers).

¹⁵⁶ For example, see *Legality of the Threat or Use of Nuclear Weapons* (Letter dated 20 June 1995 from the Acting Legal Adviser to the Department of State, together with Written Statement of the Government of the United States of America) para (III)(F).

¹⁵⁷ *Legality of the Threat or Use of Nuclear Weapons* (Verbatim Record) (3 November 1995) para 60.

¹⁵⁸ See *supra* note x.

¹⁵⁹ *Nuclear Weapons Opinion* paras 38-39, 48.

¹⁶⁰ Nikolas Stürchler, *The Threat of Force in International Law* (CUP 2007), p. 83.

¹⁶¹ *Nuclear Weapons Opinion* para 48.

unlawful, by underlining that ‘international law there are no rules, other than such rules as may be accepted by the State concerned, by treaty or otherwise, whereby the level of armaments of a sovereign State can be limited, and this principle is valid for all states without exception’.¹⁶²

On the other hand, the same Court found that, when dealing with nuclear weapons, the same assumption could not be made: the judges adopted the view that possession of nuclear weapons does itself constitute a threat, at least under most circumstances, since deterrence is for its nature a long-term affair, and it does not require for the imminence of the threat.¹⁶³

Secondly, since in this decision the Court lowered the threshold of what constitutes a threat under article 2(4), the possession itself must be justified either by the right of self-defence under article 51 UNC or by an authorization of the Security Council under Chapter VII of the Charter, and the threat must obviously be necessary and proportional.¹⁶⁴ We have already analysed how the Court did not adjudged on the legality of the ‘policy of deterrence’ *per se*,¹⁶⁵ but it just used such practice of an indicator that on the non-existence of a custom on the illegality of the threat to use force, and, if there was such custom, nuclear deterrence should have been seen as justified under the rubric of self-defence.¹⁶⁶

Finally, as seen before, the 1996 *Nuclear Opinion* has introduced a new element to the equation of nuclear weapons and self-defence: State survival. On the topic of the threat to use force, what can be inferred from paragraph 2 letter E of the *dispositif* is that, in order to ensure one State’s survival, an active threat to use nuclear weapons could be justified even in those situations in which its implementation would be considered illegal (i.e. because it threaten to commit an action against the provisions of the Geneva Convention).¹⁶⁷ It follows that, any threat to use nuclear force which is not aimed at protecting the survival of a State is illicit.

ii. Nuclear weapons and preventive self-defence

¹⁶² *Nicaragua*, para 269.

¹⁶³ Stürchler (n 160), p.84, 85.

¹⁶⁴ *ibid* p. 85; *Nuclear Weapons Opinion*, paras 38-44.

¹⁶⁵ *Nuclear Weapons Opinion*, para 67.

¹⁶⁶ Stürchler (n 160), p. 85.

¹⁶⁷ *ibid*, p. 86.

The question of whether a State which is threatened with an armed attack may take action to forestall it is closely connected to the discussion on the legality of the threat to use nuclear weapons.

The topic is particularly problematic since, not only the use of such weapons requires further considerations and their repel requires further precautions, but also since the notion and the content of the so called 'preventive self-defence' is one of the most controversial question of international law.

Generally speaking, the term 'preventive self-defence' comprehends both, 'anticipatory self-defence' (where the threat is regarded to be somehow imminent) and 'pre-emptive self-defence' (in which the perceived threat is more temporally remote).¹⁶⁸ The threshold between the two has to be found in the imminence of the threat, which, unfortunately, is hard to factor. They both refer to the halting of a future attack: hence, deliberation on the moment which the attack stops to be hypothetical and becomes imminent has to be defined by the State that experiences the threat.¹⁶⁹

Usually, the need to act in anticipatory self-defence is used by states that wish to launch a unilateral attack and still to comply with international law. Indeed, according to the 1837 Caroline Formula, a State, that has not suffered an actual armed attack before taking defensive action, can engage in anticipatory self-defence if the circumstances leading to the attack are instant, overwhelming, leaving no choice of means and no time to deliberate.¹⁷⁰

If, in the past, it could have been easy to affirm that a State was entitled to use anticipatory self-defence when seeing the enemy army getting closer to its boundaries, in the modern era, the imminent nature of the attack that could justify self-defence shall also include credible threats.¹⁷¹ Accordingly, some argue that the notion of self-defence will lose its bite if a State which is threatened by nuclear weapons shall wait that the warhead had been launched to effectively start to use force in self-defence.¹⁷² On the contrary, the text of the Charter expressly recalls for an armed attack to occur in order to justify actions in self-defence,¹⁷³ and the Court,

¹⁶⁸ Green (n 27), pp. 28-31.

¹⁶⁹ Elli Louka, *Nuclear Weapons, Justice and the Law* (Edward Elgar Publishing Limited 2011) p. 392.

¹⁷⁰ Jennings (n 11) p. 89.

¹⁷¹ Louka (n 169) p. 393.

¹⁷² Myres McDouglas and Florentino Feliciano, *Law and Minimum World Public Order* (1st edn Yale 1961) p. 184.

¹⁷³ UNC art. 51.

in its Decisions, have given a restrictive interpretation of what can be considered an armed attack.¹⁷⁴

To this day, in three occasions force has been used in situations which involved the threat posed by nuclear weapons: the Cuban Missiles Crisis (1962); the Israeli Bombing of the Iraqi Reactor (1981) and in the 2003 War against Iraq.

None of these cases involved an actual attack or an imminent threat to use nuclear weapons by the offended State, hence their analysis allows to assess the validity of a claim of self-defence against possession and development of these weapons.¹⁷⁵

As for the first instance, in 1962 (hence during the Cold War) the United States began to notice that the Soviet Union was carrying out activities in Cuba, entailing the built up of both, conventional and nuclear armaments. URSS was clearly trying to achieve missiles power parity in order to counterbalance the presence of US missiles in Turkey.¹⁷⁶ Despite the fact that the Soviet increase in armaments was undesirable for the United States (especially since an attack from Cuba would have bypasses the US Ballistic Missile Early Warning System (BMEWS)),¹⁷⁷ at that time there was not an imminent threat of a nuclear missiles attack by the Soviet Union. Nonetheless, the options considered by the American government both included the use of force: an airstrike against Cuba or a general ground invasion.¹⁷⁸ Luckily, the United States decided not to use force directly, but imposed a naval quarantine against Cuba, that was seen by the Cuban and Soviet authorities as ‘an act of war’ and ‘an unilateral act of aggression’.¹⁷⁹ Obviously, the Security Council did not adopt any decision on the matter, due to the right of veto that both, US and URSS had, but the Organization of American States (OAS) did, however, adopt a resolution in which recommended to its member states to take all measures, including the use of force, to impair Cuba from receiving Soviet military material.¹⁸⁰ The decision to refrain to use force was indeed successful, since on 26 September 1962, the soviet prime minister offered to withdraw their armaments from Cuba if the US government accepted not to

¹⁷⁴ For example, in the *Nicaragua cases*, the Court excluded that a series of prolonged low-level attacks by non-State actors could constitute an armed attack; *Nicaragua* para 238.

¹⁷⁵ Tibori Szabó, *Anticipatory Actions in Self-Defence: Essence and Limits under International Law* (The Hague: TMC Asser Press 2011) pp. 173-174.

¹⁷⁶ *ibid* p.175.

¹⁷⁷ Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis* (Pearson P T R 1999), p. 54.

¹⁷⁸ Szabó (n 175), p.176.

¹⁷⁹ UNSC Verbatim Record (22 October 1962) UN Doc. S/5183(1962).

¹⁸⁰ Abram Chayes, *The Cuban Missile Crisis (International Crisis and the Role of Law)* (OUP 1974) p.88.

invade Cuba and to remove its missiles from Turkey, conditions that the United States accepted on the following day.¹⁸¹

As regard to the Israeli attack to the Osirak reactor in 1981, it must be noted that in the 1970s, the Iraqi president Saddam Hussein decide to develop nuclear weapons, and Osirak, a nuclear reactor near Baghdad, was used to produce the fissile material needed for the development of such weapons.¹⁸² The threat perceived by Israel was connected to Hussein's attitude towards Israel and the fear that he would decide to use nuclear weapons against it. For these reasons, on 6 June 1981, Israel attacked the reactor before it could have been fully fueled and operational, killing 10 people.¹⁸³ Even though Israel tried to justify its actions in trough self-defence, the international reaction was negative, seen that there was no sign of a nuclear attack against oi to be more than a mere possibility.¹⁸⁴

Finally, the last episode took place in 2003, when, after Iraq's non-compliance with UN Security Council Resolutions on the 'destruction, removal, or rendering harmless, under international supervision' of weapons of mass destruction and of long-range delivery systems.¹⁸⁵

Iraq did not comply with its obligations under UNSC Resolution 687 but repeatedly obstructed access to sites designated by the UN Special Commission ('UNSCOM') and the International Atomic Energy Agency (IAEA), and failed to co-operate fully and unconditionally with IAEA Weapons Inspectors. Nonetheless the pressions by UK and US to the Security Council to authorize the use of force against Iraq, it instead adopted Resolution 1441(2002) which decided 'that Iraq has been and remains in material breach of its obligations under relevant resolutions, including resolution 687 (1991)' and 'to afford Iraq, by this resolution, a final opportunity to comply with its disarmament obligations under relevant resolutions' of the UNSC.¹⁸⁶

Even if it appeared that, even after this *ultimatum*, Iraq did not comply with the disarmament resolutions, no following decision by the security council authorizing the use of

¹⁸¹ Szabó (n 175), p. 178.

¹⁸² Karl P. Muller et al, *Striking first: preemptive and preventive attack in US national security policy* (RAND Project, US Air Forces 2006) available at https://www.rand.org/content/dam/rand/pubs/monographs/2006/RAND_MG403.pdf accessed 3 December 2019, p. 180.

¹⁸³ *ibid* p. 213.

¹⁸⁴ UNSC Verbatim Record (12 June 1981) UN Doc. S/PV.2280 para 58.

¹⁸⁵ UNSC Resolution 687 (3 April 1991) UN Doc SC/Res/687(1991).

¹⁸⁶ UNSC Resolution 1441 (8 November 2002) UN Doc SC/Res/1441(2002) operative paras 1, 2.

force against Iraq was approved, and, according to the most, from the wording of resolution 1441, it could not be said that it could have triggered or justified in any case the use of force.¹⁸⁷ Nonetheless, on 20 March 2003 the US, the UK, and their allies began conducting air operations against Iraq, taking control of Iraq's territory on 9 April 2003, when they established the 'Coalition Provisional Authority' ('CPA').¹⁸⁸ UK and US both justified their actions by stating that the international community was an overwhelming and imminent threat' which led them to take pre-emptive actions to defend them from an unrepairable harm.¹⁸⁹

These three instances of State practice have two elements in common: they involve a claim of self-defence (used or contemplated) and they are related to conflicts involving weapons of mass destruction. They show the tendency to exceed the temporal dimension of self-defence when it comes to the use of force against WMD, pushing the threshold towards prevention rather than actual self-defence, by putting a strain on the immediacy factor of the requirement of necessity.¹⁹⁰

¹⁸⁷ UNSC Verbatim Record (8 November 2002) UN Doc S/PV/4644.

¹⁸⁸ Wolff Heintschel von Heinegg, 'Iraq, Invasion of (2003)' (2015) Max Planck Encyclopedia of Public International Law [MPEPIL] para (A)(6).

¹⁸⁹ UNSC Verbatim Record (21 March 2003) UN Doc S/2003/351(2003).

¹⁹⁰ Szabó (n 175), p. 198-199.

	Nature of threat faced	Breached limits	Reaction
Cuban missile crisis (1962)	Emplacement of nuclear weapons in a neighboring, hostile country	None (no forceful action taken apart from the naval quarantine)	Moderate acceptance (some criticism because of the naval quarantine)
Israeli bombing of the Iraqi reactor (1981)	Development of nuclear weapons	Immediacy	Condemnation
US war against Iraq (2003)	Presumed existence of nuclear weapons	Conditionality of attack Immediacy Proportionality	Condemnation

Table 1: Instances of use of force in pre-emptive self defence

Nonetheless, it is important to note the reaction of the SC in these instances. Indeed, various members put forward their criticism against the Israeli airstrike on their exceeding the limits of anticipatory self-defence, and one member also made reference to the breach of the Caroline formula.¹⁹¹ As relevant as these affirmation may be (considering also the later condemnation by the international community of the Iraqi invasion of 2003), it must be noted that, if, according to most states, there are limits to be respected, it implies that, to some instance, anticipatory self-defence against WMD must be considered lawful.¹⁹²

¹⁹¹ UNSC Verbatim Record (15 June 1981) UN Doc S/PV.2282, paras 14-19.

¹⁹² Szabó (n 175), p.197.

3. Nuclear Weapons and *Jus in Bello*

a) *Jus in bello* under international law

Jus in bello is the Latin term used to indicate the branch of principles of the so-called International Humanitarian Law (IHL) or law of armed conflicts.¹⁹³ Together with *jus ad bellum*, is one of the branches that regulate the use of force under international law by states or other actors.

While *jus ad bellum* provides with the rules on whether a State may or may not lawfully resort to force under international law, *jus in bello* is constituted by a more complex corpus of norms which regulate various aspects of the conduct of hostilities, in particular how to protect persons placed outside the conflict. This definition entails not only civilians, but also wounded, sick, shipwrecked combatants and fighters and captured combatants and fighters.¹⁹⁴ Moreover, IHL also aims at regulating what means and methods of warfare may or may not be used, and the rights and obligations of neutral states.

One additional peculiarity of *jus in bello* is that some rules differ between international and non-international (i.e. internal) conflicts.¹⁹⁵

As regard the sources of IHL, its principles are largely codified in multilateral treaties, although some norms have been translated into rules by the ICRC Customary Law Study, aimed at filling gaps mostly created by scarce participation in treaties.¹⁹⁶

The study, which was published in 2005, identified 161 Rules of customary IHL, and of those, 136 are applicable both to IACs and NIACs, even if most of them resemble the rules

¹⁹³ Okimoto (n 62), p.7

¹⁹⁴ Under International Humanitarian Law, combatants fall under two categories: those who are members of the armed forces of a party to a conflict (other than medical and religious staff), and those who take part to the hostilities. Nonetheless, the main defining characteristic of lawful combatants' status is that, upon capture, they are entitled to the protection of prisoners of war; Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (CUP 2004), p. 27; Gary D. Solis, *The Law of Armed Conflicts: International Humanitarian Law in War* (CUP 2010), p. 188.

¹⁹⁵ *ibid* p. 8.

¹⁹⁶ Marco Sassòli, *International Humanitarian Law: Rules, Controversies, and Solutions to Problems Arising in Warfare* (Edward Elgar Publishing 2019) para 4.01.

contained in Protocol I, which was written to apply during IACs. The project is based on a wide survey of practice and experts' consultations and is now constantly updated as a database.¹⁹⁷

Due to the difficulty to codify new norm in these topics, a relevant role in IHL plays soft law,¹⁹⁸ especially those rules adopted by expert meetings or produced by the ICRC, that are as important as the traditional sources¹⁹⁹ of international law.²⁰⁰

Nonetheless, the core principles of IHL can be found in the four Geneva Conventions of 1949, which are universally accepted. They each regulate a particular category of persons involved in international armed conflicts, and in particular, the wounded and sick on land, the wounded, sick and shipwrecked at sea, prisoners of wars and civilians.

It is relevant to note that one provision is common to the four Conventions, and it is generally defined as 'Common Article 3',²⁰¹ which displays the minimum provisions that each Contracting Party shall apply in case of an armed conflict not of an international character.²⁰²

Furthermore, to the original four Conventions, Protocols Additional I and II of 1977 and III of 2005 were added to expand and ameliorate the rules already present in the Conventions. Nevertheless, the Protocols are international treaties separate from the Conventions, even if only State Parties to the Conventions can become parties to them.²⁰³

Protocol I covers international armed conflicts, while Protocol II addresses non-international armed conflicts. Lastly, Protocol III simply adds a new protective emblem to the red cross and the red crescent.²⁰⁴ Most of the provisions of Protocol I and II are considered as customary international law.

Moreover, an important source of IHL is constituted by single weapons treaties that seek to regulate the use of all weapons, in order to protect civilians. Nonetheless, there is an increasing tendency to prohibit the use of certain weapons with specific treaties, often to avoid

¹⁹⁷ Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law Volume I: Rules* (3rd edn, CUP 2009) [ICRC CIHL Database] p. liv.

¹⁹⁸ The Max Plank Encyclopedia of Public International Law defines them as 'Social norms of varying character and relevance influence the behavior and decisions of actors participating in international relations. As far as their binding quality is concerned, such social norms range from purely moral or political commitments to strictly legal ones'; Daniel Thürer, 'Soft Law' (2009) Max Planck Encyclopedia of Public International Law [MPEPIL] para 1.

¹⁹⁹ Which are deemed to be codified in article 38 (1) of the Statute of the International Court of Justice.

²⁰⁰ Sassòli (n 196), para 4.02.

²⁰¹ *ibid* para 4.13.

²⁰² As an example, see Convention (III) relative to the Treatment of Prisoners of War. Geneva, 12 August 1949, art. 3, available at <https://ihl-databases.icrc.org/ihl/WebART/375-590006> accessed 5 December 2019.

²⁰³ Sassòli (n 196), para 4.15.

²⁰⁴ *ibid*.

incidental civilian casualties. As an example of the former, the 1980 Convention on Certain Conventional Weapons (CCW) constitutes one of the main frameworks on the rules on weapons.²⁰⁵ As regard the latter, the previously seen Conventions on the Prohibition of Chemical and Biological Weapons, together with the Ottawa Convention on Anti-Personnel Landmines and the Oslo Convention on Cluster Munitions, are the most representative examples.²⁰⁶ Obviously, the most important treaty which bans a certain type of weapons, for our study, is the Treaty on the Prohibition of Nuclear Weapons, which, unfortunately, never entered into force for the lack of signatory parties.²⁰⁷

i. Threshold for the application of *jus in bello*

It must be noted that the threshold for the application of the rules of IHL differs from the one required to apply *jus ad bellum*. Indeed, while the law on the use of force in self-defence requires for its application:

- 1) the use of force, by a State, by means of an armed attack²⁰⁸, or
- 2) or an authorization to use force by the Security Council under Chapter VII of the Charter, whether a threat to peace, a breach to peace or an act of aggression occurs.²⁰⁹

On the other hand, it is commonly accepted that IHL applies:

- 1) international armed conflicts (which are those conflicts between two or more states, including the cases of occupation),²¹⁰ and

²⁰⁵ Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects (and Protocols) (As Amended on 21 December 2001) (adopted 10 October 1980, entered into force 2 December 1983) 1342 UNTS 137.

²⁰⁶ CWC; BWC Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction (adopted on 18 September 1997, entered into force 1 March 1999) 2056 UNTS 211; Convention on Cluster Munitions (adopted 30 May 2008, entered into force 1 August 2010) 2688 UNTS 39.

²⁰⁷ See below at Chapter IV(4).

²⁰⁸ UNC artt. 2(4), 51.

²⁰⁹ *ibid* art. 39.

²¹⁰ According to the common article 2 of the 1949 Geneva Conventions: ‘the present Convention shall apply to all cases of declared war or of any other armed conflict which may arise between two or more of the High Contracting Parties, even if the state of war is not recognized by one of them. The Convention shall also apply to all cases of partial or total occupation of the territory of a High Contracting Party, even if the said occupation meets with no armed resistance.’; Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (First Geneva Convention) (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 31, art. 2.

2) non-international armed conflicts (when there is protracted armed violence between a State armed force and an armed group, or between armed groups).²¹¹

Hence, an armed attack triggers the application of the use force in self-defence, while an armed conflict triggers the application of IHL. When an armed attack and an armed conflict overlap, both, *jus ad bellum* and *jus in bello* shall be applied.²¹²

Nevertheless, in the Geneva Conventions, there is no definition of ‘armed conflict’. Indeed, substantial evidences testify that the writers avoided purposely to define it, in order not to limit the applicability of such rules.²¹³

As seen before, IHL clearly applies, in virtue of Common article 2, when two or more High Contracting Parties are using force against each other: it implies that all four the Geneva Conventions must regulate the conduct of hostilities, together with Additional Protocol I since, as stated in article 1.3 ‘This Protocol [...] supplements the Geneva Conventions’.²¹⁴

On the other hand, in case of an internal armed conflict (such as an insurrection, a rebellion or a civil war) only Common article 3 applies, together with Protocol II, in cases in which the rebels control sufficient territory from which a concerted military operation could be launched.²¹⁵

To this regard, the ICTY Case *Prosecutor v. Limaj*, provides a guideline to better distinguish when an internal conflict according to Common article 3 arises. In particular, the intensity of the fighting, the seriousness and recurrence of the rebels’ attacks and whether they have spread.²¹⁶

To conclude the discussion about when the law of armed conflicts applies, it must be added that in cases of mere criminality and banditry, only domestic law applies, which includes also human rights law.²¹⁷

²¹¹ Common article 3 of the 1949 Geneva Conventions affirms that, ‘in the case of armed conflict not of an international character occurring in the territory of one of the High Contracting Parties, each Party to the conflict shall be bound to apply’ a list of core principles of humanity to apply to persons which are not part to the armed activities, such the prohibition of taking hostages, the use violence against the person and its life. Furthermore, common article 3 adds that the wounded and the sick shall be collected and cared for; *ibid*, art. 3.

²¹² Okimoto (n 62), p. 44-45.

²¹³ Solis (n 194), p. 149.

²¹⁴ Protocol I, art. 1.3.

²¹⁵ Solis (n 194), p. 168.

²¹⁶ *Prosecutor v Fatmir Limaj* (Judgement) IT-03-66-T (30 November 2005), paras. 168-173.

²¹⁷ Solis (n 194), p. 168.

ii. Principles on the choice of means and methods of warfare

Between the great corpus of norms of IHL, we can distinguish those norms which aim at protecting persons during an armed conflict (such as those regarding wounded, sick and shipwrecked, combatants and Prisoners of War, civilians under the power of the enemy and the norms to be respected during belligerent occupations) from those who regulate means and methods of warfare.

The term means refers form weapons, weapons systems and platforms, while methods stands for the way in which weapons are used and military tactics which a Party to the conflict may deploy.²¹⁸ These rules are commonly seen to be aimed at protecting those who can be referred as ‘legitimate targets’ during an armed conflicts (hence, above all, combatants or persons with an equivalent status), since civilians and civilian objects cannot traditionally be targeted.²¹⁹

The two core principles of this branch of IHL, both contained in article 35 of Additional Protocol I, are the following:

- 1) the right to choose means and methods of warfare is not unlimited;
- 2) it is prohibited to cause superfluous injuries and unnecessary suffering.

Furthermore, as previously seen, IHL outlaws certain kind of weapons (such as antipersonnel landmines) mostly because of their indiscriminate effects on civilians, and limits the use of others.²²⁰

First of all, the principle according to which parties of an armed conflict are restricted under international law in the weapons they may use to conduct hostilities is today considered a rule of customary international law.²²¹

With reference to where the principle comes from, it was already Hugo Grotius, in his 1625 work ‘*De iure belli ac pacis*’, who demonstrated the necessity of *temperamenta belli*, hence of

²¹⁸ Sassòli (n 196), para 8.366.

²¹⁹ According to article 50 AP I, a civilian is any person who does not belong to the category of Prisoners of War, as defined in article 4(A) of the Third Geneva Convention and cannot be considered a member of the armed forces taking part to the conflict, according to the text of article 43 of this Protocol. In case of doubt whether a person is a civilian, that person shall be considered to be a civilian; Protocol Additions to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) (adopted 8 June 1977 entered into force 7 December 1978) 125 U.N.T.S. 3, art. 50.

²²⁰ See above at Chapter II(3)(a)(iv).

²²¹ Stuart Casey-Maslen, ‘The use of nuclear weapons and rules governing the conduct of hostilities’ in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014), p.92.

imposing limitations on the destructive power of weapons to be used.²²² Already in 1880, the Oxford Manual of the Laws of War on Land affirmed that the law of war ‘do not recognize in belligerents an unlimited liberty as to means to injure the enemy’.²²³ This rule was then transposed in the 1907 Hague Convention, to end up as a main principle of Protocol I, where, according to article 35 (1), ‘in an armed conflict, the right of parties to the conflict to choose methods and means of warfare is not unlimited’.²²⁴

The principle enlistered at paragraph 1 of article 35 is to be considered as a basic principle of IHL. Its main aim is indeed to remind the international community their obligation to respect the rules of international law applicable in case of armed conflict.

Even if, according to some authors, the principle itself does not have an independent normative content, its cardinal importance consists in its reaffirmation that neither a state of necessity, nor the so called ‘military necessity’, can justify the violation of IHL.²²⁵

Firstly, a state of necessity can be defined as that argument according to which: ‘the laws of war no longer apply in the case of a state of emergency affecting the very existence of the nation i.e., there is a genuine right to ensure the preservation of the State, which may be exercised when conditions are such that no remedy is available, except by the violation of the laws of war, and to be decided, not by military commanders, but by the highest government authorities’.²²⁶

However, in a report of the International Law Commission (ILC), it comes to the conclusion that no situation should have the effect of ‘precluding the wrongfulness of State conduct not in conformity with one of the rules of the law of war which impose limitations on the belligerents regarding the means and methods of conducting hostilities between them’.²²⁷

Indeed, the ILC found that no state of necessity can be invoked to justify the breach of the principle according to which the choice of means and methods to conduct hostilities is not unlimited, since the principle itself constitutes a peremptory norm of international law. According to article 53 of the Vienna Convention on the Law of the Treaties, ‘a peremptory norm of general international law is a norm accepted and recognized by the international

²²² Claude Pilloud and others, *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Martinus Nijhoff 1987) [hereinafter ‘ICRC Commentary APs’] para 1383.

²²³ The Laws of War on Land (adopted on 9 September 1880) available at <<https://ihl-databases.icrc.org/ihl/INTRO/140?OpenDocument>> accessed 7 December 2019, art. 4.

²²⁴ Protocol I, art. 35.

²²⁵ Sassòli (n 196), para 8.367.

²²⁶ ICRC Commentary APs, (n 222) para 1387.

²²⁷ ‘Yearbook of the International Law Commission’ 1980, Vol. II, part two, para 28.

community of states as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character'.²²⁸

Secondly, the limitation on the choice of means and methods of warfare is not impaired by the so called 'military necessity'. This term describes 'the necessity for measures which are essential to attain the goals of war, and which are lawful in accordance with the laws and customs of war'.²²⁹ It must be reminded that the law of the armed conflicts seeks to balance between military necessity on one hand and the requirements of humanity on the other.²³⁰ Hence, considering that the balance between this two variables has already been taken into account, no rule of law can be breached by claiming it is for military necessity, unless this possibility is expressly provided by the rule in question. This rule is also expressly provided at paragraph 2 of article 1 of Protocol I, where it is provided that: 'In cases not covered by this Protocol or by other international agreements, civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience'.²³¹ This rule, fundamental in the system of IHL, is generally referred as the 'Martens Clause'.²³²

As well as the for the first paragraph, also the second paragraph of article 35 of Protocol I contains a basic principle of IHL that has to be considered a norm of customary international law. The provision in question affirms that: 'It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering'.²³³

The principle was firstly elaborated during the works of the 1868 Saint Petersburg Declaration as related to the prohibition to deploy exploding bullets, and later became a general

²²⁸ Vienna Convention on the Law of Treaties (adopted 12 May 1968, entered into force 27 January 1980) 1155 UNTS 331 [VCLT] art. 53.

²²⁹ Lieber Francis, *Instructions for the Government of Armies of the United States in the Field* (1863) (known as Lieber Code), art. 14.

²³⁰ ICRC Commentary APs (n 222), para 1389.

²³¹ Protocol I, art. 1(2).

²³² Firstly elaborated by the Russian diplomat Friedrich Martens during the 1899 Hauge Peace Conference, this rule has variously been taken into account by international jurisprudence, and, in particular, by the 1996 Advisory Opinion, where the Court held that it represents a customary rule of international law; Jochen von Bernstorff, 'Martens Clause' (2009) Max Planck Encyclopedia of Public International Law [MPEPIL], paras 2, 8-12; *Nuclear Weapon Opinion* para 84.

²³³ Protocol I, art. 35(2).

principle regarding weapons and weapons of warfare, applicable in both, international and non-international armed conflicts.²³⁴

This rule limits suffering and injuries to combatants, even if they are legitimate targets under the law of armed conflicts. Hence, it is slightly problematic to determine when the use of a particular kind of weapon could cause such consequences, considering that, in IHL, it is not prohibited to kill an enemy combatant.

In the words of professor Sassòli: ‘what is greater suffering than death?’²³⁵ The test must be conducted comparing the effects of a weapon or of a method and its military utility. Consequently, the effects of a weapon that is aimed at targeting the military personnel of the enemy army must cause as much suffering as needed just to render an individual combatant an *hors de combat* (i.e. incapable of performing its ability to wage war.²³⁶ According to this reasoning, the principle is directed at prohibiting a harm that is not justified by military utility, either because of the complete lack of it or when the utility is outweighed by the suffering caused.²³⁷

The unnecessary suffering rule is not only a theoretical provision, but it is said to outlaw a weapon when an alternative weapon that would cause less injury and suffering is available, and the effects produced by this alternative are sufficiently effective to achieve the lawful military objective.²³⁸

iii. The rule of distinction

The rule of distinction is one of the most important principles to be respected during armed hostilities. Its prominent position in the system of IHL can be understood by noting that the disposition according to which ‘the parties to the conflict must at all times distinguish between civilians and combatants, attack may only be directed against combatants. Attacks must not be

²³⁴ ICRC CIHL Database, rule 70.

²³⁵ Sassòli (n 196), para 8.369.

²³⁶ *ibid.*

²³⁷ US Law of War Manual (December 2016) available at <https://dod.defense.gov/Portals/1/Documents/pubs/DoD%20Law%20of%20War%20Manual%20-%20June%202015%20Updated%20Dec%202016.pdf?ver=2016-12-13-172036-190>, para 6.6.3.

²³⁸ Yordan Dinstein, ‘Warfare, Methods and Means’ (2015) Max Plank Encyclopedia of Public International Law [MPEPIL], para 4.

directed against civilian' is Rule 1 of ICRC study on customary international humanitarian law.²³⁹

A corollary rule to the principle is the one according to which: 'the parties to the conflict must at all time distinguish between civilian objects and military objectives. Attacks may only be directed against military objectives. Attacks must not be directed against civilian object'.²⁴⁰

Hence, the principle has two dimensions: one referred to people, the other referred to objects. They imply that combatants must distinguish themselves from civilians (wearing uniforms or distinctive signs which may be recognized from a distance, so that they may be seen and targeted by enemy combatants), while combatants must target only military objects, sparing civilian objects.²⁴¹

The rule, which nowadays may seem taken for granted, is indeed fundamental, since, before the 1868 St. Petersburg Declaration, which for the first time prescribed that 'the only legitimate that states should endeavor to accomplish during war is to weaken the military forces of the enemy', states were allowed to target, during armed conflict, not only the armed force of the enemy's State, but also its population and the people supporting it or their property.

Although its recognition as a customary rule of international humanitarian law, the principle was not codified until 1977 and Additional Protocol I, where the two rules on civilians and civilians objects were combined in article 48: 'In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.'²⁴²

Nonetheless, in Additional Protocol I there is not a specific definition of what civilian objects are, by they are rather defined by elimination by article 52(1) AP I: 'Civilian objects are all objects which are not military objectives as defined in paragraph 2.'²⁴³ Consequently, all objects which do not fall in the parameters set out in paragraph 2 of article 52 AP I are civilian objects, hence shall not be target of an attack or of a reprisal. Indeed, 'military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization,

²³⁹ Henckaerts et al. (n 197), p. 3.

²⁴⁰ *ibid* p. 25.

²⁴¹ Solis (n 194), p. 251.

²⁴² AP I, art. 48.

²⁴³ *ibid*, art. 52(1).

in the circumstances ruling at the time, offers a definite military advantage.²⁴⁴ The article also sets out that, when in doubt, any object that is normally used for civilian purposes but may be used for military ones (as schools, place of worship, means of transportation, cultural property, hospitals, shops or civilian dwelling), shall be presumed not to be used so.²⁴⁵

iv. Proportionality *in bello*

As seen above, the requirement of proportionality is employed in *jus ad bellum* to determine whether a State as acted in accordance with the law of use of force in self-defence.²⁴⁶

Nonetheless, the requirement plays a fundamental role also in the law of the armed conflicts, even though the concept has to different meanings and different implications in the two branches of the law governing the use of force, and proportionality *ad bellum* and *in bello* are two different legal concepts and each has its own meaning and scope.²⁴⁷

Previously it has been analyzed how proportionality *ad bellum* entails a balancing test between an armed attack and the response to it, which should be aimed at halting and repelling it, according to the ICJ jurisprudence.²⁴⁸ Such test must also take into account four main variables: target selection; effects on civilians; geographical scope and temporal scope.²⁴⁹ Nevertheless, there is no universal consensus in the content of the principle itself, seen that its application and implications heavily depend on the facts of the case at stake.²⁵⁰

On the other hand, the scope of proportionality *in bello* is narrower and codified in 1977 Additional Protocol I, which aims at ‘limiting incidental loss of life and damage to civilian objects in connection to the concrete and direct military advantage anticipated’.²⁵¹

According to article 51, ‘amongst the others’, two types of attacks ‘are to be considered as disproportionate’:

a) an attack by bombardment by any methods or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects; and

²⁴⁴ *ibid*, art. 52(2).

²⁴⁵ *ibid*, art. 52(3).

²⁴⁶ See *supra* at Chapter II(2)(a)(iii).

²⁴⁷ Okimoto (n 62), p. 59.

²⁴⁸ *Nicaragua* para 176.

²⁴⁹ Okimoto (n 62), pp. 59-74.

²⁵⁰ Gray (n 11), p. 121.

²⁵¹ AP I, art. 51(5)(b).

b) an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.²⁵²

The protocol further specifies that such norms must be respected in all circumstances.²⁵³

One main distinction between proportionality on self-defence and in IHL is that the parameters of necessary and proportionality must be adopted, according to the law governing self-defence, only by the victim State, while in IHL applies equally to the conflicting parties.²⁵⁴ Such differentiation is probably due to the fact that these branches of law have two different scopes: the principle of proportionality in law of self-defence aims at limiting the military target that can be attacked (taking into account the geographical and temporal extent of the use of force), while proportionality in IHL only aims at limiting civilian deaths and injuries and at limiting damages to civilian objects.

The proportionality rule is also mentioned in AP I as a requirement within the precautions in attack prescribed at article 57, aimed at sparing civilian casualties.²⁵⁵

Particular attention must be paid at the meaning of the terms ‘concrete and direct’ military advantage: indeed, these requirements prescribe that ‘the advantage concerned should be substantial and relatively close’, excluding those instances in which the advantage is hardly perceptible and it only appears in the long term, which should be disregarded.²⁵⁶ The proportionality *in bello* test also must include possible reverberating consequences, as the cumulative effects of repeated attacks and their repercussions on civilian infrastructures.²⁵⁷

Nonetheless, even taking into account this last variable, the judgement of whether an armed attack may cause excessive civilian losses is inevitably very subjective, especially in those situations in which the probability to obtain the military advantage anticipated is not 100 per cent.²⁵⁸ Furthermore, the direct and concrete military advantage is evaluated by the attacking entity (State or non-State actor) *ex ante*, while the consequences of the use of force are only known *ex post*.²⁵⁹

²⁵² *ibid*, art. 51(5).

²⁵³ *ibid*, art. 51(1).

²⁵⁴ Okimoto (n 62), p. 76.

²⁵⁵ AP I, art. 52(2)(a)(iii).

²⁵⁶ ICRC Commentary APs (n 222), para 2209.

²⁵⁷ Sassòli (n 196), para 8.321.

²⁵⁸ *ibid*, para 8.322.

²⁵⁹ *ibid*.

Hence, the evaluation of whether the criterion of proportionality *in bello* has been respected is extremely difficult, except for these cases in which, from the circumstances of the use of force, it is clear that the attack aimed at targeting civilians and civilian objects, rather than lawful targets (such as combatants and their infrastructures).

v. Precautions in attacks

Finally, the last core principle of IHL to be dealt with is what is commonly referred with the expression ‘precautions in attack’. While an attack does not become unlawful merely because of civilian casualties, the attacker must still take all the precautionary measures aimed at avoiding or minimize the attack’s effects on civilians.²⁶⁰

The precautionary measures to be taken into account when resorting to force under IHL are codified at Chapter IV of Additional Protocol I, which, at article 57, which specifically prescribes that: ‘In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.’²⁶¹

Both, the attacker and the defender must respect such provision since IHL principles have nothing to do with the *jus ad bellum* issue of who started the armed conflict but simply refer to the parameter of who is involved in an act of violence on offence or defence.

These measures, which account to customary law governing both, international and non-international armed conflicts, entail three main active precautions:

1) Any attack must be cancelled when it is obvious that, if pursued, it would be prohibited;²⁶²

2) ‘Effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.’²⁶³ Such situation entail cases in which the enemy could organize additional defence against the future attack or could move some of its infrastructures, in order to be less afflicted by the attack, diminishing the military advantage anticipated. Furthermore, a warning should not. Be given when the enemy is expected to use human shields;²⁶⁴

²⁶⁰ *ibid*, para 8.329.

²⁶¹ AP I, art. 57(1).

²⁶² *ibid*, art. 57(2)(b).

²⁶³ *Ibid*, art. 57(2)(c).

²⁶⁴ Sassòli (n 196), para 8330.

3) ‘When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.’²⁶⁵

Moreover, those who further plan to launch an attack, must follow two further obligations:

1) they must verify whether they are attacking legitimate targets under IHL, respecting the aforementioned proportionality *in bello* rule;²⁶⁶

2) they must use means and methods (such as weapons and tactics) that are expected to minimize civilian losses.²⁶⁷

b) *To which extent the recourse to nuclear weapons can be considered as illegal under International humanitarian law?*

When, in 1994, the General Assembly requested the Court for an advisory opinion on whether the threat or use of nuclear weapons could be permitted in any circumstance under international law, it did not lack to underline, in the preambular clauses, that any use of nuclear weapons would be ‘a violation of the Charter and a crime against humanity’.²⁶⁸

Indeed, in its judgments, even before analyzing the question posed to it, it underlined that the case at stake could not be considered without giving due consideration to the extremely peculiar characteristics of nuclear weapons.²⁶⁹ Hence, the vastity of the damages caused by it when compared to any other conventional weapon, the still mainly unknown effects of its radiation, the potentially catastrophic effects that a nuclear blast could have (which could not be contained either in space nor in time), have to be taken into account by scholars and judges who will be in the position to give their opinion on the legality of nuclear weapons.

According to the Court, ‘the radiations released by a nuclear explosion would affect health, agriculture, natural resources and demographic over a very wide area’, being a serious danger to future generations. In consequence, the Court found that this capacity to ‘cause untold human suffering’ and ‘to damage generations to come’ cannot be excluded from any legal judgement

²⁶⁵ AP I, art. 57(3).

²⁶⁶ *ibid*, art.57(2)(a)(i).

²⁶⁷ *ibid*, art. 57(2)(a)(ii).

²⁶⁸ UNGA Res 49/75 K (9 January 1995) UN Doc A/RES/49/75 K, forth preambular clause.

²⁶⁹ *Nuclear Weapons Opinion*, para 35.

of sort and must particularly be borne in mind in order to correctly apply international humanitarian law.²⁷⁰

As seen in the previous section on the analysis of nuclear weapons under *jus ad bellum*,²⁷¹ the Court found that the law applicable to the case discussed in front of it would be ‘that relating to the use of force enshrined in the United Nations Charter and the law applicable in armed conflict which regulates the conduct of hostilities [...]’.²⁷²

Hence the Court switched its attention on the analysis of whether and which norms of IHL could have been considered applicable to the use or threat to use nuclear weapons.²⁷³ In doing so, it found that, whether states have ratified the main instruments of IHL (from the Hague Conventions of 1899 and 1907, the St. Petersburg Declaration of 1868, to the four Geneva Conventions of 1949 and the Additional Protocols of 1977), they are so fundamental for the respect of the human persons that they must be respected them, since they ‘constitute intransgressible principles of international customary law’,²⁷⁴ and they ‘indicate the normal conduct and behavior expected by states’.²⁷⁵ Furthermore, the Court noted that some states pointed out that the principles and rules of IHL are part of *jus cogens*, according to the definition given to the, by article 53 VCLT.²⁷⁶

In the process of finding out which rules had to be taken into account, it was underlined that two core principles governing the law of the armed conflict had to be applied: the principle of distinction and the principle according to which it is prohibited to cause unnecessary suffering to combatants. As regard the first one, the Court found that, since ‘states must never make civilians the object of an attack’, consequently they must never use weapons which are incapable of distinguishing between civilians and lawful military targets; while the second principle implies that states do not have unlimited freedom of choice of means in the weapons they use.²⁷⁷

As a consequence of such principles, these general principles of humanitarian law prohibit all those weapons which that have either indiscriminate effects on combatants and civilians or cause unnecessary suffering to combatants, without needing an express norm which refers to

²⁷⁰ *ibid*, para 36.

²⁷¹ See *supra* at Chapter II(3)(b).

²⁷² *Nuclear Weapons Opinion*, para 34.

²⁷³ *ibid*, paras 74-97.

²⁷⁴ *ibid*, para 79.

²⁷⁵ *ibid*, para 82.

²⁷⁶ *ibid*, para 83; for a definition of *jus cogens* see *supra* at pp. 43- 44

²⁷⁷ *ibid*, para 78.

them. Hence, if an envisaged use of weapons does not meet the requirements of IHL, any use or threat to use such weapons is also contrary to that law.

Accordingly, the Court moved to the analysis of the question posed by the General Assembly, and in particular of the consequences of the applicability of IHL for the legality of the recourse to nuclear weapons.²⁷⁸ In doing so, it analyzed two different point of view presented to it by the member states of the United Nations, which were requested to send written statements on the matter: on one hand, the opinion of those State who affirmed that the applicability of IHL to nuclear weapons did not necessarily mean that such recourse would be prohibited;²⁷⁹ on the other, the opinion of other states who thought that the ‘recourse to nuclear weapons could never be compatible with the principles and rules of humanitarian law’ and therefore should be prohibited.²⁸⁰

Unfortunately, even if the Court observed that none of the states advocating the legality of the use of nuclear weapons in certain circumstances had indicated what the precise circumstances justifying such use could be, it found that it could not make a determination on the validity of the opposite view of their total incompatibility with the law applicable to armed conflicts.²⁸¹

In the view of their unique characteristics, the Court thought that the recourse to nuclear weapons would not respect the principle of distinction and of prohibition to cause unnecessary sufferings. Nonetheless, it ended up stating that it did not have ‘sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflicts in any circumstance’.²⁸²

In conclusion, according to the 1996 *Nuclear weapons Opinion*, even if the threat or use of nuclear weapons would ‘generally’ be contrary to the rules of international humanitarian law,²⁸³ the Court failed to declare their illegality, at least under the law governing the armed conflicts.

Even if the opinion was issued almost 25 years ago, this outcome did not lack to disappoint for its vagueness and because the Court clearly missed the opportunity to establish a precedent in the jurisprudence governing nuclear weapons.

²⁷⁸ *ibid*, para 83.

²⁷⁹ *ibid*, para 91.

²⁸⁰ *ibid*, para 92.

²⁸¹ *ibid*, paras 94-95.

²⁸² *ibid*, para 95.

²⁸³ *ibid*, para 105(2)(E).

Accordingly, in the following paragraphs, the hypothetical use or threat to use such weapons would be analyzed taking into account the core principles of IHL and the development of international law on the matter.

i. The impossibility to avoid unnecessary suffering through nuclear weapons

As seen above,²⁸⁴ the principle according to which states are limited in the choice of weapons they can use is longstanding and is deemed as customary rule of international law. The Court in its judgement also found that it was the cardinal principle to be applied to nuclear weapons, together with the principle of distinction.²⁸⁵ Nonetheless, throughout the text of the opinion, the Court only referred to such principle in order to specify that an unnecessary suffering constituted ‘an harm greater than that unavoidable to achieve the legitimate military objective’.²⁸⁶

Nonetheless, of the fourteen judges of the ICJ, nine made mention of the principle in their separate or dissenting opinion. For example, President Bendjaoui affirmed that the unnecessary suffering rule is a rule of *jus cogens* and that IHL and nuclear weapons are absolutely incompatible;²⁸⁷ Judge Herczegh remarked that IHL prohibits weapons of mass destruction such as chemical and biological weapons, hence nuclear weapons should be included in such prohibition.²⁸⁸ But, most importantly, Judge Fleischhauer considered that ‘nuclear weapon is, in many ways, the negation of the humanitarian considerations underlying the law applicable to armed conflict and the principle of neutrality. The nuclear weapon cannot distinguish between civilians and military targets. It causes immense suffering. The radiation released by it is unable to respect the territorial integrity of neutral states’.²⁸⁹ Finally, Judge Shahabuddeen underlined that the Court could have reasonably found, from the evidence it had considered, that nuclear weapons violate the principle. In his point of view, ‘the guidance that states ought to heed in making any legal is the public conscience’; hence, the ‘Court could reasonably find

²⁸⁴ See *supra* at Chapter II(3)(a)(ii)..

²⁸⁵ *Nuclear Weapons Opinion*, para 78.

²⁸⁶ *ibid.*

²⁸⁷ *Nuclear Weapons Opinion*, Declaration of President Benjaoui, available at <<https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-01-EN.pdf>>, p.272.

²⁸⁸ *Nuclear Weapons Opinion*, Declaration of Judge Herczegh, available at <<https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-02-EN.pdf>>, p. 275.

²⁸⁹ *Nuclear Weapons Opinion*, Separate Opinion of Judge Fleischhauer, available at <<https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-08-EN.pdf>>, pp. 402-405.

that the public conscience considers that the use of nuclear weapons causes suffering which is unacceptable whatever might be the military advantage derivable from such use'.²⁹⁰ Shahabuddeen elaborated this reasoning comparing nuclear weapons to another kind of weapons, poison gas, which are indeed prohibited under international law.

Nonetheless all the aforementioned judges took into account the humanitarian consequences of any use of nuclear weapon, it is still true that, according to the relevant norms of the law of armed conflicts, an unnecessary suffering can be judged only if considering the military advantage anticipated that such use aims at gaining. Indeed, the principle does not imply that a legitimate target cannot be attacked when such attack would cause great suffering, but it aims at excluding those attacks which, in the words of Judge Higgins, would cause 'horrendous' suffering.²⁹¹

Notwithstanding, from the Hiroshima and Nagasaki bombing and the nuclear tests conducted so far (and particularly from the testimony of Marshall Islands on their effects), we know that nuclear weapons would outrageous effects which are likely to act 'directly, simultaneously and in a complex fashion on the human body'.²⁹²

The following data are taken from ICRC Information Note 1 on the effects of nuclear weapons on human health.²⁹³ Any explosion of nuclear device would cause immediate and long-term effects. As for the first category, they can be divided in three main groups:

1. Heat casualties: the heat above the epicenter of the blast would be heated to a temperature of approximately 7000°, vaporizing all living beings in the area. Those who did not die, would suffer horrific full thickness skin burns, which could regard people that were up to 3 km far from the epicenter. Those who were looking at the explosion could also end up with temporary or permanent flash blindness;

2. Blast casualties: the fireball and the flash heat would be followed by blast pressure waves travelling at supersonic speed. This would result in falling buildings and flying debris and in people thrown through the air. In the human body, such blast could cause fractured bones,

²⁹⁰ *ibid*, p. 203.

²⁹¹ *Nuclear Weapons Opinion*, Dissenting Opinion of Judge Higgins, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-14-EN.pdf>, p.587.

²⁹² Eisei Ishikawa and David L. Swain, *Hiroshima and Nagasaki: The Physical, Medical, and Social Effects of Atomic Bombings* (CUP 2014), p. 105.

²⁹³ 'The effects of nuclear weapons on human health' (ICRC, February 2013) available at <https://www.icrc.org/data/rx/en/assets/files/2013/4132-1-nuclear-weapons-human-health-2013.pdf>, accessed 22 December 2019.

ruptured organs, penetrating wounds. A significant number of people would end up deaf because of ruptured eardrums;

3. The accompanying firestorm: the fireball and the heat would raise the temperature so much that objects and structure that did not vaporize immediately would later burn. The high temperature would result in the explosion of all the flammable material in the proximity of the blast. Furthermore, this amount of fires could potentially create an immense firestorm as winds and intense heat combine in individual fires. The firestorm would likely consume much of the oxygen, causing the asphyxiation of those who sought safety in underground shelters.

In addition, the long-term results caused by the immediate effects of radiation would include:

- Central nervous system disfunction;
- Nausea, vomiting and diarrhea from damage to the gastrointestinal tract, causing fatal dehydration and nutrition problems;
- Destruction of body's capacity to produce new blood cells, causing uncontrolled bleeding and life-threatening infections (because of the absence or severe reduction of platelets and white blood cells);
- Those who survive the radioactive blast could be later victims of radiation sicknesses weeks or months. This consequence would affect persons located quite far from the explosion, also as the consequence of the radioactive fallout that could be carried considerably far by the wind.

Furthermore, people who survived the immediate dangers of the Hiroshima and Nagasaki bombing, faced an increased risk of developing cancer and leukemia.

If this scenario was not bad enough, it must be added that the aforementioned data refer to the damages caused by only one 10 to 20 kiloton nuclear bomb, which is a very small weapon, compared to today's standards. Contemporary nuclear weapons are indeed up to 30 times larger.

Hence, which military necessity would be so great to justify the infliction of this amount of suffering? such effects on human lives render the actual option to us nuclear weapons really slim, if not unconceivable.²⁹⁴

²⁹⁴ Simon O' Connor, 'Nuclear weapons and the unnecessary suffering rule' in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014), pp.140-146.

ii. Are nuclear weapons inherently indiscriminate or disproportionate?

As seen above, one of the core principles of IHL, recognized as such also by the ICJ in the 1996 *Nuclear Weapons Opinion*,²⁹⁵ is the principle of distinction, sometimes referred to as the principle of discrimination, which is declaratory of a customary rule of international law.

Hence, parties of a conflict, whether they are acting in offence or in defence, shall only direct their operations against military objective, distinguishing between civilians and combatants and civilian objects and military objectives.²⁹⁶ It follows that a weapon that is unable to distinguish between civilian and military targets is unlawful under IHL.

In order to understand when a particular weapon has to be considered as indiscriminate, it is useful to apply to alternative tests, firstly elaborated by UK in their Manual of the Law of Armed Conflicts:

1. Is the weapon inherently incapable of being targeted against a specific military objective?

2. Can the effects of a given weapon be limited to a military objective or will it constitute an indiscriminate attack because of its unlimited effects?²⁹⁷

These requirements are seen as alternatives and any weapon that possesses either of the two would be adjudged as indiscriminate and therefore unlawful.

As for the first requirement, it is generally accepted that any weapon whose guidance system is rudimentary and unreliable, with no chance to know where it will land (as for long-range rockets or missiles) is inherently indiscriminate.²⁹⁸ On the other hand, some weapons, which are by their nature discriminate, can be used indiscriminately, while some weapons are more prone to be indiscriminate, and have been outlawed by specific prohibition (as for anti-personnel mines²⁹⁹ and cluster munitions).³⁰⁰

In its jurisprudence, the International Criminal Tribunal for the former Yugoslavia (ICTY) has tried to set establish when a weapon can be defined as inherently indiscriminate. For

²⁹⁵ *Nuclear Weapons Opinion*, para 78.

²⁹⁶ AP I, art. 48.

²⁹⁷ UK Manual of the Law of Armed Conflicts (JSP 383) available at <<https://www.gov.uk/government/collections/jsp-383>> accessed on 19 December 2019.

²⁹⁸ Stuart Casey-Maslen, 'Nuclear Weapons and Rules on Conduct of Hostilities' in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014), pp. 99-100.

²⁹⁹ Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction (adopted 18 September 1997, entered into force 1 March 1999) 2056 UNTS 211.

³⁰⁰ Convention on Cluster Munitions (adopted 30 May 2008, entered into force 1 August 2010) 2688 UNTS 39.

example, in the *Martić case*, the tribunal affirmed that M-87 Orkan (cluster munition) were indeed used as an indiscriminate weapon.³⁰¹ Nevertheless, even if the tribunal addressed the specific characteristics of such weapon as indiscriminate, it further added that their use in the specific case was considered indiscriminate because of the weapon was fired from the extreme of its range and was used over a densely populated area, resulting in severe civilian casualties,³⁰² leaving serious doubts of what would materially constitute and inherently indiscriminate attacks.

As for the second requirement, the indiscriminate effects, such condition recall the ‘indiscriminate attacks’ that Additional Protocol I defines as those attacks that employ methods and means of combat whose effects cannot be limited, and will strike military and civilian objective without distinction.³⁰³ As seen above,³⁰⁴ attacks by bombardment or methods which treats as a single military objective a plurality of military objective situated in a town or a civilian-populated area and attacks that are expected to cause incidental civilian casualties that would be excessive when compared to the military advantage anticipated, are considered as indiscriminate.³⁰⁵

It is quite interesting to note that the ICRC, in its Commentary to article 51(4)(c) of Additional Protocol I, refers to bacteriological weapons as a kind of weapons which would always be indiscriminate. The example is particularly relevant because both, nuclear and bacteriological weapons, fall into the category of weapons of mass destruction (WMD), defined by the Max Plank Encyclopedia of Public International Law as weapons whose ‘consequences [...] cannot be determined and controlled, and the damage they cause is indiscriminate as between combatants and civilians and disproportionately harmful to the environment’.³⁰⁶ Nonetheless, bacteriological weapons are prohibited since 1925, while nuclear weapons are still at the center of the international military scene.

The main setback for nuclear weapons to be declared indiscriminate (other than State practice) is represented by the evidence that the extent to which the effects of nuclear weapons are uncontrolled depends on a variety of factors, such as size and type of the weapon used, the location of the burst (whether it is detonated on the ground or underwater, or in the air at high

³⁰¹ *Prosecutor v. Milan Martić* (Judgement) (Appeals Chamber) IT-95-11 (8 October 2008), para 247.

³⁰² *Prosecutor v. Milan Martić* (Judgement) (Trial Chamber) IT-95-11 (12 June 2007), para 463.

³⁰³ AP I, art. 51(4)(c).

³⁰⁴ See *supra* at Chapter II(3)(a)(ii)..

³⁰⁵ AP I, art. 51(5)(a)(b).

³⁰⁶ Hendrik A Strydom, ‘Weapons of Mass Destruction’ (2017) Max Plank Encyclopedia of Public International Law [MPEPIL], para 2.

altitude), terrain and climate.³⁰⁷ Nonetheless, even knowing these factors, nits effects are still highly unpredictable. Moreover, it must be taken into account the element of radioactive fallout,³⁰⁸ which differentiate nuclear weapons from conventional weapons. Indeed, some of the radioactive particles may fall in the immediate area, but some may get blown kilometers away and eventually also enter into the stratosphere and fall back to the ground after years.³⁰⁹ The radiations transported by the fallout (which contains up to the 60 per cent of the total radiations cause by an nuclear bomb) will then cause prodromal, hematologic, cutaneous, neurovascular, gastrointestinal and pulmonary effects on the human body.

Even if, theoretically and for humanitarian reasons, it seems obvious that nuclear weapons are inherently indiscriminate, trying to apply the aforementioned two requirements to nuclear weapons is practically challenging.

The first question to analyze is whether nuclear weapons can be targeted at a lawful military objective.

It must be recalled that US and UK, in their submission related to the 1996 advisor opinion, both argued that nuclear weapons could be targeted at specific military objectives and can be used in a discriminate manner.³¹⁰ To support these claims, there is little credible evidence that delivery mechanisms for nuclear weapons are not accurate.³¹¹

Obviously, an attack against a massive enemy city would not, quite frankly, respect such standards. Although, some case studies show that there could be indeed way to target the enemy, and only the enemy, through nuclear weapons. The two typical examples are those in which an enemy army is targeted, whilst it is located in the middle of the desert, or, according to Judge Schwebel, the use of tactical weapons against a nuclear submarine that is equipped with nuclear weapons and is going to use them or has already used them.³¹²

³⁰⁷ Stuart Casey-Maslen, 'The use of nuclear weapons and rules governing the conduct of hostilities' in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014), p. 106.

³⁰⁸ The phenomenon according to which, after a nuclear blast, particles of matter in the air are made radioactive from a nuclear explosion.

³⁰⁹ Data relating to the 1954 nuclear test at Bikini Atoll, where a 15-megaton thermonuclear bomb was detonated, contaminating more than 10000 kilometers; Casey-Maslen (n 307) p.107.

³¹⁰ *Nuclear Weapons Opinion*, (Written Statement of the United States) (20 June 1995), p. 23; *ibid*, (Written Statement of the UK) (June 1995), p. 52, para 3.68.

³¹¹ Casey-Maslen (n 307), p. 111.

³¹² *Nuclear Weapons Opinion*, Dissenting Opinion of Judge Schwebel, available at <<https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-09-EN.pdf>>, p. 98.

Nonetheless, what is most important to answer is the second question, on whether their effects are able to be controlled.

The ICJ itself, in its opinion, underlined that nuclear weapons' damages would be vastly more powerful than those caused by any other weapon, that they cannot be contained either in space or in time and that they are able to potentially destroy all civilizations and the entire ecosystem of the planet.³¹³

Under the light of the effects registered after the 1945 nuclear detonations (where the bomb used where between 10 and 20 kilotons), it is hard to believe that anything other than a low-yield nuclear weapon (between 1 and 10 kilotons) could be said to be controllable.³¹⁴ It has further been suggested that a 'clean' use of nuclear weapons could be possible, especially using the so called 'neutron' bombs. These are thermonuclear bombs of limited power (1 or several kilotons), whose shockwave would be less significant, causing less damages on buildings and objects.³¹⁵ Nonetheless, survivals would still die of radiation poisoning, finding their body filled with elements such as strontium.³¹⁶

Finally, the principle of proportionality, as recalled above, is seen in Additional Protocol I as a form of indiscriminate attack: ' [...] an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated' is considered to be indiscriminate.³¹⁷ The ICJ, in the 1996 opinion, did not mention such principle, even if many states talked about it in their written agreements.

Understandably, again, both, UK and US, argued that nuclear weapons are likely to be used in a wide variety of circumstances with very different results in terms of civilian casualties,³¹⁸ and that their use would be disproportionate only depending on circumstances such as the nature of the enemy threat, the importance of destroying the objective or the magnitude of the risk to civilians.³¹⁹

But, according to ICRC itself, 'a party intending to use a nuclear weapon would be required to take into account, as part of the proportionality assessment, not only the immediate civilian

³¹³ *Nuclear Weapons Opinion*, para 35.

³¹⁴ Casey-Maslen (n 307), pp. 112-113.

³¹⁵ *Nuclear Weapons Opinion*, (Written Statement of Solomon Islands) (19 June 1995), p.45, para 3.44.

³¹⁶ BBC, 'Neutron Bomb: why "clean" is deadly', 15 July 1999, <available at <http://news.bbc.co.uk/2/hi/science/nature/395689.stm>> accessed 20 December 2019.

³¹⁷ AP I, art. 51(5)(b).

³¹⁸ Written Statement of the United Kingdom (n 310), p.53, para 3.70.

³¹⁹ Written Statement of the United States (n 310), p.23.

deaths and injuries and damage to civilian objects (such as civilian homes, buildings and infrastructure) expected to result from the attack, but also the foreseeable long- term effects of exposure to radiation, in particular illnesses and cancers that may occur in the civilian population'.³²⁰

Indeed, the same considerations analyzed before can be applied to the principle of proportionality: there are some case book examples where it is plausible that nuclear weapons wouldn't cause excessive civilian losses and civilian injuries. Nonetheless, when applied to a common situation, such as the bombing of a city, it is clear that such weapons would not pass the proportionality test.

4. Is the threat or use of nuclear weapons permitted under international law?

After having analyzed the 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, trying to contextualize the ruling of the Court to what has emergent in international law in the last 24 years, and after having applied the *dictum* of the Court to the relevant sources of international law, it is time to answer to the question posed to it in 1996, under a more modern light.

Nonetheless the International Court of Justice is a body instituted by the Charter of the United Nations and, according to its Statute, its judges are chosen by the General Assembly and Security Council,³²¹ the Court should also provide the United Nations an impartial judging body, not linked or influenced by its members and by the status of international law at the time of its judgments.

In the case at stake, it seems that the Court, throughout its judgement, tried to keep an impartial point of view, while taking into account the written statements sent to it by its member states. Nonetheless, as it was previously analyzed, the Court ended up replying to the request of the General Assembly that it could not definitely decide whether the threat or use of nuclear weapons would be unlawful.³²² As we know, the relevant law governing the question, as identified by the Court, is constituted by the branch of law relating to the use of

³²⁰ 'Nuclear weapons and International Humanitarian Law' (ICRC, February 2013) available at <<https://www.icrc.org/en/doc/assets/files/2013/4132-4-nuclear-weapons-ihl-2013.pdf>>.

³²¹ Statute of the ICJ, art. 4(1)

³²² *Nuclear Weapons Opinion*, para 105(2)(E).

force as enshrined by the UNC and the branch of law applicable in armed conflicts which regulates the conduct of hostilities, also known as International Humanitarian Law.³²³

Well, the Court, in the light of its analysis of the relevant provisions of the latter, affirmed that the threat or use of nuclear weapons would only be ‘generally’ contrary to the rules of IHL, and that it could not decide whether, in case in which the survival of a State would be at stake, such threat or use would be a violation of the rules of international law governing self-defence.³²⁴ It must be noted that certainly the Court did a great job in crystalizing its above all contrary position to such weapons but, twenty-five years after this milestone judgement it seems that such conclusions should be review.

As we have already analyzed, under all the principles that IHL entails and that are applicable to nuclear weapons (the prohibition of unnecessary suffering, the rule of distinction, the humane requirement of proportionality and the necessary precautions in attack), it stems clear how such weapons are indeed prohibited in international law. While the Court was not able to conclude definitely so because of the claim, of some states, that low-yield nuclear weapons would only have contained effects,³²⁵ the development of nuclear technology testifies that nuclear-possessing State have only developed new weapon technologies that allows then to stabilize warheads with more destructive capacity.³²⁶ In addition, even if such ‘clean’ weapons were to exist, the effects that they would have on the population or the combatants target would definitely still violate the rule which limits the choice of means and methods of warfare to those weapons which cause unnecessary suffering.³²⁷

On the other hand, even if it is an established rule of customary international law that self-defence should only cover measures that are proportional to the armed attack and necessary to respond to it,³²⁸ there is no. case in which the use of such a dangerous and deadly weapon could be necessary to halt or repel an attack suffered or it is going to be suffered.

In conclusion, on the light of the analysis of the relevant sources of international law dealt with in this chapter, nuclear weapons should be prohibited under international law.

³²³ *ibid*, para 34.

³²⁴ *ibid*, para 105(2)(E).

³²⁵ *ibid*, para 94.

³²⁶ See *supra* at p. 51.

³²⁷ See *above* at Chapter I(3)(b)(i).

³²⁸ *Nicaragua*, para 176.

III. NUCLEAR NON-PROLIFERATION REGIME FROM 1968 TO THIS DATE

1. Introduction

There is no doubt that the conclusion of any non-proliferation treaty represents the first step toward disarmament and the total elimination a certain weapon.

Nonetheless, under international law states are free to possess any weapon, unless they have decided to commit themselves otherwise.³²⁹ Indeed, as recalled by the 1996 *Nuclear Weapons* Opinion, ‘in international law there are no rules other than such rules as may be accepted by the State concerned by treaty or otherwise whereby the level of armaments of a sovereign State can be limited’.³³⁰ The reasoning behind such principle, frequently expressed in the Court’s jurisprudence (especially in its earliest judgements), is linked to the very own view of international law as relied upon sovereignty and consent of states.

Support for this contention can be found in the controversial, but fundamental, judgement of the Permanent Court of International Justice (PCIJ) in the *Case of the Lotus* (1927), where it was affirmed that ‘international law governs relations between independent states. The rules of law binding upon states therefore emanate from their own free will [...]. Restrictions upon the independence of states cannot [...] be presumed’.³³¹

Nevertheless, the assumption that states are free to do whatever is not prohibited by international law reflects a vision of the international legal order that has run its course, the relevance of this decision still remains open to discussion.³³² Indeed, what it mostly portrays is the difficulty to deal with any topic which entails states sovereignty and their military interests.

With regard to nuclear weapons, the Treaty on the Non-proliferation of Nuclear Weapons, concluded in 1968 and entered into force in 1970,³³³ represents the cornerstone of nuclear non-proliferation and the beginning of the long road towards nuclear disarmament. Being widely analyzed by many scholars throughout the last 50 years, the treaty is said to be divided into

³²⁹ Eric Myjer and Jonathan Herbach, ‘Violation of non-proliferation treaties and related verification treaties’ in Daniel H. Joyner and Marco Roscini (eds), *Non-proliferation Law as a Special Regime: a contribution to fragmentation theory in international law* (CUP 2012), p.119.

³³⁰ *Nicaragua*, para 269; *Nuclear Weapons Opinion*, para 21.

³³¹ *The Case of the S.S. Lotus (France v Turkey)* (Merits) PCIJ Rep Series A No 10 [hereinafter *Lotus*], p. 18.

³³² Armin von Bogdandy and Markus Rau, ‘Lotus, The’ (2006), Max Planck Encyclopedia of Public International Law [MPEPIL], paras 1, 17.

³³³ ‘Treaty on the Non-Proliferation of Nuclear Weapons (NPT)’ (*UNODA*) <<https://www.un.org/disarmament/wmd/nuclear/npt/>> accessed 27 December 2019.

three principal pillars: the non-proliferation pillar (articles I, II and III), the disarmament pillar (article VI) and the peaceful use of nuclear weapons, mainly on the production of nuclear energy (articles IV and V).³³⁴

Nonetheless the content of such treaty will further be analyzed later, it is important to note that in its 1996 *Nuclear Weapons Opinion* the Court variously took into account the consequences that the existence of such treaty and the vast approval received by the international community may have on the case at stake.³³⁵ Finally, it noted that such treaty could be seen as ‘foreshadowing a future general prohibition of the use of such weapons’ but that it did not constitute a prohibition by itself.³³⁶

2. The 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

The Treaty on the non-Proliferation of Nuclear Weapons, most commonly known as Non-Proliferation Treaty (NPT), was concluded in 1968 and today count 191 States Parties (that, compared to the present 193 members of the United States, makes the NPT one of the most widely accepted arms control treaty).³³⁷ Only India, Pakistan, Israel and South Sudan have not joined the treaty, while North Korea withdrew in 2003.

Nuclear non-proliferation is indeed an issue of the highest priority that has main implication in the field of disarmament and international security. Obviously, its final aim is the elimination of nuclear weapons, but ‘the establishment of a genuine, universal and non-discriminatory nuclear non-proliferation regime will enhance the prospects for a better and more secure world.’³³⁸

Indeed, with the premise that proliferation of nuclear weapons would seriously enhance the danger of a nuclear war³³⁹ and through the cooperation of all states in the attainment of such

³³⁴ Daniel H. Joyner, *Interpreting the Nuclear Non-Proliferation Treaty* (OUP 2011) [hereinafter *Interpreting NPT*] p. 26.

³³⁵ *Nuclear Weapons Opinion*, paras 45, 59, 61, 62.

³³⁶ *ibid*, para 62.

³³⁷ ‘Growth in United Nations membership, 1945-present’ (United Nations) available at <https://www.un.org/en/sections/member-states/growth-united-nations-membership-1945-present/index.html> accessed 31 December 2019.

³³⁸ Laurence Boisson De Chazournes and Philippe Sand, *International Law, The International Court of Justice and Nuclear Weapons* (CUP 1999), p. 376.

³³⁹ Treaty on the Non-Proliferation of Nuclear Weapons (adopted on 1 July 1968, entered into force 5 March 1970) 729 UNTS 161, preambular paragraph 2.

objective,³⁴⁰ the NPT aims at the cessation of the manufacture of nuclear weapons, at the liquidation of the existing stockpiles and at the elimination from national arsenals of nuclear weapons and the means of their delivery.³⁴¹

It must be reminded that the nuclear weapon was first used by the United States in its attacks to Hiroshima and Nagasaki, respectively on 6 and 9 August 1945, just one month after the United Nations Charter was approved; nonetheless, it was not in the minds of those who participated in the San Francisco Conference to establish the regime of such weapons, even if the Charter effectively came into force on 26 October 1945, hence several months after the American bombings. These circumstances explain why the first United Nations General Assembly Resolution dealt specifically with the proliferation of WMD: indeed, resolution 1(I) of 24 January 1946 created the Atomic Energy Commission, with three fundamental roles:

1. that atomic energy would be used exclusively for peaceful purpose;
2. the elimination of atomic and other weapons of mass destruction;
3. the establishment of a safeguard system, including inspection aimed to prevent violations and evasions.³⁴²

It was not until 1958, and precisely during the 13th session of the United Nation General Assembly, that Ireland came up with the idea of a treaty specifically limiting the wide dissemination of nuclear weapons.³⁴³

Before that day, the effort to return to a nuclear-weapon-free world suffered many sets back due to the spread of the nuclear weapon as a consequence of the beginning of the Cold War. In June 1946, the United States proposed to freeze the number of Nuclear Weapons-States (NWS) to one, and the creation of an agency to ensure that other states would use nuclear power only as source of nuclear energy.³⁴⁴ Even if the URSS initially responded suggesting the destruction of all atomic weapons, it ended up acquiring the weapon in 1949, followed by the United Kingdom in 1952, France in 1960 and China in 1964.³⁴⁵

The fear of triggering a chain reaction which could led to an horizontal proliferation of nuclear weapons, led to the creation in 1956, of the International Atomic Energy Agency (IAEA), which was aimed at conducting a facility-to-facility based control, which was

³⁴⁰ *ibid*, preambular paragraph 9.

³⁴¹ *Ibid*, preambular paragraph 11.

³⁴² UNGA Res 1(I) (24 January 1946) UN Doc A/RES/1(I), para 1(5).

³⁴³ Daniel H. Joyner, *International law and the Proliferation of Weapons of Mass Destruction* (OUP 2009), pp. 3-5.

³⁴⁴ Boisson De Chazournes (n 338), pp. 376-377.

³⁴⁵ *ibid*.

reinforced in 1959 with the advent of two new sets of safeguards: the need for each State to declare any fissionable material holding and the power of the Agency to verify that states declarations are correct and complete.³⁴⁶

Indeed, the danger of an increase in the number of states possessing nuclear weapons, aggravating international tensions and threatening world peace is what led Ireland to start the process which led, 10 years later, to the NPT.³⁴⁷

In particular, Resolution 1665 of 1961 (called ‘the Irish Resolution’ for the commitment of the Irish delegation to the General Assembly to the passage of such resolution) was remarkable in laying out for the first time some fundamental principles on nuclear non-proliferation, which were eventually transposed lately in articles I and II NPT. For example, in an unanimous passage of this resolution, the General Assembly:

‘1. Calls upon states, and in particular those states possessing nuclear weapons, to use their best endeavors to secure the conclusion of an international agreement containing provisions under which the nuclear states would undertake to refrain from relinquishing control of nuclear weapons and from transmitting the information necessary for their manufacture to states not possessing such weapons, and provisions under which states not possessing nuclear weapons would undertake not to manufacture or otherwise control such weapons;

2. Urges all states to co-operate to those ends.’³⁴⁸

For their part, both the main superpowers at that time, the United States and the Soviet Union, supported the Irish proposal, but mainly because the treaty would have ensured them

³⁴⁶ Sonia Drobysz and Andreas Persbo, ‘Strengthening the IAEA Verification Capabilities’ in Ida Caracciolo et al (eds) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016), p. 129.

³⁴⁷ Joyner (n 343), pp. 3, 4.

³⁴⁸ UNGA Res 1665(XVI) (4 December 1961) UN Doc A/RES/1665(XVI).

the halting of horizontal proliferation³⁴⁹ but almost no requirement when it came to vertical proliferation.³⁵⁰

Nevertheless, it was not until 1965 that the General Assembly, exercising its powers under article 11(1) UNC,³⁵¹ agreed upon five main principles which were to be the foundation of a treaty on the non-proliferation of nuclear weapons.

Hence, according to Resolution 2028 of 1965, the five main principles to take into account for the conclusion of the NPT were:

‘(a) The treaty should be void of any loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly, nuclear weapons in any form;

(b) The treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear Powers;

(c) The treaty should be a step towards the achievement of general and complete disarmament and, more particularly, nuclear disarmament;

(d) There should be acceptable and workable provisions to ensure the effectiveness of the treaty; and

(e) Nothing in the treaty should adversely affect the right of any group of states to conclude regional treaties in order to ensure the total absence of nuclear weapons in their respective territories.’³⁵²

Working on the basis of the aforementioned five principle from 1965 to 1968, on 11 March 1968 the United States and the Soviet Union sent a draft of the treaty to the Conference of the Eighteen-Nation Committee on Disarmament (ENDC).³⁵³ The draft, which was subjected to various subsequent revisions, was sent for approval to the General Assembly on 31 June 1968, which adopted it through Resolution 2373 of 12 June 1968.³⁵⁴

³⁴⁹ ‘Horizontal proliferation is the spread of nuclear weapons to new countries by banning the trade of nuclear arms and to stop any capability of producing nuclear weapons;’ Harry Breese, ‘Horizontal vs. Vertical proliferation’ (*The Nuclear Times*, 12 December 2016) available at <https://thenucleartimes.wordpress.com/2016/12/12/horizontal-vs-vertical-proliferation/> accessed 1 January 2020.

³⁵⁰ ‘Vertical proliferation refers to the advancement and stockpiling of nuclear weapons’; *ibid*.

³⁵¹ It is quite remarkable how, under article 11(1) UNC, ‘the General Assembly may consider the general principles of co-operation in the maintenance of international peace and security, including the principles governing disarmament and the regulation of armaments, and may make recommendations with regard to such principles to the Members [...]’; UNC; art. 11(1).

³⁵² UNGA Res 2028(XX) (19 November 1965) UN Doc A/RES/2028(XX), para 2.

³⁵³ A multilateral negotiations forum based in Geneva and instituted in 1961 tied the United Nations.

³⁵⁴ Joyner (n 343), pp. 6-7; UNGA Res 2373(XXII) (12 June 1968) UN Doc A/RES/2373(XXII).

The text of the NPT that enter into force in 1970 after the deposit of the fortieth instrument of ratification³⁵⁵ consists of eleven articles, and its commonly divided in three main pillars: non-proliferation, peaceful use of nuclear energy and disarmament, in addition to some provisional articles. Between these, article VIII(3) establishes that five years after the entry into force of the treaty, and at intervals of five years thereafter, a conference of parties should be held in Geneva, in order to review the operations conducted under the treaty and their respect of its purposes. Such conferences, subsequently defined as the NPT review conference, are aimed reaching an agreement on common assessment of how the NPT is being implemented by its parties.³⁵⁶

Unfortunately, considering that such agreement has to be reached by consensus, the parties to the treaty have rarely reached such agreement; nonetheless, the preparatory works for such conferences and the drafting of the proposed agreement have become paramount, replacing actual negotiation.

Between the NPT review conferences, particular importance has to be given to the one held in 1995, when the parties agreed to the indefinite extension of the treaty as requested by article X(2) (however, this decision was taken using the voting method of majority and not consensus).³⁵⁷

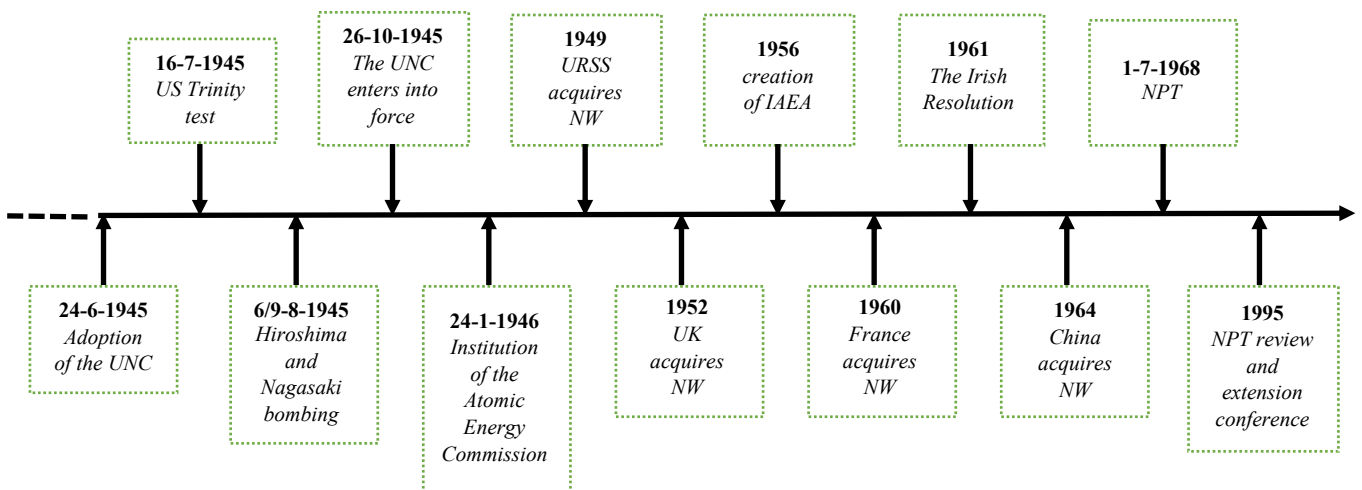


Fig. 1: Non-Proliferation Timeline

³⁵⁵ As set forth in art. IX(3).

³⁵⁶ Boisson De Chazournes (n 338), pp. 378.

³⁵⁷ According to art. X(2), the NPT was originally aimed at lasting only 25 years, with the possibility for the parties, in 1995, to extend the agreement only for a fixed period of time or indefinitely; NPT, art. X(2).

a) *The grand bargain and its controversies*

The 1958 Irish proposal ended up being transferred in an international agreement that contains two distinct sets of obligations.

On one hand, states which already possessed nuclear weapons prior to the adoption of the NPT (Nuclear Weapons States or NWS) had to commit not to proliferate those weapons or those technologies that could lead to the development of nuclear weapons in states that did not already possess them. They also accepted, according to the text of article VI, to eventually conclude negotiations towards a complete and effective nuclear disarmament, even though this topic will be analyzed later.

On the other hand, states not possessing nuclear weapons, and precisely those who had not manufactured or exploded 'a nuclear weapon or other nuclear explosive devices prior to 1 January 1967'³⁵⁸ (defined as Non-nuclear weapons States or NNWS), had to agree not to acquire such weapons from those who already possessed them, nor to manufacture them independently. Nonetheless, in exchange of what would otherwise be their right to possess nuclear weapons, NNWS demanded that the treaty recognized them two concessions from NWS.

First, they demanded that the treaty recognized their right to use nuclear technologies for purposes of civilian power generation, in addition to a further obligation on the part of NWS and other supplier states to provide positive assistance to NNWS in the development of their civilian nuclear programs.³⁵⁹

Secondly, they requested that NWS undertook an obligation to 'pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.'³⁶⁰

This system of reciprocal obligations is what has later been defined as the NPT 'grand bargain'. These two different sets of obligations are what differentiate the NPT from other

³⁵⁸ NPT, art. IX(3).

³⁵⁹ *Interpreting NPT* (n 334), p.27.

³⁶⁰ NPT, art. VI; see also UNGA Res 1378(XIV) (20 November 1959) UN Doc A/RES/1378(XIV); UNGA Res 1660(XVI) (28 November 1961) UN Doc A/RES/1660(XVI); UNGA Res 1664(XVI) (4 December 1961) UN Doc A/RES/1664(XVI); UNGA Res 1665(XVI) (4 December 1961) UN Doc A/RES/1665(XVI); UNGA Res 1722(XVI) (20 December 1961) UN Doc A/RES/1722(XVI).

broadly ratified multilateral treaty, such as the Genocide Convention³⁶¹ or the United Nations Convention on the Law of the Sea³⁶²; for this reason, the NPT, because of its fundamental *quid pro quo* nature, has been defined by some authors more as a ‘contract treaty’, a form of treaty more generally used in international law to define business transactions.³⁶³

Before analyzing specifically the content of specific articles in the treaty, it must be recalled that the object of such chapter is to scrutinize the non-proliferation strategy set out in the NPT; hence, while the disarmament pillar will be the object of further deep analysis in the following chapter, for the scope of this thesis, the pillar on peaceful use nuclear energy will not be investigated.

i. The Nuclear Weapons States Regime

Article I NPT is dedicated to the obligations of NWS parties with regard to their non-proliferation commitments. As recalled previously, according to the NPT, nuclear weapons States Parties are those states which manufactured or exploded nuclear weapons or any other kind nuclear explosive devices prior to 1 January 1967.³⁶⁴ Nonetheless, even though France and China respected such criterion, they only joined the NPT as NWS parties on 9 March 1992 and 3 August 1992 respectively.

The first sentence of article I NPT affirms that: ‘Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly;’³⁶⁵

The wording of such provision is the result of long negotiations; it is clear that the article aims at prohibiting the transfer of nuclear weapons and nuclear explosive devices outside of the territory of one of the NWS. Nonetheless, two elements have to be taken into account: first, article I does not include the prohibition of single components of such weapons, of related

³⁶¹ Convention on the Prevention and Punishment of the Crime of Genocide (adopted 9 December 1948, entered into force 12 January 1951) 277 UNTS 78.

³⁶² United Nation Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 31363.

³⁶³ Joyner (n 343), p. 9.

³⁶⁴ NPT, art. IX(3).

³⁶⁵ *ibid*, art.1.

material and of design information, probably because of the will of US and UK to cooperate on their nuclear development programs.³⁶⁶

Second, the terms ‘nuclear weapons’ and ‘other nuclear explosive devices’ are not defined by the treaty. Actually, in other relevant treaties on the matter, as the 1967 Treaty of Tlatelolco³⁶⁷ or the 1945 US Atomic Energy Act, the definition of what constitutes atomic weapons is given using the so called ‘principal purpose test’. In the wording of the latter treaty cited, an atomic weapon is defined as ‘any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device) the principal purpose of which is for use as, or development of, a weapon, a weapon prototype, or a weapon test device’.³⁶⁸

Notably, the Treaty of Tlatelolco adds to the principal purpose test an objective test, focusing on the physical characteristics of the device: it defines nuclear weapons as devices ‘capable of releasing nuclear energy in an uncontrolled manner’, characteristic that makes them appropriate for ‘warlike purposes’.³⁶⁹

Nonetheless, the only guidance offered by the NPT is the distinction between ‘nuclear weapons’ and ‘other nuclear explosive devices’, which implies that devices belonging to the first class are to be classified as weapons, by virtue of their characteristics of their intended use.³⁷⁰ On the other hand, it follows that ‘other nuclear explosive devices’ are those which, according to the same parameters, can only be classified as non-weapons, as those devices used for peaceful research or for civilian engineering purposes.

The second sentence of article I NPT relates to the relationship between NWS and NNWS when it comes to nuclear technologies. It affirms that NWS should undertake ‘in any way not to assist, encourage or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or

³⁶⁶ John Simpson, ‘The Nuclear Nonproliferation Treaty’ in Nathan E. Bush and Daniel H. Joyner (eds) *Combating Weapons of Mass Destruction: The Future of International Nonproliferation Policy* (University of Georgia Press, 2009), pp. 45-73.

³⁶⁷ Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (or Treaty of Tlatelolco) (adopted 14 February 1967) UN Doc A/6663.

³⁶⁸ US Atomic Energy Act (1954) available at <https://legcounsel.house.gov/Comps/Atomic%20Energy%20Act%20Of%201954.pdf> accessed 2 January 2020, section 11(d); it must be underlined that most of the US draft for a treaty on nuclear non-proliferation, presented to the General Assembly was mainly based on the already existing US Atomic Energy Act.

³⁶⁹ Treaty of Tlatelolco, art.5.

³⁷⁰ Joyner (n 343), p.12.

explosive devices.³⁷¹ This prohibition aims at halting NWS to share nuclear technologies, components and designs that are indeed allowed to share only with other NWS.

ii. The non-Nuclear Weapons States Regime

Under article II NPT, NNWS undertake two main obligation:

1) not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly or indirectly;

2) not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.³⁷²

It stems clearly from the words of such article that the issue of the nuclear sharing agreement between US and its NNWS NATO allies creates. Indeed, twenty-seven of the thirty members of the North Atlantic Treaty have joined the NPT as NNWS, nonetheless, they belong to an alliance that made nuclear deterrence the main part of its military doctrine.³⁷³ In particular, six NATO member and non-nuclear weapons states under the NPT (Belgium, Germany, Greece, Italy, Netherlands, and Turkey) have concluded six arrangements during the Cold war, that are still in force, according to which they host in their countries approximately 200 US B-216 gravity bombs overall,³⁷⁴ clearly violating the first of the three obligations under article II NPT.

Nuclear sharing between these states and NATO implies that such weapons are physically located within the territory of a NATO State, generally in the context of a domestic military installation, together with all items necessary to deliver such weapons, such as military personnel trained to maneuver these explosive devices and appropriately fitted aircrafts.³⁷⁵

Even though both, physical possession and the operational control legally belong to the United States in times of peace (indeed, the launch codes are only known by the US military, and can be activated upon authorization of the US President), NATO strategic policy provides

³⁷¹ NPT, art. I.

³⁷² NPT, art. II.

³⁷³ Karel Koster, 'An Uneasy Alliance: NATO Nuclear Doctrine & The NPT' (2000) 49 Disarmament Diplomacy <http://www.acronym.org.uk/old/archive/49npt.htm> accessed 2 January 2020.

³⁷⁴ *ibid.*

³⁷⁵ Joyner (n 343), p.13-15.

that, in times of war, the US President could authorize the activation of the weapons located in NNWS NATO states, that would have the physical control over their use. This means that nuclear weapons would be transported and dropped by aircrafts operated by the host State, under the NATO chain of command.

Being confronted over time with the concern that, not only the stationing of such weapons, but the actual possibility to operate them, would seriously breach the dispositions of articles I and II NPT, the US has maintained the position that these nuclear sharing arrangements do not violate the NPT and that, in time of war, the NTP would not apply and would no longer control these states military framework.³⁷⁶ This view of international law has indeed variously been criticized, since, from the Nuremberg war crimes trials, it has been established that no principle of international humanitarian law or of the law governing international use of force can render existing treaty provisions inoperable in time of war, rules that are, on the contrary, essential for the survival of positive international law.³⁷⁷

In support of this argument, Ian Brownlie, in his Third Draft Report as Special Rapporteur of the International Law Commission (ILC)³⁷⁸ on the effect of armed conflict on treaties, stated that: 'the outbreak of an armed conflict does not necessarily terminate or suspend the operation of treaties both, between the parties of the armed conflict or one or more party to the armed conflict and a third State.'³⁷⁹ Furthermore, if the possibility to suspend or terminate a treaty in case of an armed conflict wants to be affirmed, it must be determined in accordance with the intention of the parties at the time of the conclusion of the treaty in question.³⁸⁰

In the wording of the ILC, the intention of the parties to a treaty to its susceptibility to termination or suspension shall be determined in accordance with the provision of articles 31 and 32 VCLT, and with the nature of the armed conflict in question.³⁸¹ And, if according to article 31 VCLT, a treaty should be interpreted in good faith and in the light of its object and

³⁷⁶ See the Message from the President of the United States to the US Senate 90th Congress 2nd session, on 6 July 1968, as reported in Mason Willrich, 'Non-Proliferation Treaty: Framework for Nuclear Arms Control' (1969) 63(4) AJIL.

³⁷⁷ Leslie C. Green, *The Contemporary Law of Armed Conflict* (2nd edn, Manchester University Press 2008), p.55.

³⁷⁸ The International Law Commission was created in 1947 to undertake the mandate of the General Assembly under article 13(1)(a) UNC to 'initiate studies and make recommendations for the purpose of [...] encouraging the progressive development of international law and its codification.'

³⁷⁹ Draft articles on the effects of armed conflicts on treaties (2011) in *Yearbook of the International Law Commission, 2011*, vol. II, Part Two, art.3.

³⁸⁰ *ibid*, art. 4(1).

³⁸¹ *ibid*, art. 4(2).

purposes,³⁸² it is clear that the NPT was concluded with the aim to prohibit any further spread of nuclear weapons and with the will of limiting the severity of any nuclear exchange between belligerents, objective that is confirmed when looking at the circumstances of the conclusion of the NPT and at the preparatory works, as requested by article 32 VCLT.

Hence, the object and the purpose of this treaty do not, in any way, suggest that the parties aimed at suspending the effects of its provisions in time of war when they concluded it. Hence, any use of nuclear weapons by NNWS during time of war or any transfer of nuclear explosive devices from a NWS to a NNWS, which is the essential effect of the aforementioned nuclear sharing agreements, would be a fundamental violation of articles I and II of the NPT.

A second problem which stems from the formulation of article II NPT is linked to the broad use of the term 'manufacture', and to what does the second obligation contained in article II imply for NNWS.

As it can be seen in article III NPT, most of the attention when dealing with nuclear non-proliferation is concentrated in the surveillance, by the IAEA, of NNWS fissionable material. In particular, the Agency must enact procedure for the safeguard that shall be followed in order to verify whether special fissionable material 'is being produced, processed or used in any principal nuclear facility or is outside of any such facility'.³⁸³

However, the production of nuclear weapons involves not only fissionable material, but also the construction or acquisition of mechanical devices capable to manipulate such material and channeling its energy into an atomic weapon.³⁸⁴

According to the vision of William C. Foster, the head of the US delegation to the NPT negotiations, the term manufacture should be interpreted as to comprehend any activity involved in the construction of a nuclear explosive device.³⁸⁵ Nonetheless, how far back along the process of manufacture the criteria goes is not clear. Some NNWS have affirmed that the term does not cover activities like research and development of design information regarding nuclear explosive devices, as long as an actual production of such devices does not begin.³⁸⁶

³⁸² VCLT, art. 31(1).

³⁸³ NPT, art. III(1).

³⁸⁴ Joyner (n 343), p.16.

³⁸⁵ *ibid*, 16-17. This view has been accepted by many authors and is today defined as the Foster criteria.

³⁸⁶ Leonard Weiss, 'The Nuclear Nonproliferation Treaty: Strengths and Gaps' in Henry Sokolski (ed.), *Fighting Proliferation: New Concerns for the Nineties* (Air University Press 1996), commentary on art. 2 NPT.

- iii. The NPT alleged discrimination and double standard between NWS and NNWS

As seen above, at the time of its conclusion, the NPT was seen as a treaty which could represent a meeting point between the will of NWS to stop horizontal proliferation, and the NNWS aim to keep using nuclear energy for peaceful purposes and to start negotiations leading to general and complete disarmament.³⁸⁷

Nonetheless, with the exceptions of North Korea, Iran and Iraq (which will later be discussed), even if the vast majority of NNWS have respected their obligations under article II NPT, the implementation of the obligations which must be pursued by NWS still remain a main challenge. Using the words of the previous Secretary-General of the United Nations, Ban Ki-Moon:

‘Thousands of nuclear weapons remain on hair trigger alert. More States have sought and acquired them. Nuclear tests have continued. And every day, we live with the threat that weapons of mass destruction could be stolen, sold or slip away. As long as such weapons exist, so does the risk of proliferation and catastrophic use. So, too, does the threat of nuclear terrorism. [...] Nuclear disarmament is the only sane path to a safer world. Nothing would work better in eliminating the risk of use than eliminating the weapons themselves.’³⁸⁸

To this date, members of the NPT are still divided over what are the priorities to at least partially start to implement NWS obligations towards the cessation of the nuclear arms race, and how to balance non-proliferation and disarmament obligations.³⁸⁹

Furthermore, the treaty itself affirms that ‘nothing shall impair the inalienable right of all the parties to the treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination’³⁹⁰ and that the safeguards implemented by the International Atomic Energy Agency must be implemented in a way to comply with such non-discriminatory

³⁸⁷ See *supra* at Chapter II(2).

³⁸⁸ ‘Ban Ki-moon welcomes new agreement to defeat nuclear terrorism’ (*UN News* 13 June 2007), available at <http://www.un.org/apps/news/story.asp?NewsID=22892> accessed 3 January 2020.

³⁸⁹ Melissa Gillis, *Disarmament: a Basic Guide* (4th ed, United Nations Publications 2017), p. 47.

³⁹⁰ NPT, art. IV(1).

aim, and to avoid ‘hampering the economy or technological development of parties or international co-operation in the field of peaceful nuclear activities.’³⁹¹ Indeed, the treaty allows for the ‘exchange nuclear of material and equipment for the processing, use or production of nuclear material for peaceful purposes.’³⁹² Moreover, under the treaty, parties should co-operate in contributing to the development of nuclear energy for peaceful purposes, especially in the territories of NNWS parties to the treaties, with due consideration of the need of underdeveloped areas of the world.³⁹³ Finally, under the treaty, the benefits from any peaceful application of nuclear weapons should be made available to NNWS parties to the treaty in a non-discriminatory basis.³⁹⁴

Nonetheless, many NNWS parties to the treaty have variously claimed that, in practice, the NPT, and the controls over its respect implemented by the IAEA, have created a discriminatory regime for the use or exchange of product aimed at the production of nuclear energy or to nuclear research for peaceful purposes.

For example, in the context of the 2000 NPT Review Conference, the representative of Siryah stated that it was no longer a secret that the NPT was not the non-discriminatory document that aimed to be in 1968; not only it did not slow nuclear proliferation, but, even if all parties should have had access to nuclear power for peaceful uses, he claimed that double standards were clearly being applied.³⁹⁵ According to his declaration to the United Nation Press Conference: ‘Exporter States of nuclear power placed many obstacles in the way of non-nuclear States. [...] Such practices were in violation of the NPT.’³⁹⁶

Furthermore, India (that has conducted its first nuclear explosive tests in 1974)³⁹⁷ has claimed over the years that the fact that only states that have manufactured and developed nuclear weapons before 1 January 1967 can access the treaty as NWS is inherently discriminatory, and still refuses to join the treaty as NNWS.³⁹⁸

³⁹¹ *ibid*, art. III(3).

³⁹² *ibid*.

³⁹³ *ibid*, art. IV(2).

³⁹⁴ *ibid*, art. V.

³⁹⁵ ‘NPT "Not the ideal non-discriminatory document hoped for", Syria asserts as review conference continues’ (*United Nation Press Release* 26 April 2000) available at <https://www.un.org/press/en/2000/20000426.dc2698.doc.html> accessed 3 January 2020.

³⁹⁶ *ibid*.

³⁹⁷ Gillis (n 389), p. 29.

³⁹⁸ Leonard Weiss, ‘India and the NPT’ (2010) 34(2) *Strategic Analysis*.

Whether the reader decides to adhere or not to adhere to such critics, what cannot be contested is that NWS have not complied with their disarmament obligations yet. One clear example can be shown considering that the Treaty on the Prohibition of Nuclear Weapons has not been signed by any of the NWS of the NPT, that theoretically should be bounded, according to their commitment under article VI NPT, to adhere to a treaty on general and complete nuclear disarmament.

3. The enforcement mechanisms of non-proliferation law

a) The IAEA safeguard system

The International Atomic Energy Agency (IAEA) was created eleven years before the conclusion of the NPT, as the result of the ‘Atoms for Peace Plans’ envisaged by US President Eisenhower. In a speech given to the United Nations General Assembly on 8 December 1953, Eisenhower proposed that states possessing nuclear materials should have shared their resources with NNWS not possessing such technologies for peaceful purposes, under the supervision of an international organization.³⁹⁹ Hence, the IAEA was originally instituted to encourage research on the development of atomic energy for peaceful uses and as an intermediary, when asked, to secure the supply of materials, equipment or facilities from one member of the Agency to the other.⁴⁰⁰ Indeed, in the context of article III of the Statute of the IAEA, the role to administer safeguards aimed at ensuring that fissionable material and other services, materials, equipment and information made available by the Agency were not use for military purpose is only marginal. Indeed, the original structure of the Agency provided that arrangements between states and the Agency on any activities in the field of nuclear energy were only concluded at the request a State.⁴⁰¹

Being this the original purpose of the Agency, in the early 1960s, any inter-state transfer of nuclear material and technologies was supervised only by the supplying State itself, which had the role to verify that such resources were used exclusively for peaceful purposes. However, when these transfers increased in number and frequency, the supplying states became eager to

³⁹⁹ David Fischer, *International Atomic Energy Agency: The First Forty Years and Personal Reflections* (Intl Atomic Energy Agency 1997).

⁴⁰⁰ Statute of the IAEA (approved on 23 October 1956 entered into force 29 July 1957) available at <<https://www.iaea.org/sites/default/files/statute.pdf>>, art. III(A)(1).

⁴⁰¹ *ibid*, art. III(A)(5).

shift such burden over the IAEA, which, after long discussions between the IAEA's Board of Governors, adopted its first 'Safeguard Document' (INFCIRC/26) on 31 January 1961, which contained the principles and safeguards to manage small nuclear reactors.⁴⁰²

Eventually, a more complete Safeguard Document was adopted by the Board of Governors between 1964 and 1965 (INFCIRC/66),⁴⁰³ which was aimed at ensuring that material transferred to NNWS would not be diverted to military uses. Nonetheless, INFCIRC/66 was not designed to cover the entirety of nuclear fuel facilities within a State, but rather to be applied to specific lots of nuclear materials, specific nuclear facilities and installations.⁴⁰⁴

Only two years after the entry into force of the NPT, the IAEA adopted INFCIRC/153, entitled 'The Structure and the Content of Agreements Between the Agency and the States Required in Connection with the Treaty on the Nonproliferation of Nuclear Weapons', which sets out the basic content that needs to be included in the agreements between the Agency and NNWS under article III(1)(4) NPT. The systems outlined by INFCIRC/153 provides that states have an obligation to keep detailed record of all sources of fissionable material in their possession and on their peaceful uses, and to present to the IAEA design information on states' facilities where such materials are kept, and to provide the Agency's inspector with access to such facilities.⁴⁰⁵

The safeguard system, that has kept evolving over time even after the introduction of the NPT (which peculiarities will be analyzed in the following paragraph) can seem difficult to keep track with and comprehend, is today mainly based on two principal elements:

1. each State shall declare to the Agency its fissionable material holdings;
2. the IAEA has to verify whether states' declarations are correct and complete.

In an enlightening example, Sonia Drobysz and Andreas Persbo have compared the Agency to a tax law authority: 'in tax law, the individual often submits a declaration to the authority which first checks it for correctness and completeness and then decides on the final tax for the year. Under the safeguards system, the State submits reports, or declarations, on all nuclear material that is subject to safeguards. The Agency then checks whether the declarations are

⁴⁰² Laura Rockwood, 'Legal framework for IAEA safeguards' (2013) International Atomic Energy Agency available at <https://www.iaea.org/sites/default/files/16/12/legalframeworkforsafeguards.pdf> accessed on 4 January 2020, p. 11.

⁴⁰³ *ibid.*

⁴⁰⁴ Joyner (n 343) p. 20.

⁴⁰⁵ *ibid.*

correct and complete. If declarations do not check out, in any of those aspects, the organization may report this to its member states.⁴⁰⁶

i. The IAEA role in the framework of the NPT

As already mentioned, a main role in the system of the NPT is represented by the safeguard implemented by the IAEA, which aim at effectively monitor the flow of fissionable material through the use of instruments and other technics at certain strategic points.⁴⁰⁷

In particular, article III paragraph 1 and 2 NPT provide with two different mechanism aimed at ensuring the respect of non-proliferation obligations from NWS and NNWS: safeguards and export controls.

First of all, according to paragraph 4 of article III, all NNWS parties to the treaty shall negotiate and conclude a safeguards agreement with the IAEA, which must take into account the Statute of the International Atomic Energy Agency.⁴⁰⁸ The treaty provides that such agreements may be concluded individually or altogether between the IAEA and NNWS, and that negotiations shall start after 180 days from the entry into force of the NPT (or, for states that have accessed the treaty later in time, immediately after their accession). The agreements shall be concluded not later than eighteen months after the beginning of the negotiations.⁴⁰⁹

With the entry into force of these individual agreements, NNWS agree to accept the impositions of safeguards administered by the IAEA, which are specifically directed at controlling that the use nuclear energy is not diverted from peaceful purposes (such as civilian power generation) and used to manufacture nuclear weapons or other nuclear explosive devices.⁴¹⁰

The treaty specifies that such agreement should be concluded for the exclusive purpose of verification of the fulfillment of the obligation assumed by NNWS under the treaty, and in particular to prevent that nuclear energy could be used for purposes different from peaceful ones.

⁴⁰⁶ Drobysz and Persbo (n 346) p.129.

⁴⁰⁷ NPT, fifth preamble clause.

⁴⁰⁸ NPT, art. III(1).

⁴⁰⁹ *ibid*, art. III(4).

⁴¹⁰ Manson Willrich, 'Non-Proliferation Treaty: Framework for Nuclear Arms Control' (1969) 63(4) AJIL, chapter V.

Under the terms of the safeguard agreements, all fissionable material in possession of NNWS, even if aimed at producing nuclear energy for peaceful uses at civilian facilities, must be declared to the IAEA, whose inspectors must be given regular possibility to access and verify the facilities for the purpose of monitoring and inspecting such material.⁴¹¹

Practically speaking, the respect of states obligation under article III paragraph 1 is guaranteed by a process of verification of details on the location, the handling and the use of the nuclear material reported to the Agency through national reports. Such verifications are conducted through routine inspection of the declared facilities, where the IAEA inspectors may also sample the environment within or outside the facilities. This system came to be known as the 'Full Scope Safeguards System' (FSSG).⁴¹²

The compliance of NNWS to their safeguard agreements is verified by the IAEA inspectors under the latest INFCIRC/540 verification system or under INFCIRC/153;⁴¹³ reports on states compliance are sent to the IAEA Board of Governors, that, if determines that there has been a breach, will ask the State at stake to clarify or provide further information on its safeguard commitments.⁴¹⁴

If the contested breach continues, or the IAEA is 'not able to verify that there has been no diversion of nuclear material required to be safeguarded under the Agreement to nuclear weapons or other nuclear explosive devices', and the State refuse to comply with the instructions of the Board of Governors, the Board can refer the matter to the United Nations Security Council for its deliberations and actions, and for its potential authorization to act according to Chapter VII of the Charter of the United States.⁴¹⁵

Having attempted to analyze the IAEA safeguard system enshrined the first paragraph of article III NPT, it must be added that paragraph 2 has an equally important role in the NPT verification system. Indeed, it provides that all parties (hence also NWS) shall undertake not to provide to any NNWS, unless they act according to the safeguards required by art. III NPT:

- a) sources or special fissionable material;
- b) equipment or material specifically designed or prepared for the processing, use or production of special fissionable material.⁴¹⁶

⁴¹¹ Joyner, (n 343), p.18.

⁴¹² Fritz Schmidt, 'NPT Export Controls and the Zangger Committee' (2000) 7(3) Nonproliferation review.

⁴¹³ Which will be analyzed in the following paragraph.

⁴¹⁴ IAEA Statute, art. XII.

⁴¹⁵ *ibid*, art. XII(C).

⁴¹⁶ NPT, art. III(2).

This provision, one of the vaguest of the entire treaty, provides for what can be defined as national export controls, a particularly sensitive topic for NWS and their nuclear-related technology suppliers.

Due to the need of clarity in the field, in 1971, a group made by representatives of NWS and supplier states got together to clarify the technical implications of the NPT export controls provisions. This meeting was the first session of a group later called the Zangger Committee, for its Chairman, Professor Claude Zangger.⁴¹⁷ The committee established a set of Understandings and a Trigger List of items whose export should be trigger major safeguards. Rather than a forum to impose stricter rule than the one established by the NPT, the Committee became a forum for harmonization of export control policies and for the setting of minimal standards to comply to respect the provisions of article III paragraph 2 of the NPT.⁴¹⁸ The Understandings ended up being published as an official IAEA document in 1974 (INFCIRC/209), and are divided in two memoranda, one for each letter of article III paragraph 2 of the NPT: Memorandum A deals with sources and special fissionable materials, while Memorandum B deals with equipment and materials specifically designed or prepared for the processing, use or production of special fissionable material. The memoranda establish that a provider State, when furnishing material to a non-nuclear weapon State not part of the NPT, must:

- a) obtain insurances from the recipient State that the exported materials will not be used in a nuclear explosion;
- b) subject such item, and materials on the trigger list produced through their use, to IAEA safeguards; and
- c) ensure that items on the Trigger List are nor re-exported to a third party recipient State, unless that recipient State meets the criteria laid out in a) and b).⁴¹⁹

ii. The limited role of the IAEA safeguard system

After having analyzed the role and powers of the IAEA in the international legal order, some results after its institution and its work of verification of the respect of the NPT are to be mentioned.

⁴¹⁷ Joyner (n 343), p.27

⁴¹⁸ Fritz Schmidt, 'NPT Export Controls and the Zangger Committee' (2000) 7(3) Nonproliferation review, p. 137.

⁴¹⁹ Joyner (n 343), p. 28.

Indeed, after the entry into force of the NPT, on 5 March 1970, its limitations to governments nuclear choices are visible, since only a limited number of states have chosen to go nuclear in its last 50 years of operation:

- In only 4 cases, states have decided to acquire nuclear weapons, states that are outside of the NPT regime and not subject to IAEA safeguards;
- There have been only three cases of development of weapon capabilities from within the regime;
- There are just two current cases of suspect non-compliance.⁴²⁰

a tangible positive result of the IAEA work to implement the respect of the NPT can be appreciated by looking at the multiplicity of safeguards agreements stipulated during the last half century, some of which have also been stipulated with states outside the NPT.⁴²¹ The role of the IAEA in supporting the no-proliferation regime through its agreements appears evident.

Nonetheless, one of the main perplexity regarding the system of IAEA safeguards provided by the NPT is represented by the fact that, because of those (legitimate) provisions of the NPT which ensure that IAEA inspections shall be implemented ‘to avoid hampering the economic or technological development of the parties’, ‘to avoid undue interference’ in civilian nuclear energy and ‘to reduce to a minimum the possible inconvenience and disturbance to the State’, as a result, IAEA inspectors are not allowed to access all parts of the facilities visited, but are only agreed to some ‘strategic points’.⁴²²

Nonetheless, in order to face such limitation, INFCIRC/153 provided for the IAEA inspector to be authorized to conduct ‘special inspection’ in addition to the routine ones, thorough which the Agency should have access, in agreement with the State, to further information and locations.⁴²³ Nonetheless, the idea was not welcomed by NNWS, who created

⁴²⁰ These proliferations ‘episodes’ will be analyzed later para (3)(b).

⁴²¹ See ‘Agreement of 4 April 1975 Between the Agency, Israel and the United States of America for the Application of Safeguards’ (INFCIRC/249) available at <
<https://www.iaea.org/publications/documents/infcircs/text-agreement-4-april-1975-between-agency-israel-and-united-states-america-application-safeguards>> accessed on 5 January 2020.

⁴²² Joyner (n 343), p.21.

⁴²³ ‘The Structure and Content of Agreements Between the Agency and States Required in Connection with the Treaty on The Non-Proliferation Of Nuclear Weapons’ (INFCIRC/153 (Corrected)) available at <https://www.iaea.org/sites/default/files/publications/documents/infcircs/1972/infcirc153.pdf>, art. 77.

an environment in which IAEA inspectors did not feel able to make such requests and ended up never making them.⁴²⁴

A typical example of the lacks provoked by this system is the discovery, in 1991, that Iraq had clandestinely pursued a nuclear weapons program, which was located in a nuclear site situated just next to the know to the IAEA (and inspected by its personnel) Tuwaita Nuclear Research Center. This episode internationally shook the confidence in the IAEA safeguards program.

The clear problem is represented by the fact that the verification system completely relies upon states' national reports, and the IAEA has no power, under this system, to forcefully control if these declarations are indeed correct and complete.

After the 1991 fiasco, the IAEA Director General Hans Blix, in a speech in front of the 46th Session of the General Assembly, called for the elaboration of a new IAEA safeguard system with 'more teeth'.⁴²⁵ These process led to the adoption of the 1997 Model Additional Protocol (INFCIRC/540), that, in an attempt to transform IAEA inspector 'from accountants to detectives',⁴²⁶ aims at reinforcing the system by introducing two new element.

First, the Additional Protocol requires states to provide the Agency with a more detailed report than the one requested by INFCIRC/153: nowadays, states must not only include details on their nuclear material and the facility involved in producing and processing it, but must also include information on all nuclear fuel cycle-related research and development activities that do not involve nuclear material but may be used in its production, including activities carried out in private facilities.⁴²⁷

Second, the Additional Protocol gives IAEA 'complementary access' to any place on a selective basis in the site of the declared facility, and not only in agreed strategic point established by the hosting states. It also provides access to those sites in which the State conducts nuclear fuel cycle-related research and development activities, in order to verify any question on 'the correctness and completeness of the information provided.'⁴²⁸

⁴²⁴ Joyner (n 343), p.21.

⁴²⁵ *ibid*, p.22.

⁴²⁶ Theodore Hirsch, 'The IAEA Additional Protocol: What It Is and Why It Matters' (2004) *The Nonproliferation Review*.

⁴²⁷ Model Protocol Additional to The Agreement(S) between State(S) and The International Atomic Energy Agency for the Application of Safeguards (INFCIRC/540) available at <https://www.iaea.org/sites/default/files/infcirc540.pdf>.

⁴²⁸ *ibid*, art. 4.

Nonetheless, maybe the most revolutionary provision contained in INFCIRC/540 regards the possibility given to the IAEA inspectors to any location specified by them, where they would like to take soil, water and air samples, in order to detect the presence of fissionable material and be able to produce evidences of undeclared nuclear activities.⁴²⁹ Cleverly, the additional Protocol affirms that states member of the Agency must provide IAEA inspectors with multi-entry visas, provision that allows them to inspect the chosen site in a short-time period, without having to wait for months to receive the authorization from the inspected State, that took all the time necessary to cover any proof over nuclear activity.⁴³⁰

Therefore, Additional Protocol is surely an important instrument that may give new belief in the efficacy and efficiency of the IAEA verifications. Nonetheless, it must be underlined that accession to such protocol is only facultative for NNWS under the NPT, that may well opt out from it, and keep being subjected to the INFCIRC/153 regime.

Hence, even after the positive changes implemented by the Additional Protocol, the IAEA safeguard systems still relies on states cooperation. In the words of professor Daniel H. Joyner, ‘while the IAEA safeguards system overall is esteemed as an effective tool for verifying NNWS compliance with NPT article II obligations, its limitations as a system imposed upon sovereign entities, by an international organization system with limited compulsory powers and abilities, are apparent.’⁴³¹

Furthermore, despite its aim to be an independent body of nuclear surveillance which verifies objectively the NPT commitment, the IAEA has also been criticized for its politicization and for being influenced by ‘powerful Western countries’ for accomplishing their political agenda.⁴³²

On this regard, observers have noted the differences in the treatment of Iran and South Korea violation of their Safeguard Agreements and their commitment under article II NPT, despite the many similarities of their breaches. While the Iranian case will be analyzed later, it must be reported that, in 2004, South Korea’s Ministry of Science and Technology reported to the IAEA that South Korea had successfully conducted uranium enrichment experiments and plutonium separation experiments, respectively in 2000 and 1982.⁴³³ The reason why South

⁴²⁹ *ibid*, art. 5.

⁴³⁰ *ibid*, art. 12.

⁴³¹ Joyner (n 343), p. 24.

⁴³² *ibid*.

⁴³³ Paul Kerr, ‘IAEA: Seoul’s Nuclear Sins in Past’ (*Arms Control Association*) available at <https://www.armscontrol.org/act/2004-12/iaea-seouls-nuclear-sins-past> accessed 4 January 2020.

Korea finally disclosed the tests relies in the fact that in 2004 it joined the additional protocol; hence, the IAEA inspectors, that were in fact denied to entry in South Korea in 2002 and 2003, may have discovered it autonomously from the environmental sampling provided by the Protocol.

Nonetheless, the Governors Board ended up only encouraging South Korea to continue its active cooperation with the IAEA, not even referring the situation to the Security Council. This situation clearly contrasts with the resolutions adopted by the Security Council just one year before regarding Iran's uranium enrichment and plutonium extraction experiments.⁴³⁴

b) The United Nation Security Council involvement with nuclear non-proliferation disputes

As mentioned above, when the IAEA Board of Governors recognizes that a member of the NPT has violated the safeguard agreements concluded under article III(1)(4) of the NPT or and export control obligation set forth in article III(2), shall refer the situation to the United Nations Security Council, which may take those action that it deems necessary to solve the situation.⁴³⁵

In particular, the IAEA Statute provides that, in carrying out its functions, the Agency shall:

‘Submit reports on its activities annually to the General Assembly of the United Nations and, when appropriate, to the Security Council: if in connection with the activities of the Agency there should arise questions that are within the competence of the Security Council, the Agency shall notify the Security Council, as the organ bearing the main responsibility for the maintenance of international peace and security, and may also take the measures open to it under this Statute, including those provided in paragraph C of Article XII.’⁴³⁶

Hence, even after having reported the non-compliant Agency member to the Security Council, the IAEA can still take some measures and specifically, the ‘direct curtailment or suspension of assistance being provided by the Agency or by a member, and call for the return of materials and equipment made available to the recipient member or group of members.’⁴³⁷

⁴³⁴ Joyner (n 343), p.26.

⁴³⁵ IAEA Statute, art. III and XII.

⁴³⁶ *ibid*, art. III(B)(4).

⁴³⁷ *ibid*, art. XII(c).

Finally, the Agency may also suspend the privileges given to its non-complying member and its membership.⁴³⁸

Consequently, even if, as analyzed above, the perimeter of the IAEA safeguards stops where the contribution of its member states end, it may be that, in time of profound crisis of the NPT, the role of the IAEA may be supplemented by the intervention of the United Nations Security Council, that, since its legislative resolutions 1373 and 1540,⁴³⁹ has promoted the reinforcement of the IAEA in its ‘institutional, functional and teleological link with the UN Bodies.’⁴⁴⁰

Inspired by the strengthening of the IAEA an UNSC bond, some authors have suggested that, in order to strengthen the role of the IAEA in the maintenance of the world security order, the Security Council should adopt , on the model of the aforementioned 1373 and 1540 legislative resolutions, ‘a general and non-State specific resolution under Chapter VII, declaring nuclear weapons proliferation a threat to international peace and security and *inter alia*, in case of non-compliance with safeguard agreements, providing the Agency with expanded verification activities [...]’.⁴⁴¹

⁴³⁸ *ibid.*

⁴³⁹ UNSC Res 1373 (28 September 2001) UN Doc S/RES/1373(2001) and UNSC Res 1540 (28 April 2004) UN Doc S/RES/1540(2004), respectively on ‘threats to international peace and security caused by terrorist acts’ and on ‘Non-proliferation of Nuclear, Chemical and Biological Weapons’ are usually defined as ‘legislative resolutions’.

Both resolutions were adopted in the aftermath of 9/11 and tackle the global fear of terrorism. From many scholars they have been described as a new kind of Resolution which sees the Security Council as a law-making organ. Generally speaking, both contain three main elements that differentiate the form ‘general’ UNSC resolutions:

1. under Chapter VII of the UN Charter, they impose obligations on the conduct of states;
2. both resolutions call upon all states to adopt and respect all relevant international treaties (Resolution 1540 expressly requests states ‘to adopt national rules and regulations, where it has not yet been done, to ensure compliance with their commitments under the key multilateral non-proliferation treaties’);
3. the resolutions set up subsidiary committees to the Security Council to monitor their implementation, known as the Counter-Terrorism Committee (CTC) and the 1540 Committee respectively (even if neither of them sets forth a non-compliance regime). Bart Smit Duijzentkunst, 'Interpretation of Legislative Security Council Resolutions' (2008) 4 Utrecht L Rev 188.

⁴⁴⁰ Agreement Governing the Relationship Between the United Nations and the International Atomic Energy Agency (INFCIRC/11) available at <https://www.iaea.org/publications/documents/infcircs/texts-agencys-agreements-United-nations> accessed on 5 January 2020.

⁴⁴¹ Talitha Vassalli di Dachenhauen, ‘Strengthening the Role of the IAEA as a Step towards a World Security Order’ in Ida Caracciolo et al. (eds.) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016), pp.124-126.

Even if the Security Council has yet to embrace such view, it may be interesting to analyze the main instances in which, after being referred to by the IAEA, it has intervened to ensure that the non-compliance with non-proliferations obligations would not endanger international security.

i. The Iranian case and the Joint Comprehensive Plan of Action (JCPA)

Iran joined the NPT in 1970 as a NNWS. Nonetheless its interest in nuclear weapons date back to 1950s, when the Shah of Iran received assistance in the development of its nuclear program under the US Atoms for Peace program, aimed at sharing nuclear material and technology with other countries.⁴⁴² The Islamic Republic of Iran has always underlined that its nuclear activities are part of a national nuclear energy program.⁴⁴³ Indeed, under article IV NPT, members of the treaty have the inalienable right to peacefully use nuclear energy.⁴⁴⁴

Nonetheless, in 2002, a group of Iranian dissidents denounced the presence of a large-scale uranium enrichment plant in Nantz. When the IAEA decided to intervene and to undertake special inspections to Iranian facilities in 2003, suspicions were aroused not only because Tehran had failed to inform the IAEA of the construction of the nuclear site, but also since Iran had covered that it had received centrifuge technology from Pakistan. Furthermore, the IAEA found proof on the existence of undisclosed nuclear related activities involving military related organizations, including activities related to the development of a nuclear payload for a missile.⁴⁴⁵

Hence, the Agency requested Iran providing clarifications regarding possible military dimensions to its nuclear program.⁴⁴⁶

⁴⁴² 'Iran' (*Nuclear Treat Initiative*) available at <https://www.nti.org/learn/countries/iran/nuclear/> accessed on 7 January 2020.

⁴⁴³ Scott. D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: an enduring debate* (3rd ed, W.W Norton and Company 2013), p. 178.

⁴⁴⁴ NPT, art. IV.

⁴⁴⁵ 'Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran' (GOV/2011/65) available at <https://www.iaea.org/sites/default/files/gov2011-65.pdf>, para 38.

⁴⁴⁶ 'Final Assessment on Past and Present Outstanding Issues regarding Iran's Nuclear Programme' (GOV/2015/68) available at <https://www.iaea.org/sites/default/files/gov-2015-68.pdf>, para 4.

Between 2006 and 2011, six Security Council resolutions were adopted under Chapter VII of the UN Charter, being legally binding upon all its member states.⁴⁴⁷ In particular, with Resolution 1929, the Security Council reaffirmed Iran's obligations to cooperate fully with the Agency on all outstanding issues, particularly those which gave rise to concerns about the possible military dimensions to Iran's nuclear program, including by providing access without delay to all sites, equipment, persons and documents requested.⁴⁴⁸

Nonetheless the work of the NSC for the implementation of Iran's obligations under the NPT, it must be underlined that, since 2003, many states tried to conclude an agreement with Iran to regulate its nuclear program. Finally in July 2015, Iran and the so-called E3/EU+3 (China, France, Germany, the Russian Federation, the United Kingdom and the United States, as well as the European Union) reached agreement on the Joint Comprehensive Plan of Action (JCPOA), a 25-year agreement limiting Iran's nuclear capacity in exchange for sanctions relief.⁴⁴⁹ In this context, the UNSC, through Resolution 2231 endorsed the JCPOA.⁴⁵⁰

ii. North Korean withdrawal from the NPT

The most known case of violation of the NPT is surely the linked to North Korea.

Indeed, the Democratic's People Republic of North Korea (DPRK) is the only country that has withdrawn from the NPT to pursue its own nuclear programs.

Two phases are to be distinguished in the DPRK's nuclear program: the first one started in the fifties and was conducted with the help of the Soviet Union, while the second one started in 1979 and its defined as 'indigenous', due to the with the construction of a 5 MW(e) natural uranium, graphite moderated reactor in Nyongbyong.⁴⁵¹

North Korea took its initial steps for the development of a civilian nuclear weapon in the 1950s, in the context of the Korean war, which, from 1950 to 1953, saw North Korea (with the support of China and the Soviet Union) fight against South Korea (with the support of the United Nations, principally from the United States). In this context, North Korea signed several

⁴⁴⁷ UNSC Res 1696 (31 July 2006) S/RES/1696(2006); UNSC Res 1737 (23 December 2006) S/RES/1737(2006); UNSC Res 1747 (24 March 2007) S/RES/1747(2007); UNSC Res 1803 (3 March 2008) S/RES/1803(2008); UNSC Res 1835 (27 September 2008) S/RES/1835(2008); UNSC Res 1929 (9 June 2010) S/RES/1929(2010).

⁴⁴⁸ UNSC Res 1929, paras 1, 2.

⁴⁴⁹ Gillis (n 389), p. 30.

⁴⁵⁰ UNSC Res 2231 (20 July 2015) S/RES/2231(2015), para 1.

⁴⁵¹ 'Fact Sheet on DPRK Nuclear Safeguards' (IAEA) available at <https://www.iaea.org/newscenter/focus/dprk/fact-sheet-on-dprk-nuclear-safeguards> accessed on 6 January 2020.

agreements with the Soviet Union, which, in 1959, agreed to supply DPRK with a research reactor and help in the development of a nuclear program.⁴⁵² It is believed that in 1967 north Korea completed the Yongboyn Nuclear Research Complex. By the end of the 1970s, North Koreans started to work on an experimental reactor at Yongboyn, which was indigenously designed, using uranium mined in North Korea. During the 80s, DPRK began to build a 50 MV(e) reactor and a 200 MV(e) reactor.

The DPRK nuclear development did not go unobserved and, between 1970s and the 1980s, the country was urged to accede the NPT, doing so in 1985. Nonetheless, they did not sign a safeguard agreement with the IAEA until 1992.⁴⁵³

After DPRK submitted to the Agency its first report, the inspections of IAEA agents began, showing shortly after inconsistencies between North Korean initial declaration and the Agency's findings, in particular on the plutonium present in the country. In order to find more information, the IAEA requested to accede of two sites which seemed to be related to the storage of nuclear waste, but DPRK refused. Hence, in 1993, the IAEA Director General requested a special inspection, which North Korea refused once again. Consequently, the IAEA Board of Governors reported to the United Nations Security Council that IAEA was in non-compliance with his safeguard agreement, in accordance with the powers given to the Board by article XII(C) of the IAEA Statute. In parallel with these developments, on 12 March 1993, the DPRK announced its decision to withdraw from the NPT, to which the Security Council responded with Resolution 825, where it called upon the DPRK to reconsider its announcement and to reaffirm its commitment to the treaty, honoring its non-proliferation obligations under the NPT and complying with the IAEA safeguard agreements.⁴⁵⁴

Nonetheless, in June 1993 North Korea decided to suspend its withdrawal, that same year the Director General reported as early as December 1993 to the Board that 'the kind of limited safeguards permitted by the DPRK could no longer be said to provide any meaningful assurance of the peaceful use of the DPRK's declared nuclear installations.' Based on a subsequent request of action by the Board of Directors, the UNSC again called upon DPRK to enable IAEA

⁴⁵² François Carrel-Billard and Christine Wing, 'North Korea and the NPT' (*International Peace Institute* 2010) available at https://www.ipinst.org/wp-content/uploads/2010/04/pdfs_koreachapt2.pdf accessed on 5 January 2020.

⁴⁵³ 'Agreement of 30 January 1992 Between The Government of the Democratic People's Republic Of Korea and the International Atomic Energy Agency For The Application of Safeguards in connection with the Treaty On The Non- Proliferation Of Nuclear Weapons' (INFCIRC/403) available at <https://www.iaea.org/sites/default/files/infcirc403.pdf>.

⁴⁵⁴ UNSC Res 825 (11 May 1993) S/RES/825(1993) paras 1, 2.

inspectors to complete their activities. As a consequence, DPRK decided to withdraw its membership from the IAEA on 13 June 1994, taking the position that it was no longer obliged to allow the inspectors to carry out their work under the Safeguards Agreement. On the contrary, the IAEA stated that North Korea withdrawal from its membership in the Agency did not imply that the safeguards agreement concluded between them was no more in force.

Notwithstanding their different views, IAEA and DPRK kept meeting for regular technical meetings, about twice a year, to resolve major technical issues, which, anyway, achieved no progress. Continuing to deny to the IAEA access to its territory and facilities in order to verify the correctness and completeness of its initial declaration, North Korea announced its withdrawal from the NPT effective as of 11 January 2003.

Indeed, according to article X(1) NPT, 'Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.'⁴⁵⁵

Since its withdrawal from the treaty, DPRK has conducted 6 nuclear explosive tests and it is believed to be capable of enriching uranium and producing weapons-grade plutonium.⁴⁵⁶ Since its withdrawal from the NPT, Six-Party Talks with the goal of denuclearizing the peninsula have been conducted between China, DPRK, Japan, the Republic of Korea, the Russian Federation and United States. They however have been suspended in 2009.⁴⁵⁷

As for the role of the UNSC since DPRK started conducting nuclear testing under the sun, it has adopted a series of resolution which, among other, impose embargo, freeze assets and ban travel for those involved in the nuclear program and allow Member States to seize and destroy material headed to DPRK which may be connected to nuclear weapons.⁴⁵⁸

iii. Iraqis nuclear dismantlement

⁴⁵⁵ NPT, art. X(1).

⁴⁵⁶ Gillis (n 389), p. 29.

⁴⁵⁷ Mi-Yeon Hur, *The Six-Party Talks on North Korea: Dynamic Interactions among Principal States* (Palgrave Macmillan 2018), p.1.

⁴⁵⁸ See, as an example, the first one adopted in 2006: UNSC Res 1695 (15 July 2006) S/RES/1695(2006).

The international reaction to the alleged Iraqi breach of the NPT is probably the scenario that shows the most that, the fact that the final measures to oblige NNWS to comply with their obligations are left to the United Nations Security Council resolutions represent one of the main malfunctions of the system of the Treaty.

Before analyzing the Iraqi's case, it must be remembered that, the 5 states that under the NPT are allowed to possess nuclear weapons are the same states that, in the context of the United Nations Security Council, have the veto power over its resolutions.

Iraq was one of the first parties of the NPT, signing the treaty in 1969. According to the information collected by the IAEA's twice yearly in the facilities at the Tuwaitha Nuclear Research Centre, Iraq nuclear capabilities comprehended the IRT-500 research, the Tamuz-2 research reactor and a small fuel fabrication laboratory with a storage facility.⁴⁵⁹ There had been speculations for years of possible clandestine activities, especially. On a suspected uranium enrichment program which would be using the centrifuge system, but there was no hard information available.

Nonetheless, in April 1991, the United Nations Security Council ordered to carry out inspections in Iraq. Resolution 687 called upon Iraq to make a declaration of all nuclear weapons- usable material, components, and related manufacturing facilities.⁴⁶⁰ It further demanded the IAEA Director General to develop a plan within 45 days for the destruction, removal, or rendering harmless of these capabilities and established a United Nations Special Commission (UNSCOM) and authorized it to carry out similar work in the fields of biological and chemical warfare and long-range missiles. It was instructed to assist and co-operate with the IAEA in the nuclear field.

It is clear how the UNSC decided to act clearly in contrast with the mild treatment given to North Korea and Iran, even though some of these measures may be deemed as necessary, since there was the suspicion that Iraq also was manufacturing Chemical and Biological Weapons.

Anyway, again in 2002, after that an US National Intelligence Estimate declared that Saddam Hussein had stated the reconstruct the Iraqi nuclear weapons deployment program, and that had maintained some chemical and biological weapons, even after the complete destruction of 1991.⁴⁶¹

⁴⁵⁹ Leslie Thorne, 'IAEA nuclear inspections in Iraq' (1992) 2 IAEA Bulletin, p.16.

⁴⁶⁰ UNSC Res 687 (3 April 1991) S/RES/687(1991), para 9(a).

⁴⁶¹ Sagan (n 443), p.176.

In that case though, the representative of the US at the Security Council did not convince the rest of the members of the credibility of such allegation, that ended up approving resolution 1441, in which the UNSC asked Iraq to give the ‘IAEA immediate, unimpeded, unconditional, and unrestricted access to any and all, including underground, areas, facilities, buildings, equipment, records, and means of transport which they wish to inspect’, and to comply with its disarmament commitments.⁴⁶²

Nevertheless, even though the resolution did not authorized UN member states to use force, the Bush administration decided to attack Iraq in March 2003 in ‘pre-emptive self-defence’, and quickly defeated Saddam’s army. Nonetheless, investigation conducted after the attack quickly revealed that Iraq did not indeed reconstituted its nuclear program after that the UN Mission left the country in 1998.⁴⁶³

4. The open challenges of the NPT

In the light of what we have analyzed in this past chapter, it is clear how the instances of non-proliferation of nuclear weapons and, in particular, the conclusion of the NPT has represented a step forward in the obtainment of the final objective of the elimination of nuclear weapons. Nonetheless, it is also undoubtable that the NPT is a product of its time, and of what was politically achievable on 1968. It succeeded in alleviating the greatest fear of 1960s: the possibility that 15, 20 or 25 states may possess nuclear weapons.

Indeed, while NNWS subjected to article II of the NPT have mostly respected their obligations under the Treaty, NWS did not comply with the obligations set forth under article VI. While we will be analyzing such subject in the next chapter, it must be reminded that part of the grand bargain imposed by the NPT to NWS was their commitment to pursue negotiations in good faith on effective measures relating to the end of the nuclear arms race at an early stage and to achieve nuclear disarmament under a comprehensive and effective treaty.

Nonetheless, we can easily observe how nuclear weapons States have not even lessened their nuclear stockpiles, especially during the Cold War. Indeed, up to 2016, the United States and the Russian Federation only were estimated to possess at least 14.000 nuclear warheads.

In conclusion, the NPT has largely succeeded in reaching the objectives of its non-proliferation pillar and has promoted the peaceful use of nuclear energy. On the contrary, it has failed in being the key to start the disarmament process.

⁴⁶² UNSC Res 1441 (8 November 2002) S/RES/1441(2002), para 5.

⁴⁶³ *ibid*, p. 177.

IV. NUCLEAR DISARMAMENT: A CONVENTIONAL OBLIGATION OR A CUSTOMARY RULE OF INTERNATIONAL LAW?

1. The importance of promoting disarmament

The question which introduces this first chapter is: why is disarmament so important?

The quest for disarmament finds its roots with the advent of the XX century. Indeed, the way wars were used to be fought and international conflicts were used to be solved changed drastically with the development of Weapons of Mass Destruction, which are distanced from conventional weapons since their consequences cannot be determined and controlled.⁴⁶⁴

Before the deployment of WMD, weapons used in armed conflicts, while certainly deadly, caused mostly limited damage to the close vicinity of the battle and killed and wounded mainly active combatants.⁴⁶⁵ By contrast, between World War I and II, more than 80 millions people died because of the deployment of chemical and biological weapons and on the use, in 1945, of the first nuclear bomb, weapons that by their very nature cause indiscriminate damages between combatants and civilians and are disproportionately harmful to the environment. During the second half of the century, the tensions caused by the Cold war, together with wars of national liberations, internal conflict, genocides and many human related crisis, killed an undefined, but definitely massive, number of people, estimated to range from 60 millions to 100 millions of people, most of whom were just civilians.⁴⁶⁶ Moreover, during the second half of the XX century, states engaged a massive arms race: it is indeed estimated that 1 trillion of American dollars were spent each years of the 1980s in military arsenals. After a relatively short period of reduction in military expenditures due to the fall of the Berlin wall, between 2001 and 2009 such expenses increased of a 5 per cent annually.

1686 billion dollars is the total amount of world military expenditure recorded in 2016, which represents the 2.2 percent of the global gross domestic product: it is like every person in the world spent 227 dollars in weapons in 2016. And while it is estimated that 875 millions of small arms are circulating right now, at the beginning of 2016, states possessed more than 15400 nuclear warheads, 4100 of which are deployed and ready to use and 1800 are kept in high alert, ready to be launched within minutes. Furthermore, the global stockpile of nuclear-bomb-

⁴⁶⁴ Strydom (n 306). para 2.

⁴⁶⁵ Gillis (n 389), p.1.

⁴⁶⁶ *ibid*, p.2.

material such as uranium and plutonium is sufficient to make up to ten thousands of new weapons.⁴⁶⁷

According to the Organization for the Prohibition of Chemical Weapons United Nations Joint Investigative Mechanisms, nonetheless chemical weapons have been prohibited since 1997, they have recently been used in Syria⁴⁶⁸ by the national armed forces and by the Islamic State in Iraq and the Levant (ISIL), and in Darfur by the Sudanese forces.⁴⁶⁹

On the other hand, while, as seen before, the NPT has done a great work in preventing further horizontal proliferation after its entry into force, its NWS have yet to comply with their disarmament obligation and there have been cases (like the previously analyzed Iran development of nuclear weapons)⁴⁷⁰ in which NNWS are bypassed their prohibition not to manufacture such weapons.

The need to take the path of nuclear disarmament has been clear to the United Nations since its first years of activities. Indeed, in 1961, the General Assembly adopted resolution 1653, entitled 'Declaration on the Prohibition of the Use of Nuclear and Thermonuclear Weapons',⁴⁷¹ while, with its Resolution 2602E of 16 December 1969, the General Assembly declared the 1970's the First Disarmament Decade, calling upon states to 'intensify efforts in the cessation of the nuclear arms race, nuclear disarmament and the elimination of other weapons of mass destruction'.⁴⁷² And, when the decade was coming to an end, disappointed by non-realization of the objective of the first decade, the General Assembly decided to declare the 1980s the Second Disarmament Decade⁴⁷³ and, likewise, the 1990s the Third Disarmament Decade.⁴⁷⁴ Both, in 1978 and 1982, the General Assembly further hosted two Disarmament sessions, stressing the most immediate goal of disarmament and of the elimination of the danger of a nuclear war. More recently, the General Assembly has adopted a more drastic approach to such

⁴⁶⁷ For more detailed information on global military arsenals visit www.armscontrol.org, www.smallarmssurvey.org or www.sipri.org.

⁴⁶⁸ 'OPCW Director-General's Statement on the UN Final Report on Chemical Weapons Use in Syria' (OPCW 25 March 2014) available at <https://opcw.unmissions.org/opcw-director-generals-statement-un-final-report-chemical-weapons-use-syria> accessed on 15 January 2020.

⁴⁶⁹ Alicia Sanders-Zakre, 'Sudan Accused of Chemical Weapons Use' (*Arms Control Association* November 2016) available at <https://www.armscontrol.org/act/2016-10/news-briefs/sudan-accused-chemical-weapons-use> accessed on 15 January 2020.

⁴⁷⁰ See *supra* at Chapter III(3)(b)(iii).

⁴⁷¹ UNGA Res 1653 (24 November 1961) A/RES/1653(XVI).

⁴⁷² UNGA Res 2602E (16 December 1969) A/RES/2602E(XXIV), para 2.

⁴⁷³ UNGA Res 34/75 (11 December 1979) A/RES/34/75; UNGA Res 35/46 (3 December 1980) A/RES/35/46.

⁴⁷⁴ UNGA Res 43/78L (7 December 1988) A/RES/43/78L; UNGA Res 45/62A (4 December 1990) A/RES/45/62A

deadly weapons, finally affirming the condemnation of nuclear weapons, which represent a great danger to the survival of the mankind; the Assembly did so with the belief that an official prohibition from an UN body of the use or threat to use such weapons would be a step forward the complete elimination of nuclear weapons, leading to general and complete disarmament under strict and effective international control.

While the step made by the UN in this sense will further be analyzed later, as the testimony of a consolidated *opinio juris* on the need to negotiate at an early stage nuclear disarmament, this chapter aims at analyzing the most prominent source of international law which lead towards nuclear disarmament, while trying to demonstrate that such obligation as indeed acquired the status of a customary rule of international law. Finally, it will briefly be discussed of states may reach the long-awaited ‘nuclear zero’.

2. The Conventional Obligation entailed by Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons

Certainly, the most internationally known and relevant provision on nuclear disarmament is the one contained in article VI of the NPT. Such fundamental passage states that:

‘Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.’⁴⁷⁵

It must be noted, as reported before, that the NPT is usually divided in tree pillars, since it has three main objectives: non-proliferation, disarmament and peaceful use of nuclear weapons, nonetheless, out of eleven articles article VI is the only one which deals with nuclear disarmament, nonetheless it is today considered the most important provision in the field.

Nonetheless today article VI represents the cornerstone of nuclear disarmament, it is not always been so; previously we have analyzed that such disarmament obligation was requested by the NNWS to counterbalance their heavy duties not to manufacture and deploy nuclear weapons ever.

⁴⁷⁵ NPT, art. VI.

The starting point for interpreting the dispositions of article VI of the NPT must be their analysis under articles 31 and 32 of the Vienna Convention in the Law of the Treaties.

First of all, according to article 31(1) VCLT, ‘a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.’⁴⁷⁶ It follows that, according to the ordinary meaning of the text of the disposition, article VI NPT contains three separate obligations:

Each of the parties to the treaty undertakes to pursue negotiations in good faith:

- 1) on effective measures relating to cessation of the nuclear arms race at an early date;
- 2) on effective measures relating to nuclear disarmament; and
- 3) on a treaty on general and complete disarmament under strict and effective international control.

Hence, parties to the NPT shall indeed conduct negotiations in good faith that shall towards three different results. The text does not indicate if there is a chronological order to follow when complying to these obligations, except for the reference to ‘at an early date’ for the cessation of the nuclear arms race; hence, it seems that measures relating to nuclear disarmament and the treaty on general and complete disarmament are less urgent than the cessation of the arms race.⁴⁷⁷

The provision to pursue negotiations in good faith applies to each of the three results. In its formulation, it resembles the provisions of article 33 UNC, which requires all members of the United Nations to seek a solution through negotiations to any dispute that may endanger the maintenance of international peace and security.⁴⁷⁸

While the nature of such obligation will be analyzed later, it is useful to underline that the principle of good faith represents an accepted general principle of international law. Daniel H. Joyner, one of the main experts on the NPT, interprets such reference to good faith as the negation of the possibility that one of the parties to the treaty may interpreted the words in an

⁴⁷⁶ VCLT, art. 31(1).

⁴⁷⁷ Daniel H. Joyner, ‘The legal meaning and implication of Article VI of the Non-Proliferation Treaty’ in Gro Nystuen at al. (eds) *Nuclear Weapons Under International Law* (CUP 2014) [hereinafter Joyner 2014], p. 399

⁴⁷⁸ UNC, art. 33.

sense that might result in its personal gain or in an unfair and unjust advantage over the other parties.⁴⁷⁹

a) *Nature and limits of the obligation to negotiate in good faith on effective measures*

i. Article VI negotiation history and its development through time

The idea of a treaty governing the non-proliferation of nuclear weapons arose in the 1960s, from the joint opinion of both, the United States and the former Soviet Union, that a coordinated process of limitation of nuclear weapons and of reversal of the nuclear arms race would be beneficial to their national interests.⁴⁸⁰ Arms control was indeed perceived by the two superpowers as a less expensive and more safe solution compared to an unbridled stockpiling of nuclear weapons.⁴⁸¹ The results of such idea gave life to a decade-long process between nuclear superpowers to forbid among them possession of certain weapons delivery system.

Such process led to many important arms control bilateral agreements such as:

- The Anti-Ballistic Missile Treaty (ABM), an agreement concluded in 1972 between the US and the former Soviet Union in the limitation of the employment of anti-ballistic missiles, systems used to defend states' territories against missiles-delivered nuclear technologies (from which the United States withdrew in 2002 to develop their own missile-detection technology);⁴⁸²
- SALT I and SALT II, arms limitation treaties which between the same parties as the ABM, aimed at limiting the manufacture of strategic missiles able to carry nuclear weapons;⁴⁸³
- Intermediate-Range Nuclear Forces Treaty (INF), which requires US and the former Soviet Union to all of their nuclear and conventional ground-launched

⁴⁷⁹ Joyner 2014 (n 477), pp. 407-408.

⁴⁸⁰ *Interpreting NPT* (n 334), pp. 35-36.

⁴⁸¹ Jozef Goldblat, *Arms Control: The New Guide to Negotiation and Agreements* (Sage Publications 2002), p.71.

⁴⁸² The Anti-Ballistic Missile Treaty (United States – former Soviet Union) (26 May 1972).

⁴⁸³ Strategic Arms Limitation Treaty (SALT I) (United States - former Soviet Union) (26 May 1972); Strategic Arms Limitation Treaty (SALT II) (United States - former Soviet Union) (never entered into force).

ballistic and cruise missiles with ranges of 500 to 5,500 kilometers, from which, on 2 August 2019, the Trump administration decided to withdraw.⁴⁸⁴

. Nonetheless, it must be underlined that the original efforts towards the NPT and the above-mentioned agreements should properly be understood in an arms control optic, rather than under a nuclear disarmament light. Indeed, while the terms are frequently used as interchangeable, they refer to quite different concepts: arms control efforts seek and are designed by policy to effect a limitation or reduction of their subject weapon technologies, but do not intend to achieve the complete elimination of the weapons they are referred to, on the contrary of disarmament treaties.⁴⁸⁵ Hence, ‘while arms control efforts and disarmament control efforts may look similar, in that the short-term aim of both is to limit and reduce their subject weapon technologies, they are in fact quite different in that disarmament efforts are clearly framed within a policy program the object of which is complete elimination from national arsenals.’⁴⁸⁶

This distinction is useful to identify the absence of any true disarmament in the way some NWS, and in particular United Nations, claim to implement article VI of the NPT. Indeed, throughout the last half century, NWS have marginalized the importance of the disarmament pillar of the NPT: they adopted a ‘uniformly obfuscatory interpretive stance of the obligation contained in article VI’, maintaining that the article has very limited scope, if not non-existent.⁴⁸⁷ For example, the US representative Christopher Ford argued that the only legal obligation stemming for NWS from article VI NPT is the minimal obligation to put for good faith efforts towards negotiations on disarmament.⁴⁸⁸ As a consequence of this view of interpreting the NPT, flowed an undue marginalization by NWS of the disarmament pillar of the NPT, together with a disproportionate prioritization of the non-proliferation pillar of the NPT. Such way of thinking led NWS to adopt a conclusion regarding the NPT which is actually in contrast with the plain meaning of article VI if analyzed within the provision’s proper context and in the light of the NPT’s correctly understood object and purpose.

As briefly viewed above when dealing with the NPT non-proliferation pillar,⁴⁸⁹ article 31 of the Vienna Convention on the Law of the Treaties, provides that treaty provisions must be

⁴⁸⁴ Intermediate-Range Nuclear Forces Treaty (INF) (United States - former Soviet Union) (concluded on 8 December 1987, entered into force 1 June 1988).

⁴⁸⁵ *Interpreting NPT* (n 334), p. 36

⁴⁸⁶ *ibid.*

⁴⁸⁷ *ibid.*, pp. 95-96.

⁴⁸⁸ Christopher A. Ford, ‘Debating Disarmament: Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons’ (2007) 14(3) *Non-proliferation review*.

⁴⁸⁹ See *supra* at Chapter III(2)(a)(ii).

interpreted in their context, hence, viewing each provision for the purpose of the interpretation not as an isolated rule or recognition of right, but as a part of a larger normative treaty. In the context of the NPT, such comprehensive interpretation must take into account both, the internal normative structure of the NPT together with the meaning of the other provisions, and the macro structure of the treaty's framing by its parties.⁴⁹⁰

As for the internal normative structure of the NPT, the essential separation between the three afore-mentioned pillars must be taken into account: indeed, when interesting a provision located in one of these subject grouping, it is important to bear in mind that such provision is located in such grouping and that the grouping is only one of the three provided for.⁴⁹¹

As for the external macro structure of the treaty and its parties' framing, it must be taken into account the structure of the treaty as a contract with sets forth 'synallagmatic obligations' between NWS and NNWS: on the one hand, states already in possession of nuclear weapons were to take upon themselves the obligation not to transfer nuclear weapons and technologies to states not possessing them; on the other hand, the latter group had neither to acquire nor to manufacture such weapons, in exchange of a right to use nuclear energy with the assistance of NWS, and of the commitment of NWS to move towards disarmament in good faith.⁴⁹²

It must be noted that this structure of the NPT as a 'contract-treaty' does not in any way affect the binding nature of the commitment that the parties agreed to undertake,⁴⁹³ and does not imply that different rules of interpretation must be applied. Nonetheless, different consequences may arise from the breach of its obligations.⁴⁹⁴

According article 60 VCLT, in the event that a party of a multilateral law-making treaty was to break one treaty obligation, in order to invoke such breach with the scope to suspend or terminate the treaty, all the party must unanimously do so, unless one of the non-breaching parties could argue that they are 'specially affected' by the breach, or that the breach 'radically changes the position of every party with respect to the further performance of its obligations under the treaty.'⁴⁹⁵

⁴⁹⁰ Richard Gardiner, *Treaty Interpretation* (OUP 2008), pp. 177-185.

⁴⁹¹ *Interpreting NPT* (n 334), p. 26

⁴⁹² Joseph Cirincione, *Bomb Scare: The History and Future of Nuclear Weapons* (CUP 2008), pp. 30-31; *ibid*, p.27.

⁴⁹³ Hugh Thirlway, 'The Source of International Law' in Malcom Evans (ed) *International Law* (2nd edn, OUP 2006), pp. 119-120.

⁴⁹⁴ *Interpreting NPT* (n 334), p. 28.

⁴⁹⁵ VCLT, art. 60(1)(2).

On the other hand, in the case of a treaty which is founded upon a *quid pro quo* reciprocal commitment, a material breach by one group of parties could certainly strike the object and purpose of the treaty itself and allowing the non-breaching group to invoke such breach as ground for the termination or suspension of the treaty.⁴⁹⁶

As for the object and the purpose of the NPT, article 31 of the VCLT prescribes that it can be deduced from the preamble of the treaty concerned;⁴⁹⁷ and the preamble of the NPT clearly fully addresses all three of the pillars. In particular, the disarmament one is taken into account from the very first paragraph, which refers to ‘the devastation that would be visited upon the mankind by a nuclear war and the consequent need to make every effort avert the danger of such a war and to take measures to safeguard the security of peoples’.⁴⁹⁸ Moreover, it clearly states that the intention of the treaty is to ‘achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of the nuclear disarmament’,⁴⁹⁹ and that the achievement of such primary objective would be possible only with the co-operation of ‘all’ states (hence not only NNWS).⁵⁰⁰ Finally, the preamble also contains the wish of the contracting parties to ‘facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all the existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant a Treaty on a general and complete disarmament under strict and effective international control.’⁵⁰¹

The preamble shows that the NPT is not a treaty exclusively focused on non-proliferation. Considering that two paragraphs are dedicated to the peaceful use of nuclear energy,⁵⁰² three to nuclear non-proliferation,⁵⁰³ and five deal with nuclear disarmament,⁵⁰⁴ the parties to the treaty clearly signaled that the treaty’s object and purpose is to be found in all three the pillars, and there is not one that prevails over the others.

In conclusion, following the rules of interpretation of the treaties contained in the 1969 Vienna Convention on the Law of the Treaties, article VI of the Treaty on Non-proliferation of

⁴⁹⁶ *Interpreting NPT* (n 334), p. 29.

⁴⁹⁷ VCLT, art. 31(2).

⁴⁹⁸ NPT, preambular paragraph 1.

⁴⁹⁹ *ibid*, preambular paragraph 8.

⁵⁰⁰ *ibid*, preambular paragraph 9.

⁵⁰¹ *ibid*, preambular paragraph 11.

⁵⁰² *ibid*, preambular paragraphs 6, 7.

⁵⁰³ *ibid*, preambular paragraphs 1, 2, 3.

⁵⁰⁴ *ibid*, preambular paragraphs 8, 9, 10, 11, 12.

Nuclear Weapons ‘can ultimately offer a basic legal framework for an effective nuclear disarmament’.⁵⁰⁵

ii. Does article VI entail an obligation to conclude negotiations?

It must be noted that, in 1996, while dealing with the question of the legality of the use or threat to use nuclear weapons, the ICJ dealt marginally also with nuclear disarmament.⁵⁰⁶

As we have just analyzed, from the object and the purpose of the treaty it stems clear that the parties to the NPT are expected to get rid of their nuclear arsenals and reach an effective and complete nuclear disarmament, in 1996, when the ICJ dealt with the question of the legality of the threat or use of nuclear weapons, it was faced with the question of the legal nature of the obligation contained in article VI NPT.

Indeed, faced with the impossibility to definitely declare nuclear weapons unlawful under international law, right before answering to the request of the General Assembly, the Court itself admitted that, because of the difficult issues that derives from the application of the law on the use of force to nuclear weapons, it needed to ‘put an end to this state of affairs’.⁵⁰⁷

Remarkably, the ICJ held (and almost predicted) that, in the long run, international law and the international order are bound to suffer from the continuous differences of views with regard to weapons as deadly as nuclear weapon; consequently, the Court affirmed that ‘the long promised complete nuclear disarmament appears to be the most appropriate mean of achieving’ the end of the nuclear weapons’ era.⁵⁰⁸

And to this regard, the Court revolutionary added that:

‘the legal import of the obligation [contained in article VI NPT] goes beyond that of a mere obligation of conduct; the obligation involved here is an obligation to achieve a precise result – nuclear disarmament in all its

⁵⁰⁵ Ida Caracciolo, ‘The limitation of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons: International Law in Support of Nuclear Disarmament’ in Ida Caracciolo et al. (eds.) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016), p. 8.

⁵⁰⁶ *Nuclear Weapons Opinion*, paras 98-103.

⁵⁰⁷ *ibid*, para 98.

⁵⁰⁸ *ibid*.

aspects by adopting a particular course of conduct, namely, the pursuit of negotiations on the matter of good faith.’⁵⁰⁹

Hence, the obligation to pursue negotiation in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a general treaty on nuclear disarmament is a twofold obligation, that entails the duty to pursue and – more importantly – to conclude such negotiations, that would formally concerns all 191 states parties to the NPT, hence the majority of the international community.⁵¹⁰

If follows that the ICJ reinforced the meaning of article VI, interpreting its provisions as a *pactum de contrahendo* rather than a mere *pactum de negotiando*. Indeed, under public international law, ‘a *pactum de contrahendo* is an agreement between parties creating a binding obligation to conclude a future agreement on a particular subject [which, in many cases,] also stipulates the basic form that future agreement will take.’⁵¹¹ On the other hand, a *pactum de negotiando* merely implies that two or more parties have assumed a binding obligation to enter into future negotiations with an intention to conclude a future treaty, but the obligation does not go as far as to commit the parties to conclude a final agreement.⁵¹² Consequently, thanks to the ICJ interpretation, the minimum core of article VI NPT switched from just and obligation of conduct to the maximum standard of an obligation of result.⁵¹³

iii. Or just an obligation to pursue negotiations in good faith?

Nonetheless, other authors, such as professor Roscini, affirm that the interpretation of the ICJ does not respect what is the text of the article itself, which ‘does not suggest an obligation to bring negotiations to a successful conclusion , for instance by adopting a treaty on nuclear disarmament – a result that is beyond the powers of any individual State – but only to “pursue negotiations” in good faith.’⁵¹⁴

⁵⁰⁹ *ibid*, para 99.

⁵¹⁰ *ibid*, para 100.

⁵¹¹ Hisashi Owada, 'Pactum de contrahendo, pactum de negotiando' (2008) Max Plank Encyclopedia of Public International Law [MPEPIL], para 3.

⁵¹² *ibid*, para 5.

⁵¹³ Caracciolo (n 505), p. 9.

⁵¹⁴ Marco Roscini, ‘On Certain Legal Issue Arising from Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons’ in Ida Caracciolo et al. (eds) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016), pp. 17-18.

In particular, Roscini displays three main arguments in support of its claim.

First, the Court's interpretation of article VI does not take into account the context of the treaty and, in particular, the 'aspirational language' of the preamble, where the parties declare their intention 'to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures "in the direction" of nuclear disarmament.'⁵¹⁵

Second, professor Roscini also added that a *pactum de contrahendo* would need to be formulated with sufficient precision in order to create valid obligations and goes beyond an 'obligation assumed by two or more parties to negotiate in the future with a view of the conclusion of a treaty.'⁵¹⁶ He then compares, on this premise, the vagueness of article VI NPT to the specificity of article III NPT, which explains in detail the steps and the deadlines that NNWS need to respect in order to conclude a safeguard agreement with the IAEA.

Finally, he claims that from the *travaux préparatoires*, used as a supplementary means of interpretation of the treaties according to article 32 VCLT, emerges that article VI was included in the text of the treaty just because 'it did not contain a commitment to successfully conclude negotiations by adopting a treaty on nuclear disarmament.'⁵¹⁷

Nonetheless, even if such interpretation of the nature of the obligation contained in article VI should be accepted, there still is one silver lining: the provision contains, at the very least, an obligation 'to proactively, diligently, sincerely, and consistently pursue good faith negotiations',⁵¹⁸ which goes beyond the mere obligation *ad negotiandum* to enter negotiations.

In the *North Sea Continental Shelf Case* the Court, dealing with a dispute about the delimitation of the Continental Shelf that should belong to the territories of the parties involved, established that the division should be drawn by agreement between the parties, which had to conduct their negotiations in good faith.⁵¹⁹

In this regard, the Court specified that:

'the parties are under an obligation to enter into negotiations with a view to arriving at an agreement, and not merely to go through a formal process of

⁵¹⁵ *ibid*, p. 18; NPT, preambular paragraph 8.

⁵¹⁶ Lord McNair, *The Law of Treaties* (2nd edn, Oxford Clarendon Press 1961), pp. 27, 29; Roscini M, 'On Certain Legal Issue Arising from Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons' in Ida Caracciolo et al. (eds) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016), p. 18.

⁵¹⁷ Joyner 2014 (n 477), p. 399; Roscini (n 516), p. 18.

⁵¹⁸ *Interpreting NPT*, (n 334), p. 99.

⁵¹⁹ *North Sea*, para 101(C)(1).

negotiation [...]; they are under an obligation so to conduct themselves that the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating any modification of it.’⁵²⁰

Furthermore, similar opinions in the requirements of the parties which are subjected to a *pactum de negotiando* can be found in some arbitral awards. For example, in the case concerning the Claims Arising out of Decisions of the Mixed Graeco/German Arbitral Tribunal, the Arbitral Tribunal found that, even if an agreement to negotiate does not imply an obligation to reach an agreement, it does imply that serious efforts towards the negotiations shall be made.⁵²¹ The tribunal further specified that:

‘*pactum de negotiando* is [...] not without legal consequences. It means that both sides would make an effort, in good faith, to bring about a mutually satisfactory solution by way of compromise, even if that meant the relinquishment of strongly held positions earlier taken. [...] An undertaking to negotiate involves an understanding to deal with the other side with a view to coming to terms.’⁵²²

Finally, it has also been held that ‘an unjustified breaking off of the discussions, abnormal delays, disregard of the agreed procedures, systematic refusals to take into consideration adverse proposals or interests, and, more generally, in cases of violation of the rules of good faith’ should be considered as a State’s breach of an obligation to negotiate.⁵²³

3. Article VI of the NPT as customary norm of international law

In 1996, when the ICJ dealt with the 1996 Advisory Opinion on the Legality of Use or Threat to Use Nuclear Weapons, it first wondered whether such prohibition may be had been

⁵²⁰ *ibid*, para 85(a).

⁵²¹ Case Concerning Claims Arising out of Decisions of the Mixed Graeco/German Arbitral Tribunal set up under Article 304 in Part X of the Treaty of Versailles (*Greece v Federal Republic of Germany*) (Decision of 26 January 1972) Reports on International Arbitral Awards Vol XIX, p. 57.

⁵²² *ibid*, p. 56.

⁵²³ Lac Lanoux Arbitration of 16 November 1957 (*France v Spain*) 24 ILR 128 (1957).

crystallized in a customary rule of international law.⁵²⁴ As it was previously analyzed, at the time in which it answered to the General Assembly question, the Court did not find neither customary nor conventional law that could either authorize or prohibit the deployment of such weapons.⁵²⁵ We have also seen how, under the light of the last 25 years' evolution of international law and, in particular, under the renewed understanding of the atrocious consequences of nuclear weapons to the mankind and to the environment of the planet we live in, the use or threat to use nuclear weapons shall be considered prohibited under international law.

In this chapter, we have subsequently analyzed the major provision that can be found in conventional international law which relates to the step subsequent to the prohibition to use nuclear weapons, namely the path leading to their dismantlement and to definitive nuclear disarmament.

It was also shown how generally NWS tend to minimize the disarmament requirements under the NPT and have neither shown enough effort in the pursue of negotiations in good faith on effective measures relating to the cessation of the arms race and nuclear disarmament and to the adoption of a treaty which will finally outlaw nuclear weapons as it has already been done for chemical and biological weapons. Indeed, NWS under the NPT nuclear-weapons States still own nearly 15,400 nuclear warheads, more of 4,100 of who are deployed and ready to be launched.⁵²⁶ Moreover, since taking its office in January 2017, the US new administration, under the leadership of its President Donald Trump, has adopted a debatable strategy to reduce nuclear weapons' risks, which entailed the withdrawal from the Joint Comprehensive Plan of Action (an agreement that the previous administration had heavily contributed to conclude), the beginning of high-stakes nuclear diplomacy with DPRK, and the development of new low-yield nuclear capabilities.⁵²⁷

Finally, it has been mentioned that India and Pakistan - which are both certainly possessing nuclear weapons and are also expanding their stockpiles and developing land, sea and air-based missiles delivery systems – never joined the NPT; Israel (that has also never joined the treaty) is believed to possess nuclear weapons and to be producing fissile materials; while DPRK, as

⁵²⁴ *Nuclear Weapons Opinion*, paras 64-73.

⁵²⁵ *ibid*, para 105(2)(A), (B).

⁵²⁶ Gillis (n 389), p. 4.

⁵²⁷ 'A Critical Evaluation of the Trump Administration's Nuclear Weapons Policies' (*Arms Control Association* 29 July 2019) available at <https://www.armscontrol.org/events/2019-07/critical-evaluation-trump-administrations-nuclear-weapons-policies> accessed on 20 January 2020.

it has already been scrutinized, has withdrawn from the NPT in 2003, and has conducted several nuclear tests after that date.⁵²⁸

Hence, 4 out to 9 states that are believed to possess nuclear weapons are not party to the NPT; while, those states which joined the treaty as NWS tend to underestimate the importance of the disarmament obligations they have committed to.

In order to overcome this *empasse*, it feels obvious to wonder whether a customary rule on nuclear disarmament does exist.

Before examining in deep such relevant question, it must be reminded that customary international law is enlisted in article 38 of the ICJ Statute as one of the main sources of international law and is defined as ‘a general practice accepted as law’.⁵²⁹ Whether nuclear disarmament could be considered a customary norm of international law, such legal status implies that such obligation would not only regard those who committed to it by adopting the treaty on the Non-Proliferation of Nuclear Weapons, but would be legally binding upon all states. Indeed, as reaffirmed by the ICJ multiple times, states’ sovereign right to possess weapons can only be limited by any specific provision they accept or by custom.⁵³⁰

a) ICJ Jurisprudence, from 1996 to the Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament

Since the 1996 Advisory Opinion, the Court did not have the opportunity to pronounce upon nuclear weapons and their more recent implications, until, on 24 April 2014 the Republic of Marshall Islands submitted to it nine separate application against the world’s nuclear-possessing States (hence, the United States, the United Kingdom, Russia, France, China, India, Pakistan, Israel and North Korea). All nine of the requests concerned these states obligations concerning negotiations to cessation of the nuclear arms race and to nuclear disarmament.

Nonetheless, the Court had the possibility to analyze only three of the nine application file to it by the Marshall Islands, since only UK, India and Pakistan accepted the jurisdiction of the Court, in accordance to what is required by its Statute at article 36.⁵³¹

⁵²⁸ Gillis (n 389), pp. 28-31.

⁵²⁹ ICJ Statute, art. 38(1)(b).

⁵³⁰ *Nuclear Weapons Opinion*, para 21, 52; *Nicaragua* para 269.

⁵³¹ Indeed, article 36 of the ICJ Statute provides that the jurisdiction of the Court covers all cases in which all the parties refer to in on matters specifically provided for by the Charter of the United Nations or in treaties and conventions in force. Furthermore, any state at any time may present to the Court a declaration according to which

In its applications, the Marshall Islands requested to the Court to declare that nuclear-possessing states had violated and continued to violate two main sets of obligations:

i) the obligation to pursue negotiations in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects and under strict and effective international control;

ii) the obligation to perform their international legal obligations in good faith.⁵³²

Nonetheless one fundamental element of Marshall Islands' requests to the Court must be taken into account we have already analyzed that UK signed the NPT on the 1 January 1968,⁵³³ and hence it is rightfully legally bound to implement the obligations which are enshrined in article VI of the treaty and that are substantially those to which Marshall Islands refer in its application. But, India and Pakistan, as well as Israel, never joined the NPT, while the Democratic People's Republic of Korea withdrew from it in 2003. Still, the Marshall Islands contested to these nuclear-possessing states the breach of the same obligations to which NWS under the NPT are bound affirming that, the obligation contained in article VI of the NPT has obtained both the legal status of an obligation *erga omnes* and of a customary rule of international law.⁵³⁴ Hence, in its applications against NWS parties to the NPT, Marshall Island contested not only the violation of the conventional obligation of article VI of the NPT, but also

it recognizes as compulsory *ipso facto* and without special agreement, its jurisdiction on disputes over the interpretation of a treaty, any question of law, the existence of any fact that if ascertained would constitute a breach of international law and the nature and the extent of the reparation to be made as consequence of the aforementioned breach. It follows that members of the United Nations cannot be subjected to any Court's judgement if they do not expressly (*a priori* or *a fortiori*) accept its jurisdiction. ICJ Statute, art. 36(1), (2).

⁵³² *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v United Kingdom)* (Application Instituting Proceeding) available at <https://www.icj-cij.org/files/case-related/160/160-20140424-APP-01-00-EN.pdf>, para 7; *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v India)* (Application Instituting Proceeding) available at <https://www.icj-cij.org/files/case-related/158/158-20140424-APP-01-00-EN.pdf>, para 6; *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v Pakistan)* (Application Instituting Proceeding) available at <https://www.icj-cij.org/files/case-related/159/159-20140424-APP-01-00-EN.pdf>, para 6.

⁵³³ 'Disarmament Treaties Database: Treaty on the Prohibition of Nuclear Weapons' (*UNODA United Nations Office for Disarmament Affairs*) <<http://disarmament.un.org/treaties/t/tpnw/state/asc>> accessed 29 November 2019.

⁵³⁴ *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v India)* (Application Instituting Proceeding), paras 38-49.

the violation of an obligation of the same content which has indeed gained the legal status of an international custom.⁵³⁵

Before analyzing the very interesting but unfortunately brief reasoning on the legal value of the obligation contained in article VI of the NPT that the applicant gave, it can be useful to understand why the Marshall Islands filed these petitions.

The Republic of Marshall Islands (RMI) is an island country situated near the equator in the Pacific Ocean, a NNWS party to the NPT since 30 January 1995. ‘the Marshall Islands has a particular awareness of the dire consequences of nuclear weapons’⁵³⁶ since, from 1946 to 1958 was the location of various nuclear test under the trusteeship of the United States. During these 12 years, 67 nuclear weapons were detonated in the Marshall Islands, at varying distance from its population, whose devastating adverse impact is still affecting the islands. In particular, in addition to the damages created to the natural environment of such State, from the Marshallese experience the international medical community has started registering a particular connection between radioiodine and thyroid cancer.⁵³⁷

Under the light of the consequences still affecting its population, the Marshall Islands felt the urge to file a complaint to the ICJ because it had concluded that ‘it is no longer acceptable simply to be a party to the NPT while total nuclear disarmament pursuant Article VI and customary law remains a best a distant prospect.’⁵³⁸

As regard the innovative claim made by the applicant, it recalled that the ICJ, in its Advisory Opinion, interpreted article VI entails an obligation to achieve a precise result – nuclear disarmament in all its aspects - by adopting particular course of action: negotiations in the matter of good faith.⁵³⁹ It further stressed that the decision of the Court to declare that ‘there exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective control’⁵⁴⁰ was adopted

⁵³⁵ *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v United Kingdom)* (Application Instituting Proceeding), paras 81-92.

⁵³⁶ *ibid*, para 9.

⁵³⁷ Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Calin Georgescu; Addendum, Mission to the Marshall Islands (27-30 March 2012) and the United States of America (24-27 April 2012), 3 September 2012, doc. A/HRC/21/48/Add.1, para 95.

⁵³⁸ *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v United Kingdom)* (Application Instituting Proceeding), para 10.

⁵³⁹ *Nuclear Weapon Opinion*, para 99.

⁵⁴⁰ *ibid*, 105(2)(F).

unanimously, and that the Court recognized that the obligation of article VI is rather an obligation of result rather than simply of conduct.

The applicant then recalls that, in 1996, the President of the ICJ, Judge Benjaoui, in its declaration subsequent to the judgment held that:

‘As the Court has acknowledged, the obligation to negotiate in good faith for nuclear disarmament concerns the 182 or so States parties to the Non-Proliferation Treaty. I think one can go beyond that conclusion and assert that there is in fact a twofold *general obligation*, opposable *erga omnes*, to negotiate in good faith and to achieve the desired result.’⁵⁴¹

Hence, according to the RMI, the Advisory Opinion was tantamount to declaring that the obligation in article VI is an obligation *erga omnes*,⁵⁴² that every State has legal interest in its timely performance.⁵⁴³

Furthermore, RMI contested to all nine states it filed a complaint against to have breached the customary norm of international law which entails the same obligations as entailed in article VI NPT. In order to demonstrate to the Court that a norm of such value had indeed consolidated under international law, RMI first recalled that in the *Nicaragua* case it had affirmed that the fact that certain principles are enshrined in a multilateral convention does not mean that they cannot exist as customary rules of international law.⁵⁴⁴ Subsequently it cited the words of the Court in the *Nuclear Weapons Opinion*, which expressed the concern that ‘any realistic search for general and complete disarmament, especially nuclear disarmament, necessitates the

⁵⁴¹ *Nuclear Weapons Opinion*, Declaration of President Benjaoui, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-01-EN.pdf>, para 23.

⁵⁴² According to the ICJ jurisprudence, an obligation *erga omnes* is an obligation that every State owes to the international community as a whole, because it concerns every state and consequently every state has a legal interest in complying with it. Obligations *erga omnes* are indeed the opposite of those arising vis-à-vis another State. *Barcelona Traction, Light and Power Company, Limited (Belgium v Spain)* (Judgment) ICJ Rep 1970, p. 3, para 33.

⁵⁴³ *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v India)* (Application Instituting Proceeding), para 40.

⁵⁴⁴ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)* (Jurisdiction and Admissibility Judgment) [1984] ICJ Rep 1984, p. 392 [hereinafter *Nicaragua Jurisdiction*], para 73.

cooperation of all states’,⁵⁴⁵ and as recalled above, unanimously came to the conclusion that ‘there exist an obligation to conclude negotiations in good faith at an early stage concerning the cessation of nuclear arms race and nuclear disarmament.’⁵⁴⁶ Hence, it affirmed that the Court’s declarations constitute an customary rule of international law.⁵⁴⁷ It finally recalled the declaration given by Judge Benjaoui in 1996, which added as well that:

‘it is not unreasonable to think that, considering the at least formal unanimity in this field, this twofold obligation to negotiate in good faith and achieve the desired result has now, 50 years on, acquired a customary character.’⁵⁴⁸

Even if the Court was finally given the opportunity to express its view on the development of international law in the field of nuclear weapons, it ended up dismissing the case because it found that a dispute did not exist Marshall Islands and the UK, India and Pakistan.⁵⁴⁹ This conclusion leaves astonished not only because it is was the first time that the Court dismissed a claim because of such preliminary objection, but also because it used a narrower standard to determine the existence of a dispute than it did in any other previous case.⁵⁵⁰ Indeed, the Court required to the ‘objective awareness’ of the respondent state prior to the filing of the case.⁵⁵¹

⁵⁴⁵ *Nuclear Weapons Opinion*, para 100.

⁵⁴⁶ *ibid*, 105(2)(F).

⁵⁴⁷ *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v India)* (Application Instituting Proceeding), para 42.

⁵⁴⁸ *Nuclear Weapons Opinion*, Declaration of President Benjaoui, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-01-EN.pdf>, para 23.

⁵⁴⁹ *Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v. United Kingdom)* (Preliminary Objections) (Judgment) ICJ Rep 2016, p. 83, para 59.

⁵⁵⁰ Nico Krisch, ‘Capitulation in The Hague: The Marshall Islands Cases’ (2016) EJIL:Talk! available at <https://www.ejiltalk.org/capitulation-in-the-hague-the-marshall-islands-cases/> accessed on 18 January 2020.

⁵⁵¹ *Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v. United Kingdom)* (Preliminary Objections) (Judgment) ICJ Rep 2016, p. 83, para 52.

b) *Can the provision of a multilateral treaty generate a customary rule of international law?*

The fact that the Court decided not to take such important opportunity for the development of contemporary international law does not imply that the claims brought before the Court by Marshall Islands shall not be analyzed.

Indeed, subsequently to the nine applications presented to the ICJ in 2014, the possibility that article VI of the Treaty of Non-Proliferation of Nuclear Weapons represents a customary norm of international law has been analyzed by be considered a customary norm if international law has already be taken into account by many authoritative scholars.

For example, professor Ida Caracciolo has held that it is not unusual for an international treaty to become customary when it is considered binding by third states and spontaneously applied by them in their relationships.⁵⁵² It has indeed been the case of most of the provision contained in the United Nations Convention on the Law of the Sea, especially those which establish the exclusive economic zone, or of some provisions of International Humanitarian Law contained in the 1949 Geneva Conventions and the 1977 Additional Protocols.

As previously noted, international customs are enlisted under article 38 of the ICJ Statute as one of the sources of international law, and are defined as ‘general practice accepted as law’.⁵⁵³ Indeed, what mainly differentiate customary international law from other sources of international law are the way it comes to existence and the way its existence can be determined, as it is necessary to ascertain whether, at a certain time, all the conditions required for its existence are complied with.⁵⁵⁴

But what conditions must come to life in order to determine the existence of a customary international law rule? The prevailing view on the matter divides these facts in two elements: an objective element represented by the repeated behavior of states (*diuturnitas*), and a subjective element, the belief that such behavior depends on a legal obligation (*opinion juris sive necessitatis*).⁵⁵⁵

⁵⁵² Caracciolo (n 505), para 1.5.

⁵⁵³ ICJ Statute, art. 38(1)(b).

⁵⁵⁴ Tullio Treves, ‘Customary International Law’ (2006) Max Planck Encyclopedia of Public International Law [MPEPIL], para 3.

⁵⁵⁵ *ibid*, para 8.

Since the first judgments given by the Permanent Court of International Justice (PCIJ) the United Nations juridical body have been constant in affirming that customary rules require the joint presence of the two elements abovementioned. In the *Case of the Lotus*, the PCIJ, already in 1929, stated that ‘international law is based on the will of States expressed in conventions or in usages generally accepted as expressing principles of law’.⁵⁵⁶ Furthermore, the Court has particularly examined the ‘two elements theory’ in the *North Sea Continental Shelf Case*, where it explained that:

‘actions by States not only must amount to a settled practice, but they must also be such, or be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of the rule of law requiring it. The need for such a belief, i.e. the existence of a subjective element, is implicit in the very notion of the *opinio iuris sive necessitatis*. The States concerned must therefore feel that they are conforming to what amounts to a legal obligation.’⁵⁵⁷

Similarly, in the *Nicaragua* case, the Court reinstated the importance of the *opinio juris*/State practice duo, specifying that: ‘For a new customary rule to be formed not only must the acts concerned “amount to a settled practice” but they must be accompanied by the *opinio juris sive necessitatis*.’⁵⁵⁸

Finally, before applying the two requirements prescribed by the ICJ and PCIJ jurisprudence to verify whether it can be determined the existence of a customary rule of international law on nuclear disarmament, some special considerations must be taken into account. Indeed, while analyzing the application to the Court by the Republic of Marshall Islands, it has been recalled that the fact that international customs are enshrined in a multilateral convention does not mean that they cease to exist and to apply as principles of customary law,⁵⁵⁹ it must be recalled that the Court, in the *North Sea Continental Shelf Case*, has established further requirement to comply with.

In particular, the 1969 Judgement provided that, in order for a rule only conventional or contractual to pass into the general *corpus* of international law, being accepted as expression of

⁵⁵⁶ *Lotus*, p. 18

⁵⁵⁷ *North Sea*, para 77.

⁵⁵⁸ *Nicaragua*, para 207.

⁵⁵⁹ *Nicaragua Jurisdiction*, para 73.

opinio juris and become binding for countries which have never become parties to the convention, three main requirements are needed:

1. the provision must have a norm-creating character;
2. the participation to the Treaty which contains it should be widespread, including those States whose interests are specially affected; and t
3. the provision should be supported by an extensive and uniform State practice, recognized as a binding legal obligation.⁵⁶⁰

i. Article VI of the NPT as a provision of norm-creating power

In the *North Sea Continental Shelf* case, the Court held that for a provision contained in a convention to be considered as of norm-creating power, it must be regarded as forming the basis of a general rule of law.⁵⁶¹

The obligation contained in article VI of the NPT, namely, to pursue in good faith, and bring to a conclusion negotiations on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament in all its aspects under strict and effective international control, seems to have such characteristics.

First of all, article VI of the NPT has been set out aiming at protecting the international community as a whole, bearing in mind that the consequences related to the prosecution of the Cold war arms race would have indeed led to a nuclear war whose devastation would have effects on all the mankind.⁵⁶² Confirmation of the broad aspiration of such provision can be found in the *dictum* of the Court itself, which has affirmed that ‘any realistic search for general and complete disarmament, especially nuclear disarmament, urges the participation of all States.’⁵⁶³ Moreover, the ICJ recognition that article VI’s obligation is one to conclude negotiations which would effectively lead to nuclear disarmament, rather than passively participate to them further remarkably confirms that such provision has been set out in order to represent the legal basis for the achievement of an effective nuclear disarmament.⁵⁶⁴

Furthermore, since the disarmament obligation figures between those provisions upon which no reservation is conferred, it is able to crystalize as an emerging customary rule, thus

⁵⁶⁰ *North Sea*, para 71, 72, 74.

⁵⁶¹ *ibid*, para 71.

⁵⁶² NPT, preambular paragraph 1.

⁵⁶³ *Nuclear Weapons Opinion*, para 100.

⁵⁶⁴ *ibid*, para 105(2)(F).

showing its norm creating character. Indeed, paragraph 64 of the *North Sea* case specifies that, when reservations⁵⁶⁵ to the provision in question are permitted, it can be inferred that such provision is not ‘declaratory of previously existing or emergent rules of law.’⁵⁶⁶ The reasoning of the Court can be logically understood considering that customary norms, by their very nature, must have equal binding force upon all member of the international community; hence, no unilateral derogation to them is permitted.

The second requirement ‘regarded as necessary before that a conventional rule can be considered to have become a general rule of international law, it might be that, even without the passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself.’⁵⁶⁷ It has already be variously recalled how the Treaty on the Non-Proliferation of Nuclear Weapons counts 191 States parties,⁵⁶⁸ more than any other disarmament agreement ever concluded.

Unfortunately, the Court also added that the wide participation to the Convention to which the norm aspiring to ‘become’ a customary rule belongs, must entail the participation of those states whose interests are specifically affected.⁵⁶⁹ To this regard, the fact that 4 on 9 states who possess (or allegedly possess, as for Israel)⁵⁷⁰ nuclear weapons are not parties to the treaty may be an obstacle to the crystallization of article VI of the NPT as a customary norm of international law.

ii. State practice and *opinio juris* on nuclear disarmament

The third element for a norm contained in a multilateral convention to be recognized a customary rule of international law is the presence of a consistent and widespread State practice. In particular, the Court firmly held that:

⁵⁶⁵ According to Art. 2(1)(d) VCLT, a reservation is a unilateral statement, however phrased or named, made by a State whereby it purports to exclude or to modify the legal effect of certain provisions of the treaty in their application to that State.

⁵⁶⁶ *North Sea*, para 64.

⁵⁶⁷ *ibid*, para 73.

⁵⁶⁸ ‘Disarmament Treaties Database: Treaty on the Prohibition of Nuclear Weapons’ (*UNODA United Nations Office for Disarmament Affairs*) <<http://disarmament.un.org/treaties/t/tpnw/state/asc>> accessed 26 November 2019.

⁵⁶⁹ *North Sea*, para 73.

⁵⁷⁰ Gillis (n 389), p. 30.

‘an indispensable requirement would be that within the period in question, short though it might be, State practice, including that of States whose interests are specially affected, should have been both extensive and virtually uniform in the sense of the provision invoked; and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation is involved.’⁵⁷¹

Throughout time, the ICJ jurisprudence and many scholars have tried to define what can and cannot be accounted as State practice. Generally speaking, it entails both statements and material actions of states, nonetheless the former must be cautiously taken into account, trying to distinguish from political and legal ones.⁵⁷² Evidence of State practice may also be found in positions taken by States in their written and oral pleadings in international and domestic court proceedings.⁵⁷³ Inaction, only when deliberate, may also be considered as practice, while such practice may in some cases be attributable to States taken singularly and in other cases to States taken in groups.⁵⁷⁴

In order to try to simplify the job of the interpreter, in 2016 the ILC, in an effort to try to identify and to clarify what should be looked at when analyzing State practice, provided a non-exhaustive list of sources, which entails:

- diplomatic acts and correspondence;
- conduct in connection with resolutions adopted by an international organization or at an intergovernmental conference;
- conduct in connection with treaties;
- executive conduct, including operational conduct ‘on the ground;’
- legislative and administrative acts; and
- decisions of national courts.⁵⁷⁵

⁵⁷¹ *North Sea*, para 74.

⁵⁷² Sir Michael Wood and Omri Sender, ‘State Practice’ (2017) Max Planck Encyclopedia of Public International Law [MPEPIL], para 6, 7.

⁵⁷³ *ibid*, para 15.

⁵⁷⁴ Treves (n 554), para 23.

⁵⁷⁵ Report of the International Law Commission on the work of the sixty-eighth session (2 May-10 June and 4 July-12 August 2016) UN Doc A/71/10, Chapter V(c).

Furthermore, it must not be forgotten that such practice shall be perpetuated by states with the feeling that they are indeed accomplishing an already existing legal obligation. Hence, the subjective element of the *opinio juris sive necessitatis* should also be taken into account.

Undertaking the task to analyze State practice and *opinion juris* relating to the pursuit of negotiations in good faith toward the cessation of nuclear arms race and complete and effective nuclear disarmament feels like staring at a glass of water: is it half full or half empty?

If on the one hand the commitment of the vast majority of the international community is moving forward the path of the abolition of nuclear weapons, those State which should be mostly looked at, according to the Court's jurisprudence, since are those who are most affected by such obligations, are indeed not complying at all or only marginally complying with the obligations set forth in article VI.

Nonetheless, the actions of an handful of states should not overshadow the protracted commitment of the vast majority of the international community to pursue (and conclude)⁵⁷⁶ negotiation in good faith on effective measures relating to cessation of nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete international control.

Indeed, it has been variously underlined throughout this dissertation that the very first Resolution adopted by the United Nation General Assembly on 24 January 1946, set forth the goal of eliminating all weapons 'adaptable to mass destruction' and instituted the United Nations Atomic Energy Commission.⁵⁷⁷

Between the earliest efforts of towards nuclear disarmament can also be appreciated the adoption, on 1965, of the Partial Test Ban Treaty, concluded aiming at prohibiting nuclear weapons testing in the atmosphere, underwater and in outer space.⁵⁷⁸ The efforts towards the cessation of the nuclear arms race culminated with the entry into force, on 5 March 1970 of the Treaty on Non-Proliferation of Nuclear Weapons, what makes these treaty even a more relevant demonstration of states practice towards nuclear disarmament is that, in order to be party to the NPT, a considerable number of states abandoned their nuclear program. Among them we can find Argentina, Brazil, Iraq, South Africa, South Korea, Sweden, Switzerland, Taiwan and

⁵⁷⁶ According to the interpretation given by the Court to such obligation in *Nuclear Weapons Opinion*, para 99.

⁵⁷⁷ UNGA Res 1(I) (24 January 1946) UN Doc A/RES/1(I).

⁵⁷⁸ Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water (adopted on 5 August 1963, entered into force 10 October 1963) 480 UNTS 43.

Albania must be recalled, together with those former Soviet States that decided to join the treaty (Ukraine, Kazakhstan and Belarus).

Nonetheless, the most important effort toward nuclear disarmament stated in 2013, when a group of States and non-governmental organization launched the ‘Humanitarian Initiative’ a project seeking at reframe the disarmament debate by emphasizing the devastating effects of nuclear detonation. Conferences held in 2013 and 2014 culminated in a diplomatic ‘Humanitarian Pledge’, involving 127 states in an effort to stigmatize, prohibit and eliminate nuclear weapons.⁵⁷⁹ Inspired by the work of the intergovernmental conference, in 2016 the United Nations General Assembly convened an Open-ended Working Group (OEWG), with the mandate to take forward multilateral nuclear disarmament negotiations. Under the OEWG recommendation, on 26 December 2016, the UNGA adopted resolution 71/258⁵⁸⁰ in which it convened an United Nations conference to negotiate a legally binding instrument to prohibit nuclear weapons. Thanks to the work of such conference, on 7 July 2017, the Treaty on the Prohibition of Nuclear Weapons was adopted. The treaty represents the first legally binding multilateral agreement for nuclear disarmament to be adopted in 20 years.

Together with these incredible efforts toward nuclear disarmament, the interpreter must recall the numerous United Nations Security Council and General Assembly Resolutions which evidence the customary nature of the obligation through nuclear disarmament, from General Assembly resolution 1653 (XVI), which since 1961 has prohibited nuclear weapons, to Security Council resolution 2397 of 22 December 2017. Furthermore, it must not be forgotten the contribution of Security Council Resolution 1540(2004), which, adopted under Chapter VII of the Charter, requires all states to comply with their duty to pursue and conclude negotiations on nuclear disarmament with a binding legal value.

On the other hand, the practice of states possessing nuclear weapons, and in particular of those states which are parties to the NPT (and consequently already conventionally obliged to respect the obligations contained in article VI) represents several figurative steps back from the recognition of a customary rule of international law.

First and foremost, the previously analyzed case of the DPRK withdrawal from the NPT in 2003 and its subsequent series of nuclear tests, together with the renew American military interest in reinforcing their nuclear arsenal (as testified not only by numerous declaration released by the US President Donald Trump, but also from its withdrawal from JCAP, INF and

⁵⁷⁹ For more information, visit the website <https://pledge.icanw.org>.

⁵⁸⁰ UNGA Res 71/258 (11 January 2017) A/RES/71/258.

SALT I) rightly contrasts with the international community's path towards nuclear disarmament.

Nonetheless, there could still be hope. It has indeed been held that, for the establishment of the existence of a customary rule it is not necessary that the extensive and uniform State practice comprehends all states.⁵⁸¹ Even if it difficult to conceive the possibility of the existence of a rule on nuclear weapons without the practice of the main nuclear powers, it could be that, under the definition of the states that are mostly affected by the custom to be, established by the *North Sea* case, one could include those aforementioned states that were indeed nuclear power but spontaneously decided to walk on the path of nuclear disarmament. And if it was so, there would be the contraposition of the practice of 11 former nuclear-armed State against those 9 states which possess nuclear weapons today.

4. The Treaty on the Prohibition of Nuclear Weapons

The Treaty on the Prohibition of Nuclear weapons, adopted in New York on 7 July 2017, main objective is the same that what the 1975 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (BWC) and Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (CWC) already accomplished in respect to the other two kinds of weapons of mass destruction: the total elimination of a kind of weapons whose consequences 'cannot be determined and controlled, and the damage they cause is indiscriminate as between combatants and civilians and disproportionately harmful to the environment'.⁵⁸²

As seen in the previous paragraph, the treaty has been concluded in the context of the Humanitarian ledge undertaken by 127 members of the United Nations, with the aim to stigmatize, prohibit and eliminate nuclear weapons.

The final result of the Open-ended Working Group (OEWG) convened by the United Nations in order to negotiate upon nuclear disarmament is a twenty-articles-treaty adopted taking into account the 'catastrophic humanitarian consequences that would result from any use of nuclear weapons'.⁵⁸³ Indeed, the preamble of the treaty specifically mentions that the parties,

⁵⁸¹ Treves (n 554), para 35.

⁵⁸² Strydom (n 306), para 2.

⁵⁸³ TPNW, preambular paragraph 2.

in order to decide the text and the extent of the prohibitions set forth in the Treaty were guided, by the principles and the rules of IHL and, in particular, by the principle that the right of the parties to an armed conflict to choose means and methods of warfare is not unlimited, the rule of distinction, the prohibition against indiscriminate attacks, the rules on proportionality and precautions in attack, the prohibition on the use of weapons of a nature to cause superfluous injuries or unnecessary suffering and the rules for the protection of the natural environment.⁵⁸⁴ The treaty also further reminds that all states, at all times, shall comply with the rules of international law applicable to nuclear weapons, including international humanitarian law and international human rights law.⁵⁸⁵

Even though the treaty has yet to enter into force, since it provides that it will be so 90 days after the fiftieth instrument of ratification, acceptance, approval or accession has been deposited,⁵⁸⁶ it is worth to spend some time analyzing its main obligations, in the hope that it will be soon contribute to the final and complete nuclear disarmament.

Obviously, the most important obligation which the TPNW provides for is enshrined in article 1, which enlists seven fundamental steps to respect in order to implement the prohibition of nuclear weapons:

‘Each State Party undertakes never under any circumstances to:

- (a) Develop, test, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices;
- (b) Transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly or indirectly;
- (c) Receive the transfer of or control over nuclear weapons or other nuclear explosive devices directly or indirectly;
- (d) Use or threaten to use nuclear weapons or other nuclear explosive devices;
- (e) Assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Treaty;
- (f) Seek or receive any assistance, in any way, from anyone to engage in any activity prohibited to a State Party under this Treaty;

⁵⁸⁴ *ibid*, preambular paragraph 9.

⁵⁸⁵ *ibid*, preambular paragraph 8.

⁵⁸⁶ *ibid*, art. 15(1)

(g) Allow any stationing, installation or deployment of any nuclear weapons or other nuclear explosive devices in its territory or at any place under its jurisdiction or control.⁵⁸⁷

The obligations contained in such article, with is indexed ‘prohibitions’ contains a set of undertakings that State parties shall never perform under any circumstance, are more comprehensive than those of any other disarmament treaty, ‘reflecting the unique properties of nuclear weapons as well as the political commitment of states that negotiated the 2017 Treaty.’⁵⁸⁸

On the contrary to the NPT (which provides disarmament obligation that its member shall respect but sets forth effective control only with regard of the obligations relating non-proliferation and peaceful use of nuclear energy),⁵⁸⁹ states which are willing to accede the TPNW shall, not later than 30 days after the treaty enters into force, submit to the Secretary-General of the United Nations a declaration in which:

(a) they declare whether they owned, possessed or controlled nuclear weapons or other nuclear explosive devices and, if so, that they have eliminated their nuclear program, including the irreversible conversion of all their nuclear-related-facility;

(b) if the own, possess or control any nuclear weapons or other nuclear explosive devices;

(c) if there are any nuclear weapons or other nuclear explosive devices in their territories or in any other place under their jurisdiction which are controlled, possessed or owned by another State.⁵⁹⁰

It is indeed also provided by article 4, paragraph 4 of the TPNW, that any State that wishes to join the treaty must ensure the prompt removal of such weapons or other explosive devices,⁵⁹¹with clear reference to those states that, under the obligations concluded within the NATO framework, host in their territories nuclear weapons belonging to the United States.⁵⁹²

Nonetheless, the lynchpin of the treaty’s architecture is represented by the provision contained in article 4, which precisely describes the path to follow toward the total elimination of nuclear weapons. It indeed addresses the obligation of those states that will apply to become

⁵⁸⁷ *ibid*, art.1

⁵⁸⁸ Stuart Casey-Maslen, *The Treaty on the Prohibition of Nuclear Weapons: a Commentary* (OUP 2019) [hereinafter Casey-Maslen 2019], para 1.01.

⁵⁸⁹ NPT, artt. II, III, VI.

⁵⁹⁰ TPNW, art. 2.

⁵⁹¹ *ibid*, art. 4(4).

⁵⁹² For a more extensive discussion of the NATO nuclear umbrella see *supra* at Chapter III(2)(a)(ii).

member of the treaty but are, after the 7th July of 2017, still nuclear-armed or are hosting a third's State's nuclear weapons.

On the one hand, nuclear-armed states are obliged to destroy all their nuclear weapons or other nuclear explosive devices, while they must also conclude or maintain a heightened safeguard agreement with the IAEA.⁵⁹³

On the other hand, states with a foreign states' nuclear explosive devices stationed, installed or deployed in any place under their jurisdiction or control must ensure their prompt removal. They are also required, under article 3, to conclude or maintain a comprehensive safeguard agreement.⁵⁹⁴ Finally, the First Meeting of the States Parties to the Treaty, to be held one year after the entry into force of the treaty, will determine deadlines for the destruction or the removal or the respective nuclear programs or foreign states' nuclear weapons.⁵⁹⁵

In conclusion, the 2017 Treaty on the Prohibition of Nuclear Weapons represents an optimal instrument for the obtainment of the long-awaited abolition of nuclear weapons. To this date, while 81 states have signed the treaty, only 36 became parties, hampering the enter into force of the instrument. The hope is that, during the programmed 2020 NPT review Conference, a debate on the necessity to join the treaty, which indeed is provided for by article VI of the NPT as the final step toward nuclear disarmament, will be started by those who states who undertook the Humanitarian Pledge on the first place, and that such discussion will finally lead to a complete and effective nuclear disarmament.

⁵⁹³ TPNW, art. 4(1), (2), (3).

⁵⁹⁴ *ibid*, artt. 3, 4(4).

⁵⁹⁵ Casey-Maslen 2019 (n 588), paras 4.01, 4.02.

V. CONCLUSIONS: THE STATUS OF NUCLEAR WEAPONS UNDER 2020 INTERNATIONAL LAW

When it comes to nuclear weapons, a strongly polarized debate over their legality and legal regime has taken place in the last 75 years. As it appears from the written statements sent to the International Court of Justice in occasion of its 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, states either assert that nuclear weapons are permitted under international law, or held that their possession and their use is prohibited under international law. As it was analyzed, the Court, in 1996, was not able to give a definitive answer that would lean toward one of these positions.

Throughout this dissertation, three main branches of law have been scrutinized, with the aim to find if, 25 years after the latest ICJ pronounce on nuclear weapons, the evolution on Public International Law could have led to a slow but steady affirmation of a general prohibition of weapons as deadly as nuclear weapons.

During the investigation on the legality of the use or threat to use such weapons, two different branches of law relating to the lawful use of force were taken into account: the law of self-defence as enshrined in the Charter of the United Nations (*jus ad bellum*) and the law governing the conduct of hostilities, also known as International Humanitarian Law (*jus in bello*). Since *jus ad bellum* is weapon-neutral, the specific characteristics of nuclear weapons do not infer in the application of such rules. Nonetheless, throughout the application of the principles of necessity and proportionality that govern the use of force in self-defence, it has been concluded that it seems nearly impossible that there would be any circumstance in which the use of a weapon of such destructive power would be considered proportionate to repel or halt an attack suffered. On the other hand, it is clear from the application of the principles and rule of IHL to any possible use of nuclear weapons that the deadly effects of such weapons may never distinguish between civilians and combatants or be proportionate to any imaginable military advantage anticipated. Furthermore, the use of nuclear weapons would never respect the rule of IHL which prescribes the prohibition of unnecessary suffering.

From the summary of the analysis conducted in chapter II, it appears that any use or threat to use nuclear weapons shall be considered unlawful.

Secondly, from a dispassionate assessment of the effects of the entry into force and of the 50 years-work conducted by the Treaty on the Non-Proliferation of Nuclear Weapons, it has been found that the treaty has indeed reached its non-proliferation purpose, but has failed to implement the obligation entailed in its disarmament pillar, mainly because the five NWS under the NPT are the same five members of the United Nations Security Council that are ultimately

appointed under the Statute of the International Atomic Energy Agency to take care of the most outrageous breaches of the treaty. Furthermore, an element which impairs the effectiveness of the disarmament provisions is the fact that, under article III of the NPT, the conclusion of a safeguard agreement is imposed only to non-nuclear-weapons states and aims at controlling the implementation of their non-proliferation duties under article II of the NPT. On the other hand, there is no such provision with regard to the disarmament commitments undertaken by nuclear-weapons states under article VI, and namely their obligation to ‘pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.’ It has further been analyzed that, according to the unanimous decision taken by the International Court of Justice in its 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, the obligation contained in article VI is not just one to negotiate but is indeed a *pactum de contrahendo*, obliging all states to effectively conclude such negotiations on effective measures towards nuclear disarmament. It was finally observed that, even the safeguard framework on non-proliferation, instituted by the treaty through the supervision of the International Agency for the Atomic Agency, is, in the end, quite ineffective in the prevention of the breach of the treaty obligations. Such situation depends upon two main factors: first, the IAEA inspection to the nuclear facilities of the member states to the NPT are undertaken only with the consent of the State in question; second, in case of massive breach of the NPT’s non-proliferation obligations, the organ of the United Nations provided with the task to intervene and put to an end such violation is, again, the United Nations Security Council that, inevitably, ends up not being able to act impartially.

Finally, it has been analyzed, under the guidance of the Applications Instituting Proceedings presented by the Republic of Marshall Islands to the ICJ on the Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament against the 9 states possessing nuclear weapons, whether article VI may be considerate to have acquired the legal value of a customary rule of international law.

Following the dictum of many decisions of the International Court of Justice, actions by States carried out in such a way as to be evidence of a belief that this practice is rendered obligatory by the existence of the rule of law requiring it have been looked for and analyses with regard to the obligations contained in article VI. While it is remarkable the commitment undertaken by the majority of the international community toward nuclear disarmament and is evident the commitment of the United Nations General Assembly and Security Council towards the elimination of nuclear weapons and other nuclear explosive devices, the practice of those

states that are mostly affected by the obligations of article VI, namely the five permanent members of the UNSC, seems to jeopardize the formation of such custom.

The journey through the sources of international law regulating nuclear weapons has been concluded with the analysis of the Treaty on the Prohibition on Nuclear Weapons, which will hopefully also represent the last step towards the elimination of such deadly weapons. Indeed, the treaty, concluded in the frame of multistate diplomatic pledge, sets forth specific obligations which seem to have the possibility to actually guide states toward 'nuclear zero'. Nonetheless, it has not yet reached the numbers of parties needed in order for it to enter into force. The hopes are that, in the context of the 2020 NPT Review Conference, such instrument will be given the importance it embodies in the world's commitment toward the elimination of all weapons of mass destruction.

BIBLIOGRAPHY

TREATIES

- Charter of the United Nations (adopted 24 October 1945, entered into force 31 August 1965) 1 UNTS;
- Convention on Cluster Munitions (adopted 30 May 2008, entered into force 1 August 2010) 2688 UNTS 39;
- Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects (and Protocols) (As Amended on 21 December 2001) (adopted 10 October 1980, entered into force 2 December 1983) 1342 UNTS 137;
- Convention on the Prevention and Punishment of the Crime of Genocide (adopted 9 December 1948, entered into force 12 January 1951) 277 UNTS 78;
- Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (adopted 10 April 1972, entered into force 26 March 1975) 1015 UNTS 163;
- Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (adopted 13 January 1993, entered into force 29 April 1997) 1974 UNTS 45;
- Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction (adopted on 18 September 1997, entered into force 1 March 1999) 2056 UNTS 211;
- Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (First Geneva Convention) (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 31;
- ILC, 'Draft Articles on Responsibility of States for Internationally Wrongful Act' (adopted 10 August 2001) UN Doc A/56/10;
- Intermediate-Range Nuclear Forces Treaty (INF) (United States - former Soviet Union) (concluded on 8 December 1987, entered into force 1 June 1988);
- Protocol Additions to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) (adopted 8 June 1977 entered into force 7 December 1978) 125 UNTS 3;

- Statute of the IAEA (approved on 23 October 1956 entered into force 29 July 1957) available at <<https://www.iaea.org/sites/default/files/statute.pdf>>;
- Statute of the International Court of Justice (adopted 26 June 1945, entered into force 24 October 1945) 33 UNTS 993;
- Strategic Arms Limitation Treaty (SALT I) (United States - former Soviet Union) (26 May 1972);
- Strategic Arms Limitation Treaty (SALT II) (United States - former Soviet Union) (never entered into force);
- The Anti-Ballistic Missile Treaty (United States – former Soviet Union) (26 May 1972);
- Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water (adopted on 5 August 1963, entered into force 10 October 1963) 480 UNTS 43;
- Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (or Treaty of Tlatelolco) (adopted 14 February 1967) UN Doc A/6663;
- Treaty on the Non-Proliferation of Nuclear Weapons (adopted on 1 July 1968, entered into force 5 March 1970) 729 UNTS 161;
- Treaty on the Prohibition of Nuclear Weapons (adopted 7 July 2017 not yet entered into force) CN.475.2017.TREATIES-XXVI-9;
- United Nation Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 31363;
- US Atomic Energy Act (1954) available at <https://legcounsel.house.gov/Comps/Atomic%20Energy%20Act%20Of%201954.pdf> accessed 2 January 2020;
- Vienna Convention on the Law of Treaties (adopted 12 May 1968, entered into force 27 January 1980) 1155 UNTS 331.

INTERNATIONAL JURISPRUDENCE

- *Armed Activities on the Territory of the Congo (New Application: 2002) (Democratic Republic of the Congo v Rwanda)* (Judgment) [2006] ICJ Rep 6, p. 165;
- *Barcelona Traction, Light and Power Company, Limited (Belgium v Spain)* (Judgment) ICJ Rep1970, p. 3;
- Case Concerning Claims Arising out of Decisions of the Mixed Graeco/German Arbitral Tribunal set up under Article 304 in Part X of the Treaty of Versailles (*Greece v Federal*

Republic of Germany) (Decision of 26 January 1972) Reports on International Arbitral Awards Vol XIX;

- *Case concerning Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America)* (Merits) [1986] ICJ Rep 1986, p. 14;
- *Case Concerning Oil Platforms (Iran v US)* (Judgment) [2003] ICJ Rep 161, p. 158;
- *Corfu Channel* (United Kingdom of Great Britain and Northern Ireland v. Albania) (Judgement) ICJ Reports 1949, p.4;
- Lac Lanoux Arbitration of 16 November 1957 (*France v Spain*) 24 ILR 128 (1957);
- *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) [1996] ICJ Rep 1996, p.224;
- *Legality of the Use by a State of Nuclear Weapons in Armed Conflict* (Advisory Opinion) [1996] ICJ Rep 1996 p. 66;
- *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America)* (Jurisdiction and Admissibility Judgment) [1984] ICJ Rep 1984, p. 392
- *North Sea Continental Shelf Case (Federal Republic of Germany v Denmark; Federal Republic of Germany v Netherlands)* (Judgment) [1969] ICJ Rep 1969, p. 3;
- *Nuclear Tests* (Australia v. France) (Interim Protection) (Order of 22 June 1973) ICJ Reports 1973, p. 99;
- *Nuclear Tests* (Australia v. France) (Judgment) ICJ Rep 1974, p. 253;
- *Nuclear Tests* (New Zealand v. France) (Interim Protection) (Order of 22 June 1973) ICJ Rep 1973, p. 135;
- *Nuclear Tests* (New Zealand v. France) (Judgment) ICJ Rep 1974, p. 457;
- *Obligations concerning Negotiations relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament* (Marshall Islands v. United Kingdom) (Preliminary Objections) (Judgment) ICJ Rep 2016, p. 83;
- *Prosecutor v Fatmir Limaj* (Judgement) IT-03-66-T (30 November 2005);
- *Prosecutor v. Milan Martić* (Judgement) (Appeals Chamber) IT-95-11 (8 October 2008);
- *Prosecutor v. Milan Martić* (Judgement) (Trial Chamber) IT-95-11 (12 June 2007);
- *The case of the S.S. Lotus (France v Turkey)* (Merits) [1927] PCIJ Rep Series A No 10.

UN DOCUMENTS

- Report of the International Law Commission on the work of the sixty-eighth session (2 May-10 June and 4 July-12 August 2016) UN Doc A/71/10;

- UNGA Res 1(I) (24 January 1946) UN Doc A/RES/1(I);
- UNGA Res 1378(XIV) (20 November 1959) UN Doc A/RES/1378(XIV);
- UNGA Res 1653(XVI) (24 November 1961) UN Doc A/RES/1653(XVI);
- UNGA Res 1660(XVI) (28 November 1961) UN Doc A/RES/1660(XVI);
- UNGA Res 1664(XVI) (4 December 1961) UN Doc A/RES/1664(XVI);
- UNGA Res 1665(XVI) (4 December 1961) UN Doc A/RES/1665(XVI);
- UNGA Res 1665(XVI) (4 December 1961) UN Doc A/RES/1665(XVI);
- UNGA Res 1722(XVI) (20 December 1961) UN Doc A/RES/1722(XVI);
- UNGA Res 2028(XX) (19 November 1965) UN Doc A/RES/2028(XX);
- UNGA Res 2373(XXII) (12 June 1968) UN Doc A/RES/2373(XXII);
- UNGA Res 2602E (16 December 1969) A/RES/2602E(XXIV);
- UNGA Res 34/75 (11 December 1979) A/RES/34/75;
- UNGA Res 35/46 (3 December 1980) A/RES/35/46;
- UNGA Res 43/78L (7 December 1988) A/RES/43/78L;
- UNGA Res 45/62A (4 December 1990) A/RES/45/62;
- UNGA Res 49/75 K (9 January 1995) UN Doc A/RES/49/75 K;
- UNGA Res 54/54 (10 January 2000) UN Doc A/RES/54/54;
- UNGA Res 55/33 (12 January 2001) UN Doc A/RES/55/33;
- UNGA Res 71/258 (11 January 2017) A/RES/71/258.
- UNSC ‘Letter Dated 7 October 2001 from the Permanent Representative of the United States of America to the United Nations Addressed to the President of the Security Council’ (7 October 2001) UN Doc S/2001/947;
- UNSC Res 1373 (28 September 2001) UN Doc S/RES/1373(2001);
- UNSC Res 1441 (8 November 2002) S/RES/1441(2002);
- UNSC Res 1540 (28 April 2004) UN Doc S/RES/1540(2004);
- UNSC Res 1695 (15 July 2006) S/RES/1695(2006);
- UNSC Res 1696 (31 July 2006) S/RES/1696(2006);
- UNSC Res 1737 (23 December 2006) S/RES/1737(2006);
- UNSC Res 1747 (24 March 2007) S/RES/1747(2007);
- UNSC Res 1803 (3 March 2008) S/RES/1803(2008);
- UNSC Res 1835 (27 September 2008) S/RES/1835(2008);
- UNSC Res 1929 (9 June 2010) A/RES/1929(2010);
- UNSC Res 687 (3 April 1991) S/RES/687(1991);

- UNSC Res 825 (11 May 1993) S/RES/825(1993);
- UNSC Resolution 1441 (8 November 2002) UN Doc S/Res/1441(2002);
- UNSC Verbatim Record (12 December 1971) UN Doc S/PV.1613;
- UNSC Verbatim Record (12 June 1981) UN Doc S/PV.2280;
- UNSC Verbatim Record (12 June 1981) UN Doc. S/PV.2280;
- UNSC Verbatim Record (15 June 1981) UN Doc S/PV.2282;
- UNSC Verbatim record (21 December 1971) UN Doc S/PV.1621;
- UNSC Verbatim Record (21 March 2003) UN Doc S/2003/351(2003);
- UNSC Verbatim Record (22 October 1962) UN Doc. S/5183(1962);
- UNSC Verbatim Record (4 June 1998) UN Doc S/PV.464;
- UNSC Verbatim Record (6 June 1967) UN Doc S/PV.1348;
- WHO Res 46/40 (14 May 1993) WHA46.40.

BOOKS

- Allison GT and Zelikow P, *Essence of Decision: Explaining the Cuban Missile Crisis* (Pearson P T R 1999);
- Boisson De Chazournes L and Sand P, *International Law, The International Court of Justice and Nuclear Weapons* (CUP 1999);
- Browlie I, *International Law and the Use of Force by States* (Oxford Clarendon Press 1963);
- Caracciolo I, 'The limitation of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons: International Law in Support of Nuclear Disarmament' in Ida Caracciolo et al. (eds.) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016);
- Stuart Casey-Maslen, *The Treaty on the Prohibition of Nuclear Weapons: a Commentary* (OUP 2019);
- Casey-Maslen S, 'The use of nuclear weapons and rules governing the conduct of hostilities' in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014);
- Chayes A, *The Cuban Missile Crisis (International Crisis and the Role of Law)* (OUP 1974);
- Christodoulidou T and Chainoglou K, 'The Principle of Proportionality from a *Jus ad Bellum* Perspective' in Marc Weller (ed), *The Oxford Handbook of the Use of Force in International Law* (OUP 2015);
- Cirincione J, *Bomb Scare: The History and Future of Nuclear Weapons* (CUP 2008);

- Constantinou A, *The Right Of Self-Defence Under Customary International Law And Article 51 Of The United Nations Charter* (Athènes Sakkoulas 2000);
- Dinstein Y, *The Conduct of Hostilities under the Law of International Armed Conflict* (CUP 2004);
- Dinstein Y, *War, Aggression and Self-Defence* (6th edn CUP 2017);
- Doswald-Beck L, *San Remo Manual On International Law Applicable To Armed Conflicts At Sea* (CUP 1995);
- Drobysz S and Persbo A, ‘Strengthening the IAEA Verification Capabilities’ in Ida Caracciolo et al (eds) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016);
- Fischer D, *International Atomic Energy Agency: The First Forty Years and Personal Reflections* (Intl Atomic Energy Agency 1997);
- Francis L, *Instructions for the Government of Armies of the United States in the Field* (1863) (known as Lieber Code);
- Gardam J, *Necessity, Proportionality and The Use of Force By States* (1st edn, CUP 2004)
- Gardiner R, *Treaty Interpretation* (OUP 2008);
- Gary D. Solis, *The Law of Armed Conflicts: International Humanitarian Law in War* (CUP 2010);
- Gazzini T, *The Changing Rules on the Use of Force* (2006 Manchester University Press)
- Gills M, *Disarmament: a Basic Guide* (4th edn, United Nations Publications 2017);
- Goldblat J, *Arms Control: The New Guide to Negotiation and Agreements* (Sage Publications 2002);
- Gray C, *International Law and The Use of Force* (3rd edn, OUP 2008);
- Gray C, *International Law and The Use of Force* (4th edn, OUP 2018);
- Green J, *The International Court of Justice and Self-Defence in International Law* (Hart Publishing 2009);
- Green L C, *The Contemporary Law of Armed Conflict* (2nd edn, Manchester University Press 2008);
- Hart H L A, *The Concept of Law* (Oxford Clarendon Press 1961);
- Hayashi N, ‘Using Force by means of nuclear weapons and requirements of necessity and proportionality *ad bellum*’ in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014);
- Henckaerts J and Doswald-Beck L, *Customary International Humanitarian Law Volume I: Rules* (3rd edn, CUP 2009);

- Hur M, *The Six-Party Talks on North Korea: Dynamic Interactions among Principal States* (Palgrave Macmillan 2018);
- Ishikawa E and Swain DL, *Hiroshima and Nagasaki: The Physical, Medical, and Social Effects of Atomic Bombings* (CUP 2014);
- Joyner D H, 'The legal meaning and implication of Article VI of the Non-Proliferation Treaty' in Gro Nystuen et al. (eds) *Nuclear Weapons Under International Law* (CUP 2014);
- Joyner D H, *International law and the Proliferation of Weapons of Mass Destruction* (OUP 2009);
- Joyner D H, *Interpreting the Nuclear Non-Proliferation Treaty* (OUP 2011);
- Louka E, *Nuclear Weapons, Justice and the Law* (Edward Elgar Publishing Limited 2011);
- McDouglas M and Feliciano F, *Law and Minimum World Public Order* (1st edn Yale 1961);
- McNair L, *The Law of Treaties* (2nd edn, Oxford Clarendon Press 1961);
- Myjer E and Herbach J, 'Violation of non-proliferation treaties and related verification treaties' in Daniel H. Joyner and Marco Roscini (eds), *Non-proliferation Law as a Special Regime: a contribution to fragmentation theory in international law* (CUP 2012);
- Nanda VP and Krieger D, *Nuclear Weapons and the World Court* (Ardsley N.Y: Transnational publishers 1988);
- O' Connor S, 'Nuclear weapons and the unnecessary suffering rule' in Gro Nystuen and others (ed), *Nuclear Weapons under International Law* (CUP 2014);
- Okimoto K, *The Distinction and Relationship between Jus ad Bellum and Jus in Bello* (Hart Publishing 2011);
- Pilloud C and others, *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Martinus Nijhoff 1987);
- Roscini M, 'On Certain Legal Issue Arising from Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons' in Ida Caracciolo et al. (eds) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016);
- Sagan SD and Walltz KN, *The Spread of Nuclear Weapons: an enduring debate* (3rd ed, W.W Norton and Company 2013);
- Sassòli M, *International Humanitarian Law: Rules, Controversies, and Solutions to Problems Arising in Warfare* (Edward Elgar Publishing 2019);
- Schrijver N, 'The Ban on the Use of Force in the UN Charter' in Marc Weller (ed), *The Oxford Handbook of the Use of Force in International Law* (OUP 2015);
- Simma B et al (eds), *The Charter of the United Nations: A Commentary* (3rd edn, OUP 2012);

- Simpson J, 'The Nuclear Nonproliferation Treaty' in Nathan E. Bush and Daniel H. Joyner (eds) *Combating Weapons of Mass Destruction: The Future of International Nonproliferation Policy* (University of Georgia Press, 2009);
- Singh N and McWhinney E, *Nuclear Weapons and Contemporary International Law* (2nd edn. 1988 Kluwer);
- Stürchler N, *The Threat of Force in International Law* (CUP 2007);
- Szabó T, *Anticipatory Actions in Self-Defence: Essence and Limits under International Law* (The Hague: TMC Asser Press 2011);
- Thirlway H, 'The Source of International Law' in Malcom Evans (ed) *International Law* (2nd edn, OUP 2006);
- Vassalli di Dachenhauen T, 'Strengthening the Role of the IAEA as a Step towards a World Security Order' in Ida Caracciolo et al. (eds.) *Nuclear Weapons: Strengthening the International Legal Regime* (Eleven International Publishing 2016);
- Weiss L, 'The Nuclear Nonproliferation Treaty: Strengths and Gaps' in Henry Sokolski (ed.), *Fighting Proliferation: New Concerns for the Nineties* (Air University Press 1996).

JOURNAL ARTICLES

- 'The Caroline Case' (1937) 29 *British and Foreign State Papers* 1137;
- Ago R, 'Addendum to the 8th Report on State Responsibility' (1980) 2 *Yearbook of the International Law Commission (YILC)* 52;
- Ford C A, 'Debating Disarmament: Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons' (2007) 14(3) *Nonproliferation review*;
- Hirsch T, 'The IAEA Additional Protocol: What It Is and Why It Matters' (2004) *The Nonproliferation Review*;
- Jennings R Y, 'The Caroline and McLeod Cases' (1938) 32 *American Journal of International Law* 82;
- Koster K, 'An Uneasy Alliance: NATO Nuclear Doctrine & The NPT' (2000) 49 *Disarmament Diplomacy*;
- Kretzmer D, 'The inherent right to self-defence and proportionality in *jus ad bellum*' 24 (2013) *EJIL*;
- Krisch N, 'Capitulation in The Hague: The Marshall Islands Cases' (2016) *EJIL: Talk!* Available at <https://www.ejiltalk.org/capitulation-in-the-hague-the-marshall-islands-cases/> accessed on 18 January 2020.

- Lazar S, 'Necessity in Self-Defence and War' (2012) vol 40(1) Philosophy and Public Affairs 3;
- Schmidt F, 'NPT Export Controls and the Zangger Committee' (2000) 7(3) Nonproliferation review;
- Smit Duijzentkunst B, 'Interpretation of Legislative Security Council Resolutions' (2008) 4 Utrecht L Rev 188;
- Thorne L, 'IAEA nuclear inspections in Iraq' (1992) 2 IAEA Bulletin;
- Weiss L, 'India and the NPT' (2010) 34(2) Strategic Analysis;
- Willrich M, 'Non-Proliferation Treaty: Framework for Nuclear Arms Control' (1969) 63(4) AJIL.

WORKING PAPERS

- 'Agreement of 30 January 1992 Between The Government of the Democratic People's Republic Of Korea and the International Atomic Energy Agency For The Application of Safeguards in connection with the Treaty On The Non- Proliferation Of Nuclear Weapons' (INFCIRC/403) available at <https://www.iaea.org/sites/default/files/infcirc403.pdf>;
- 'Agreement of 4 April 1975 Between the Agency, Israel and the United States of America for the Application of Safeguards' (INFCIRC/249) available at < <https://www.iaea.org/publications/documents/infcircs/text-agreement-4-april-1975-between-agency-israel-and-united-states-america-application-safeguards>> accessed on 5 January 2020;
- 'Final Assessment on Past and Present Outstanding Issues regarding Iran's Nuclear Programme' (GOV/2015/68) available at <https://www.iaea.org/sites/default/files/gov-2015-68.pdf>;
- 'Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran' (GOV/2011/65) available at <https://www.iaea.org/sites/default/files/gov2011-65.pdf>;
- 'Nuclear weapons and International Humanitarian Law' (ICRC, February 2013) available at <https://www.icrc.org/en/doc/assets/files/2013/4132-4-nuclear-weapons-ihl-2013.pdf>;
- 'The Structure and Content of Agreements Between the Agency and States Required in Connection with the Treaty on The Non-Proliferation Of Nuclear Weapons' (INFCIRC/153 (Corrected)) available at <https://www.iaea.org/sites/default/files/publications/documents/infcircs/1972/infcirc153.pdf>;

- Agreement Governing the Relationship Between the United Nations and the International Atomic Energy Agency (INFCIRC/11) available at <https://www.iaea.org/publications/documents/infcircs/texts-agencys-agreements-united-nations> accessed on 5 January 2020;
- Model Protocol Additional to The Agreement(S) between State(S) and The International Atomic Energy Agency for the Application of Safeguards (INFCIRC/540) available at <https://www.iaea.org/sites/default/files/infcirc540.pdf>;
- ¹ Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Calin Georgescu; Addendum, Mission to the Marshall Islands (27-30 March 2012) and the United States of America (24-27 April 2012), 3 September 2012, doc. A/HRC/21/48/Add.1
- Rockwood L, 'Legal framework for IAEA safeguards' (2013) International Atomic Energy Agency available at <https://www.iaea.org/sites/default/files/16/12/legalframeworkforsafeguards.pdf> accessed on 4 January 2020;

ENCYCLOPEDIA ENTRIES

- 'Nuclear Umbrella' in Collins English Dictionary (Harper Collins Publishers);
- Dinstein Y, 'Warfare, Methods and Means' (2015) Max Planck Encyclopedia of Public International Law [MPEPIL];
- Greenwood C, 'Self-Defence' (2011) Max Planck Encyclopedia of Public International Law [MPEPIL];
- Heintschel von Heinegg W, 'Iraq, Invasion of (2003)' (2015) Max Planck Encyclopedia of Public International Law [MPEPIL];
- Owada H, 'Pactum de contrahendo, pactum de negotiando' (2008) Max Planck Encyclopedia of Public International Law [MPEPIL];
- Ruffert M, 'Reprisals' (2015) Max Planck Encyclopedia of Public International Law [MPEPIL];
- Strydom H A, 'Weapons of Mass Destruction'(2017) Max Planck Encyclopedia of Public International Law [MPEPIL];
- Thürer D, 'Soft Law' (2009) Max Planck Encyclopedia of Public International Law [MPEPIL];
- von Bernstorff J, 'Martens Clause' (2009) Max Planck Encyclopedia of Public International Law [MPEPIL];

- Treves T, ‘Customary International Law’ (2006) Max Planck Encyclopedia of Public International Law [MPEPIL].
- von Bogdandy A and Rau M, ‘Lotus, The’ (2006), Max Planck Encyclopedia of Public International Law [MPEPIL];
- Wood M and Sender O, ‘State Practice’ (2017) Max Planck Encyclopedia of Public International Law [MPEPIL]:
- Zemanek K, ‘Armed Attack’ (2013) Max Planck Encyclopedia of Public International Law [MPEPIL];

MISCELLANEOUS

- *Case Concerning Oil Platforms (Iran v US)* (Judgment) (Counter-Memorial of US);
- *Case Concerning Oil Platforms (Iran v US)* (Judgment) (Memorial of Iran);
- Draft articles on the effects of armed conflicts on treaties (2011) in *Yearbook of the International Law Commission, 2011*, vol. II, Part Two;
- International Committee of the Red Cross (ICRC) ‘San Remo Manual on International Law Applicable to Armed Conflicts at Sea’ (ICRC, Livorno 1994);
- *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion) (Written Statement of Malaysia);
- *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) (Written Statement of the UK);
- *Legality of the Threat or Use of Nuclear Weapons* (Letter dated 20 June 1995 from the Acting Legal Adviser to the Department of State, together with Written Statement of the Government of the United States of America);
- *Legality of the Threat or Use of Nuclear Weapons* (Verbatim Record) (3 November 1995)
- *Legality of the Threat or Use of Nuclear Weapons* (Written Statement of the United States) (20 June 1995);
- *Legality of the Threat or Use of Nuclear Weapons* (Written Statement of the UK) (June 1995);
- *Legality of the Threat or Use of Nuclear Weapons* (Written Statement of Solomon Islands) (19 June 1995);
- *Legality of the Threat or Use of Nuclear Weapons*, Declaration of President Benjaoui, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-01-EN.pdf>;
- *Legality of the Threat or Use of Nuclear Weapons*, Declaration of Judge Herczegh, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-02-EN.pdf>;

- *Legality of the Threat or Use of Nuclear Weapons*, Dissenting Opinion of Judge Schwebel, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-09-EN.pdf>;
- *Legality of the Threat or Use of Nuclear Weapons*, Dissenting Opinion of Judge Higgins, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-14-EN.pdf>;
- *Legality of the Threat or Use of Nuclear Weapons*, Separate Opinion of Judge Fleischhauer, available at <https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-08-EN.pdf>;
- Letter dated 27 July 1842 from Daniel Webster to Lord Ashburton, (1841-1842) *British and Foreign State Papers*;
- *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v United Kingdom)* (Application Instituting Proceeding) available at <https://www.icj-cij.org/files/case-related/160/160-20140424-APP-01-00-EN.pdf>;
- *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v India)* (Application Instituting Proceeding) available at <https://www.icj-cij.org/files/case-related/158/158-20140424-APP-01-00-EN.pdf>;
- *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v Pakistan)* (Application Instituting Proceeding) available at <https://www.icj-cij.org/files/case-related/159/159-20140424-APP-01-00-EN.pdf>;
- UK Manual of the Law of Armed Conflicts (JSP 383) available at <https://www.gov.uk/government/collections/jsp-383>> accessed on 19 December 2019;
- US Law of War Manual (December 2016) available at <<https://dod.defense.gov/Portals/1/Documents/pubs/DoD%20Law%20of%20War%20Manual%20-%20June%202015%20Updated%20Dec%202016.pdf?ver=2016-12-13-172036-190>>;
- Yearbook of the International Law Commission, 1980, Vol. II, part two.