The Legal Effectiveness of Disarmament Regimes

by

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I wish to express my gratitude to my parents for trusting in my abilities, supporting me on every level and for providing encouragement when needed.
Statement of Originality

I confirm that the submitted work is my own work and that I have clearly identified and fully acknowledged all material that is entitled to be attributed to others (whether published or unpublished) using the referencing system set out in the programme handbook. I agree that the University may submit my work to means of checking this. I confirm that I understand that assessed work that has been shown to have been plagiarised will be penalised.

Guildford, 2 July 2018

Miriam Sheikh
Abstract

A growing awareness of the devastating impact of weapons of mass destruction (WMD) on international peace and security inspired multilateral efforts in the 20th century to alleviate the threat posed by these weapons. These efforts culminated in the adoption the Nuclear Non-proliferation Treaty (1968), the Biological and Toxin Weapons Convention (1972) and the Chemical Weapons Convention (1997). This complex of WMD disarmament regimes, which was expanded by the recent adoption of the Treaty on the Prohibition of Nuclear Weapons in 2017, provides legal frameworks for reducing, and eventually eliminating, all WMD stockpiles.

The disarmament literature tends to place a focus on political, technical, scientific and military aspects surrounding the implementation of disarmament regimes, while largely neglecting their legal architecture and the wider role of international law in the field of disarmament. However, developments in recent years, including the ad hoc chemical disarmament of Syria, the Marshall Islands lawsuit brought against the nuclear weapons states at the International Court of Justice (ICJ), and the adoption of the new treaty on nuclear weapons, have accorded increased attention to international legal aspects surrounding disarmament.

In the context of these movements, this thesis intends to make a two-fold contribution. First, it addresses gaps in the disarmament literature by offering a comprehensive up-to-date analysis of the international law on disarmament, including of recent legal debates. As a second contribution, it will provide a novel evaluation of the legal effectiveness of disarmament regimes by identifying criteria which are considered crucial for successful disarmament and applying them to the respective WMD regimes. Through this dual examination of legal and practical aspects surrounding disarmament, this thesis aims to offer useful insights and support to both international legal scholars and disarmament practitioners in the appropriate interpretation, implementation and strengthening of disarmament regimes.
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Introduction and Literature Review

1. Background and Research Problem

1.1. Background to the Research

Over the 19th and 20th centuries, disarmament has emerged as a key area of international relations. Given its central role in the maintenance of peace and security, disarmament has become a high priority on the agenda of the international community.\(^1\) In light of the continuing threat posed by weapons of mass destruction (WMD), the devastating humanitarian impact of their use, as well as excessive global military expenditure caused by the costly maintenance of vast weapons stockpiles, disarmament remains of relevance.\(^2\)

Today, disarmament goals are pursued through a cooperative and rule-based approach in the form of multilateral treaty regimes which provide a legal framework for collective disarmament efforts.\(^3\) Yet, the effectiveness of disarmament regimes can be questioned on a number of grounds. Two types of challenges for the effective execution of disarmament norms can be distinguished.

The first set of challenges is related to the legal architecture of the regimes itself, which may lead to discrepancies between the standards established by disarmament norms on the one hand, and state conduct on the other. For instance, structural weaknesses in the treaty regime may result from conflicting interests during treaty negotiations or from the withdrawal of participating states.\(^4\) As these treaty regimes were adopted several decades ago, they require

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4 For example, the asymmetry in the NPT regime has led to discrimination between nuclear weapons states and non-nuclear weapons states, as different obligations are imposed upon both. Furthermore, the BTWC is often dismissed as a ‘failure’ due to the inability of negotiators to attach a verification regime to the treaty, which has significantly limited its authority in contrast with the CWC.
continuous strengthening and adaptation in order to withstand emerging challenges and to prevent the erosion of their disarmament norms.\(^5\)

The second set of challenges is related to the external environment in which disarmament regimes are operated. This environment is generally marked by a lack of mutual trust among participants in disarmament regimes, political tensions and instances of non-compliance. Disarmament regimes are exposed to the political will of their parties. This vulnerability may manifest itself in their reluctance to ratify disarmament treaties, to reduce weapons stockpiles as required, to comply with verification and monitoring procedures or even their modernisation of weapons stockpiles contrary to the goals and purposes of disarmament.

For example, although Syria was not a party to the CWC at the time, its decision to use chemical weapons in 2013 sparked debates regarding the legal and diplomatic mechanisms available to end this use and to prompt Syria to eliminate its chemical weapons stockpiles. In particular, the Syrian case raised questions related to its implications for the health of the CWC regime. A second movement, the Marshall Islands’ lawsuit in 2014 against the nine de facto nuclear weapons states at the ICJ also moved legal questions surrounding disarmament into the centre of attention. Questions related to the legal scope and nature of the obligation under Article VI, NPT had been left unanswered since the ICJ’s 1996 Advisory Opinion on the Legality of Nuclear Weapons. They remain open to date, given that the lawsuits failed to move to the merits stage.

These examples of increased attention given to legal issues must be viewed within the general context of renewed attention to disarmament in high politics, and in particular at the UN level. Furthermore, recent North Korean missile test launches also led to responses at the UN, including UNSC statements condemning such launches and resolutions tightening and expanding existing sanctions.\(^6\) More generally, nuclear arms control, non-proliferation and disarmament gained stronger attention following the 2018 Nuclear Posture Review under US

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\(^5\) For example, the limited control disarmament treaties have over non-state actors and non-states parties may limit its scope, see Chapter 3 on the chemical disarmament of Syria as a third party to the CWC.

President Trump,\textsuperscript{7} which was interpreted by some as the announcement of a new nuclear arms race.\textsuperscript{8} Together with, debates on prospects for nuclear disarmament reopened.

Since 2014, the Humanitarian Initiative and in particular the Humanitarian Pledge, a political commitment to stigmatise, prohibit and eliminate nuclear weapons, attracted the formal support of 127 states.\textsuperscript{9} It reflected the dissatisfaction of non-nuclear weapons states with the status quo in nuclear disarmament. Eventually, this dissatisfaction and uncertainties surrounding the fate of New START\textsuperscript{10} paved the way for the adoption of the Treaty on the Prohibition of Nuclear Weapons in 2017.\textsuperscript{11}

In light of the generally slow pace of progress in disarmament, this momentum generated in the wider disarmament movement is a valuable opportunity for reflection on the strengths and weaknesses of existing regimes with a view to their strengthening and expansion. Although multilateral discussion fora such as the General Assembly and the Conference on Disarmament enable states to achieve consensus and produce important outcome documents, they do not offer an in-depth analysis of important theoretical and legal issues. However, in order to fully take advantage of the current momentum, states must also understand and address the legal dimension of disarmament. For this reason, research on the role of international law in disarmament is of high temporal relevance.

\textsuperscript{11} Treaty on the Prohibition of Nuclear Weapons, UNTC, 7 July 2018: As of June 2018, the treaty has 10 states Parties and will enter into force 90 days following its ratification by 50 states.
2. Research Problem

In light of the potential threat the use or possession of WMD poses for international peace and security, the mere creation of regimes imposing their elimination is not sufficient. Given the implications of arms reductions for national security, the ability of such regimes to influence state conduct in a precise and predictable manner is crucial for the sustainable and irreversible disarmament of WMD by all states. For this reason, it is important to continuously re-evaluate the ability of disarmament regimes to fulfil their purpose.

Such an evaluation must account for both the legal character of disarmament regimes and the non-legal aspects related to the environment in which they are implemented. WMD disarmament regimes are constructed around legal treaties which constitute the principal source of international law and are governed by the general norms, rules, principles and procedures of international law. This legal dimension is often disregarded in the disarmament literature.\(^\text{12}\)

Furthermore, aspects related to the nature of disarmament processes and the wider political environment must be considered. Frameworks for assessing regime effectiveness have been elaborated in areas including environmental protection\(^\text{13}\) and in the field of human rights.\(^\text{14}\) However, such tools for assessing the effectiveness of disarmament regimes have not been available.

It can be argued that the absence of both a comprehensive analysis of the international law governing disarmament regimes and of means to evaluate their effectiveness, limits the understanding of states of the strengths and weaknesses of such regimes. Such an understanding is fundamental to their continuous strengthening and adaptation over time. Against this background, this thesis seeks to enhance the legal literature on disarmament and to apply the concept of effectiveness to the disarmament context.

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\(^\text{12}\) For more detail, see Section 5: ‘Literature Review.’


The evaluation of disarmament regimes undertaken in this thesis will therefore begin with an assessment of both their legal architecture and the tools available under international law for its interpretation and the identification of standards of behaviour for states. In a second step, state behaviour will be assessed against the legal disarmament obligations set out in the respective WMD treaties. By following this interdisciplinary approach, this thesis will shed light on the role of international law in the politically charged context of disarmament, as well as the boundaries of what it can achieve.

3. Objectives and Scope

The assessment of the effectiveness of disarmament regimes requires the examination of several sub-questions. First, the concepts of ‘disarmament’ and ‘regime effectiveness’ will be defined for the purpose of demonstrating the relevance and usefulness of assessing regime effectiveness in the context of disarmament.

This research seeks to identify norms, rules and principles of international law applicable to disarmament regimes, considering both treaty obligations. In relevant cases, reference will also be made to issues related to customary international law. It also aims to describe the relationship between disarmament norms and general international law in the context of the fragmentation of international law. The extent to which disarmament norms can be considered distinct and special will shape the notion of legal ‘effectiveness’ in this research.

Furthermore, the role and authority of international institutions, in particular of the UN Security Council (UNSC), in disarmament affairs will be examined. Finally, given that treaty regimes constitute the objects under review, a special focus will be placed on the Vienna Convention on the Law of Treaties (VCLT), which offers basic rules for the interpretation of treaty norms, the examination of compliance issues, the applicability of norms, the right of states to withdraw from a treaty.

Following this legal analysis, the central aim of this research is to define key criteria for testing the effectiveness of disarmament regimes. Such criteria will be drawn from the international relations (IR) literature on regime effectiveness and international law, and then adapted to the practical context of disarmament.
4. Research Design and Methodology

This research follows a purely qualitative design. The rationale for excluding quantitative techniques is their limited suitability for exploring regime effectiveness. Disarmament regimes are defined and shaped by historical, geographical and political phenomena which are difficult to grasp through the application of statistical techniques. Such phenomena are best examined by means of case-oriented, qualitative analysis, as this makes it possible to analyse the specific criteria within the context of the regime as a whole.

4.1. Interdisciplinary Approach

Disarmament is an area of international affairs in which legal and political structures overlap and cannot be isolated from each other. This creates a need for an expanded vision. Given that both public international law and international relations seek ‘to understand the causes and consequences of international cooperation, in general, and international legalisation, in particular,’ an interdisciplinary approach is required. It allows the drawing of conclusions regarding the effectiveness of regimes in the real world, which is only possible in the presence of empirical data. This approach constitutes one way in which this research contributes to the body of knowledge in the field of disarmament, namely by establishing a connection between legal and political debates in the literature surrounding disarmament, which generally remain separate.

The primary focus of this research will be placed on issues of public international law, which will be examined using a doctrinal approach. IR theory will then complement this analysis, by describing and explaining political factors causing certain types of state behaviour, which

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15 Jon Hovi, Detlef Sprinz, Arild Underdal, ‘The Oslo-Potsdam Solution to Measuring Regime Effectiveness: Critique, Response, and the Road Ahead’, Vol 3(3), (Global Environmental Politics, 2003) 87: a qualitative approach analysis is better suited for the assessment of dynamic processes which are not measurable on the basis of quantitative standards.

16 Dean Hardy Dillard, ‘Conflict and Change: The Role of Law’ in 1963 Proceedings of the American Society of International Law at its Annual Meeting (1921 – 1969), Vol 57, (25 – 27 April, 1963) 50, 67: ‘Once we get rid of the over-simplified notion that “law” is exclusively a matter of norms and the correlative notion that the international lawyer’s role is simply to refashion and refine the norms, we open up vistas for collaborative effort.’


cannot be grasped through a legal analysis alone. This imbalance between the legal and political analysis is justified by the aim of this research, which is to advance an understanding of international legal effectiveness, or, the effectiveness of treaty regimes. This is in line with the aim of IL/IR scholarship to provide a better understanding of international legal issues, rather than to create an even intellectual balance.

Although the phenomenon under investigation in this thesis is the legal effectiveness of disarmament regimes, it is important to recall that the concept of regime effectiveness is a non-legal concept which has entered the field of international law. It illustrates the fact that the achievement of collective goals requires more than the mere existence of law and therefore builds a bridge between the formalism of international law and situations of fact.

While relevant situations of fact include the technological, scientific and military state of affairs, the geo-political environment in which disarmament regimes operate constitutes the strongest factual influence on the success of disarmament. Therefore, it is important to recognise the ways in which legal disarmament regimes are influenced by the highly political environment in which they operate. Indeed,

‘it is impossible to lay too much stress (...) [on] the extremely close interrelationship which links the problem of disarmament with the evolution of the general political situation and makes it highly dependent thereon.’

Given this interrelationship, international regimes cannot be examined in either a legal or political vacuum, making an interdisciplinary perspective on regime effectiveness indispensable and valuable. Viewing legal treaties through the lens of IR theories on international cooperation offers a unique opportunity to better understand aspects of state behaviour such as treaty adherence, compliance and active collective efforts to promote regime goals – phenomena which international legal theory cannot explain.

Moreover, a better understanding of collisions between legal obligations and political interests would clarify the limitations of what the law can achieve in a given area. It would

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allow the identification of situations in which states invoke or disregard the law and thereby facilitate the reconciliation of policy with legal structures.

Despite this interrelationship, there is a persisting tendency of international legal scholars and IR scholars to restrict research disarmament to their respective fields.\textsuperscript{22} The emergence of regime theory now ‘offers a long-overdue opportunity to re-integrate IL and IR.’\textsuperscript{23} This thesis aims to make a contribution to this reintegration by linking key aspects of legal disarmament regimes to concepts of IR theory.

4.2. Data Collection

The doctrinal and empirical approaches followed in this thesis required the collection of different types of data. The former approach was concerned with disarmament norms within their legal structure and therefore required the examination of both primary and secondary literary sources. While the text of the treaties which establish the disarmament regimes under review constituted the central primary source, secondary literary sources included monographs, articles and treaty commentaries, which were used to determine criteria for effectiveness.

Empirical primary data related to the constitution and operation of these regimes were gathered through the case study method and in-depth interviews. Case studies were conducted both for the purpose of determining, confirming and illustrating the criteria for effectiveness in each disarmament regime. They allowed the study of disarmament regimes in practice and in particular the behaviour of state actors in a given context. Two case studies were selected for every regime, based on the number of criteria for effectiveness present in the particular disarmament situation or operation, as well as the degree of distinctiveness between the case studies.


5. Literature Review

The literature which relates to the research question may be subdivided into three categories. The first body of scholarship explores issues surrounding disarmament through the lens of international law. The second category studies political, scientific, military or other real-life aspects of disarmament regimes. The third category draws from IR literature on regime effectiveness and remains almost entirely disconnected from the study of disarmament regimes. This literature review will demonstrate that, while each of these categories of literature provides important insights into the role international law plays in the field of disarmament, a significant gap remains at the intersection between them.

5.1. Literature on Disarmament under International Law

David Fidler, in his article 'International Law and Weapons of Mass Destruction: End of the Arms Control Approach?' (2004) asserts that arms control treaties, international law on the use of force and international humanitarian law constitute the three bodies of international law which regulate WMD.24 By doing so, he fails to consider important concepts of wider international law which govern disarmament regimes. However, a large proportion of the legal literature on disarmament does appear to focus on questions of international humanitarian law and the use of force which govern the use rather than the possession of WMD.25

As Marco Roscini correctly states, ‘[i]f there are entire libraries on issues of jus ad bellum and jus in bello, there is still a relatively scant number of publications on the international law aspects of disarmament.’26

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Allan Gotlieb’s *Disarmament and International Law: A Study of the Role of Law in the Disarmament Process* (1965) constitutes an early contribution to the international legal literature on disarmament. Similar to the present thesis, he sought ‘to examine the legal questions that may arise in the execution of [disarmament], to describe their close connection with the key political questions that must be resolved and to suggest what role the lawyer can play in the achievement of a totally disarmed world.’ In his study, Gotlieb discussed important legal issues, such as the nature and scope of disarmament obligations and the legal effects of breaches of disarmament agreements.

Further, a consultation of the *Collected Courses of The Hague Academy of International Law* reveals that the few contributions which address issues of disarmament are dated and provide little insight into current questions of international law in disarmament.

A common theme which can be observed is the limitation of legal studies on disarmament to an examination of WMD treaty regimes, without consideration of the wider international law into which they are embedded. For instance, in *Disarmament Sketches: Three Decades of Arms Control and International Law* (2002), former disarmament negotiator Graham Thomas Jr outlines the negotiating history and structure of key bilateral and multilateral weapons treaties, without further exploring their role as sources of international law.

Similarly, Jozef Goldblat’s book *Arms Control: The New Guide to Negotiations and Agreements* (2002), surveys different weapons treaties, both bilateral and multilateral. This phenomenon can also be observed in the form of articles which are published in international legal journals, yet fail to explore issues of general international law.

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31 See e.g. Angela Woodward, ‘Weapons of Mass Destruction, Non-Proliferation and Disarmament’ Vol (10) (NZYIL, 2012): She briefly discusses developments in the UNGA (p 254 - 256) but does not raise any further questions with regard to general international law.
However, a number of more recent publications examine individual aspects of international law within the wider context of weapons law. For example, Julie Dahlitz’ collection of essays on the *Avoidance and Settlement of Arms Control Disputes, Vol 2* (1994) adopts a legal approach to exploring the role of treaty interpretation, the verification and monitoring of compliance and the UNSC in preventing and settling arms control disputes.\(^{32}\)

In the same vein, James Fry’s book *Legal Resolution of Nuclear Non-Proliferation Disputes* (2013) outlines the history of legal resolution of disputes of similar political sensitivity, discusses the role treaty interpretation and challenges of UNSC involvement in disputes and the jurisdiction of the ICJ in non-proliferation disputes. Finally, he argues that legal forms of dispute resolution offer greater impartiality and consistency and may be interpreted as a manifestation of good faith.\(^{33}\)

Guido den Dekker, in *The Law of Arms Control – International Supervision and Enforcement* (2001), explores the role of international law in arms control and focuses on mechanisms for the interpretation of arms control obligations and the monitoring and enforcement of compliance.\(^{34}\) In his article ‘The Jurisprudence of Non-Proliferation: Taking International Law Seriously’ (1992), David Koplow complements his examination of WMD treaties with an emphasis on the relevance of customary international law for disarmament.\(^{35}\)

One of the most relevant international legal studies on WMD regimes was undertaken by Daniel Joyner in his book *International Law and the Proliferation of Weapons of Mass Destruction* (2009).\(^{36}\) In addition to an examination of WMD regimes, he discusses important international legal issues including the roles of the UNSC and the ICJ in the field of WMD law and the interpretation of Article VI, NPT under the 1969 Vienna Convention on the Law of Treaties.\(^{37}\)

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33 James Fry, (fn 34).
John Kierulf’s very recent monograph *Disarmament Under International Law* (2017)\(^{38}\) complements his overview of WMD regimes with a short overview of the evolution of the law on disarmament and addresses issues of treaty interpretation and the enforcement of compliance with WMD treaties. Finally, Kierulf makes recommendations for the further development of the international legal WMD framework which can be summarised as a mere reiteration of calls to advance nuclear disarmament.

The Book *Norm Dynamics in Multilateral Arms Control: Interests, Conflicts and Justice* (2013) by Müller and Wunderlich addresses the important international legal issue of norm conflicts between WMD regimes. It identifies conflicts within the three WMD regimes, as well as with norms of general international law, and their consequences for regime operation.\(^{39}\)

Given the scarcity of publications examining disarmament regimes within the wider context of general international law, the blog *Arms Control Law* constitutes a useful platform for discussion among legal experts on issues related to WMD and international law.\(^{40}\) Similar blogs include *EJIL: Talk* which covers all areas of international law, but includes publications related to weapons and disarmament, and *The Trench* which covers chemical weapons in particular.\(^{41}\)

Finally, reports of the International Law Association’s Committee on Arms Control and Disarmament Law (1990 – 2004) offer important insights into the law on disarmament. The Committee was created with a view to contributing

‘to the development of arms control and disarmament law by investigating and elucidating the legal background of existing and evolving principles of the law, (...) [taking] account of treaty law and customary law [and] problems of treaty interpretation.’\(^{42}\)


\(^{39}\) Harald Müller, Una Becker-Jakob, Tabea Seidler-Diekman, ‘Regime Conflicts and Norm Dynamics: Nuclear, Biological and Chemical Weapons’ in Harald Müller, Camen Wunderlich (eds), *Norm Dynamics in Multilateral Arms Control: Interests, Conflicts and Justice* (The University of Georgia Press, 2013) 51.

\(^{40}\) Arms Control Law, Blog, https://armscontrollaw.com/about/ (accessed 17 March 2018): ‘This blog is intended as a forum for rigorous analysis and serious discussion of legal issues related to arms control (...) [and] an attempt to fill a gap in current online blog offerings (...) [which tend to] focused on either technical or politics/policy views of the issue area.’


None of the above-mentioned literary sources examine issues of disarmament exclusively, but rather view them as part of arms control and non-proliferation efforts. They focus on one class of weapons, in particular nuclear weapons.43

5.2. Non-Legal Literature on Disarmament

The UN itself contributes to the non-legal body of literature on disarmament. The *United Nations Disarmament Yearbook*, an annual publication by the United Nations Office of Disarmament Affairs, is an important source of information on developments in the field of disarmament, in particular in UN bodies such as the UNGA and the Conference on Disarmament.44

Further UN publications on disarmament include the *Disarmament Study Series* (UNGA studies undertaken by expert groups on aspects of disarmament), *UNODA Occasional Papers* (input from expert panels and seminar sponsored by UNODA), *Disarmament: A Basic Guide* (aimed to generate public understanding of disarmament and support for multilateral action) and *Fact Sheets* on various disarmament issues.45 Yves Collart’s compilation and summary of official UN documents complements the UN’s own literature on disarmament. He describes UN efforts and political developments, in particular multilateral negotiations, in the field of disarmament between 1945 and 1958.46

The international relations literature generally views disarmament from a security perspective.47 For example, Michael O’Hanlon’s book *A Skeptic’s Case for Nuclear


46 Yves Collart, (fn 21).

Disarmament (2010) outlines the principal challenges connecting nuclear disarmament and security. As an alternative to both nuclear arms control and the full abolition of nuclear weapons, he proposes an approach to nuclear disarmament which allows possessor states to reconstitute their programmes following their dismantlement (‘Dismantling, not abolishing, nuclear weapons’).

Given the dominant scientific and technical dimension of disarmament, literature from these fields also

5.3. Studies on the Effectiveness of Disarmament Regimes

Alexander Kelle’s journal article ‘Assessing the Effectiveness of Security Regimes – The Chemical Weapons Control Regime’s First Six Years of Operation’ constitutes the only attempt to apply the concept of regime effectiveness to a disarmament treaty. He demonstrates how criteria for assessing the effectiveness of the CWC regime may be derived from its normative framework. However, he treats the CWC’s disarmament dimension as one of several aspects under investigation and does not address questions of international law. He follows a similar approach in his assessment of the ‘BWC control regime.’

5.4. Gap in the Research

This review of the past and current legal literature on disarmament reveals several important gaps which this thesis seeks to address. Generally, disarmament appears to receive little attention from legal scholars, as publications on legal aspects of disarmament are limited, narrow and dated. They tend to be limited to a descriptive overview of WMD treaty regimes as the principal source of disarmament law, while disregarding the wider international law on other sources of law, institutions, legal obligations and mechanisms under the UN Charter.

Furthermore, existing legal studies on disarmament generally only cover individual classes of weapons and only consider disarmament in relation to arms control and non-proliferation efforts, yet rarely as a goal in itself. Moreover, as very few interdisciplinary analyses of disarmament regimes have been undertaken to date, the disarmament literature generally focuses on either legal or non-legal aspects. Finally, the absence of considerations of regime effectiveness from the legal disarmament literature has been observed.

This thesis makes two crucial and original contributions to the legal literature on disarmament in order to remedy these shortcomings. First, it seeks to provide a holistic and up-to-date analysis of the international law WMD disarmament regimes. Secondly, the legal effectiveness of these regimes will be evaluated on the basis of principles of both international law and international relations. Given that disarmament regimes have not yet been examined through the lens of regime effectiveness, this perspective will yield new and useful insights for disarmament practitioners and scholars.

6. Thesis Outline

As explained above, a comprehensive evaluation of disarmament regime requires an understanding of the general principles underlying the concept of disarmament in general; of the norms, rules and principles of international law governing disarmament treaties; and finally, of non-legal factors influencing the behaviour of states in their implementation. Hence, the research question determines both the structure of this thesis as a whole, and of the internal structure of its substantive chapters. Chapter 1 will establish the theoretical framework for disarmament. It will provide definitions of key concepts underlying this research and demonstrate the relevance of regime analysis in the field of disarmament. Then, the international law applicable to disarmament treaties will be detailed. In particular, the sources of international law establishing disarmament obligations will be identified, distinguishing between consent-based disarmament and coerced disarmament. In its final section, this chapter will demonstrate how criteria for the effectiveness of disarmament

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regimes are derived from the general context of disarmament, international law and IR theory. These criteria will then be outlined.

Chapter 2 highlights the first dimension of the research question by providing an understanding of the concept of disarmament. For this purpose, it traces the historical evolution of disarmament regimes until today. It offers insights into the origins of disarmament efforts, including explanations for early failures to disarm peoples. This historical analysis will reveal aspects of successful disarmament and the genesis of multilateral, rule-based disarmament as the form of disarmament pursued today.

Chapter 3 to 5 constitute the core of this thesis, as they contain an effectiveness evaluation of the chemical (Chapter 3), nuclear (Chapter 4) and biological (Chapter 5) disarmament regimes. Each chapter will begin by providing a more focused historical background to the respective treaty regimes and a detailed examination of their legal architecture. As part of the effectiveness evaluation of each regime, two case studies will be used to examine the five criteria for effectiveness: a) participation, b) compliance, c) institutional effectiveness, d) verification and e) enforcement. Conclusions will be drawn for each chapter.

The conclusion chapter will first reiterate conclusions drawn regarding the effectiveness each regime, including the individual criteria examined. Then, the benefits and limitations of the approach to assessing regime effectiveness followed in this thesis will be discussed. The complexity of the field and the resulting challenges for efforts to strengthen disarmament regimes will be underlined. However, this chapter will confirm the significance of international law for the study of disarmament regimes and call for the increased consideration for international legal issues in the disarmament literature. Finally, broader conclusions will be drawn regarding WMD disarmament in general.
Chapter 1 – Theoretical Framework

Introduction

This chapter outlines the theoretical framework for assessing the effectiveness of disarmament regimes. It first seeks to explain the rationale for the selection of WMD disarmament regimes as the object of analysis. For this purpose, the concepts of weapons of mass destruction, disarmament and international peace and security will be defined. These notions will define the context of analysis by embedding the elimination of weapons threats into the wider international security environment. The definition of disarmament and its relation to neighbouring concepts will highlight key characteristics disarmament processes as well as challenges which are inherent to the area of disarmament.

Secondly, this chapter aims to demonstrate the usefulness and relevance of examining disarmament regimes through the lens of regime effectiveness. Regime effectiveness will be presented as a useful tool for determining the long-term significance of evolving entities such as disarmament regimes. The components of international regimes described by the literature on regime theory reveals the two-fold focus of effectiveness analysis on the legal norms, rules and principles of regimes on the one hand, and on the practical behavioural responses by states to them, on the other.

This introduces the central objective of this chapter to demonstrate how suitable criteria for effectiveness are revealed by key aspects related to disarmament, international law and international relations. Criteria for assessing disarmament regimes will be derived on the grounds of three types of considerations: aspects related to the nature and objectives of disarmament processes, the rules and norms of international law underlying disarmament regimes, and theories of international relations explaining the behaviour of regime members related to their implementation.\(^5\)

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The procedure for selecting criteria in this chapter will also be followed in the chapters evaluating the respective WMD regimes. Following this approach, this chapter will first define the conceptual context of disarmament in order to determine the expected outcomes. The focus of this thesis will be placed on the examination of the ‘internal’ effectiveness of the legal architecture of disarmament regimes. Finally, their ‘external’ effectiveness, or their ability to produce practical effects in the ‘real world’ will be evaluated.

1. Concepts and Terms

1.1. Weapons of Mass Destruction

The term ‘weapon of mass destruction’ is commonly understood to include chemical, biological and nuclear weapons, including their delivery systems, which are conceived to kill or cause significant harm to a large number of human beings and their environment. It was first used in 1937 to describe formations of aircraft used in the aerial bombardment of Guernica, Spain. Subsequently, its meaning subsequently to encompass non-conventional weapons specifically and the term was introduced into diplomatic discourse. In 1947, a Working Committee of the United Nations Commission for Conventional Armaments advised the Security Council that

‘weapons of mass destruction should be defined to include atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in

53 This will be further developed in Chapter 1 on the historical evolution of disarmament.
55 ‘Archbishop’s Appeal: Individual Will and Action’, Times of London, 28 December 1937, 9: citing the Archbishop of Canterbury, ‘Who can think without horror of what another widespread war would mean, waged as it would be with all the new weapons of mass destruction?’
destructive effect to those of the atomic bomb or other weapons mentioned above.\textsuperscript{57}

The use of the term has been inconsistent over time and across different contexts.\textsuperscript{58} No universally binding, comprehensive definition of WMD has been formulated. This can be explained by the fact that each category of WMD has been addressed individually by international law, given their fundamental historical, scientific and technological differences. For the purposes of this thesis, and the term WMD will be understood in its broadest sense to include chemical, biological and nuclear weapons, as defined by the CWC, BWC and NPT respectively, as well as their delivery systems such as ballistic missiles. Consequently, conventional weapons which have been subject to disarmament measures will only be addressed for the purpose of providing context to WMD disarmament.

Beyond their capacity to cause mass casualties, their destabilising influence on relationships between states and psychological impact on civilians have made of WMD political tools rather than military weapons, as their possession is generally aimed at achieving policy outcomes rather than military goals.\textsuperscript{59} In addition to the risks stemming from the continued possession of WMD by states, the

‘acquisition of WMD or related materials by terrorists would represent an additional threat to the international system with potentially uncontrollable consequences. Armed with weapons or materials of mass destruction terrorists could inflict damage that in the past only states with large armies could achieve.’\textsuperscript{60}

\textsuperscript{57} ‘Letter from the Chairman of the Working Committee of the Commission on Conventional Armaments addressed to the Chairman of the Commission on Conventional Armaments and enclosed resolution’, [letter dated 9 September 1947], [UN Doc. S/C.3/24], dated 28 July 1948, in Vannevar Bush, \textit{Pieces of the Action}, (Morrow, 1970) 297: Bush, co-drafter the Declaration on Atomic Energy, on the inclusion of chemical and biological weapons in solutions to the nuclear threat: ‘While we were attempting to bring reason to bear on one terrible weapon, we might as well include another that could be equally terrible.’


\textsuperscript{59} For example, nuclear weapons stood at the centre of Cold War tensions, yet were never deployed.

1.2. Disarmament

1.2.1. Defining Disarmament

The concept of WMD disarmament is grounded in a quasi-universal understanding that the continued existence of such weapons poses an unacceptable threat to humans. It originates in part from the prohibition under international humanitarian law of the use of weapons which cause indiscriminate and unnecessary suffering. Furthermore, disarmament addresses the paradox of arms races which lead states to ‘incessantly [prepare themselves] for war in order to not be surprised by war.’

Today, the elimination of individual categories of weapons is regarded as the most feasible approach to disarmament, as it takes into consideration the distinct technical traits and historical challenges of each class of weapons. The CWC establishes an ‘effective prohibition’ of chemical weapons and required the declaration of stockpiles and production facilities as well as their destruction within ten years of its entry into force. Similarly, the BWC requires the destruction, or diversion to peaceful purposes of all biological weapons and related materials. In contrast, the NPT merely requires that its States Parties ‘pursue negotiations in good faith on effective measures relating (...) to nuclear disarmament.’ While only the CWC and BWC establish effective bans on their respective classes of weapons, all three regimes seek the ultimate elimination of an entire class of weapons.

The absence of a precise definition of disarmament often blurs the lines between disarmament measures and related efforts such as arms control and non-proliferation. Arms control measures may entail an increase rather than reduction of weapons stockpiles as it suggests that certain arms contribute to the stabilisation of military relations between states, and as a result, to increased security. Yet, the apparent support by a state of disarmament measures may in fact be embedded in its arms control policy in cases where it decides that a certain type of weapon no longer enhances its national security. On the other hand, non-

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63 Hedley Bull, The Control of the Arms Race: Disarmament and Arms Control in the Missile Age, (Weidenfeld and Nicholson for IISS, 1961) vii: A further distinction is offered by Hedley Bull. He understood disarmament as the reduction or abolition of certain arms, and arms control as international restraint on numbers, types and uses of armaments.
64 Jeffrey Larsen, (fn 63) 3-4.
proliferation seeks to prevent the spread of a type of weapon to a non-possessor state. In some regimes, non-proliferation measures may support disarmament by providing confidence in the non-reversion of destruction processes.65

Despite this interrelationship, they remain distinct processes with distinct objectives. A clear distinction between these concepts is crucial for the evaluation of regime effectiveness given that the obligations of states and expected outcomes vary fundamentally in each context. Yet, such overlaps with neighbouring concepts have not only led to the misunderstanding and misuse of the term.

1.2.2. Key Characteristics of Disarmament

Disarmament discourse frequently features expressions such as ‘eradication’, ‘a world without nuclear weapons’, ‘Nuclear Zero’ or ‘WMD-free zone’. These terms reflect its intended outcome of a world without ongoing arms races.66 However, it is important to note that disarmament is not only this end state, but also an ongoing process of creating ‘conditions that will assure a country that others are neither intending to attack it nor capable of doing so at least in the immediate future.’67 This process which entails making states feel increasingly secure in not having large arsenals of weapons, is a key element in the full elimination of all WMD stockpiles. Indeed, former Secretary-General to the UN, Dag Hammarskjöld,

‘viewed disarmament as a dynamic process that was continually evolving in response to events and interaction among states: “In this field, as we well know, a standstill does not exist; if you do not go forward, you do go backward.”’68

65 See for example, Republic of Korea, ‘Proposal for Enhancing the Efficiency and Cost-Effectiveness of Other Chemical Production Facilities Inspections’, OPCW document RC-2/NAT.7, 8 April 2008: ‘The relative importance of an effective industry verification regime and strengthened non-proliferation measures will grow as the chemical weapons destruction campaign progresses and the disarmament goal of the Convention is achieved.’
66 Hans Morgenthau, Politics Among Nations, 3rd cd. (Alfred A. Knopf, 1960) 167: ‘Disarmament is the reduction or elimination of certain or all armaments for the purpose of ending armament race.’
This highlights two fundamental characteristics of disarmament, namely that disarmament processes must be sustainable and that the end state must be irreversible. Disarmament processes are not self-sustaining, as they are initiated by ‘human beings who are subject to competing priorities, limited resources, technological complexity, uncertainty, stress, risk, and ambitions’ which constantly counteract elimination efforts. They can be reversed at any moment, even after all conventionally imposed destruction requirements have been satisfied. Therefore, effective disarmament requires momentum and continuous monitoring.

Rather than being linear and one-dimensional, disarmament both draws from and impacts the scientific, economic, military, political and legal spheres. On a geographic scale, disarmament efforts can be global, regional or local. They can be unilateral, bilateral or multilateral. They can be ad hoc, voluntary and conventional, or coerced. However, given that ‘disarmament presupposes a cooperative approach to international security,’ multilateral conventional disarmament regimes have been regarded as the most sustainable strategy and will therefore constitute the object of this thesis.

Disarmament measures can be of qualitative or quantitative nature. Qualitative disarmament aims to end the possession of any meaningful quantities of weapons agents or materials. The continued possession of weapons components is permitted, as long as they cannot be reassembled as deployable weapons. Quantitative disarmament, on the other hand, requires the reduction of stockpiles by or to a certain number of weapons and accounts for all weapons, their components and related materials. It disregards research and development activities, the destruction of obsolete weapons and the modernisation of existing stockpiles. Due to the dual-use nature of WMD, even the quantitative reduction to zero weapons by itself cannot ensure that a state is qualitatively disarmed. For this reason, the continued monitoring of facilities required for their production is necessary.

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70 Ibid: ‘Just as the military-industrial complex has developed the means to perpetuate itself over generations, to adapt its goals and methods to changing circumstances, and to expand its coalition base, so too must the “disarmament complex” match these specific organizational capacities.’
71 Sverre Lodgaard, Nuclear Disarmament and Non-Proliferation, (Routledge, 2011) 2.
73 Ibid.
1.2.3. Challenges to Disarmament

A number of challenges inherent to the nature of disarmament and the security environment in which it takes place must be considered in assessing the effectiveness of disarmament regimes. One of the most fundamental challenge is the reconciliation of the renunciation of most powerful weapons with national security interests. Disarmament measures can be viewed as depriving states of their primary means of protecting national security.\(^{74}\) The absence of alternative, equally effective means of achieving security interests can make states reluctant to fully commit to disarmament efforts. Furthermore, the concepts of security and insecurity are subjective and differ among states, which makes it difficult for a global disarmament regime to adequately accommodate the security needs of all participating states.

Secondly, in the security field states are highly sensitive about disclosing their military capabilities and activities. This lack of transparency inhibits mutual trust between states and creates suspicions regarding the goodwill of political and military adversaries. By adhering to a disarmament treaty, states renounce their freedom to decide on the possession and use of the weapon. Although voluntary, the conventional renunciation of a certain type of weapon limits the sovereignty of the state in this particular area which has implications for compliance by states with their disarmament obligations.

Thirdly, due to the dual-use nature of WMD agents, many of the technologies associated with non-conventional weapons programmes also have civilian applications. This not only makes a distinction between legitimate scientific activities and violations of weapons agreements difficult, but also requires states to provide inspectors with insights into their industrial activities. This degree of transparency creates a significant obstacle to the willingness of states to adhere to such treaties.

Fourthly, progress in the field of disarmament is heavily dependent on the political leadership of large powers. As a result, ‘the current disarmament and broader limitation system is, to a significant extent, an asymmetric one (…), one primarily shaped in the interests of a

disarmament empire – the USA.’ This has led to inconsistent reactions to breaches of disarmament obligations and accusations of ‘hypocrisy’. This has hampered progress and dissatisfied smaller and middle powers which, in turn, seek to acquire WMD to protect their interests.

Finally, no disarmament regime is able to provide absolute guarantees. Such political, scientific and technological limitations are unique to the field of disarmament and must be taken into account in an evaluation of its effectiveness. Yet, these challenges have contributed to a delegitimization of disarmament and its dismissal by policy makers as an unattainable goal. In particular the continued association of disarmament with the idea of General and Complete Disarmament has been ‘used to damn disarmament as utopian in principle and unachievable in practice.’ As a consequence, Jayantha Dhanapala argues, ‘disarmament is rarely the focus of serious scholarly analysis these days. Many academics and journalists are devoting far more attention to "arms control," "non-proliferation," "managed proliferation," and, most recently, "counter-proliferation." Though disarmament is a respected topic in policy rhetoric, it is all too often trivialized in policy implementation.’

Indeed, a ‘near invisibility of disarmament’ in academic debates and, in some cases, an apparent ‘self-imposed silence’ on disarmament have naturally limited the resources allocated to it. As a consequence, ‘more far-reaching and emancipatory forms of disarmament [have] arrived still-born into the zeitgeist of IR academia and global society

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78 Neil Cooper, (fn 76) 356: Reminders of the overarching goal GCD feature in all three WMD treaties.
79 Jayantha Dhanapala, (fn 70) 48.
80 Dan Plesch, ‘The South and Disarmament at the UN’ Vol 37 (7) (Third World Quarterly, 2016) 1204: using the example of the academic journal Millennium which, over a 39-year period (1979 – 2010), published over 4,000 articles, yet only 39 in total on the subject of disarmament (i.e. < 1%). The author made similar observations regarding other key journals (Review of International Studies, International Studies Quarterly, World Politics); Jayantha Dhanapala, (fn 70) 48: ‘It is notoriously underfunded compared to its counterpart – armament – yet it is blamed for being weak.’
more generally.' Yet, assertions that ‘disarmament efforts have not borne fruit and only reflect the least common denominator among negotiating states [leave] out important parts of the equation.’ For example, at least 24 disarmament treaties have been negotiated under the auspices of the UN and the growth of disarmament infrastructure sparked by new scientific discoveries and technological progress which constantly offer new support to elimination and verification processes.

In 2018, disarmament remains a ‘top priority’ for key actors, such as UN Secretary-General Antonio Guterres. An evaluation of the effectiveness of WMD disarmament regimes is grounded in the suggestion that disarmament has yet to develop its full potential and that ‘a more emancipatory system of disarmament (...) might be both necessary and achievable’ through increased attention and prioritisation.

1.3. Assessing International Regime Effectiveness

1.3.1. Defining Regimes

The concept of disarmament is based on the premise that the protection of national security through the accumulation of armaments severely threatens international peace and security and must therefore be substituted with a cooperative approach to security. The negotiation by states of multilateral treaty regimes, which impose legally-binding disarmament obligations on states, suggests that the existence of disarmament regimes allow them to more easily promote and achieve security objectives.

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81 Neil Cooper, (fn 76) 354.
82 Dan Plesch, (fn 81) 1208: UNODA has listed over 25 disarmament treaties which have been adopted since 1945 (as of January 2016).
83 Jayantha Dhanapala, (fn 70) 48, 51: ‘The process of building national and international infrastructures for disarmament is by no means complete. Networks of nongovernmental organizations are just beginning to grow, and many are facing steep learning curves.’
84 Antonio Guterres, ‘Remarks to the Conference on Disarmament’ 26 February 2018 https://www.un.org/sg/en/content/sg/speeches/2018-02-26/remarks-conference-disarmament (accessed 12 March 2018): ‘Disarmament and arms control are top priorities for me. And they are central to the system for international security agreed in the United Nations Charter. (...) We need further disarmament and arms control measures as a sound basis for global peace.’
86 UNGA Res 71/67, (A/71/67) 5 December 2016: ‘(...) recognizing that a resort to unilateral actions by Member States in resolving their security concerns would jeopardize international peace and security and undermine confidence in the international security system.’; Sverre Lodgaard, (fn 48) 2.
The term ‘international regime’ was first used in its current sense in the 1970, as an international arrangement constructed by states as a ‘collective response’ to ‘collective situations.’ The initiation of the study of international regimes reflected a growing separation of the behaviour of international organizations from institutionalised collective behaviour. While research on international regimes has produced a range of definitions, which each focus on different aspects of regimes, the most commonly referred to definition was formulated by Stephen Krasner. He describes regimes as frameworks of

‘implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given area of international relations. Principles are beliefs of fact, causation, and rectitude. Norms are standards of behaviour defined in terms of rights and obligations. Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice.’

This definition is sufficiently broad to serve as a starting point for further perspectives. Robert Keohane proposed a more restrictive definition which focuses on the constitutive and prescriptive status of regimes. He describes regimes as ‘institutions with explicit rules, agreed upon by governments, that pertain to particular sets of issues in international relations.’ Others focus on the social character of regimes as reflected in Krasner’s definition. For instance, Ruggie defines regimes as ‘set[s] of mutual expectations, rules and regulations, plans, organizational energies and financial commitments which have been accepted by a group of states.’ This perspective emphasises state practices and highlights the behavioural

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88 Stephen Krasner, ‘Structural Causes and Regime Consequences: Regimes as Intervening Variables’, Vol 36 (2), (International Organization, 1982) 185 – 205, later republished in Stephen Krasner (ed), International Regimes, (Cornell University Press, 1982); John Ruggie, (fn 88) 569: Ruggie places regimes on a scale of institutionalisation of collective behaviour which reaches from mere cognitive responses (shared intentions and expectations of states) to international regimes (mutual expectations which have been consolidated through commitments, plans and the organisation of resources) and finally, international organisations (established by treaties, governed by international law and possessing a clear material scope and membership).
89 Stephen Krasner, (fn 89) 2, 127; Alexander Kelle, (fn 50) 225: ‘The principles of an international regime represent the shared beliefs of regime participants about the issue area which the regime is set up to regulate.’
90 Robert Keohane, International Institutions and State Power: Essays in International Relations Theory, (Westview Press, 1989), 4; see also Oran Young, International Cooperation: Building Regimes for Natural Resources and the Environment, (Cornell University Press, 1989) 13: Young defines regimes as ‘specialized arrangements that pertain to well-defined activities, resources, or geographical areas and often involve only some subset of the members of international society.’
91 John Ruggie, (fn 88) 570.
effects of regimes. These two sets of definitions highlight the normative and behavioural aspects which are under investigation in regime analysis.\textsuperscript{92}

1.3.2. Regime Effectiveness

Today there is a quasi-consensus in regime literature on the significance of international regimes in the international order. Recent research has shifted from the question whether regimes matter, to ‘the ways in which they matter, the extent to which they matter and the conditions under which they matter.’\textsuperscript{93} Given that international regimes create and shape expectations, ‘it is important for governments to find out which of the international regulatory regimes they have joined actually yield returns on their investments and where progress has been minute.’\textsuperscript{94}

The literature on international regimes has used the term ‘regime effectiveness’ to address these questions. The purpose of studying regime effectiveness is to identify conditions for the success of regimes with a view to reducing the likelihood of failure and optimising collective problem-solving.\textsuperscript{95} As mentioned above, regimes are dynamic entities which ‘require ongoing efforts and periodic adjustments in governing arrangements to ensure that they are properly adapted to changing circumstances.’\textsuperscript{96} For this reason, simply characterising as effective regime as ‘successful’ at one moment in time, says little about its long-term significance.\textsuperscript{97}

The literature on regime effectiveness has used the term to discuss a number of different notions, which shows that ‘the study of effectiveness lacks a common and precisely defined


\textsuperscript{93} Oran Young, ‘The Consequences of International Regimes: A Framework for Analysis’, in Arild Underdal, Oran Young (eds), (fn 13) 3.


\textsuperscript{95} On the question of why some regimes solve problems more easily than others, see Arild Underdal, ‘The Concept of Regime “Effectiveness”’, Vol 24 (2), (Cooperation and Conflict, 1992) 227; see also Edward Miles et al (eds), (fn 13); Marc Levy, Oran Young, Michael Zürn, ‘The Study of International Regimes’, Vol 1 (3), (European Journal of International Relations, 1995).

\textsuperscript{96} Oran Young, ‘The Consequences of International Regimes: A Framework for Analysis’, in Arild Underdal, Oran Young (eds), (fn 13) 6.

\textsuperscript{97} \textit{Ibid} 41.
The precise meaning of effectiveness applied in an evaluation depends on the theoretic perspective, background and area of expertise of practitioners. Therefore, the term ‘effective’ must be understood in its traditional sense, namely as being ‘successful in producing a result or effect.’ Regime effectiveness is to be distinguished from regime effects. The former implies positive effects, whereas effects in general can be either positive or negative.

Given the absence of a universally-applicable definition of effectiveness, it varies according to the characteristics of the particular field under review. However, common approaches have been developed to address regime effectiveness. The most frequently applied approach was proposed by Underdal in the form of questions which must be addressed in an effectiveness assessment:

‘(i) What precisely constitutes the object to be evaluated? (ii) Against which standard is the object to be evaluated? (iii) How do we operationally go about comparing the object to our standard, in other words, what kind of measurement operations do we perform in order to attribute a certain score of effectiveness to a certain [regime]?’

The object under investigation is the regime itself, in particular its norms, rules and principles. Assessing the effectiveness of a regime therefore implies a determination of the type and level of influence the regime has on the behaviour of states. Such an exercise entails both legal and political considerations. In a first step, the legal nature and significance of rules, norms and principles and their capacity to meaningfully guide the exercise of sovereign power must be identified. Given that the creation and operation of regimes are political processes, the types of state behaviour which are directly caused by the regime (i.e. behavioural responses) must then be isolated from all state activity.

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98 Ibid, 27, 28: Underdal notes that the effectiveness of a regime is to be distinguished from its ‘efficiency’ or ‘fairness.’ They must also be distinguished from regime ‘strength’ and ‘robustness’ which are important considerations for effectiveness but not sufficient conditions thereof.


100 Arild Underdal, (fn 96) 228 – 229.

101 Arild Underdal, ‘Methodological Challenges in the Study of Regime Effectiveness’, in Arild Underdal, Oran Young (eds), (fn 13) 33: On this point it must be noted that the unit of analysis may be a single regime or a group of regimes. In the former case, the institutional context in which the regime is embedded (i.e. related regimes) may be treated as a ceteris paribus condition. In the latter case, more attention will be given to the degree to which regimes influence each other.

The standard of evaluation, i.e. the type of state behaviour necessary for effective regime implementation, is derived from its norms and principles.\textsuperscript{103} Using the example of the CWC regime, Alexander Kelle proposes a method of determining such a standard. He argues that regime principles, which are shared beliefs among regime participants (e.g. the chemical weapons taboo), indicate the regime goal. This goal is ‘to exclude completely the possibility of the use of chemical weapons’ through their verified global elimination.\textsuperscript{104}

In turn, the norms embodied in the regime create obligations for states which guide them in their pursuit of the regime goal. Such norms include the obligation imposed on possessor states to destroy them (disarmament norm); the verification of state activities (declaration norm, inspection norm) and the commitment by non-possessor states to not acquire chemical weapons (non-acquisition norm).\textsuperscript{105} Finally, the rules and procedures set requirements for the effective implementation of the norms.

In a second step, the behavioural responses of states to the regime will be evaluated.\textsuperscript{106} The state behaviour to be evaluated are a combination of actions, attitudes and policies which reflect the internalisation of regime norms and principles.\textsuperscript{107} The most relevant types of behaviour are those which reflect compliance with regime obligations, cooperation with other states parties and decision-making which are oriented towards the regime goal.\textsuperscript{108} The attribution of such behaviours to the regime can be difficult as causal links between norms, rules and principles and state behaviour are not always evident.\textsuperscript{109}

\begin{footnotesize}
\begin{enumerate}
\item Alexander Kelle, (fn 50) 293: ‘Retaining [Krasner’s] four-part structural definition (...) can be seen as a pre-requisite to arrive at a qualitative assessment of regime effectiveness.’
\item Preamble, CWC, 3 September 1992, UNTS, Vol 1975, 45.
\item Article 1 (2) CWC, 3 September 1992, UNTS, Vol 1975, 45.
\item Beth Simmons, ‘International Law and State Behavior: Commitment and Compliance in International Monetary Affairs’ Vol 94 (4), (American Political Science Review, 2000) 832: ‘The effect of international law on state behaviour should be a central concern of international relations scholarship.’
\item Andreas Hasenclever, Peter Mayer and Volker Rittberger, ‘Theories of International Regimes’, Cambridge Studies in International Relations, (CUP, 1997), 248: ‘The most fundamental and most widely discussed of these purposes is the enhancement of the ability of states to cooperate in the issue area.’; see also David Victor, Kal Raustiala, Eugene Skolnikoff (eds), The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice, (MIT Press, 1998): on types of political behaviour to be considered in the legal-political domain; Graham Allison, Philip Zelikow, Essence of Decision: Explaining the Cuban Missile Crisis, 2\textsuperscript{nd} ed, (Addison-Wesley, 1999): on three models of decision-making (Rational Actor-, Organisational Behaviour- and Bureaucratic Politics Models); Irving Destler, Presidents Bureaucrats and Foreign Policy: The Politics of Organizational Reform (Princeton University Press, 1972) 52.
\item Beth Simmons, (fn 107) 820.
\end{enumerate}
\end{footnotesize}
For instance, in cases where the expected outcome is to reduce emissions below a certain threshold has been achieved, the regime can be regarded as having positively influenced state behaviour. However, in the case of regimes which require sustained, long term efforts, improvements relative to the expected outcome will be assessed. Thus, an assessment of the effectiveness of disarmament regimes, which are established with the objective of fully eliminating a type of weapon, will focus on the achievements of the regime up until the moment of evaluation and its prospects for the future.

One approach to determining the relative improvement brought about by the regime, is the so-called ‘Oslo-Potsdam Solution.’ It allows the determination of how much out of what can be accomplished has been accomplished. It establishes two reference points, the lower and upper boundaries of regime performance, against which state behaviour must be assessed. First, against the hypothetical state of affairs in which the regime did not exist (no-regime counterfactual), and secondly, against the optimum degree of influence the regime could have on state behaviour (collective optimum). It is useful for evaluating improvements which may be substantive, yet fall short of being optimal.

The approach to assessing regime effectiveness followed in this thesis borrows its basic structure from the Oslo Potsdam Solution as it uses regime rules, norms and principles as the standard to derive optimal outcomes in terms of state behaviour. Where relevant, it explores instances of extra-regime disarmament such as measures undertaken prior to the existence of a particular regime, ad hoc disarmament operations or coerced disarmament, as no-regime counterfactuals.

Within those two reference points, further focal points for analysis must be determined. Explaining effectiveness entails the identification of the ‘critical “determinants” of effectiveness.’ The complexity of the environment in which disarmament regimes are operated makes it impossible for any model to account for all relevant factors. Therefore, the

110 This notion of ‘relative effectiveness’ was developed by Helm and Sprinz. See Carsten Helm, Detlef Sprinz, (fn 95) 359 – 369.
112 Arild Underdal, (fn 96) 230 – 231.
113 Arild Underdal, ‘Methodological Challenges in the Study of Regime Effectiveness’, in Arild Underdal, Oran Young (eds), (fn 13) 40.
most relevant factors of regime effectiveness in the field of disarmament will be selected and subjected to qualitative analysis.

Some authors have questioned the validity of scores which are ‘assigned on the basis of [such] crude, qualitative assessments rather than systematic, quantitative measurement’\textsuperscript{114} However, qualitative analysis may serve as a remedy to the absence of valid and useful quantitative criteria, such as stockpile numbers.\textsuperscript{115} It better reflects the dynamic nature of international regimes than quantitative measurement, as it is not simply concerned with the status quo of a regime but aims to offer insights into its trajectory. Such an approach is in line with the ‘prevailing practice in regime analysis [which] does not aspire to top rating by the canons of scientific measurement.’\textsuperscript{116}

2. International Law and Disarmament

Historically, the WMD threat has been addressed through the rule of law and in particular by limiting the use of armed force and promoting peaceful dispute settlement.\textsuperscript{117} The principle of sovereign equality of states under international law has enabled all states to participate in the creation of disarmament regimes, regardless of their military or political powers.\textsuperscript{118} States consequently assume a tripe role as the principal creators, subjects and enforcers of the law on disarmament.

The determination of the role which international law plays in the achievement of disarmament requires a discussion of international legal concepts which are relevant to the study of regime effectiveness. A review of those sources of international law which create disarmament obligations for states will provide an outline of the components of the legal

\begin{footnotesize}
\begin{enumerate}
\item[114] Arild Underdal, ‘Methodological Challenges in the Study of Regime Effectiveness’, in Arild Underdal, Oran Young (eds), (fn 13) 37; see also Jon Hovi, Detlef Sprinz, Arild Underdal, (fn 15) 77 – 79, 84: regard no-regime counterfactuals and collective optimums as arbitrary constructs that do not offer accurate and comprehensive results.
\item[115] Jon Hovi, Detlef Sprinz, Arild Underdal, (fn 15) 87.
\item[116] Arild Underdal, ‘Methodological Challenges in the Study of Regime Effectiveness’, in Arild Underdal, Oran Young (eds), (fn 13) 37.
\item[117] Thilo Marauhn, ‘Dispute Resolution, Compliance Control and Enforcement of International Arms Control’ in Geir Ulfstein (ed), Making Treaties Work: Human Rights, Environment and Arms Control, (CUP, 2007) 244.
\item[118] Arthur Desjardins, (fn 62) 668: ‘The law is the asylum of the weak: even small States, which would be crushed in the blink of an eye if a strong State used force, naturally evoke the image of international justice. What must be admired is the strong seeking to limit the rule of force.’
\end{enumerate}
\end{footnotesize}
architecture of disarmament regimes. Finally, the role of international institutions in the implementation of disarmament regimes will be discussed.

2.1. Sources of Disarmament Law

Legal obligations regulating the conduct of states in the area of disarmament may arise from all sources of international law.\(^{119}\) The law of disarmament principally comprises multilateral treaties and is supported by regional and bilateral agreements\(^ {120}\) with other sources of law including customary international law, UN Security Council resolutions creating \textit{ad hoc} disarmament regimes, and judgments of international courts and tribunals as interpretative sources. In addition, exhortative instruments such as UNGA resolutions or Review Process Outcome Documents shed interpretative light on the current limits of the law and potential directions for its progressive development. Examining this complex architecture raises questions including what standards for state conduct these sources of law establish, how they are interpreted and applied to particular situations of fact, how they interact with each other, and whether there is a distinct ‘disarmament law.’

2.1.1. Multilateral Disarmament Treaties

Multilateral treaties are tools which enable the transformation of collective social claims into binding law.\(^ {121}\) Their consent-based approach not only facilitates the maintenance of international peace and security in general but also constitute the normative core of disarmament regimes and the primary source of disarmament obligations.\(^ {122}\) The effective implementation of such complex treaty regimes requires states parties to follow common


procedures regarding the participation in a regime, to develop homogenous understandings regarding the content and scope of treaty obligations and ensure compliance with them.

It is therefore indispensable to acknowledge the key role which the Vienna Convention on the Law of Treaties (VCLT) of 1969 plays in supporting the implementation of disarmament regimes throughout their life cycle.\textsuperscript{123} It creates legally-binding obligations regarding the creation, interpretation and implementation of disarmament treaties.\textsuperscript{124} The VCLT is a further expression of how the rule of law serves

\begin{quote}
\textquote{the cause of disarmament by giving commitments in this field the qualities of bindingness and permanence that are simply indispensable. The rule of law not only provides the framework within which commitments are undertaken, it also provides tools to assist in interpreting them, in confirming their full implementation, and in responding to violations.}'\textsuperscript{125}
\end{quote}

The VCLT provides rules for the determination of the scope of jurisdiction of disarmament treaties. The application \textit{ratione temporis} of a disarmament treaty begins with its entry into force.\textsuperscript{126} Given the principal goal of disarmament to bring about a permanent state of affairs in which a certain class of weapons no longer exists, disarmament treaties must remain in place even after the eventual elimination of all stockpiles. Hence, disarmament treaties are of indefinite duration.\textsuperscript{127}

The application \textit{ratione personae} of a disarmament treaty is limited to those states which have signed and ratified it and have thereby expressed the intention to be bound by its terms.\textsuperscript{128}

Regarding the territorial application of disarmament treaties, Article 29, VCLT

\begin{footnotes}
\textsuperscript{123} All three WMD under examination in this thesis have been adopted after the entry into force of the VCLT, which consequently applies to all of them.
\textsuperscript{124} Vienna Convention on the Law of Treaties, (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS, 331: governs all treaties concluded since 1969 between states which are also parties to the VCLT.
\textsuperscript{126} See Article 28, VCLT on the principle of non-retroactivity of treaties. Article 18, VCLT provides that, even before it enters into force and creates legal obligations, states which ratified it must refrain from actions which defeat the object and purpose of the treaty.
\textsuperscript{127} See Articles 12 – 18, VCLT on the condition of consent; Article XIII, (1), BWC and Article XVI, (1), CWC: \textquote{This Convention shall be of unlimited duration.}; Article X, (2), NPT: initial limitation of the NPT to 25 years; Decision 3 of the Outcome Document of the 1995 Review and Extension Conference of the Parties to the NPT, NPT/CONF.1995/32 (Part I), Annex: the Conference decided that \textquote{the Treaty shall continue in force indefinitely.}'
\textsuperscript{128} See Article 2, para g and Articles 11 – 18 VCLT; although treaty rules may crystallise as customary international law, this does not extend the application of the treaty itself to third states.
\end{footnotes}
provides that a treaty is binding upon each party in respect of its entire territory, unless a
different intention appears from it. Given that a state may produce, stockpile or deploy
weapons on the territory of other states, the territorial scope of application of disarmament
treaties cannot be limited to its own territory and must therefore be understood as being
global.129

Finally, the material scope of application (ratione materiae) is defined by the text of the
respective disarmament treaties which generally includes to the prohibition of activities (the
development, production, stockpiling, acquisition and transfer of weapons), the imposition
of actions (destruction or diversion to peaceful uses of weapons) and definitions of items
covered (weapons, weapons agents, equipment, means of delivery and production facilities).

The principle of pacta sunt servanda enshrined in Article 26, VCLT dictates that treaties are
binding on their parties and must be executed in good faith. It protects the legitimate
expectation of states parties in the compliance by all other states parties with their treaty
obligations. The decision of states to conclude legally-binding disarmament instruments
illustrates the fact that ‘disarmament is clearly not simply a matter of policy, but a legal
obligation.’130

The highly technical and scientifically complex terminology of disarmament treaties can lead
to disagreements regarding the exact standard of behaviour expected of states.131 Such
disagreements pose for the consistent and uniform implementation of treaty obligations by
all states parties. Furthermore, the unilateral misinterpretation of treaty obligation may serve
as a justification by some states for the adoption of weapons policies which run counter to

129 The CWC imposes the destruction of chemical weapons or chemical weapons facilities owned or possessed,
‘that are located in any place under its jurisdiction or control,’ or weapons which ‘it abandoned on the territory
of another State Party.’ (Article 1, para 2 – 4, CWC). The BWC simply imposes the destruction or diversion to
peaceful purposes of all biological weapons under its possession or under its jurisdiction or control. Moreover,
it prohibits the ‘transfer to any recipient whatsoever, and not in any way to assist, encourage or induce any State
(…) to manufacture or otherwise acquire’ biological weapons and their means of delivery. Article VI of the NPT
refers to the ‘cessation of the nuclear arms race’ and to ‘nuclear disarmament’ which can be understood as
covering all nuclear weapons on the territories of all states.
130 Sergio Duarte, (fn 126); Articles 11 – 15 VCLT; Oliver Dörr,(fn 123).
Indeterminate legal texts enable conflict because they are open to multiple interpretations; see e.g. ongoing
debates surrounding the legal nature and scope of Article VI, NPT, the obligation which it proscribes and the
legality of weapons renewal and stockpile maintenance activities.
their disarmament obligations. For these reasons, Articles 31 – 33, VCLT lists elements to be taken into consideration by all states in the interpretation of treaty provisions.\footnote{\hspace*{1em}It does not impose a specific process of interpretation and the use of the guidelines it proposes is at the discretion of states. This is due to the fact that interpretation is not an exact science.}

The aim of interpreting a treaty is to determine its true meaning at a given time. Article 31 (1), VCLT provides that treaties must be interpreted on the basis of the ordinary meaning of their terms and in the light of their object and purpose. Consequently, the provisions of disarmament treaties must be understood as contributing to the ultimate elimination of their respective class of weapon. In light of fundamental changes in the geopolitical environment since the adoption of most WMD treaties, their interpretation requires the consideration of current circumstances, subsequent agreements and state practice, as well as new rules of international law (Article 31 (3) VCLT).

The possibility of a state party withdrawing from a treaty is regulated by Article 54, VCLT provides that a state party may withdraw from a treaty ‘in conformity with the provisions of the treaty.’ All WMD treaties contain a clause which establishes the right of withdrawal and conditions for its exercise.\footnote{\hspace*{1em}Article XIII (2), BWC; Article XVI (2), CWC; Article X, NPT.} It has been argued that the option to withdraw from disarmament regimes contradicts and undermines their irreversible, sustainable and indefinite character and thereby weakens them.

However, its inclusion may be understood as a means of restricting the invocation of the doctrine of \textit{rebus sic stantibus} (Article 62, VCLT), which allows states to suspend or withdraw from a treaty based on a ‘fundamental change of circumstances.’\footnote{\hspace*{1em}Nicholas Sims, ‘Withdrawal Clauses in Disarmament Treaties: A Questionable Logic?’ Issue No. 42, (Disarmament Diplomacy, 1999) \url{http://www.acronym.org.uk/old/archive/42clause.htm} (accessed 2 January 2018).} Withdrawal clauses attach three conditions to a withdrawal: extraordinary events, which are relevant to the object of the treaty, and which threaten national security interests. However, the assessment of whether these conditions are met is ultimately left to the withdrawing state itself.

\subsection*{2.1.2. Customary International Law}

Provisions of disarmament treaties may crystallise into norms of customary international law which constitute an additional source of disarmament obligations and an exception to the
principle in Article 34, VCLT that states are only bound by norms and rules which they have consented to. The existence of such customary obligations strengthens a regime’s normative structure by filling gaps left in the membership of disarmament treaties and by creating legally-binding obligations for third states (hold-out states).

The International Law Commission (ILC) suggests that the crystallisation of a customary norm requires evidence of uniform, general and consistent state practice\textsuperscript{135} and of the general recognition by ‘states of the existence (...) of an obligatory rule [\textit{opinio juris}].’\textsuperscript{136} However, such evidence of state practice and \textit{opinio juris} may easily be challenged by states which do not wish to be bound by a customary norm. Customary norms cannot be created \textit{ad hoc} and develop slowly over long periods of time. Although no customary disarmament obligations have been widely accepted thus far, debates surrounding the customary nature of disarmament obligations have gained renewed attention with the chemical disarmament of Syria, a non-party to the CWC, and the submission of the Marshall Island’s applications to the ICJ in which it claimed the customary status of Article VI, NPT.

\subsection*{2.1.3. The UN Charter and the Law on the Use of Force}

The UN Charter does not impose disarmament obligations, which can be explained by the fact that its negotiators did not intend for it to serve as a legal framework for disarmament.\textsuperscript{137} The only two mentions of disarmament in Articles 11 and 47, UN Charter relate to the maintenance of international peace and security.\textsuperscript{138} Rather than calling for disarmament, it

\begin{flushleft}
\textsuperscript{135} ILC, ‘Formation and Evidence of Customary International Law’, Memorandum by the Secretariat, 65\textsuperscript{th} session, 14 March 2013, (A/CN.4/659): 9 (Observation 2), 10 (Observation 3), 13 (Observation 6).
\textsuperscript{136} \textit{Ibid}: 17 (Observation 9), 18 (Observation 8).
\textsuperscript{138} Article 11, para 1: ‘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 or to the Security Council or to both.’; Article 47, para 1: ‘There shall be established a Military Staff Committee to advise and assist the Security Council on all questions relating to the Security Council’s military requirements for the maintenance of international peace and security, the employment and command of forces placed at its disposal, the regulation of armaments, and possible disarmament.’
\textsuperscript{Article 47, para 1: ‘There shall be established a Military Staff Committee to advise and assist the Security Council on all questions relating to the Security Council’s military requirements for the maintenance of international peace and security, the employment and command of forces placed at its disposal, the regulation of armaments, and possible disarmament.’}
\end{flushleft}

43
treats it as a means of preventing armed conflicts *where possible* and restricting the use of force when it occurs.\(^{139}\)

In other words, it recognises that the accomplishment of the UN’s central goal to maintain peace and to prevent war can in some cases require the use of armed force.\(^{140}\) Conversely, disarmament measures targeting those weapons whose degree of destructiveness goes beyond what is required for the enforcement of peace and the maintenance of security – in particular unconventional weapons – are in line with the Charter’s goals.\(^{141}\)

Nevertheless, the Charter plays an important role for disarmament, as it charged the General Assembly and the Security Council with the task of dealing with disarmament. Indeed, ‘disarmament [has become] part of the very identity of the United Nations as an institution.’\(^{142}\)

### 2.2. The Law on Disarmament within a Fragmented International Legal Order

#### 2.1.1. The Existence of a ‘Special’ Disarmament Law

In an expanding and diversifying international normative system, ‘the allocation of authority within a complex system of legal prescriptions’ becomes necessary.\(^{143}\) Such a distribution of authority is not straightforward in the decentralised international legal system. International law has developed mostly horizontally and does not manifest a clear hierarchy of norms.\(^{144}\)

The fragmentation of international law through the emergence of specialised sets of rules

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139 See ICRC, ‘International Humanitarian Law: Answers to Your Questions’, 22 January 2015, 8-10: on the distinction between *jus ad bellum* (‘conditions under which States may resort to [...] the use of armed force) and *jus in bello* (‘conduct of parties engaged in armed conflict’).
140 See Article 2 (4) and Articles 42, 46, 47 UN Charter.
141 See for example the Preamble of the BWC: ‘desiring [...] also to contribute to the realisation of the purposes and principles of the Charter of the United Nations.’
142 Randy Rydell, ‘Explaining Hammarskjöld’s “Hardy Perennial” - The Role of the United Nations in Nuclear Disarmament’ (UNA-UK, 2013) 5; Inis Claude, *The Changing United Nations* (Random House, 1964) 7: ‘The assertion that disarmament is the key to peace and that its promotion is the foremost task of the world organisation has become a central tenet of the orthodox ideology of the United Nations speech-making and resolution-drafting.’
144 With the exception of obligations *erga omnes* and norms *jus cogens*, see Article 53, VCLT and ILC Report on Fragmentation (fn 120), 181, paras 361 – 379 (norms *jus cogens*); 193, paras 380 - 409 (obligations *erga omnes*).
which claim autonomy from general international law has led to normative conflicts which can cause legal uncertainty.

The International Law Commission (ILC) identified four types of conflicts between norms which can contribute to the fragmentation of international law, among which the relationship between special law and general international law appears to be the most relevant.\(^\text{145}\) Given their role in inducing highly technical state behaviour, the normative content of disarmament regimes is very specialised, accounting for the scientific, technical and political processes necessary for disarmament.\(^\text{146}\) Disarmament treaties contain ‘tailor-made’ rules which don’t exist under general international law, such as rules on verification, on the legal consequences of breaches and procedures of dispute settlement.

Conflicts between special and general international law are addressed by the doctrine of *lex specialis derogat lex generali* and the doctrine of self-contained regimes. Both serve as a means of determining whether the special set of rules overrides general international law in a given issue-area. The doctrine of *lex specialis* is grounded in the idea that special rules are better adapted to the subject area and therefore more effective.\(^\text{147}\) Self-contained regimes have been viewed as the strongest form of *lex specialis*.\(^\text{148}\) In general terms, self-contained claim the priority of their secondary rules over the secondary rules which exist under general international law.\(^\text{149}\) For instance, regimes which create their own rules and mechanisms for managing compliance and dealing with breaches are less likely to resort to formal dispute settlement.\(^\text{150}\)

Disarmament regimes, although equipped with specialised rules, mechanisms and institutions, have not gained sufficient normative autonomy to be qualified as a distinct body of ‘disarmament law’. They continue to rely on general international law, such as norms of

\(^{145}\) ILC Report on Fragmentation (fn 120) 15 - 16, para 18: special and general law, prior and subsequent law, laws at different hierarchical levels, relations of law to its normative environment generally.

\(^{146}\) Vera Gowlland-Debbas, (fn 122) 600; Friedrich Kratochwill, John Ruggie, (fn 88) 759.

\(^{147}\) This has been expressed by Hugo Grotius in *De Jure Belli ac Pacis. Libri Tres*, Book II Section XXIX: ‘Among agreements which are equal...that should be given preference which is most specific and approaches most nearly to the subject in hand, for special provisions are ordinarily more effective than those that are general.’


\(^{149}\) ILC Report on Fragmentation (fn 120) 66, paras 124, 128.

\(^{150}\) *Ibid*, 73, para 137.
international humanitarian law, the VCLT and the UN Charter, in particular for the enforcement of compliance by the Security Council. Therefore, general rules will remain relevant and applicable to the extent that special rules are unavailable or ineffective. ‘If the rules and procedures of special systems fail, a fall-back on general international law, including resort to countermeasures, is justified.’\textsuperscript{151}

Hence, they may be conceived as \textit{lex specialis} only as an expression or elaboration of general international law, rather than an exception to it. This implies that in such an absence of a normative conflict, the regime’s special rules are applied simultaneously with the general rules under international law and do not further its fragmentation.\textsuperscript{152}

\textbf{2.2.2. The Hierarchy of Norms}

It is important to place disarmament treaties and other sources of disarmament law within the hierarchy of norms in the international legal system. Article 103 of the UN Charter provides that obligations under the Charter take priority over obligations under other treaties in the case of a conflict. The phrase ‘obligations under the Charter’ not only refers to the text of the Charter itself, but also to binding decisions adopted by UN bodies.\textsuperscript{153} For instance, binding obligations may arise from resolutions adopted by the Security Council under Chapter VII include sanctions, which themselves claim primary over other international obligations.\textsuperscript{154} The effect of this precedence is that rather than being invalidated, the lower-priority rule is simply rendered inapplicable to the extent that it conflicts with obligations under the Charter.\textsuperscript{155}

\textbf{3. International Relations Theory}

Addressing the second layer of regime effectiveness entails exploring why states adopt certain behaviours in a given issue-area. Such behaviours include the decision of states to acquire or give up certain weapons, to create regimes for this purpose, to comply with

\textsuperscript{152} ILC Report on Fragmentation (fn 120) 49, para 88.
\textsuperscript{153} ILC Report on Fragmentation (fn 120) 168 - 169, para 331.
\textsuperscript{154} Article 25, UN Charter: ‘The Members of the United Nations agree to accept and carry out the decisions of the Security Council in accordance with the present Charter.’
disarmament obligations, to actively promote disarmament in international fora and to coerce other states to disarm. Considerations drawn from IR Theory will not only shed light on questions related to state conduct which international law cannot address by itself, but also be useful in defining the limits of what the law can achieve in a highly political context.

3.1. The Implications of Security Perceptions for Disarmament

Security is a core value of societies, both national and international. Considerations of national and international security are the primary factor influencing decisions of states related to the possession of weapons and the formation and implementation of regimes governing their elimination. States generally justify the adoption of policies which promote arms races on the grounds of the protection of national security interests.\(^\text{156}\)

In contrast, disarmament suggests that the enhancement of international security through the elimination of weapons is in principle not incompatible with national interests. In fact, a close relationship between disarmament and security has been affirmed and summarised in a 1982 report by then-UN Secretary-General Perez de Cuellar:

\[\text{‘The relationship between disarmament and international security lies at the very root of the problem of how to find ways by which States can achieve security without engaging in an arms race which merely results in greater insecurity for all.’}\(^\text{157}\)

The desire of states to exist in a state of security is a natural consequence of their inherent vulnerability vis-à-vis other states who also seek to protect their existence and limited resources. Hence, in international relations, security ‘means no more than safety [from threats posed by other states]: either objective safety, meaning safety which actually exists, or subjective safety, meaning safety which is felt or experienced.’\(^\text{158}\) This subjective aspect of security has important implications for disarmament.

\(^{156}\) Alva Myrdal, *The Game of Disarmament: How the United States and Russia Run the Arms Race*, (Manchester University Press, 1977) 7: such policies include those legitimising the use or threat of the use of force, aimed at military domination, undermining the peaceful settlement of disputes and supporting the weapons industry; Report of the Secretary-General, ‘Relationship between Disarmament and International Security’ (UN Centre for Disarmament, 1982) 2, para 16.

\(^{157}\) Foreword by the Secretary-General, (fn 157) v.

For instance, the presence of large stockpiles of the most destructive weapons may increase the perceived level of security for some states.\textsuperscript{159} This unilateral view on security based on deterrence stands in contrast with the collective security which disarmament seeks to promote. It suggests that the possession of highly destructive weapons creates a balance of power between states which prevents them from launching military attacks against each other and that, as a result, security is enhanced.\textsuperscript{160} Other states may consider the presence of the same stockpiles as destabilising feel threatened by them. Such diverging perceptions of security can create opposing needs and expectations of states which may be difficult to reconcile and hamper cooperative disarmament.

The level of predictability of state behaviour in a given issue area is crucial for the levels of security perceived by other actors. Regimes structure state behaviour and thereby render it more transparent and predictable. For this reason, disarmament regimes have been described as ‘agent[s] of change in the international security environment in [their] own right.’\textsuperscript{161}

3.2. Theories of International Regimes

Early IR scholarship on international regimes reflected a growing distinction between the behaviour of international organizations and the institutionalised collective behaviour of states.\textsuperscript{162} Regime theory,\textsuperscript{163} which grew out of this separation, is rooted in the idea that

\textsuperscript{159} See e.g. Thomas Schelling, \textit{The Strategy of Conflict}, (Harvard University Press, 1980): Schelling argues that deterrence of potential attacks, by demonstrating the ability to launch an even more devastating counter-attack, is the most viable way of achieving security; Alva Myrdal, (fn 157) 8.


\textsuperscript{161} Jean-Pascal Zanders, ‘Challenges to Disarmament Regimes: The Case of the Biological and Toxin Weapons Convention’ Vol 15 (4) (Global Society, 2001) 361.

\textsuperscript{162} Stephen Krasner, (fn 89) 185 – 205, later republished in Stephen Krasner (ed), \textit{International Regimes}, (Cornell University Press, 1982); John Ruggie, (fn 88) 569: Ruggie places regimes on a scale of institutionalisation of collective behaviour which reaches from mere cognitive responses (shared intentions and expectations of states) to international regimes (mutual expectations which have been consolidated through commitments, plans and the organisation of resources) and finally, international organisations (established by treaties, governed by international law and possessing a clear material scope and membership).

\textsuperscript{163} It has been argued that there is no such thing as ‘regime theory’, but rather, multiple theories of regimes within an overarching ‘concept’ or ‘phenomenon’. See M. J. Peterson, ‘International Regimes as Concept’ http://www.e-ir.info/2012/12/21/international-regimes-as-concept/ (accessed 21 March 2018): he considers the phrase ‘theory of international regimes’ more appropriate, as it does not suggest the existence of a ‘distinct and reasonably unified school of analysts.’
cooperation between states is possible and necessary in a state of anarchy.\textsuperscript{164} Common approaches to regime theory, including realism, neoliberalism and constructivism, have offered different explanations for the motivations of states to form and participate in regimes. Realism centres on the role of power in the creation and operation of regimes. It suggests that anarchy causes states to pursue \textit{relative} gains, i.e. a better position relative to other states in terms of power and security.\textsuperscript{165} Realists are interested in immediate, rather than long-term benefits which regimes may provide. States traditionally following a realist approach are therefore unlikely to participate in and comply with a regime which either undermines their superiority or unlikely to directly increase it.

Neoliberalism suggests that states seek to maximise \textit{absolute} gains. While they ‘concede that cooperation is affected by power relationships’, they argue that interests and expectations are influenced by norms and international institutions.\textsuperscript{166} They regard regimes as cooperative arrangements which facilitate the exchange of information, knowledge and resources and thereby reduce uncertainty.\textsuperscript{167} In turn, this exchange optimises the achievement of desired outcomes for all participants.

Constructivists regard regimes as social constructs which, rather than by material interests of states, are shaped by knowledge, norms, identities and discourse.\textsuperscript{168} Constructivism treats these elements as part of a learning process. In other words, if a new concept or idea enters public discourse and influences the collective understanding of states in a given issue area, a regime may emerge from such a process.

Although the role of power relations cannot be neglected in the international order, the realist exclusive focus on immediate gains in superiority is not useful for the legal examination of disarmament regimes. Moreover, the realist assumption that regimes have ‘minimal

\textsuperscript{166} Andreas Hasenclever, Peter Mayer, Volker Rittberger, (fn 109) 23.
\textsuperscript{167} Ibid
\textsuperscript{168} Alexander Wendt, \textit{Social Theory of International Politics}, (CUP, 1999) 1.
influence on state behaviour’ contradicts the assumption of their importance underlying this
thesis.\textsuperscript{169}

Neoliberalist and constructivist theories offer the most valuable perspective for the purposes of describing the behaviour and motivations of states in the context of disarmament. Although they admit that power relationships influence international cooperation, their understanding of regimes centres on norms.\textsuperscript{170} Moreover, they account for other relevant factors including the emergence of weapons taboos which lead states to adopt disarmament treaties, the influence of public discourse on progress in disarmament, the need for transparency and the exchange of information and the dynamic character of disarmament. They best reflect the dual normative and behavioural approach to regime effectiveness followed in this thesis.

4. Criteria for Assessing Regime Effectiveness

As mentioned above, approaches to evaluating regime effectiveness vary depending on the subject area and the focus of evaluation. Underdal argues that ‘any attempt at explaining [effectiveness] must first of all try to identify the critical “determinants” [or criteria] of effectiveness.’\textsuperscript{171} The following section will set out the criteria for evaluating the effectiveness of WMD regimes which have been derived from the concept of disarmament, the law on disarmament and general international law, and theories on international relations. The structure of the substantive chapters on the effectiveness of WMD regimes will follow the two-fold assessment of the normative (internal) effectiveness of regimes and their and operational (external) effectiveness.

4.1. Internal Effectiveness

The internal structure of a regime creates a legal roadmap for states in their pursuit of regime goals. Therefore, it is important to evaluate ‘internal’ effectiveness, in order to ensure that

\begin{itemize}
    \item \textsuperscript{170} Andreas Hasenclever, Peter Mayer, Volker Rittberger, (fn 109) 23.
    \item \textsuperscript{171} Arild Underdal, (fn 13) 40.
\end{itemize}
the legal architecture creates clear obligations for states and enables them to cooperate effectively. The necessity of identifying internal ‘sources of effectiveness is based on the premise that there are good and bad ways of structuring international institutions.’ In order to be internally effective, a regime must display a number of qualities which reflect their dynamic nature.

A first indicator of internal effectiveness is an ideal balance of density, breadth, precision and clarity of rules and norms. They must be vague enough to cover all relevant activities, yet clear enough to leave as little room as possible for misinterpretation. These factors can be summarised as regime strength, which implies its ability to constrain the behaviour of states. Secondly, the adaptability and survivability of a regime is crucial. This implies that the essential functions of a regime remain while non-essential features are adapted to changes in order to ensure the continued operation of the regime.

Finally, regimes must create opportunities for states to cooperate effectively, not only in their operation of the regime but as early as during the negotiation of its norms and rules. The symmetry and reciprocity of obligations enhances the internal stability of a regime’s legal structure. Further, a treaty may create review processes, institutions and fora for the negotiation of additional protocols and measures, which enhance the cooperation of states in the re-evaluation, adjustment and enforcement of the regime.

As part of an internal effectiveness assessment, the origins of the regime will be explored. This includes the evolution of the prohibition of the weapon in question, the negotiating history of the treaty, as well as the historical and political circumstances at the time of its adoption. Then, the text of the treaty will be assessed against the qualities above. Finally, all secondary sources of law, mechanisms and procedures connected to the treaty will be identified.

172 Marc Levy, Oran Young, Michael Zürn, (fn 96) 299.
176 Susan Buck, The Global Commons – An Introduction, (Earthscan Publications, 1998) 27 – 28: The exclusion of some states from the negotiation process or the neglect of legitimate interests of a group of states may erode the structure over time through decreased support and an increasing risk of breaches.
4.2. **External Effectiveness**

As pointed out above, the internal effectiveness of a regime merely indicates the potential of the regime and says little about the effects which it develops in practice.\(^{177}\) The following criteria have been selected to serve as a foundation for the evaluation of state behaviour relevant for the operation of disarmament regimes: the participation and cooperation of states, levels of compliance with disarmament obligations, the capacity of relevant institutions to support states in the operation of the regime, and mechanisms for the verification and enforcement of compliance.

4.2.1. **Participation and Cooperation**

The membership of a treaty must be adapted to its object. Multilateral disarmament treaties are adopted with a view to achieving the global elimination of certain classes of weapons. For this reason, they can be understood as aspiring to universality. Strong adherence to regimes is considered an important indicator of their effectiveness as it ensures the widespread promotion and implementation of the regime’s norms, rules and principles. Treaties which have a strong legal architecture, yet struggle to attract a sufficiently large membership, are less likely to achieve their regime goals.\(^{178}\)

Participation in a regime generally implies a formal acceptance of and commitment to the regime’s objectives. Such international legal commitments are

> ‘a bid to make a credible commitment to a particular policy stance. The acceptance of treaty obligations raises expectations about behavior that, once made, are reputationally costly for governments to violate. An international legal commitment is one way that governments seek to raise the reputational costs of reneging, with important consequences for state behavior.’\(^{179}\)

A higher number of states which make such a ‘credible commitment’ also raises the pressure on hold-out states to join the treaty. However, it must be noted that a treaty’s aspiration to

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\(^{179}\) Beth Simmons, (fn 107) 819.
universality does not necessarily imply that universality is necessary for a treaty to be effective. For instance, in cases where a state is bound by neither a treaty- nor a customary norm, a treaty may still influence its behaviour. Some hold-out states may not formally join disarmament treaties for political or other reasons, yet explicitly adhere to them in principle.

Another important consideration in the composition of the membership of a regime, i.e. whether key possessor states participate or remain outside the regime (hold-out states). Furthermore, the leadership of states such as the United States has been regarded as essential for the adoption of measures to strengthen disarmament regimes. Finally, the withdrawal of a state may weaken a regime. A withdrawal can raise levels of suspicion among treaty members and leading to non-compliance with treaty provisions which expose them to threats emanating from the withdrawn state which is no longer bound by it.

4.2.2. Compliance

The participation of states in a regime by itself is not sufficient for the advancement of regime goals. Viewed at the level of international peace and security, Former High Representative for Disarmament Affairs Sergio Duarte considers state compliance with disarmament obligations an absolute requirement. He argues that

‘[t]he problem of assessing compliance, however, is not easily solved by simply counting the number of countries that have joined treaties, nor even by just counting the number of violations in a particular year. There may be very few violations, yet the use of even a single weapon of mass destruction, especially a nuclear weapon, would have unique and catastrophic effects – both direct and indirect, and both short-term and long-term. International peace and security therefore clearly requires a very high standard of compliance. When it comes to such solemn goals as (...) fulfilling disarmament obligations, partial compliance is simply not good enough.’

However, at the regime level, not all instances of non-compliance necessarily undermine the effectiveness of a regime, as instances of non-compliance can have effects of varying gravity. It has therefore been argued that the concept of compliance must not always be understood in absolute terms, but rather in terms of ‘acceptable levels of compliance’ which are not to

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180 Sergio Duarte, (fn 126).
be understood as ‘an invariant standard, but one that changes over time with the capacities of the parties and the urgency of the problem.’\textsuperscript{181} Therefore, the assessment of state compliance will consider the nature of the violation and its implication for the wider operation of the regime in question.

Moreover, not all non-compliant behaviour is intentional. The obligation set out by the CWC and BWC to destroy chemical and biological weapons is clear. However, both the dual-use nature of these weapons and their definition on the basis of the ‘general purpose criterion’ requires states to determine standards of behaviour themselves. The absence of clear thresholds for what constitutes compliant and non-compliant behaviour can lead to apparent, yet unintended violations.\textsuperscript{182}

Compliance is an important factor for the maintenance of levels of trust required for the effective cooperation of regime members.

\section*{4.2.3. Institutional Capacity}

Disarmament regimes rely, to varying extents, on the support of institutions which they mandate with tasks regime members cannot fulfil themselves. In this regard, institutions attached to WMD treaties, including the OPWC and IAEA, reflect the dominant technical dimension of the control and elimination of weapons. Such bodies are charged with carrying out important activities including the verification and enforcement of compliance. Their capacity to perform these activities is highly dependent on the authority and resources which states are willing to grant to them. The rationale for the creation of institutions is that

\textquote{[f]or such important purposes many nations seem willing to accept an evolving definition of their sovereignty provided that the procedures are implemented either by an international organisation with a track record of impartiality, or by a specialist institution created expressly to verify compliance.}\textsuperscript{183}

\textsuperscript{182} Ibid 10.
In addition to verification and enforcement, institutions also act as discussion fora which enable states to review a disarmament treaty periodically, and to develop consensus necessary for their further development and strengthening of the regime. The UN system complements such institutions with its own negotiating bodies including the first Committee of the General Assembly on international security and disarmament and the Conference on Disarmament.

4.2.4. Verification

Given the implications of non-compliance for both the strength of the regime and the wider security context, the monitoring of state conduct and the verification of declared stockpiles constitutes an indispensable element in WMD disarmament. The inclusion of verification and monitoring mechanisms is particular to disarmament treaties and only exists in few other areas.\textsuperscript{184}

This can be explained on the grounds that the willingness of states to forgo weapons is dependent on that of all other regime members. Verification plays an important role in confidence building, as States require confidence in the permanence and non-reversion of disarmament processes. For this reason, monitoring activities must continue beyond the moment of complete elimination.

The dual-use nature of WMD, in particular biological and chemical weapons, creates obstacles for verification, given the reluctance of states to provide inspectors with access to scientific and industrial sites. Therefore, effective verification mechanisms must be tailored to the political and technical context in order to reconcile confidentiality requirements with verification requirements.

4.2.5. Enforcement

In cases where verification activities reveal the violation of a state of its treaty obligations, enforcement mechanisms attached to the treaty must be capable of bringing the state back

\textsuperscript{184} \textit{Ibid}.
into compliance. The purpose of enforcement is both to deter violations by holding states accountable for them and to address them in such a manner which limits their impact on the general operation of the regime. Studies on compliance and implementation of regimes indicated that co-operative diplomatic approaches were more suitable for the enforcement of disarmament and regimes than sanctions.  

Chapter 2 - The Historical Evolution of Disarmament

Introduction

This chapter seeks to offer a point of departure for the study of the respective regimes in the following chapters. For this purpose, it will first demonstrate that the idea of disarmament is not novel. The desire to reduce and eliminate certain types of weapons has accompanied the development and use of armaments since the ancient and medieval eras, primarily taking the form of demilitarisation imposed by victors of conflicts upon vanquished peoples, or by a religious authority upon its subjects. While the underlying incentive for these measures was a desire for peace, the interests of the disarming entity generally motivated such measures.

‘The Pact of the League of Nations, in particular Article 8, made disarmament one of the cornerstones of the League system. Carried away by the wave of hope and faith which the development of new forms of organisation of international society brought with it at that time, it was widely felt at the beginning of the inter-war period that the maintenance of peace and security depended entirely on disarmament and that it would be sufficient for countries to agree to a limitation of their respective forces in order finally to remove the threat of war. But the efforts made to achieve this, ending with the prolonged failure of the Disarmament Conference that began in 1931, led to nothing but the provision of an instructive example for future negotiations, which it was then attempted without much success, to carry forward on a slightly different basis.’\textsuperscript{186}

Further, this chapter will explain how the emergence of a Just War theory and an international world order in the 17\textsuperscript{th} century shaped the concept of disarmament and led to the conclusion of the first disarmament treaties with reciprocal obligations. While considerations for peace continued to drive disarmament motivations, the concept of human security began to enter the disarmament debate with the development of international humanitarian law in the 19\textsuperscript{th} century. Although The Hague Conferences of 1899 and 1907 failed to produce an

\textsuperscript{186} Ibid 9.
international disarmament agreement, they played an important role in paving the way for disarmament negotiations after the end of the Great War.

The importance of inter-war disarmament efforts will be highlighted, as it not only illustrates the essential components of disarmament regimes, such as mechanisms for verification and enforcement of compliance, but also offers lessons on which subsequent disarmament efforts were built. Moreover, it will evaluate the success of restricted approaches to disarmament, such as the Washington Treaty, and offer explanations for the failure to conclude a general disarmament agreement at the Geneva Disarmament Conference.

These first experiences in disarmament, in combination with the realisation that arms races had contributed to the outbreak of two World Wars, made Cold War talks between East and West a suitable forum for the negotiation of multilateral disarmament agreements. The general disarmament approach was abandoned for partial measures in order to overcome the paralysis in negotiations, which led to the conclusion of several bilateral agreements, in particular between the US and the Soviet Union. However, it was only after the end of the Cold War that discussions between the two powers became more fruitful and obstacles such as verification were overcome.

Finally, this chapter will conclude with an outline of the principal challenges which have emerged for disarmament since the end of the Cold War, such as the rise of terrorism, unilateral tendencies of states in matters of non-proliferation, disarmament and arms control as well as the question of how to deal with dual-use materials. Furthermore, it will present a number of promising aspects, including the voluntary denuclearisation of Ukraine and South Africa, the conclusion of the now quasi-universal CWC, the condemnation of NW by the International Court of Justice (ICJ), as well as the recent lawsuit of the Marshall Islands against the nine NWS.
1. Early Approaches to Disarmament

1.1. Disarmament in the Ancient and Medieval Worlds

Contrary to modern times, warfare in the ancient world was mostly endemic and fought with primitive weapons. Men organised themselves into social groups and relied on the use of physical violence as a means of influencing and controlling the behaviour of neighbouring groups. As the size of those groups increased, so did the destructiveness of these tools, which reflects the importance of armed forces for states in demonstrating independence and sovereignty.¹⁸⁷

During this period, violence was common and warfare, the general means of resolving conflicts, was of strong social and cultural importance. Moreover, humanitarian values appeared only centuries later with the Just War doctrine. In other words, there were few incentives to prevent armed conflict.¹⁸⁸ Over the centuries, a number of initiatives emerged which demonstrate the link between the limitation of armaments on one hand, and the achievement and maintenance of peace, religious and humanitarian considerations on the other.

For example, Hindu law which emerged 4000 years ago, prohibits the use of disproportionately destructive weapons.¹⁸⁹ At the end of the Peloponnesian Wars in ancient Greece (404 BC), the victorious Spartans, dictating the terms of peace, rendered Athens indefensible by destroying the long walls connecting it with the harbour, as well as parts of their fleet. After the second Punic War (Carthaginian War, 218-201 BC), Carthaginians had to surrender their elephants and ships to the victorious Romans. During the Age of Confusion in China (6 BC), two of the three ruling military powers (Ts’s and Ts’in) formed an alliance against the third, Ch’u, and imposed a treaty of disarmament, which ‘became the foundation of a new pacific empire.’¹⁹⁰ It is important to note that in the ancient world, depriving defeated peoples of their full military force constituted an alternative to its obliteration or enslavement.¹⁹¹

¹⁸⁷ David Singer, Disarmament, International Encyclopaedia of the Social Sciences, 1968
¹⁸⁸ Stuart Croft, (fn 78) 21
¹⁹⁰ H G Wells, The Outline of History: Prehistoric to the Roman Republic, Vol I (Sterling 1991) 157
¹⁹¹ Philip Towle, ‘Forced Disarmament in the 1920s and After’ Vol 29 (2) (Journal of Strategic Studies, 2006) 324
Furthermore, disarmament has been portrayed as a prerequisite for peace in the Bible. According to the Old Testament, in 8–7 BC the prophet Isaiah predicted a state of peace for all nations who spread the message of God to the rest of the world.\textsuperscript{192} In this state of peace, nations were to transform their weapons into peaceful instruments:

‘and they shall beat their swords into ploughshares, and their spears into pruning hooks: nation shall not lift up sword against nation, neither shall they learn war anymore.’ Isaiah 2:3-4

This conception of disarmament illustrates the interrelation between peace and disarmament, which is also reflected in contemporary disarmament efforts. For example, contrary to Isaiah’s prophecy that peace will result in disarmament, the United Nations’ vision is that disarmament will result in peace. Today, this vision drives all United Nations bodies mandated with disarmament affairs.\textsuperscript{193}

Attempts at limiting armaments in both the Ancient and Medieval Worlds were primarily undertaken on religious grounds, generally under the authority of God or the Church, which can be regarded as an early form of institutionalised disarmament. In 1139, Pope Innocent II is said to have convened the Second Lateran Council, an international conference, to discuss a ban of a new weapon he considered ‘hateful to God and unfit for Christians’, namely the crossbow.\textsuperscript{194} Canon 29 of the Council reads: ‘We forbid under penalty of anathema that that deadly and God-detested art of slingers and archers be in the future exercised against Christians and Catholics.’\textsuperscript{195} This prohibition can be explained by the highly stratified structure of medieval societies.\textsuperscript{196}

The motivation behind arms control at the time was to create norms of behaviour by regulating certain types of violence. The Church, which constituted the legitimising authority for the ban, was charged with the enforcement of these norms. However, the scope of this

\textsuperscript{192} Terry Briley, \textit{Isaiah, Volume I}, (College Press Publishing, 2000) 51; Psalm 46: ‘He makes wars cease to the ends of the earth. He breaks the bow and shatters the spear; he burns the shields with fire.’ (New Revised Standard)

\textsuperscript{193} See, the motto of the UNODA: ‘strengthening peace and security through disarmament’.


\textsuperscript{195} Gregory Reichberg, Henrik Syse, Endre Begby (eds), \textit{The Ethics of War}, (Blackwell Publishing, 2006) 97

\textsuperscript{196} ‘The Crossbow – A Medieval Doomsday Device?’ (Military History Now, 23 May 2012) http://militaryhistorynow.com/2012/05/23/the-crossbow-a-medieval-wmd/ accessed 12 March 2014: ‘...any technology that could put the power to instantly kill a chivalric knight, a nobleman or even a king into the hands of an amateur or a commoner was seen as an abomination. Crossbows were not just battlefield weapons that could quickly win battles; to a ruling class they were downright terrifying.’
prohibition was limited, given that its use against non-Christians, who threatened the authority of the Church, was accepted.\textsuperscript{197}

These early developments reveal that reductions to armed forces imposed by victors or religious and political authorities upon vanquished peoples or inferior subjects, constitute the oldest form of disarmament. With the creation of nation states after the 15\textsuperscript{th} century, armed conflict began to take place on a much larger scale than those among the feudal states of the medieval era. Moreover, the emergence of concepts such as national identity and territorial sovereignty led to the establishment of standing armies equipped with sophisticated weapons.\textsuperscript{198} Finally, following the unrestricted forms of warfare of the ancient world, movements suggesting the limitation of the level of violence in war began to form.

This idea of a just war, however, had roots in much earlier works such as Marcus Tullius Cicero’s \textit{De Officiis} (On Obligations) from 44 BC, in which he attempted to lay out moral ground rules for public behaviour, including that of statesmen. This essay later influenced advocates of a Christian theory of Just War. For example, Augustine of Hippo (354 – 430) believed that the pursuit of peace did not exclude the use of violence against evils.\textsuperscript{199} This implies that, although states have a right to protect themselves through violence (\textit{jus ad bellum}), they must ensure this use of violence is morally justifiable. Three conditions of a Just War were established in Thomas Aquinas’ \textit{The Just War} (1265 – 1274). According to him, a Just War is a war waged by a properly instituted authority for a just purpose with the achievement of a state of peace being the central motive.\textsuperscript{200}

Building on these ideas, the concept of a Just War was further developed in a secular context by members of the School of Salamanca, a body of Spanish and Portuguese intellectuals, who deemed the unnecessary and excessive use of violence in warfare unjust. Furthermore, in 1625, Dutch jurist and philosopher Hugo Grotius lamented ‘a lack of restraint in relation to war’\textsuperscript{201} and expressed his belief that freely available arms turned good men into ruthless barbarians:

\begin{itemize}
  \item \textsuperscript{197} Stuart Croft, (fn 78) 24.
  \item \textsuperscript{199} Romans 13:4, New International Version: ‘…for rulers do not bear the sword for no reason’
  \item \textsuperscript{201} Hugo Grotius, \textit{On the Law of War and Peace, Prolegomena [1625]} para 28
\end{itemize}
I observed that men rush to arms for slight causes, or no cause at all and that when arms have once been taken up there is no longer any respect for law, divine or human; it is as if in accordance with a general decree, frenzy has openly been let loose for the committing of all crimes.¹²²

1.2. Disarmament under Emerging International Law: Disarmament Treaties

These humanitarian values emerging from the Just War doctrine in response to the growing dimension of warfare laid the foundation for the first reciprocal agreements on the limitation of military force. When modern international law began to take shape in the 17th century, the European continent was being ravaged by wars of religion and in particular the Thirty Years War. It ended in 1648 with the Peace of Westphalia, a peace agreement which contained provisions that suggest de-fortification and de-militarisation.²⁰³ The medieval belief that the prohibition of certain types of behaviour in warfare could limit violence continued to motivate considerations for arms control and of limitations on the scope of war.²⁰⁴

The foundations of modern disarmament were laid in the era between the Peace of Westphalia (1648) and the outbreak of WWI (1914). The establishment of neutralised (de-fortified) areas²⁰⁵ and the adoption of ‘unequal treaties’ which imposed limitation of armaments on the vanquished states, illustrate the increasing emphasis put on arms control in that era. For example, Swiss philosopher de Vattel welcomed a practise of systematic disarmament of both parties to a peace treaty.²⁰⁶

The Peace of Westphalia of 1648 is often seen as marking the emergence of sovereign states. The Westphalian model is based on the principle that each nation state has sovereignty over its own territory and domestic affairs, to the exclusion of all external powers. This explains why, the concept of disarmament was only gradually accepted. Indeed, it challenged this

²⁰² Ibid
²⁰³ Articles LXXXIII, LXXXIV and CXVIII of the Treaty of Münster
²⁰⁴ Article XXIII of the Trade Agreement between Prussia and the US, 1785, Treaty of Commerce between the Netherlands and the US, 1782
²⁰⁵ Treaty of Utrecht (1713): under Article IX the French agreed to British demands on de-fortification, British-Spanish-Dutch Treaty (1715): under Article XXVII fortifications in Liège were ‘razed and demolished in such a way that they can never be rebuilt’
²⁰⁶ Emer de Vattel, ‘Chapter III - Of the Just Causes of War’, in The Law of the Nations, 1758, para 50
absolute understanding of sovereignty as established by the Westphalian model, given that military force was and still is considered crucial for the exercise of state sovereignty.

Several agreements containing provisions limiting military forces were proposed or adopted in the 18th and 19th centuries, gradually developing the concept and establishing a foundation for the comprehensive disarmament efforts of the 20th century. For example, the Treaty of Utrecht (1713) prohibited the French from constructing fortifications at Dunkirk in order to ensure greater security for Britain.\(^\text{207}\) In the wake of the American Revolutionary War (1765–1783), economic reasons as well as a change of goals from war to peace, led the US to unilaterally reduce its army and naval forces. In 1766, Austria proposed a reciprocal three-quarter reduction of the standing armies to Prussia, however, without success.\(^\text{208}\) On 27 October 1787, France and Britain concluded a naval disarmament agreement in order to reduce military preparedness and, thereby, the risk of a naval attack.\(^\text{209}\) In 1806, Napoleonic France attempted to impose disarmament measures on Prussia, which, however, were eventually evaded.\(^\text{210}\) In 1817, Britain and the US adopted the Rush-Bagot Treaty in which they agreed to limit armaments on the Great Lakes.

The Vienna Congress was convened in 1814, in a desire to find solutions for long-term peace following the Napoleonic Wars. A general disarmament project was proposed for the first time by Russian Tsar Alexander I. It was the result of his desire to create a Holy Alliance guaranteeing long-term peace. However, this proposal was met with strong scepticism by Britain and Austria who shared a fear of Russia’s expansion westwards.\(^\text{211}\) The Austrian representative at the Vienna Congress, Count Metternich, did not consider it possible to control the armed forces of the powers and to effectively verify disarmament.\(^\text{212}\) It is

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\(^\text{208}\) Merze Tate, *The Disarmament Illusion*, (The Macmillan Company, 1942) 7.


\(^\text{212}\) H.G. Schenk, *The Aftermath of the Napoleonic Wars – The Concert of Europe, An Experiment*, (Howard Fertig Publisher, 1967) 215; Despatch sent by Metternich to Castlereagh, 1816: “The disadvantage of affording in the outset information of this nature, and the difficulty always of obtaining any true data from Russia, no one could better appreciate than your Lordship. To take the initiative here, uncertain of a reciprocity of confidence, would be impossible.”
important to note that during the pre-WWI era, the obligations of states in the field of arms control were formulated in such vague terms, that verifying compliance with them would have been too difficult to be considered until this moment. As a consequence, British Foreign Secretary Lord Castlereagh proposed alternatively that Russia disarm unilaterally. 213

1.3. Disarmament from The Hague Conferences to the Great War

During the years of peace between the Vienna Congress and the Crimean War, the reduction of armaments was addressed independently from the peace movement. Besides suggestions on disarmament as a solution to the financial burden of military expenditure, 214 increasing considerations for humanitarian aspects in armed conflicts in the 19th century played an important role in the advancement of disarmament.

Key events in this area were the 1868 Saint Petersburg Conference and the 1899 Hague Conference. The rationale of the resulting Saint Petersburg Declaration was that ‘the progress of civilization should have the effect of alleviating as much as possible the calamities of war.’ 215 To this end, the Declaration prohibited certain types of weapons which were deemed to cause unnecessary suffering. However, the list of prohibited weapons was not systematically updated and completed. The Hague Peace Conference of 1899 was convened on the initiative of the Russian Tsar Nicholas II on 24 August 1898. Although, like Alexander I in 1814, he presented himself as a pacifist, his true motivations stemmed from the critical state of the Russian economy. 216 Consequently, in order to ensure national security while limiting the ongoing arms race and military expenditure, he suggested multilateral disarmament.

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213 Tim Chapman, (fn 213) 64.
214 EL Woodward, War and Peace in Europe, 1815 -1870 (Constable, 1931) 62.
216 Count Mouravieff, Russian Minister of Foreign Affairs ‘Message of the Czar, 12 August 1898’, Documents Relating to the Program of the First Hague Peace Conference, (Humphrey Milford, 1921) 1: ‘The maintenance of general peace and a possible reduction of the excessive armaments which weigh upon all nations present themselves(…) as the ideal towards which the endeavours of all Governments should be directed.’; Scott Andrew Keefer, ‘Building the Palace of Peace: The Hague Conference of 1899 and Arms Control in the Progressive Era’ Vol 8 (1) (Journal of the History of International Law, 2006) 3.
A committee of military specialists charged with studying the possibility of arms limitation concluded that at the time any collaborative limitation was impossible. It was argued that ‘there was no possible means of guaranteeing that such a self-denying ordinance would be observed, except perhaps through an army of international inspectors, and this would lead to friction.’ In other words, the lack of an international executive body charged with enforcing compliance and ensuring verification can be seen as the principal obstacle to an agreement on disarmament at the First Hague Conference.

Instead, three declarations were adopted which prohibited the discharge of projectiles and explosives from balloons, the use of projectiles with the sole object to spread asphyxiating poisonous gases and the use of dum-dum bullets. In sum, the impact of these conferences on the advancement of disarmament was limited. However, non-state actors such as the International Committee of the Red Cross (ICRC) took advantage of the post-Hague climate to influence the views of politicians, aiming at the creation of new human security-based legal norms. The idea of human suffering constituted the unifying element between the humanitarian and the disarmament communities, which secured the latter additional support and included the human security concept in the disarmament debate.

These early agreements were limited to the prohibition of the use of weapons, as they did not include a prohibition of the production of these weapons or an obligation to destroy existing arms stockpiles. In such an environment, the outbreak of an arms race could not be prevented. It was triggered by the growing imperialist desires of the European powers and the permanent fear of a potential attack in the early 20th century.

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217 James Brown Scott, The Hague Peace Conferences of 1899 and 1907, Vol II Documents (The Johns Hopkins Press, 1909): Report of Captain Mahan to the United States Commission to the International Conference at the Hague, on Disarmament, 31 July 1899; Ibid 44, 657: ‘disarmament was neither practicable nor desirable until an agreement had been reached regarding a limitation of present armaments’; Ibid 670: ‘There is no doubt that disarmament might be accomplished by a universal treaty binding the nations to disband their armies and dismantle their navies; but it is unreasonable in the present state of affairs, to suppose that the countries of the world will agree to such a drastic not to say Utopian measure.’

218 Arthur Marder, The Anatomy of British Sea Power: A History of British Naval Policy in the Pre-Dreadnought Era, 1880-1905, 3rd Edition 1972 (Frank Cass, 1940) 342, see also: Merze Tate, (fn 210) 347: ‘In the European society of the nineteenth century, without an international executive to enforce engagements on recalcitrant states, disarmament was impossible.’


States constantly adjusted their military forces in order to maintain a ‘balance of power’. For example, in 1905 Britain built the Dreadnought, a heavily-armed battleship more powerful than the entire German navy. In doing so it hoped to deter Germany from challenging the British fleet. In response, Germany itself built Dreadnoughts, which turned Britain’s initial decision to build the battleship into a strategic error and a political disaster.221 This arms race, the naval arms race between Britain and Germany in particular, is believed to have been one of the principal causes of the Great War, as constantly growing armed forces gave states the impression and confidence that there was little risk of defeat. Thus, when the war ended in 1918, the question of the limitation of armaments was at the heart of the peace talks.

2. Disarmament in the Interwar Period

The second important period in the evolution of disarmament began in 1919 with the adoption of the peace treaties in the wake of the Great War. After the end of the war, former British Foreign Secretary Lord Grey wrote:

“The enormous growth of armaments in Europe, the sense of insecurity and fear caused by them – it was these that made war inevitable. This is the truest reading of history, the lesson that the present should be learning from the past.”222

The principal objectives of states in the immediate post-WWI period, which resulted from this sentiment, were to ‘develop the rules of war, (...) create a general world order’, prevent another war and create stability.223 The strong common desire to prevent another war, in particular, for the first time provided a fruitful environment to negotiate disarmament. As mentioned above, the first pursuers of modern disarmament did not consider a durable regulation of nations’ armaments and military forces as an achievable goal. It was only after the Great War that the idea of disarmament became an essential element in the pursuit of security.

In parallel to these developments a transition from non-legal values to the reliance on the rule of law occurred in the international community. Prior to 1919, the concept of honour had

222 Viscount Grey of Fallodon, Twenty-Five Years, 1892 – 1916, Vol I (Frederick A Stokes Company, 1925) 91-92
223 Stuart Croft, (fn 78) 26-27.
been relied upon to ensure adherence to international agreements, as in European pre-WWI civilisation ‘avoiding stain of dishonour was (...) a key incentive promoting conformity with the rules making up a common code.’ With the conclusion of the Treaty of Versailles in 1919, the notion of honour as a guarantee for compliance gave way to the rule of law, which became the main component of the new world order. Moreover, during this period the term “international peace and security” emerged in the international discourse. This new objective induced the desire to make treaties legally binding. It was enshrined in the Treaty of Versailles which put a strong emphasis on the respect of its obligations.

Six varieties of disarmament can be distinguished between the Paris Peace Conference in 1919 and the final peacetime League Assembly in 1938: disarmament imposed on the vanquished powers of WWI, unilateral force reductions and budget cuts made by the victors, naval limitations, narrow disarmament initiatives aimed at securing acceptance of the principle of disarmament, a disarmament for security approach and, finally, general and complete disarmament. Each approach had an impact on international relations in the interwar period and can be used to illustrate some of the challenges surrounding disarmament which still exist today.

2.1. The Disarmament of Germany under the Treaty of Versailles

The arms restrictions imposed by the Allies upon Germany in Part V (Articles 159-213) of the 1919 Treaty of Versailles, the most important of the post-war peace treaties, constitute the central element of interwar disarmament efforts. The underlying idea was that forced disarmament, followed by the voluntary disarmament of the victors would guarantee lasting

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225 ‘Germany must settle for all injustice, says Clemenceau’, *The Pittsburgh Press* (Pittsburgh, 17 June 1919) 14: Georges Clemenceau, the president of the Paris Peace Conference wrote in a letter to Count von Brockdorff-Rantzau, the president of the German delegation: ‘(...) the old era is to be left behind and nations as well as individuals are to be brought beneath the reign of law;’ Allan Hertz, ‘Honour’s Role in the International States’ System’ (Denver Journal of International Law and Policy, 2002) 114.
227 Treaties imposing disarmament upon the other vanquished powers: 1919 Treaty of Saint-Germain (Austria), 1919 Treaty of Neuilly (Bulgaria), 1920 Treaty of Trianon (Hungary), 1920 Treaty of Sevres (Turkey).
peace. In other words, a general disarmament agreement would complement the imposed disarmament of Germany.

It is important to note that the treaty was a product of compromises seeking to fulfil as many of the national interests of the allied powers as possible and was thus negotiated under great pressure. It was marked by tensions between the high moral ideals pursued by the US and Britain on one hand, and France's desire to reach conclusions fast on the other. These factors added to the difficulties surrounding the execution of the treaty. In reminding Britain of the Prussian evasion of the disarmament measures imposed by Napoleon, France predicted that Germany would find a way to evade the restrictions and prevent the Treaty from becoming a veritable source of security. Indeed, from the very beginning Germany rejected the imposed measures and soon began reconstructing its military forces.

Imposed disarmament under the Treaty of Versailles failed, as he Allies were unable to put a stop to these transgressions and enforce disarmament for a number of reasons. A recurring problem was the inability of Britain and France to find common grounds over how to react to German rearmament. Britain, favouring a reconciliation policy, dismissed German violations as militarily insignificant and, consequently chose inaction. France, on the other hand, was alarmed by German rearmament and wished to take action to enforce disarmament through military action.

The conflicting interests of Great Britain and France also hindered constructive discussions on the question of verification. Britain argued that the surveillance of German disarmament would not only imply a double insult to Germany but would also be ineffective. It wished

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229 Philip Towle, (fn 193) 325.
231 SHD-DAT, Fonds Clemenceau, 6 N 73-1 : ‘Observations concernant le projet d’imposer à l’Allemagne le système d’une force permanent recrutée pour un service à long terme et strictement destinée à assurer l’ordre intérieur’ ; SHD-DAT, 7 N 3529-2 : ‘Note au sujet du désarmement de l’Allemagne’ (February 1919) and ‘Historique du projet de désarmement de l’Allemagne’ (30 September 1919)
232 Andrew Webster, (fn 228) 227: violation of numerical limits, reconstitution of staff in disguised form, falsification of budgets to hide excessive military expenditures and experiments with prohibited weapons.
233 Ibid
234 The National Archives, Admiralty Papers 116/3275, ‘Supervision and Control’, 1933: ‘If a convention is signed in good faith, supervision of this kind is unnecessary, but if good faith is not present, supervision would be useless and ineffective.’
to create a friendly relationship with Germany and considered such measures a violation of state sovereignty.²³⁵ Yet, the French feared German rearmament and therefore advocated for the surveillance of Germany’s military activities. US President Wilson aligned with Britain and dismissed the French suggestion to establish an international control of armaments as unrealistic, given that ‘no nation would have consented to such external control on their armament’.²³⁶

Such international control was for the first time established in Section IV of the Treaty of Versailles, which provided for monitoring mechanisms (the Inter-Allied Commissions of Control) and Section V (inspection measures). For example, the Inter-allied Military Commission of Control (IAMCC) was established under Article 203 with the mandate to supervise the execution of the Treaty’s military clauses. Demanding provisions obliged the German government to provide the Commissions with detailed information regarding its armaments.²³⁷ This idea of requiring a sovereign state to disclose highly confidential information on military activities to a foreign inspection authority was unprecedented at the time.

Although the duration of this mandate was limited until Germany had fully disarmed, views diverged on what constituted ‘complete disarmament’. Again, Britain opted for the cessation of the IAMCC, while France demanded continued assurance that Germany executed its obligations under the Treaty.²³⁸ After years of discussions regarding the completion of German disarmament and the fate of the Commission, the Allies finally agreed on its withdrawal in January 1927 and on charging the League with the task of surveilling German armament activities under Article 213 of the treaty.

A final element contributing to the failure of disarmament were the vague terms of Article 8 of the Covenant of the League of Nations, which was established by Part I of the Treaty of Versailles. It provided in that ‘the maintenance of peace requires the reduction of national armaments to the lowest point consistent with national safety.’ However, it did not specify

²³⁵ Ann Florini, ‘The End of Secrecy’, Vol 111, (Foreign Policy, 1998) 52: ‘in the 1920s, the prevailing attitude held that states, even aggressors, had a right to military privacy’; Sami Sare, The League of Nations and the Debate on Disarmament (1918-1919), (Edizioni Nuova Cultura, 2013) 52.
²³⁶ Sami Sare, (fn 237) 140.
²³⁷ Articles 208, 209 Treaty of Versailles.
²³⁸ HL Deb 01 April 1925 vol 60 cc876-90.
how this lowest point would be assessed. This illustrates that the powers not only failed to achieve consensus, but also failed to consider technical questions inherent to such measures.

2.2. Other Forms of Interwar Disarmament

A second form of interwar disarmament, besides the forced disarmament of Germany and its allies, consisted in voluntary and unilateral force reductions and budget cuts made independently by the victors of the war. For example, the British Ten-Year Rule, a government guideline ‘based on the assumption that the British Empire would not be engaged in any great war during the next ten years’, 239 led to cuts in defence spending and a reduction in naval strength. In other words, the powers ‘placed their military establishments onto a peacetime footing’, primarily motivated by financial necessity. 240 Such unilateral measures did not offer a stable foundation for disarmament under Article 8, given that they could easily be suspended.

Naval limitations, which constituted the third type of interwar disarmament, were relatively successful as they were able to put a halt to the naval arms race. Substantial reductions to capital ships and aircraft carriers were achieved among the main maritime powers as a result of the Washington Naval Conference of 1921-1922. 241 This can be explained by the fact that verification at sea was easier than on land and the US, the strongest naval power, offered to make the greatest reductions to its fleets. 242 Still, disarmament proved difficult even among political allies, as tensions developed between the US and Britain who accused each other of violating their treaty obligations. 243 These tensions between political interests prevented the powers from expanding the achievements in naval disarmament to other maritime powers and the wider sphere of general disarmament. It can be argued that the conclusion of the naval treaties was only made possible by the small number of states involved, who shared a common fear of a naval arms race.

The fourth type of interwar disarmament consisted in diverse initiatives of the League undertaken in parallel, which did not aim to achieve numerical reductions in armaments.

240 Andrew Webster, (fn 228) 232.
241 Britain, US, Japan, France and Italy.
242 Philip Towle, (fn 193) 331.
243 Ibid.
Rather, as laid down by the Preamble to Part V of the Treaty of Versailles, these measures aimed ‘to render possible the initiation of a general limitation of armaments of all nations.’ In other words, they did not target Germany specifically but represented ‘the first steps towards the general reduction and limitation of armaments.’\textsuperscript{244} In this context, the Geneva Conference\textsuperscript{245} was convened in May 1925 which resulted in the adoption of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare (Geneva Protocol) on 17 June 1925. Although it banned chemical warfare, it was not a complete ban, as it did neither prohibit the study, production or storage of CW, nor include provisions for verification or enforcement. Moreover, states attached important reservations to it, regarding retaliatory use in particular. These weaknesses prevented the Protocol from promoting disarmament.

The link between the reduction of armaments and international security was emphasised by the fifth type of disarmament. The idea that states would more easily reduce their armed forces in a climate of international security motivated the adoption of a treaty of reciprocal security commitments, the Treaty of Mutual Assistance of 1923. Based on its relatively vague provisions, the parties assured each other assistance in the case of a military aggression, in return for which they were to make reductions to their armed forces compatible with security requirements. This treaty was rejected. The French criticised the vague security provisions and the fact that disarmament was given priority over security. The British, on the other hand, were unwilling to accept undefined and potentially unlimited arms reductions.

The final approach to interwar disarmament was a comprehensive one which ‘would cover all nations and all spheres of armaments’.\textsuperscript{246} Although general disarmament was discussed at the 1932-1934 World Disarmament Conference, these discussions produced no tangible results. Varying conceptions of general and complete disarmament, motivations and national interests of the 59 participating states prevented the achievement of an agreement. Again, differing Anglo-French conceptions stood at the centre of the debate. For the French, disarmament was the consequence of security while, inversely, for the British disarmament created security and stability in Europe. A major complicating factor was added by Germany’s

\begin{footnotesize}
\begin{enumerate}
\item[244] Georges Clemenceau, note to the German Foreign Minister, Count Brockdorff-Rantzau, 16 June 1919.
\item[245] Conference for the Supervision of the International Trade in Arms and Ammunition and in Implements of War (May-June 1925).
\item[246] Andrew Webster, (fn 228) 241.
\end{enumerate}
\end{footnotesize}
claim of “equality of status” as an officially disarmed power, a strategy employed to cover up its illegal rearmament activities. The conference was doomed to failure when Germany left the conference.247

2.3. The Failure of General Disarmament and a Renewed Arms Race

In the early 1930s there was still hope in Britain that agreement could be reached on disarmament measures that were reconcilable with British imperial security. However, being confronted with the vulnerability of its territories in the Far East after the Japanese invasion of the Chinese province of Manchuria in 1931, Britain soon started to rearm.248 The primary motivation behind rearmament was to deter Germany from war. However, disarmament did not prove effective in deterring war, as fears that rearmament would trigger an arms race were confirmed. It merely delayed the moment when Hitler was prepared to risk war and increased Britain’s preparedness when the war eventually broke out.249

When WWII broke out in 1939, all the efforts to create peace, including disarmament, proved futile. The ultimate goal of general disarmament had not been achievable in the political setting of the interwar era, given that in the environment of suspicion at the time, the powers were unwilling to give up their independence in the area of defence and security. This explains why consensus was only reached on very limited questions and under the condition that national interests were preserved.

The disarmament of Germany demonstrated that the unwillingness of a state to disarm cannot be remedied, especially in the absence of enforcement mechanisms. In other words, disarmament can only develop permanent benefits if it is not imposed but undertaken on the basis of an agreement. The demilitarisation of Germany and Japan in 1945 proved much more successful than that of Germany and its allies in the 1920s, given that in 1945 their moral defeat and the overwhelming military power of the victors made it possible to bend the defeated powers to the will of the leaders.250 In 1920, cooperation was also undermined by the failure of the Allies to persuade Germany that the imposed asymmetry of forces was not

248 Ibid, 588.
249 Ibid, 589.
250 Philip Towle, (fn 193) 325.
intended as a humiliation but rather a means to enhance European security.\footnote{Ibid, 340.} Moreover, Anglo-French disagreements in the interwar period illustrate that political will and consensus among disarming powers themselves is a \textit{sine qua non} in disarmament.\footnote{Setsuko Ushioda, (fn 200) 20.} This lack of a common strategy among the allies of WWI emphasised the role of the League as an institutional framework to interwar disarmament. The League, however, lacked its own armed forces and depended on its members to enforce disarmament measures. Moreover, none of the proposed or concluded disarmament agreements established levels of reductions required, which consequently were to be determined by each state individually.

3. \textbf{Cold War Negotiations: From Comprehensive to Partial Disarmament}

3.1. \textbf{Renewed Disarmament Efforts}

Disarmament negotiations during the Cold War were shaped by the post-WWII world order. Given that arms control was a ‘key feature of Cold War diplomacy’,\footnote{Ibid, 31.} the conflict provided a forum for the renewed negotiations on disarmament. This allowed the transformation of the vague ideas about disarmament, as developed in the interwar period, into reality. Moreover, the creation of the UN and its Charter reflected the determination ‘to save succeeding generations from the scourge of war’,\footnote{See Preamble, UN Charter.} a central objective of the UN which made of disarmament an important element in the maintenance of international peace and security.

However, a comparison of the Covenant of the League of Nations of 1919 and the United Nations Charter of 1945 reflects a change in the priority given to disarmament by the two organisations. Formulating plans for disarmament was one of the central tasks of the League, as it was considered essential to ensure security.\footnote{See Article 8 of the Covenant of the League of Nations.} After 1945, disarmament was no longer considered indispensable, given that ‘weapons were treated as the result, not as the cause of insecurity.’\footnote{Andrew Webster, (fn 228) 226.} In other words, similarly to the pre-WWI era, they were again considered necessary for the maintenance of peace. This shift is reflected in the wording of Article 11 of
the UN Charter, which simply notes disarmament as one of the means of promoting international peace and security available to the UN General Assembly.\footnote{Article 11 (1), UN Charter: ‘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 or to the Security Council or to both.} 

In 1959, the UNGA adopted Resolution 1378, which explicitly put general and complete disarmament on the UNGA’s agenda.\footnote{It was backed by all 82 UN member states at the time.} Its preamble states that ‘the question of general and complete disarmament is the most important one facing the world today.’ As a result, the Conference on Disarmament was convened in 1965 by the UN to discuss the steps to be taken in order to achieve this goal. General principles to guide negotiations on such a general disarmament agreement were adopted, such as the sovereign equality of all members of the UN, with the resulting objective of providing equal security for all members through disarmament\footnote{Article 1 (2), UN Charter: the sovereign equality of all UN members; World Armaments and Disarmament, SIPRI Yearbook (Taylor & Francis, 1979) 529.} and the principle of friendly relations among nations.\footnote{UNSC resolution 2625 (1970): ‘States shall refrain in their international relations from the threat and the use of force (…) inconsistent with the purposes of the United Nations.’}

The UNGA held Special Sessions on Disarmament in 1978, 1982 and 1988 to pursue a comprehensive disarmament programme, yet producing few outcomes.\footnote{Concluding document, Second special session of the General Assembly devoted to Disarmament, 1982, (A/S-12/32) para 59: ‘developments since 1978 have not lived up to the hoped engendered (…as) the objectives, priorities and principles laid down have not been generally observed.’} Preparatory talks on further Special Sessions were held in UN Working Groups.\footnote{UNGA, Report of the Open-ended Working Group (Open-ended Working Group to consider the objectives and agenda, including the possible establishment of the preparatory committee, for the Fourth Special Session of the General Assembly devoted to disarmament), (A/AC/268/2007/2) 31 August 2007, Annex V.} Given the climate of extreme suspicion in Cold War negotiations, finding consensus on the elements of a general disarmament agreement proved equally, or even more, difficult than in the interwar period. Eventually, the powers soon began to opt for partial measures in order to achieve the advancement of disarmament.

### 3.2. Developments in Nuclear Disarmament

Two conflicting movements emerged at the very beginning of the Cold War. The nuclear arms race between the two superpowers began, while attempts at limiting the use of atomic
energy to peaceful purposes were undertaken. The development of the nuclear weapon (NW), as well as its use in Hiroshima and Nagasaki in 1945, constituted a turning point in the evolution of disarmament which challenged the traditional diplomatic parameters. As a consequence, Wilson’s vision that peace would be achieved through the rule of law was replaced by a pursuit of peace through fear.

The importance of the nuclear question was highlighted by the adoption of the UNGA’s first resolution on 24 January 1946, which envisaged the establishment of a commission to deal with the problems raised by the discovery of atomic energy. Both Eastern and Western leaders acknowledged that the risks NW posed to humanity outweighed their respective interests, which motivated their intention to pursue nuclear disarmament.263 On 14 June 1946, Barnard Baruch presented a U.S. plan which suggested the unprecedented delegation of authority to an international organisation.264 The plan was vehemently opposed by the Soviet Union which preferred to maintain control over its own nuclear activities and a monopoly on atomic secrets.265

The first Soviet NW test opened debates on nuclear disarmament at the UN, which led to the creation of the UN Disarmament Commission by the General Assembly in 1952.266 In this context the phrase ‘disarmament under effective international control’ first became part of the disarmament debate. However, opposing views on the questions of disarmament and verification hindered negotiations between the East and the West. While the US argued that effective verification mechanisms had to be implemented before disarmament could take place, the Soviets insisted in a “disarmament first”-approach. These irreconcilable visions illustrate the political environment in which states were not yet prepared for the idea of mutual verification.267

264 Setsuko Ushioda (fn 200) 33: This International Atomic Development Authority was to assume ownership of all fissionable material, supervise its production and distribution and verify the destruction of existing nuclear weapon stocks.
265 Alva Myrdal, (fn 157) 74-78.
266 UNGA res resolution 502 (VI), January 1952.
Negotiations during the 1950s took place in a context of easing of geo-political tensions made possible by thermonuclear parity between the US and the Soviets. A concentration on partial measures of disarmament seemed more acceptable to both sides which allowed more constructive negotiations.\textsuperscript{268} The establishment in 1957 of the International Atomic Energy Agency for the cooperation of nuclear weapon states (NWS) and non-nuclear weapon states (NNWS) marked an important turning point for the promotion of the peaceful use of atomic energy and nuclear arms control. Its extensive safeguards system, which allows intrusive on-site inspections on the territory of NNWS, provided a strong foundation for the future NPT.\textsuperscript{269}

The 1959 resolution 1378 of the UNGA established “general and complete disarmament under efficient international control” as the objective of all global disarmament efforts. This term was adopted by the Non-Aligned Movement (NAM), which was founded in 1961 in a context of decolonisation. It constituted a recurring theme in the Final Documents of its Summit Conference of Heads of State or Governments, stressing the importance of verification.\textsuperscript{270} Similarly, Principle No. 6 of the 1961 ‘McCloy-Zorin Principles’ for future disarmament negotiations demanded that ‘disarmament should be implemented under strict and effective international control carried out by an International Disarmament Organisation established within the framework of the UN.’

After the 1962 Cuban Missile Crisis reminded the international community of the dangers of the ongoing arms race, negotiations at the Eighteen Nation Committee on Disarmament in 1961 underscored the fact that achieving an agreement on a single disarmament treaty was imperative. When the issue of verification again stood in the way of agreement on a comprehensive test ban, a provisional solution targeting nuclear testing was favoured, namely, the 1963 Partial Test Ban Treaty, which relied exclusively on national technical means (NTM).\textsuperscript{271}

\textsuperscript{268} Ibid, 36.

\textsuperscript{269} David Fischer ‘Nuclear Safeguards: The First Steps – From a Suspicious Spider’s Web, a Trusted Security Net was Born’ Vol 49 (1) (IAEA Bulletin, 2007) 7.


\textsuperscript{271} Berhanykun Andemicael, John Mathiason, (fn 269) 37.
When China began to emerge as a nuclear power, the need for an agreement countering the proliferation of NW became all the more pressing. The most important agreements, which resulted from the 1960 negotiations, were the 1967 Treaty of Tlatelolco, the 1967 Outer Space Treaty, the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT), and the 1971 Sea-Bed Treaty. The NPT is today the only multilateral disarmament agreement. Although its underlying purpose is to prevent the proliferation of NW, the UN Secretary-General at the time stressed that the NPT constituted a step towards disarmament. In practice, its central function was to establish different obligations for NNWS and NWS; non-proliferation obligations for the former and disarmament obligations for the latter. Today, its disarmament dimension has yet to develop its full potential, given that it is unable to prevent the acquisition of NW by non-States Parties. Moreover, its unlimited extension has not yet led to disarmament measures targeting the full elimination, but only a simple reduction of NW stockpiles.

Consequently, limited reductions continued to be pursued on a bilateral level. For example, in 1964, the Soviets signed the first strategic arms limitation treaty (SALT I) with President Richard Nixon in 1972 and a second accord (SALT II) with President Jimmy Carter in 1979. Each treaty sought to freeze the Soviet-U.S. competition in strategic weapons which could reach the territory of the other. Despite the refinement of methods of international verification and the bilateral SALT I and II, the problem of OSI continued to be evaded, which prevented the conclusion of a comprehensive test ban. By 1978, with no real progress in halting the arms race, the UN General Assembly convened its First Special Session Devoted to Disarmament (SSOD I) to organise future efforts. For the first time, international consensus on a comprehensive disarmament strategy was achieved.

In the mid-1980s another sudden realisation of the real dangers of pre-emptive nuclear strike by either side induced a policy of openness and a genuine will to end the war. The Soviets moved away from a doctrine of mutual assured destruction towards one of mutual

272 The Treaty for the Prohibition of Nuclear Weapons in Latin America
273 UN Secretary-General U Thant, Official Records of the UNGA, Twenty-First Session, supplement 1A/201/Add.1.
274 SALT I was ratified, SALT II was eventually rejected by the US because it granted the Soviets, who had just invaded Afghanistan, advantages in heavy missiles.
Finally, in 1989 the Soviets eventually agreed to intrusive OSI, which eliminated an important roadblock in negotiations and enabled a rapid progress in relations between the US and the Soviet Union. This resulted in the conclusion of the 1987 Intermediate Range Nuclear Forces Treaty (INF Treaty) and the 1991 Strategic Arms Reduction Treaty (START I).

3.3. Developments in Chemical and Biological Disarmament

Concerned by the devastating consequences of the potential use of CW and BW, as well as the continuing violations of the Geneva Protocol, several UN member states proposed amendments to the 1925 Geneva Protocol at the UNGA’s 21st session. Hungary submitted a draft resolution on CBW, recognising the Protocol’s inadequacy for prohibiting the use of biological and chemical weapons. In reaction to this, the UNGA assigned the task of seeking an agreement on the cessation of the development and production of such weapons to the Eighteen Nation Disarmament Committee (ENDC).

As discussions on the question continued in the Conference of the Committee on Disarmament (CCD, the successor of ENDC) and the subsequent UNGA sessions, the question arose whether to treat CW and BW separately or jointly. In 1971, two separate but identical draft conventions were submitted to the CCD, which both focused on biological weapons only. However, there was an understanding that an agreement on chemical weapons required further discussion.

At its 26th session in 1971, the UNGA adopted resolution 2826 (XXVI) with the Convention on the Prohibition of the Development, Production and Stockpiling of Biological and Toxin Weapons and on their Destruction (BWC), as an annex, which did not include a verification regime. Not only was international verification still deemed unachievable at the time of its conclusion, but the convention was also considered only a first step in the search for a comprehensive ban. The US argued that ‘information sufficient to produce an unequivocal

277 Ibid, 50.
279 UNGA res 2162 B (XXII), 5 December 1966.
verdict of guilty on a proliferator would not be obtainable’\textsuperscript{280} for reasons linked to the complex dual-use nature of biological materials. The Soviets on the other hand objected to proper verification from the outset.

After the successful conclusion of the BWC, the UNGA requested the CCD to continue its negotiations of a convention on CW and urged all states, pending agreement on the complete prohibition, to refrain from any further development, production and stockpiling of chemical weapons.\textsuperscript{281} However, no agreement was achieved for several years thereafter. It was only following Iraq’s use of CW against Iran in the 1980s that efforts to conclude a convention banning CW were enforced.

In the Final Declaration of the 1980 Review Conference of the BWC\textsuperscript{282} and later at the 1987 Paris Conference, states parties reaffirmed their obligation to achieve an agreement on complete, effective and adequately verifiable measures for banning and destroying CW. In 1991, the Conference on Disarmament (CD), mandated to elaborate a Convention, included the use of CW in the scope of the prohibition. In 1992, after 26 years of negotiations, consensus was reached, the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (CWC) was opened for signature in 1993 and entered into force in 1996. The CWC is the first comprehensively verifiable multilateral treaty banning an entire class of weapons. As of October 2013, having 190 states parties with only four States outside of its regime, the CWC is quasi-universal.\textsuperscript{283} Its verification regime is the most sophisticated and extensive ever established in an arms control agreement; a result of several decades of negotiations.

4. Post-Cold War Developments in Disarmament

With the end of the Cold War in 1991 and the warming up of East-West relations, the new geo-political landscape made the conclusion of new agreements possible. Several factors


\textsuperscript{281} UNGA resolution 2827 A (XXVI) and 2827 B (XXVI), 16 December 1971.

\textsuperscript{282} Final Declaration of the First BWC Review Conference, (BWC/CONF.I/10), 1980.

\textsuperscript{283} Note by the Technical Secretariat of the OPCW, 'Status of Participation in the Chemical Weapons Convention as at 14 October 2013,' (S/1131/2013).
brought about changes in the international environment in the early 1990s. The international community came to the realisation that international security not only depends on military factors but can also be ensured through other factors such as regional stability, economic strength and political cooperation. Applied to the field of arms control and disarmament, this implied a movement towards multilateralism.

Furthermore, the collapse of the Soviet Union in 1991 and the establishment of newly independent states as new actors in arms control created new proliferation concerns. Finally, the rise of international terrorism, in particular after the events of 11 September 2001, called for the rethinking of the concept of disarmament. This changing international environment paved the way for new opportunities but also challenges for disarmament.

4.1. Post-Cold War Opportunities for Disarmament

While during the Cold War, the deterrent effect of NW had been considered essential for the maintenance of international security, after the war such a strong deterrent was no longer required. Consequently, as NW transformed from a necessary into an unnecessary evil, fresh impetus was given to disarmament by a renewed common willingness of states to begin removing NW from their arsenals.

For example, in 1990 the US invested a large amount of its defence budget to support the Soviet Union in the dismantlement of its NW. Moreover, in 1994 The US, Russia and the UK signed the Budapest Memorandum, in which the three nuclear signatory powers agreed to respect Ukraine’s sovereignty and territorial integrity in return for Ukraine giving up the NW it inherited from the Soviet Union and joining the NPT as a NNWS. The Memorandum is one of the rare examples of successful voluntary nuclear disarmament.

Similarly, the end of the Cold War made possible South Africa’s unilateral decision to dismantle its nuclear arsenal in 1994. While it argued that ‘a nuclear deterrent had become not only superfluous but an obstacle to the development of South Africa’s international

285 David Singer, (fn 189): After the end of the Cold War, Russia, Belarussia, Kazakhstan and Ukraine.
286 Budapest Memorandum on Security Assurances, signed by Russia, the US and the UK on 5 December 1994 in Budapest.
relations’, several alternative explanations for this decision have been advanced. Although this case of denuclearisation is unique and therefore does not offer generalisable criteria for disarmament, it shows that voluntary disarmament can be undertaken without threatening national security.

As previously discussed, the most significant disarmament agreement concluded in the post-Cold War period was the 1997 CWC. Its highly sophisticated and virtually complete verification regime could only be adopted when a certain amount of trust was introduced into East-West relations. Its success is illustrated by its efforts in the UN-led mission surrounding the chemical disarmament of Syria, for which it was awarded the Nobel Peace Prize. Furthermore, the indefinite extension of the NPT on May 11, 1995 marked another important moment, as it was originally only given a 25-year lifespan.

The last significant agreement of the 1990s, the Comprehensive Test Ban Treaty (CTBT), was adopted by the UNGA on 10 September 1996, as a result of the sustained momentum from the successes of the CWC and the extension of the NPT. After four decades of bilateral and multilateral negotiations, it constituted a follow-up treaty to the 1963 PTBT. The CTBT bans nuclear weapon testing in all environments and is equipped with an extensive global monitoring system. However, the treaty has not yet entered into force as China and the US have not ratified it and India, Israel and Pakistan have not signed it.

In 1996, the highest judicial body in the world, the ICJ issued an advisory opinion the ‘Legality of the Threat or Use of Nuclear Weapons’, its longest advisory opinion to date. The UNGA had adopted a resolution requesting this advisory opinion at its forty-ninth session in 1994 under the agenda item 62 entitled “General and Complete Disarmament”, in which it declared its conviction that ‘the complete elimination of nuclear weapons is the only guarantee against the threat of nuclear war.’ While in its advisory opinion the Court concluded that in

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287 BBC, Text of relay of address by President F W de Klerk to a special joint session of Parliament in Cape Town, Radio South Africa, 24 March 1993.
290 Involving seismological, infrasound, hydro-acoustic and radionuclide procedures.
292 UNGA Resolution 49/75 K (1994).
principle NW are illegal, it did not extend this statement to all circumstances. Still, it affirmed the obligation of every NWS to negotiate in good faith for the reduction of their arsenals which offered additional force to the nuclear disarmament regime under the NPT.

An important opportunity for disarmament was created in 2014 when the Marshall Islands, whose population has suffered from the effects of nuclear tests conducted by the US in the 1950s and 1960s, brought unprecedented lawsuits against the nine NWS before the ICJ. It accused the five NWS member to the NPT of failing to comply with their obligations under Article VI of the treaty, which obliges them ‘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.’ The four NWS remaining outside of the NPT regime were accused of violating customary international law. The US has dismissed the claim, while others announced that they would not appear before the Court or have not yet accepted the ICJ’s jurisdiction. Whether or not the lawsuit will be successful, it will constitute a first public reminder that noncompliance with nuclear disarmament obligations will no longer be overlooked.

Further opportunities for future disarmament efforts can be seen in other recent developments. The creation of regional Nuclear-Weapon Free Zones (NWFZ), as authorised by article VII of the NPT and defined by UNGA resolution 3472 B (1975), have consolidated the commitment of NNWS to nuclear non-proliferation and facilitated their collaboration. For example, the WMD-free zone in the Middle East which was envisaged by the ‘Resolution on the Middle East’ annexed to the Final Document of the 1995 NPT Review Conference, could constitute a solution to the Iranian nuclear crisis and remove double standards over Israel’s

295 The US, UK, Russia, France and China.
296 ICJ Press Release, ‘The Republic of the Marshall Islands Files Applications against nine States for their alleged failure to fulfil their obligations with respect to the cessation of the nuclear arms race at an early date and to nuclear disarmament’ (No. 2014/18, 25 April 2014).
However, the potential of this regional approach remains unexplored, as little progress has been made in implementing the 1995 resolution to establish such a zone.

Additional impetus was given to multilateral disarmament in reaction to the 9/11 terrorist attacks, as US and Russian leaders Putin and Bush began to see eye to eye on terrorism and ties between East and West improved. After START I expired in December 2009, this common ground allowed the adoption of the most recent bilateral US-Russian agreement for the reduction of NW in 2010: the new START treaty. It requires its signatories to reduce the number of strategic nuclear missile launchers by half. Moreover, it streamlines the verification measures from START I, with fewer but more comprehensive inspections and includes verification of actual warhead numbers rather than simply counting delivery vehicles.

Finally, the Obama doctrine re-engaged policy-makers in a discussion about disarmament.

Although proposals for general nuclear disarmament had been made over the course of half a century, debates surrounding the role of the US nuclear arsenal for national security and the nature of the post-Cold War nuclear threat, revived interest in such ideas. However, such declarations and proposals for nuclear disarmament are contradicted by practical measures adopted by the US. Indeed, although President Obama speaks of a world free of NW and disarmament, the measures he suggested fall into the category of arms control. For example, the acceptance of the new START was only possible in combination with the $85 billion modernisation of the US NW programme. This shows that arms control and non-proliferation policies do not automatically lead to disarmament.

4.2. Post-Cold War Challenges for Disarmament

On the other hand, new obstacles in the way of effective disarmament constantly arise in a quickly changing international environment. For example, the dual-use dilemma each WMD technology is confronted with creates a conflict between the development of peaceful technologies and the prevention of their diversion into WMD. The clear distinction between

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300 See Barack Obama, ‘Remarks by President Barack Obama’ (Speech, Hradcany Square, Prague, 5 April 2009).

301 Heinz Gärtner, ‘Deterrence, Disarmament and Arms Control’, Vol 51 (International Politics, 2014) 753: follow-up treaty to START, ratification of the CTBT and the conclusion of the FMCT.

302 Ibid.
scientific or military motivations behind activities involving WMD materials is often difficult. This interdependence between industry and the military not only increases the risk of noncompliance with disarmament obligations but also that of weapons materials falling into the hands of non-state actors such as terrorist groups. Such activities fall outside the scope of disarmament treaties, as they address state rather than non-state behaviour. This emphasises the need to destroy such weapons completely, rather than to rely on simple reductions.

While some disarmament agreements have reached quasi-universal adherence, others still struggle to attract signatories. For example, the political systems of some countries, especially those of the Middle East, are based upon religious texts such as the Sharia. The primacy given to these texts over international legal instruments often contributes to this lack of universality of disarmament treaties. Moreover, after decades of arduous negotiations on multilateral disarmament instruments, unilateralist tendencies have developed after the events of 11 September 2011. For example, the US withdrawal from the 1972 ABM Treaty in 2002 and its reluctance to ratify the 1996 CTBT can be interpreted as a new preference for fast, short-term solutions which are difficult to reach in a multilateral context. This aspect risks to undermine the authority of multilateral disarmament regimes.

Today, the remnants of the Cold War can be felt in Ukraine, as Russia’s annexation of Crimea has reigned tensions between Russia and the Western nuclear powers. The crisis has led to the suspension of US-Russian cooperation in mutual inspections of nuclear facilities and Russia’s announcement of its absence at the Nuclear Security Summit in 2016 indicate an interruption of stockpile reductions. One additional aspect linked to the Ukraine crisis, Russia’s breach of the Budapest memorandum, is of particular concern for nuclear disarmament. In fact, in this agreement the three nuclear signatory powers, the US, Russia and the UK, agreed to respect Ukraine’s sovereignty and territorial integrity in return for Ukraine giving up the NW it inherited from the Soviet Union and joining the NPT as a NNWS. The Memorandum had been one of the rare examples of successful voluntary nuclear disarmament.


304 Budapest Memorandum on Security Assurances, signed by Russia, the US and the UK on 5 December 1994 in Budapest.
It can be argued, however, that if Ukraine had not given up its NW, Russia would not have dared to invade Crimea. Such an interpretation of the Memorandum as a mistake, poses a threat to the authority of the NPT regime as it is likely to serve as a justification for NWS not to give up their NW.\footnote{Rob van Riet, (fn 305).} For example, North Korean is continually strengthening its nuclear programme, in particular over fears of an invasion of its territory by the West. Despite the absence of reductions taking place in the near future, the alliance between NWS against North Korea will likely be reinforced, given that its relationship with long-time ally China has begun to deteriorate.\footnote{Jane Perlez, ‘Chinese Annoyance with North Korea Bubbles to the Surface’, (New York Times, 20 December 2014).}

Conclusion

This chapter has provided an overview of the principal developments in the history of disarmament. It has addressed the historical events which have shaped the concept and made its achievement one of the most critical elements of international peace. Modern disarmament was shaped by the promotion of peace and globalisation, thus loosening the rigid Westphalian model of state sovereignty. Indeed, as negotiations in the field of disarmament advanced, the acceptance of disarmament as a means of ensuring peace and security and the willingness of states to be subjected to such instruments grew.

The events and developments discussed in this chapter illustrate the strong impact which geopolitical circumstances, the level of international security at a given time, as well as national interests of state actors have in the negotiation and conclusion of disarmament agreements. Furthermore, the militarily strategic value of categories of weapons are believed to strongly influence cooperation of states in disarmament efforts. Furthermore, it emphasised an important lesson drawn from the interwar disarmament experience: the understanding that imposed disarmament is rarely successful, in particular in the absence of effective verification and enforcement mechanisms and a climate of political suspicion.

A further conclusion to be drawn from this historical outline is the understanding that a general disarmament agreement is difficult or even impossible to achieve. The political and technical complexities of each weapons regime, as well as a degree of suspicion commonly
displayed by states in areas related to their armed forces, multiply the potential sources of disagreement. Consequently, disarmament continues to be pursued in more limited framework on the basis of partial disarmament measures.

Today there is a common understanding that only binding, irreversible and verifiable disarmament obligations can lead to successful disarmament.\textsuperscript{307} The establishment of instruments fulfilling these criteria has proven to be a long and complicated process. First, the key aspects of verification and enforcement represented a recurring theme in this analysis, which highlights not only their indispensable character for disarmament, but also their contentious nature. Today, verification and enforcement mechanisms are not equally present in all disarmament regimes, as agreement on these elements is more difficult to achieve in some regimes than in others. Secondly, the institutional support provided by the League of Nations and, subsequently, the United Nations has evolved. While disarmament was a central objective of the League, it was reduced to one means available to the UN in promoting peace amongst others. Today, the institutional capacity to coordinate, verify and enforce disarmament varies between regimes. Some disarmament treaties establish international organisations to fulfil such tasks, while others are devoid of institutions and are consequently reliant on regular meetings of states parties and support from the UN.

Furthermore, this chapter has demonstrated the limitations of contemporary disarmament efforts. The formalisation of common disarmament interests in treaties aims at making the behaviour of states more predictable by increasing the political costs of breaches, rather than preventing them. However, the CWC represents hope for future disarmament efforts, as its genesis shows that political challenges can be overcome.

Finally, this historical overview has shown that some efforts to create effective international disarmament regimes have failed dramatically while others have attracted a wide membership, have been equipped with verification and enforcement mechanisms and developed a great potential to achieve full disarmament in the future.

\textsuperscript{307} UN Secretary-General Annual Report, Report of the Secretary-General on the work of the Organisation (A/56/1).
Chapter 3 - The Effectiveness of Chemical Disarmament

Introduction

Longstanding efforts to rid the world of its most devastating weapons have, to a large part, centred on chemical weapons (CW). This can be explained by their “particularly abhorrent” character, which was highlighted by the impact of their deployment in the Great War,\(^308\) as well as their lack of deterrence value.\(^309\) This experience led to reinforced efforts to establish a global ban on CW, which culminated in the adoption of the most comprehensive disarmament regime to date, the 1993 Chemical Weapons Convention (CWC). What sets this treaty apart from other disarmament regimes is the fact that it bans an entire category of weapons at a high level of participation and under intrusive verification.\(^310\)

Despite its success in acquiring a high level of participation and in advancing the destruction process,\(^311\) flaws in the structure of the CWC regime have risked weakening its capacity to respond to emerging challenges, as changes in the geopolitical and scientific environment influence not only weapons capabilities, but also motivations of States and non-State actors to acquire them.\(^312\) Moreover, the shift after 9/11 in US policy from effective multilateralism to ‘selective multilateralism’\(^313\) in the security field has invited scepticism about the viability of international institutions and instruments. Against this background, this chapter intends to examine the effectiveness of the chemical disarmament regime, focusing particularly upon


\(^{310}\) Note by the Technical Secretariat of the OPCW, ‘Status of Participation in the Chemical Weapons Convention as at 14 October 2013, (S/1131/2013): 190 States Parties, 2 signatory States which have not yet ratified the CWC, 4 States that have neither signed nor ratified the CWC.

\(^{311}\) Note by the Director-General, ‘Report on the Overall Progress with Respect to the Destruction of the Remaining Chemical Weapons Stockpiles’, 28 November 2014, (C-19/DG.15).


\(^{313}\) Amy Smithson, ‘The Chemical Weapons Convention’ in Stewart Patrick, Shepard Forman, Multilateralism and U.S. Foreign Policy: Ambivalent Engagement, (Lynne Rienner Publishers, 2002) 247: selective multilateralism implies that multilateralist instruments are only supported in security areas where national interests are at stake.
the aspects of participation, verification, enforcement and the institutional capacity of the chemical disarmament regime.

A brief reference to the origins of chemical disarmament will serve as a starting-point for the assessment of the CWC disarmament regime, given that evaluating the success of a cooperative arrangement implies the comparison of the regime against ‘some standard of success or accomplishment’. For this purpose, the international reaction to the use of CW in the Iran-Iraq conflict (1980-1988) will serve as an example for what can and cannot be achieved in the absence of a disarmament regime.

The criteria of effective disarmament regimes, as defined in Chapter 1, will be examined in the context of the CWC regime with a view to evaluating their causal effects on its success. First, this chapter will determine the importance of the level of participation in the CW regime and cooperation between its members on its capacity to bring forward the elimination of all CW. Secondly, the institutional capacity of its central organ, the OPCW, to organise, finance and coordinate the removal and destruction of CW stockpiles will be evaluated. Thirdly, this chapter will assess both the completeness of the textual foundation of the CWC’s verification regime as well as the OPCW’s practical capacity to implement verification measures. Finally, measures to enforce compliance under the convention will be discussed and contrasted with the UN Secretary-General mechanism for the investigation of the alleged use of CW. Based on these elements, the chapter will conclude with an assessment of the effectiveness of the chemical disarmament regime.

This chapter not only intends to evaluate the effectiveness of chemical disarmament in routine situations, but also under extraordinary circumstances, such as humanitarian crises and other pressure situations. The contemporary relevance of this question is highlighted by the recent Syrian case, which reminded the international community that although firmly established, the CWC, including its mechanisms for ensuring compliance, verification and enforcement, is not applicable in all situations. This scenario raises questions regarding the complementarity of the CWC regime and ad hoc disarmament operations.

314 Arild Underdal, (fn 96) 228–229.
1. The Chemical Disarmament Regime

1.1. The Chemical Weapons Taboo

In this section, a discussion of the taboo on chemical weapons will serve as a foundation for the examination of the ban on chemical weapons which evolved from it. Early evidence of the employment of chemical substances as military weapons dates back to the classical, medieval and early Modern periods.\(^\text{315}\) The first forms of bans on chemical weapons appeared in the period between 200 BCE to 300 CE and prohibited poison and fire arrows and the poisoning of food and water supplies.\(^\text{316}\)

Given the extensive use of poison bullets by France and the Holy Roman Empire, the two sides concluded the Strasbourg Agreement in 1675. Its Article 57 provided that any person who was found in possession of such weapons would be punished.\(^\text{317}\) The ban, rather than providing for measures of enforcement, relied on an assumption of moral integrity - that the parties to the agreement would assume the task of stopping any violation by their own members.\(^\text{318}\)

The taboo on chemical weapons evolved in parallel to the further development of chemical weapons. Modern forms of chemical warfare were only developed following the Industrial Revolution in the 19th century, as industrialised nations sought more efficient and more


\(^{316}\) Georg Buehler, *The Laws of Manu, Title VII*, (Forgotten Books, 2008), para 90: ‘When the king fights his foes in battle, let him not strike with weapons concealed (in wood), nor with (such as are) barbed, poisoned, or the points of which are blazing with fire. (…) These are weapons of the wicked.’; Coleman Phillipson, *The International Law and Custom of Ancient Greece and Rome*, Vol II (Macmillan and Co., 1911) 221: ‘It was considered wrong and impious to cut off or poison the enemy’s water supply, or to make use of poisoned weapons. Treacherous stratagems of every description were condemned as being contrary to civilised warfare.’; Casimir Siemienowicz, *The Great Art of Artillery – The First Part*, (first published in Amsterdam, 1650, J Tonson, 1729) 289.


economical ways of killing enemy troops. These circumstances were a source of concern for the international community which desired to counter this development at the time.

As a consequence, serious attempts to establish a norm prohibiting the use of CW were undertaken for the first time at the 1899 Hague Peace Conference in Geneva. They resulted in the adoption of a ban on ‘projectiles whose purpose is to spread asphyxiating gases’ which was later repeated at The Hague Peace Conference in 1907. The Hague Convention of 1899 was the first international agreement to define the prohibited CW by referring to its intended purpose, an approach which was later adopted by the CWC.

The norm established in Geneva proved futile as the belligerents resorted to chemical warfare during the Great War. During the first and most deadly attack near the Belgian city of Ieper in April 1915, between 150 and 160 tons of chlorine gas were released onto French trenches, killing about 1,000 French and Algerian soldiers. The Germans introduced the odourless and persistent blistering agent, mustard which was first used against British troops, again at Ieper, causing 20,000 casualties. Chlorine and mustard are today referred to as ‘first generation CW’. Besides resulting in mass casualties, the use of these CW during WWI triggered hysteria and so-called ‘gas fright’ among troops, an effect which was exploited for the primary goal of demoralising forces.

After the end of WWI, a sentiment of outrage in the international community intensified efforts to reach a ban on the use of CW. The international society of the 1920s felt that, in order to preserve international security, there was a strong need for a legal instrument abolishing the use of toxic chemicals in war. For example, the ICRC strongly and openly condemned the use of CW. As a first result of this global commitment, a prohibition of the

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319 Shiv Prasad, *Chemical Weapons* (Discovery Publishing House, 2009) 207: The idea of killing several hundred or even thousands of soldiers with one single strike, using substances which were easy to manufacture, appeared very attractive to military strategists.

320 1899 Hague Convention, Article IV, 2.

321 See Article VI, CWC.

322 Due to the significant scientific and technological efforts made during this war in the field of CW development, it is often referred to as ‘the Chemist’s War’.

323 Joy Robert J T, ‘Historical Aspects of Medical Defense Against Chemical Warfare’, in Frederick R Sidell, Ernest T Takafuji and David R Franz (eds), *Medical Aspects of Chemical and Biological Warfare*, (Borden Institute, Walter Reed Army Medical Center, 2008) 91.

324 SIPRI, ‘CB Disarmament Negotiations, 1920-1970’ in *The Problem of Chemical and Biological Warfare*, Vol IV, (SIPRI, 1974) 41: ‘We wish today to take a stand against a barbaric innovation... This innovation is the use of asphyxiating and poisonous gas, which will it seems increase to an extent so far undreamed of... We protest with all the force at our command against such warfare which can only be called criminal.’
use of gas in war was included in the Treaty of Versailles. Furthermore, the 1922 Washington Treaty signed between the US, the British Empire, France, Italy and Japan, banning the use of submarines and noxious gases in warfare, reaffirmed the prohibition of The Hague Conventions and employed a similar terminology to define the prohibited agents.

In 1925, the League of Nations convened the international Convention for the Supervision of the International Trade in Arms and Ammunition and in Implements of War in Geneva, to initiate discussions on the supervision of the trade in arms of war. Yet, the main objective of the conference was not achieved, which, in particular, had implications on efforts to impose restrictions on CW. The proposed prohibition of CW export was not only considered as an ineffective means for preventing the use of CW, but also to be discriminatory against non-CW states who, as a consequence, could not acquire them. Alternatively, the US suggested an agreement based on the prohibitions laid out in the 1922 Washington Treaty.

Finally, the ‘Protocol on the Prohibition of the Use of Asphyxiating, Poisonous or other Gases and Bacteriological Methods of Warfare’ (the Geneva Protocol) was adopted as a side product of the conference. With the coming into force of the Protocol, the use of CW was, henceforth, ‘justly condemned by the general opinion of the civilised world’. The Geneva Protocol is the oldest element of the current CW disarmament regime and, therefore, constitutes a starting point in the evolution of modern chemical weapons disarmament.

While the Protocol effectively stigmatised CW, there is reason to question the effective participation in the ban. Indeed, its incompleteness shows that the negotiators were not fully committed to prohibiting this class of weapons in all its aspects. For example, they failed to include the prohibition of the use of CW against non-member States Parties, of retaliation in kind against a chemical attack as well as of the use of CW in internal armed conflicts. Moreover, the Protocol lacked provisions for the monitoring, verification and enforcement of non-compliance. The failure to regulate these questions created loopholes, which limited its legal authority and allowed states to build vast chemical arsenals for deterrence purposes.

325 Article 171, Treaty of Versailles: ‘the use of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices being prohibited, their manufacture and importation are strictly forbidden in Germany.’
326 SIPRI, (fn 355) 41: ‘the use in war of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices’
327 Ibid, 43.
Moreover, participation in the ban by states only grew tentatively. Some major powers, including the US, who had initially led the negotiations, at first failed to ratify the Protocol, while others further weakened it by making significant reservations to it.

Although gas was used by Nazi Germany in its concentration camps, it never entered the European battlefields of WWII. The first logical assumption would be to regard this non-use as an accomplishment of the legal ban of the Geneva Protocol. While the ban did play a role, it was not because it was considered inviolable that the belligerents complied with it by refraining from using CW. Rather, it was a cost-benefit calculation involving several factors which excluded the use of CW as a good strategy. Although the non-use of CW during WWII cannot be entirely attributed to the Geneva Protocol, this example shows that a weapons ban can be effective even in the most destructive armed conflict, when it is in the interest of all parties to comply with it.

In the 1960s and 1970s, participation in the Geneva Protocol grew. A wave of ratifications occurred following political pressure by the UN (the US finally ratified it in 1975), which enhanced its legal authority. Yet, several breaches of the Geneva Protocol occurred in Korea, Yemen, South-East Asia and Afghanistan. Although, this created a need for a new, more comprehensive chemical disarmament agreement, the negotiation of a CW treaty was not a priority of the international community during the Cold War. When the World Disarmament Conference was convened by the UN in 1965, CW received little attention. This was due to the fact that CW had not been employed during WWII and to the pursuit of a general disarmament approach, which focused primarily on NW.

328 Due to strong lobbying against the Protocol, the Senate never voted on it. It was finally withdrawn from the Senate by President Truman after WWII President Truman.

329 There is one exception to the non-use of CW during WWII: Following the invasion of the Chinese province of Manchuria, the Imperial Japanese army established Unit 731, a covert biological and chemical warfare research programme (1937 – 1945). Unit 731 used Chinese and Soviet prisoners as subjects for the testing of CBW, which were used in 1938 and 1939 against communist Chinese troops (League of Nations resolution 13 May 1939: condemnation of CW use by Japan).

330 Richard Price, ‘A Genealogy of the Chemical Weapons Taboo’ Vol 49 (1) (International Organization, 1995) 74 - 77: 1. Given that retaliatory use of CW was not prohibited under the Geneva Protocol, a breach of the Protocol would have to outweigh the risk of retaliation in kind. 2. Contrary to the slow trench war of WWI, strongly environment-dependent CW were unsuitable for the fast-moving and mechanised Blitzkrieg of WWII. 3. Many soldiers has already fought in WWI and were traumatised by the effects of CW, which led them to abstain from using them.

331 Walter Krutzsch, Eric Myjer, Ralf Trapp (eds), (fn 311) 5.
1.2. Case Study: The Use of Chemical Weapons in the Iran-Iraq War

The Iraq-Iran war (1980 – 1988) provided the stage for the second large-scale use of CW in modern history, following WWI. Considering that the CWC was not to come into force until 1997, the development, production and stockpiling of CW had not been prohibited under the 1925 Geneva Protocol. This allowed Iraq to launch an intensive clandestine research programme, which was operated mostly under the cover of scientific research.\(^\text{332}\)

The use of CW in the Iran-Iraq conflict, waged by Saddam Hussein, was primarily defensive in nature and gradually increased not only in terms of frequency but also in terms of toxicity. Beginning with the use of tear gas in 1982,\(^\text{333}\) the battlefield provided an ideal testing ground, which allowed the Iraqi regime to quickly develop more toxic and lethal agents such as mustard, tabun, sarin and VX. Subsequently, CW were used every year until the end of the war in 1988, with almost two-thirds of Iraq’s CW stockpile being used in the last 18 months of the war.\(^\text{334}\)

Simultaneous to the conflict with Iran, a civil war broke out between the Iraqi regime and the Kurdish population of northern Iraq, which had risen up against Saddam in its fight for a Kurdistan, independent from the Arab regime in Baghdad. On 15 March 1988, during the so-called War of the Cities (February – April 1988), Iranian forces ‘liberated’ and occupied the Kurdish city of Halabja. In response, a chemical attack was launched on the city the following day, during which between 4,000 and 5,000 civilians died and 10,000 more were injured.\(^\text{335}\) This chemical attack was the single most destructive since WWI and ‘the largest-scale chemical weapon attack against a civilian population in modern times.’\(^\text{336}\)

When the Iran-Iraq war broke out in September 1980, the only legal instrument banning the use of CW in armed conflict was the 1925 Geneva Protocol, which had been signed by both Iran and Iraq in 1929 and 1931, respectively. Although it had been in force for over fifty years, its provisions were breached by both sides of the conflict. This leads to the assumption that

\(^{332}\) Under the Chemical Corps (1964), the Al-Hasan Research Foundation, Project (922).


\(^{335}\) Daniel Joyner, (fn 37) 264.

\(^{336}\) C M Gosden, ‘Chemical and Biological Weapons Threats to America: Are We Prepared?’, Testimony before the Senate Select Committee on Intelligence, 22 April 1998.
Weaknesses in the norm itself caused it to fail as a deterrent against the use of CW and can thus be dismissed as being ineffective.

However, it has been argued that the use of CW alone does not necessarily justify drawing conclusions regarding the failure of the norms in the 1925 Geneva Protocol banning chemical warfare. On the contrary, Iraq did feel constrained by the norms established in the 1925 Geneva Protocol. It was ‘only after the failure of the international community to demonstrate its commitment to the norm (…) that Iraq felt free to flout the chemical weapons taboo.’ In other words, it was the absence of measures taken to enforce the norms of the 1925 Geneva Protocol which undermined its authority rather than the other way around. In sum, this conflict illustrated the crucial character of enforcement measures in order to ensure compliance with a weapons ban. This conflict constituted a turning point in the evolution of the CW regime. While the international community’s reaction to the Iraqi use of CW was reluctant and slow, the reminder of the abhorrent character of these weapons and the fear of their use in the Gulf War eventually led to renewed efforts to negotiate a more comprehensive CW regime.

The first important addition to the institutional capacity of the UN in responding to the use of CW was made only three months into the war. Without referring to the ongoing conflict between Iran and Iraq, the UN General Assembly adopted resolution 35/144C, noting that the 1925 Geneva Protocol lacked a mechanism for the investigation of allegations of the use of CBW, thus leaving the Secretary-General unable to follow up on allegations. As a remedy for this shortcoming, the Assembly requested Secretary-General Perez de Cuellar to carry out impartial investigations of the use of CW. This resolution laid the groundwork for the adoption of the Secretary-General’s Mechanism (SGM) in 1987, which constituted the first verification mechanism of the CW regime. In its resolution 42/37C (1987), the UN General Assembly sought measures to uphold the authority of the 1925 Geneva Protocol and requested the Secretary-General

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337 Richard Price, ‘A Weapon of the Weak’ in Richard Price, The Chemical Weapons Taboo, (Cornell University Press, 1997) 141: ‘A particular use of chemical weapons does not necessarily signal the simple death of the chemical weapons taboo, any more than the occurrence of a homicide indicates that there is no a generally robust societal norm proscribing murder.’

338 Ibid, 137.

339 Daniel Joyner, (fn 37) 100.

340 UNGA resolution 42/37C (1987) was reaffirmed by the UNSC in its resolution 620 (1988)
to carry out investigations in response to reports that may be brought to his attention by any Member State concerning the possible use of chemical (...) weapons that may constitute a violation of the Geneva Protocol or other relevant rules of customary international law in order to ascertain the facts of the matter and to report promptly the results of any such investigations to all Member States.’

The SGM seeks to objectively and scientifically establish facts in the case of suspected violations of the 1925 GP and to produce a report on the findings which is circulated amongst all member states. While the SGM became the first instrument for the verification of chemical activities, its full potential remained unexploited.

Since the early stages of the conflict, Iranian officials had led an intensive campaign to raise awareness of Iraqi violations of the Geneva Protocol, through formal as well as informal requests to the Secretary-General, to investigate the possible use of CW by Iraq against Iran.341 However, it soon became clear that these requests were unable to provoke an immediate reaction from the UN,342 as the Secretary-General was ‘under strong political pressure not to act’ and to use the mechanism.343 The Soviet Union viewed ‘the instrument as impinging on the prerogatives of the UNSC to decide when, where and if any investigations were to be conducted’.344 Moreover, given that it was in the interest of the US that Iraq would win the war, the outcome of such investigations would limit its possibility to turn a blind eye to Iraqi transgressions.

For these reasons, the activation of the SGM required continuous pleas by Iran to the Secretary-General. Although Perez de Cuellar eventually took ‘courageous action’345 in launching a first investigation in March 1984, he did so not under resolution 37/98D, but on the basis of a moral responsibility vested in him as Secretary-General by the UN Charter.346 On 13 March 1984, a UN team of experts arrived in Teheran, five months after Iran’s first

341 Letter from the Permanent Representative of the Islamic Republic of Iran to the UN addressed to the Secretary-General, UN Doc S/16128, 7 November 1983; Letter from the Permanent Representative of the Islamic Republic of Iran to the UN addressed to the Secretary-General, UN Doc S/16220, 15 December 1983
344 Jez Littlewood, ‘Investigating Allegations of CBW Use: Reviving the UN Secretary-General’s Mechanism’ (Compliance Chronicles, 2006) 15.
345 Ibid.
346 UNSC, Report of the Specialists appointed by the Secretary-General to investigate allegations by the Islamic Republic of Iran concerning the use of Chemical Weapons, (S/16433, 26 March 1984) 2.
urgent request to investigate the use of CW. The authors of the team’s report made strong efforts not to attribute responsibility for the use of CW to either side, by only declaring that CW had been used.\textsuperscript{347} Similarly, in a presidential statement of the UN Security Council, members ‘strongly condemned the use of chemical weapons’\textsuperscript{348} without naming the perpetrator.

This led Iran to accuse the Security Council, including its most powerful members, of demonstrating bias towards Iraq, thus limiting its capacity to respond to the allegations of chemical warfare.\textsuperscript{349} Despite its inherently impartial character, it manifested a pattern of consistent bias towards Iraq in adopting a ‘pose of studied neglect’.\textsuperscript{350} Indeed, instead of outwardly addressing Iraq’s evident violations, every UNSC resolution addressed ‘both parties’ which implied shared responsibility. Concern was expressed that this ‘active condoning of what clearly constitute serious violations (…), for the sake of protection of immediate geostrategic interest, (…) helps create a culture of impunity.’\textsuperscript{351} International neglect of the CW issue during the Iran-Iraq war risked leading to the erosion of customary norms which prohibited the use of CW in warfare and consequently to the loss of credibility of international institutions such as the UN:\textsuperscript{352}

‘If the very institution responsible for protecting and promoting international norms allows these to be violated, deliberately and repeatedly, in front of the world’s eyes, then the inevitable consequence is that these norms depreciate in value and in the end may become as worthless as the paper on which they are written’\textsuperscript{353}

The UN continued to avoid the issue of attribution of responsibility until 1986, when a UN report clearly stated for the first time that ‘on many occasions, Iraqi forces have used chemical

\textsuperscript{347} Ibid, para 8
\textsuperscript{348} Note by the President of the Security Council, UN documents S/16454 (30 March 1984) and 2 S/PV.2524 (30 March 1984).
\textsuperscript{349} Zorina Pysariwsky, ‘Gas used against Iran, says UN team’, The Times (London), 27 March 1984, 1; Bryan R Gibson, ‘Covert Relationship: American Foreign Policy, Intelligence, and the Iran-Iraq War, 1980-1988’ (ABC-CLIO, 2010) 150.
\textsuperscript{351} Ibid, 162.
\textsuperscript{352} Ibid, 160.
\textsuperscript{353} Ibid.
weapons against Iranian forces’. This condemnation was consolidated in a UN Security Council statement of 21 March 1986, in which its members collectively name Iraq as the perpetrator of chemical warfare.

By issuing an implicit warning that it would use CW in retaliation, Iran succeeded in exercising pressure on the Secretary-General and achieved the launching of several UN investigations, indicating the use of CW as well as an explicit attribution of responsibility to Iraq by the Security Council. Following this success, Iran further requested enforcement measures in the form of effective steps taken by the UN to end the use of CW by Iraq. On 25 March 1988, shortly after the Halabja massacre, the Secretary-General decided to send a UN team to Iraq and Iran to investigate the alleged events. Despite clear imputation of the attack to Iraq, the West failed to condemn Iraq for this attack and even continued the sale of military equipment to Iraq. It became clear that, given that a diplomatic or military intervention of any of the Western states was very unlikely, only an end to the war would be able to put an end to Iraq’s use of CW.

Finally, the UN-sponsored ceasefire represented a solution which allowed the Security Council to avoid adopting a strong position. It can be argued that the absence of verification and enforcement mechanisms at the time provided the international community with the opportunity to avoid getting involved without having to justify its absenteeism. This allowed Western countries, in particular, to preserve their commercial and political interests in the region.

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355 ‘Reports by the Specialists appointed by the Secretary-General to Address Allegations by the Islamic Republic of Iran Concerning the Use of Chemical Weapons,’ UN Doc S/17932, 21 March 1986.
1.3. The Chemical Weapons Convention

Although the international community failed to react to chemical warfare in the Iran-Iraq conflict, its psychological impact helped to bring CW back to the negotiating table. The international community perceived an urgent need to repair ‘the damage that had been done to the 1925 GP’. Indeed, being well aware of the atrocities committed by the Iraqi regime and of the fact that the repeated calls by the Security Council to comply with the 1925 Geneva Protocol had not been sufficient to deter or stop the use of CW, it wished to prevent the repetition of such a dilemma.

In addition, it had been predicted in the early 1990s that CW proliferation would increase, especially in developing countries, which led the public to demand protection from such attacks. In response, the international community opted for the full elimination of all CW, rather than continuing to rely on deterrence by retaliation in kind. Finally, the 1991 Gulf crisis further heightened the sense of urgency to conclude a CW treaty quickly.

The inability of the international community to achieve an agreement was partially resolved by the warming up of relations between East and West at the end of the Cold War. A new, consensus-oriented political environment gave fresh impetus to negotiations of a comprehensive CW ban under the joint leadership of the superpowers.

Already in the early stages of the war, the UNGA had encouraged the speedy conclusion of a CWC, urging states ‘to refrain from any action that could impede negotiations on the prohibition of chemical weapons.’ From February 1984 onwards, the Conference on Disarmament (CD) in Geneva served as a forum for multilateral negotiations of disarmament and arms control agreements. An Ad Hoc Working Group was charged with the task of elaborating the CW ban based on exploratory discussions which had taken place at the CD.

The first draft proposal submitted by the US in 1984 included intrusive verification measures. Although it was outright dismissed by the Soviet Union, this draft served as the

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360 Joost Hilterman, (fn 362) 161.
basis of a rolling text, in which the Working Group incorporated the progress achieved during negotiations, thus progressively expanding the draft treaty.

Despite the high priority given to verification, it presented a problematic source of disagreement throughout the negotiations. The lack of verification arrangements in the first drafts of a CWC can be explained by the fact that a CW ban whose compliance could not be fully verified was dismissed by both sides. Eventually, an important change occurred in the thinking of the negotiators, which led to the adoption of a more relative stance on verification. In an address to the UNGA in 1989, President Bush Sr. announced that, instead of pursuing total verifiability, the US would now seek ‘a level of verification that would give us confidence to go forward with the ban’. 364 This implied that the standard of a verification regime acceptable to both the US and the Soviets was lowered to the question whether it would significantly enhance treaty compliance.

In January 1989, the Paris Conference was convened with the goal of discussing the proliferation of CW. The Paris Conference, which had been proposed by the US and French Presidents Reagan and Mitterrand, respectively, was a symbolic attempt to right the wrongs committed during the Iran-Iraq conflict, in particular, in Halabja. In a desire to counter the proliferation of CW, the Conference encouraged its States Parties to conclude at an early stage a ‘global and comprehensive and effectively verifiable’ ban on CW. 365 Finally, the Paris Declaration affirmed that the parties ‘are determined to prevent any recourse to CW by completely eliminating them. (...) They recall their serious concern at recent violations as established and condemned by the competent organs of the United Nations.’ 366

Although the final obstacle in the path of the Convention was removed when the Soviet Union accepted intrusive on-site inspections, finding consensus on the verification of non-production in the chemical industry continued to present a serious challenge for the negotiators. The conflicting interests of protecting industrial secrets while preventing the misuse of industrial chemical substances were considered an obstacle to the monitoring of

compliance with a CW treaty. Eventually, the chemical industry began to accept intrusive verification mechanisms, which it considered to be a necessary evil.\textsuperscript{367}

Finally, in August 1992, the Ad Hoc Committee deemed the document ready for transmission to the UNGA.\textsuperscript{368} On 12 January 1993, the Convention was opened for signature and signed by 130 countries. The entry into force of the Convention in 1997 represented a breakthrough in the international community’s long-standing efforts to comprehensively ban CW. It ‘was the final crown in the trinity of global treaties regulating the three classes of WMD.’\textsuperscript{369}

The CWC comprehensively bans all toxic chemicals except for peaceful purposes, a characteristic which prevents it from being overtaken by technological change. In addition, with the CWC, not only the use, but also the development, production, stockpiling and possession became unlawful. With the establishment of the Organisation for the Prohibition of Chemical Weapons (OPCW), the CW regime was finally institutionalised. The text of the CWC explicitly notes that it constitutes an element in the wider objective of general and complete disarmament under strict international control, as pursued since the 1960s.\textsuperscript{370} Moreover, it can still be argued today that the prohibition of CW under the CWC is part of a common framework shared with the prohibition of biological weapons under the BTWC and BWC, as trends in science, technology and industry suggest.\textsuperscript{371}

The CWC took a different path from the NPT. While the NPT established different rights and obligations for NWS than for NNWS, the CWC took a comprehensive approach, which made an important constitutional element out of the equal rights and obligations of its States Parties.\textsuperscript{372} The distribution of rights was an important element of CWC negotiations\textsuperscript{373} and is

\begin{footnotesize}
\begin{enumerate}
\item Preamble, CWC, para 1: CWC States Parties are ‘[d]etermined to act with a view to achieving effective progress towards general and complete disarmament under strict and effective international control including the prohibition and elimination of all types of weapons of mass destruction’
\item Walter Krutzsch, ‘Articles of the Chemical Weapons Convention – Article I: General Obligations’ in (fn 311) 61.
\item See Article VIII, CWC on membership of the OPCW and decision-making
\end{enumerate}
\end{footnotesize}
today reflected in the structure of the OPCW’s Conference of States Parties. Disarmament
under the CWC is divided into two steps. First, States Parties are required to declare their CW
stockpiles and production facilities. In a second step, the OPCW oversees and verifies the
elimination of CW and facilities under the timeframes established by the CWC.

2. Case Study: The Use of Chemical Weapons in Syria

The use of CW in Syria caused not only the second crisis of confidence of the CW ban after
the Iraq-Iran war, but also the first of the CWC. The subsequent chemical disarmament
mission can, to a certain extent, be regarded as a test of its effectiveness. While the mission
was able to minimise the ‘leakage of confidence in the achieved global system of
disarmament’, several existing and emerging challenges were revealed in the process.

2.1. Background

Seeking a means of protection against Israel’s superior non-conventional weapons
capabilities, Syria first initiated its CW programme in preparation for the Yom Kippur War of
October 1973. Similarly to that of Iraq, it was established under a scientific cover and through
the exploitation of ‘the legitimately used infrastructure of international trade’. Although
several official statements, made during the 1980s and 1990s, clearly indicated the possession
of CW, Syria refused to answer questions regarding the state’s military capabilities.

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377 Paul Schulte, (fn 386).
openly refused to participate in the CWC regime, arguing that Syria would only disarm chemically if Israel signed the NPT and eliminated all of its WMD.\(^{378}\)

When the uprisings of the Syrian population against the authoritarian Assad regime began in March 2011 with nation-wide protests, the Syrian government responded with violence. Protesters formed armed rebel groups, which eventually caused the situation to escalate into a civil war. At the time, the Syrian government possessed a CW arsenal which included sarin, VX and sulphur mustard gas. Still, Syria was not a declared possessor state when it began using its CW. This shows that today, the taboo against CW is emphasised by ‘the absence of countries coming forward as “CW-States”’.\(^{379}\)

The Syrian CW threat was met with caution internationally, as there was a ‘heightened international anxiety about the possible use of CW in Syria’.\(^{380}\) In 2012, the detection of the movement of CW in Syria\(^ {381}\) prompted President Obama to draw a ‘red line’ regarding the possible use of CW.\(^ {382}\) Still, the question of how to enforce the ban, in which Syria did not participate, sparked international debate.\(^ {383}\)

After the first lethal chemical attacks took place in March 2013, the Syrian regime openly blamed the opposition and requested the UN to conduct an investigation of the Aleppo incident, thus activating the SGM. In a strategic move, it intended to obtain UN protection against any aggressions against Syria.\(^ {384}\) UN Secretary-General Ban Ki-Moon announced such an investigation in collaboration with the OPCW and the WHO.\(^ {385}\) This decision was further

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378 Dany Shoham, ‘Syria’s Chemical Weapons: is Disarmament Possible?’, (BESA Center Perspectives Papers, 2013).


380 William Hague, Secretary of State for Foreign and Commonwealth Affairs, 4 December 2012, Oral Answers, Hansard (Commons), vol 554, c721-22.


382 President Obama, ‘Remarks by the President to the White House Press Corps’, Office of the Press Secretary, 20 August 2012.


strengthened by French and British requests for an investigation based on evidence obtained by their respective national intelligence agencies.\textsuperscript{386}

After months of disagreement between the UN and Syria on the modalities of the investigation, a UN team was eventually deployed on 17 August 2013 in Syria, with the task of investigating whether CW had been used. Its mission was abruptly interrupted by the chemical attack on the opposition-held Damascus suburb, Ghouta, on 21 August 2013. This incident, during which between 300 and 1,300 people died, was the largest chemical attack during the Civil War.

A solution was urgently needed to end the use of CW by the Assad regime. The US and France threatened to carry out airstrikes against the Assad regime.\textsuperscript{387} Such a military intervention would not only have been inconvenient for both the parties concerned, but was also widely seen as a contravention to international law.\textsuperscript{388} Given that Syria was not party to the CWC at the time, its mechanisms to enforce compliance with its provisions were unavailable. This implied not only that Syria’s production and stockpiling of CW could not be verified under the CWC, but also that an OPCW investigation could not be launched in response to the use of CW.

This dilemma caused by threats of the use of force and the inapplicability of the CWC put the international community under pressure to explore a diplomatic path, while at the same time forcing Syria to cooperate in order to avoid such an intervention. Negotiations between the US and Russia were launched and eventually led to the adoption of the US-Russian framework agreement on 15 September 2013,\textsuperscript{389} which favoured the chemical disarmament of Syria as a way of ending the use of CW in the conflict and served as a starting point to the UN-OPCW joint mission. On the basis of this agreement, UNSC resolution 2118 later established the UN-OPCW joint mission.

\textsuperscript{386} United Nations Security Council Official Records, 86\textsuperscript{th} Session, 6940\textsuperscript{th} Meeting, UN Doc S/PV.6940 (25 March 2013) 5.

\textsuperscript{387} “Syria “Chemical Attack”: France says force may be needed’, BBC News, 22 August 2013

\textsuperscript{388} OUP Debate Map (fn 395).

2.2. The Chemical Disarmament Mission (UN-OPCW)

The UN-OPCW disarmament mission in Syria can be regarded as a milestone in the history of chemical disarmament, as it was unprecedented in many aspects. Never before had such a large number of members of the international community come together outside of the CWC regime, to collaborate in the verifiable elimination of a state’s entire class of WMD. The mission worked on a very tight, accelerated schedule compared to the deadlines generally set under the CWC. Moreover, the OPCW, never before having conducted inspections in a war zone, had to work without any guidelines in this respect. It is also important to note that the accession of a host state to a major disarmament treaty was an important step which had never been achieved before as part of a disarmament operation.

Furthermore, not only significant financial, but also practical contributions from States had facilitated this ambitious undertaking. Although states acceding to the CWC are obliged to finance he destruction of their own CW, Syria claimed to be unable to pay for neither the destruction nor the verification activities. For this reason, the mission was financed through donations collected through separate UN and OPCW Trust Funds, as well a third one set up for the destruction of chemical weapons in Syria. In accordance with the UN-OPCW Relationship Agreement of 2000, the UN was charged with ensuring the security of the team in Syria and providing logistical support, while the OPCW was charged with the destruction of Syrian CW, as well as its verification.

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390 Article IV, CWC, para 16: ‘Each State Party shall meet the costs of destruction of chemical weapons it is obliged to destroy. It shall also meet the costs of verification of storage and destruction of these chemical weapons unless the Executive Council decides otherwise.’

391 Status of Contributions to the OPCW-UN Joint Mission in Syria, as of 31 July 2014 http://opcw.unmissions.org/LinkClick.aspx?fileticket=vJnsjylZrN8%3d&tabid=205: The UN Trust Fund was used to finance logistical support for the movement of chemical agents and to enhance the capacity of the Syrian authorities to fulfil their obligations. The OPCW Trust Fund financed equipment required in verification activities and maritime transport of CW for destruction outside of Syrian territory. The Syria Trust Fund for the Destruction of Chemical Weapons covered the destruction of CW and CW materials.


393 UN-OPCW Relationship Agreement: ‘(…) Bearing in mind that, in accordance with the Charter, the UN is the principal organization dealing with matters relating to the maintenance of international peace and security, and acts as a centre for harmonizing the actions of nations in the attainment of the goals set out in the Charter.’ ‘Considering that the OPCW shares the purposes and principles of the Charter, and that its activities performed pursuant to the provisions of the Convention contribute to the realization of the purposes and principles of the Charter.’
Although international outrage led to the launching of the disarmament mission, its mandate was very narrow, as it was limited to stockpiles which had been declared by Syria. Several factors explain this narrow mandate. Firstly, given the urgency to stop the use of CW, verification was limited to activities related to Syria’s chemical disarmament. These included the assurance that CW had been used in Syria on the one hand and the regime’s compliance with its disarmament obligations on the other. This approach allowed the acceleration of the disarmament process and, in particular, the deployment of investigators on the ground, the collection of evidence and the removal and destruction processes of the CW.

It can be argued that opting for an accelerated disarmament process was an ill-advised decision, given that this was not conducive to thorough verification. It might have been more advantageous to await Syria’s accession to the CWC and apply its sophisticated verification mechanisms with its traditional time frames. In other words, the limitations of the UN-OPCW joint mission highlighted the advantages of the CWC procedure for the investigation of alleged CW use.

The hesitant stance adopted by Russia and China regarding the use of CW in Syria and the subsequent approval of only a limited disarmament agreement can also be explained by the overstepping by the West of the intervention mandate in Libya. While in its resolution 1973, the UNSC gave its green light for the Libya intervention on purely humanitarian grounds, namely the Responsibility to Protect, the protection of civilians soon moved out of the focus of the intervention which began to aim at regime change. Consequently, Russia and China made sure that the UN-OPCW’s mandate was sufficiently narrow to prevent a repetition of these developments in Syria. The impact of strong political relations such as that of Syria with Russia and China on the authority of the CW ban, illustrate the importance of enforcement by an international body.

On 23 June 2013, Russia issued a draft statement welcoming the removal of the final shipment of CW from Syrian territory as well as Syria’s supposedly constructive cooperation throughout

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394 Under Article III, CWC
the disarmament mission. This statement was blocked by the US and other members of the OPCW’s Executive Council for a number of reasons. In fact, the limited scope of the deal with Syria allowed the regime to obstruct the disarmament mission on several occasions,\(^{397}\) which created additional challenges.

First, in consequence of the limitation of the OPCW’s disarmament mandate to declared CW stockpiles only,\(^ {398}\) the OPCW was forced to verify the correctness and completeness of the Syrian declaration.\(^ {399}\) This outstanding clarification proved more difficult and complex than the verification of declared CW stockpiles and prevented the organisation to announce full disarmament, due to the risk that the regime might use hidden CW and blame the opposition for the use.\(^ {400}\)

Furthermore, the use of chlorine against a village in April 2014 forced the OPCW to launch an independent investigation of the alleged use of chlorine.\(^ {401}\) Finally, continuing efforts to prevent the reconstruction of a CW programme after the destruction of all CW and destruction sites is required to ensure Syria’s capacity to fulfil all its obligations under the CWC and UNSC resolution 2118 (2013). This will, require long-term monitoring and verification activities.

Uncertainties surrounding the outcome of the civil war make it difficult to implement such measures in advance. It can be predicted that if Assad remains in power, he will cooperate over the short-term while retaining the technical know-how, scientific personnel and dual-use equipment which would enable him to reconstitute his CW capability over the long-term. If his regime falls, the OPCW will have to monitor and verify CW activities in a country without a stable or effective government; a situation for which the CWC provides no guidelines.


\(^{401}\) OPCW Office of the Director General, ‘Summary Report of the Work of the Fact-Finding Mission in Syria Covering the Period from 3 to 31 May’ 16 June 2014: The use of chlorine, as such not a substance prohibited under the CWC, is contrary to the Convention if used to cause temporary or permanent harm.
3. The Effectiveness of the Chemical Disarmament Regime

Iraq’s violation of the Geneva Protocol and its defiance of UNSCOM in the 1990s illustrated a ‘continual need to maintain, institutionalise and enforce non-proliferation and disarmament regimes, if these legal instruments are to retain their effectiveness’. These strongly inter-linked efforts are indispensable for the collective effort of pursuing chemical disarmament. In fact, they represent “a three-legged stool, where one or two legs are not enough on which to stand; each leg is dependent on the others”.

Since the entry into force of the CWC, the architecture of the CW disarmament regime can be considered complete, in the sense that it covers all three of these aspects of chemical disarmament. The following analysis aims to assess to what extent those key elements are present in the CWC regime today and whether their interaction is strong enough to ensure the overall effectiveness of the chemical disarmament regime.

3.1. Participation and Cooperation

The CWC regime is a product of global cooperation. The foundations of such cooperation among States Parties are laid down in Article IX of the CWC. In the 16 years since its creation, the OPCW has been able to induce a significant level of participation, which is illustrated by the fact that its number of States Parties has doubled in this period. As of 14 October 2013, the CWC’s status of participation has risen to 190 States Parties, which represent about 98% of the global population and landmass, as well as 98% of the worldwide chemical industry. Today, only six states still remain outside the CWC regime.

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403 Ibid.
404 Article IX, para 1 CWC: ‘States Parties shall consult and cooperate, directly among themselves, or through the Organization or other appropriate international procedures, including procedures within the framework of the United Nations and in accordance with its Charter, on any matter which may be raised relating to the object and purpose, or the implementation of the provisions, of this Convention.’
406 Note by the Technical Secretariat of the OPCW, Status of Participation in the Chemical Weapons Convention as at 14 October 2013 (S/1131/2013), http://www.opcw.org/about-opcw/member-states/
While participation is generally measured by the number of regime members, a state’s refusal to ratify the CWC alone does not imply its refusal to cooperate in the pursuit of the goals of the treaty. In other words, state practice in the area of CW manifests a strong will on the part of the international community, including non-signatory states, to uphold the ban on CW. For example, the two most critical cases of non-ratification, namely Israel and North Korea, claim to adhere to the principles of the CWC. Both ‘have asserted that they will never use CW or are strongly committed to their elimination’.\footnote{Rule 74. Chemical Weapons’ in Jean-Marie Henckaerts, Louise Doswald-Beck (eds), Customary International Humanitarian Law, Volume I: Rules, (Cambridge University Press & ICRC, 2005) 259.} On the other hand, the two largest possessor states, namely the US and Russia are behind schedule in eliminating their CW stockpiles.

In its annual compliance report of January 2013, the US State Department assessed that the Russian CWC declaration is incomplete and underlined that being unable to meet any deadlines established by the OPCW, Russia’s destruction activities would continue until 2015. The US itself, while having achieved the destruction of some 89.75 percent of the declared CW inventory by the 29 April 2012 deadline,\footnote{Ahmet Üzümcü, OPCW Director-General, Address at the 15th Chemical Weapons Demilitarization Conference, Glasgow, United Kingdom (May 22, 2012): noting a September 2023 projected completion date.} is expected to miss the final deadline for full destruction by an estimated 11 years.\footnote{Ibid.}

Although multiple factors account for these delays,\footnote{David Koplow, ‘Train Wreck: The US Violation of the Chemical Weapons Convention’, (JNSLP, 2012) 340, 342: old and hazardous chemicals, 9/11 imposed unforeseen disruptions on CW demilitarisation, US bureaucratic apparatus that provided inconsistent oversight, poor coordination and unclear goals, unrealistic budget and risk profiles.} it can be argued that despite the near-universal status of the CWC, the lack of prioritisation on the part of US and Russia of their obligations under the convention significantly limits the effectiveness of the chemical disarmament regime. At the least, they constitute poor examples for the CWC membership and risk to undermine the credibility of the chemical disarmament regime.

In contrast, during debates in the First Committee of the UN General Assembly, Israel condemned the use of CW in the Iran-Iraq War and chemical attacks against the civilian population.\footnote{Israel, Statement before the First Committee of the UN General Assembly, (UN Doc. A/C.1/42/PV.16, 22 October 1987) 22} Furthermore, it expressed its desire to achieve a Middle East zone free from
CW\textsuperscript{413} and repeatedly called for the elimination of CW.\textsuperscript{414} Israel justified its non-ratification of the CWC by pointing to other Arab countries in the region, which had also failed to do so. At the same time, it assured that it was ‘strongly committed to the fundamental goal of the Convention, that is, the total elimination of the scourge of chemical weapons from the face of the earth’.\textsuperscript{415}

North Korea, which is believed to be the third largest CW possessor, adopted a similar stance in assuring that it was opposed ‘in principle’ to the use of CW.\textsuperscript{416} It asserted that

‘the government of the Republic in the future, too, as in the past, will not test, produce, store and introduce from outside nuclear and chemical weapons and will never permit the passage of foreign . . . chemical weapons through our territory and territorial waters and air.’\textsuperscript{417}

These examples show that opposition to the CWC regime in the form of non-participation by a very small number of states does not necessarily undermine its effectiveness. Often financial or technical obstacles, rather than a lack of will prevent states from complying with their treaty obligations. Indeed, the examination of the progress in the signature and ratification of the CWC reveals two further problems, which have prevented full participation and cooperation in chemical disarmament.

The CWC is rooted in the principle of non-discrimination, which implies an equal commitment of all States Parties to its prohibitions and obligations. The active involvement of developing economies is based on the premise that durable security requires not only global participation in the regime, but also a basic capacity to implement the Convention through national legislation and the budgetary contribution to verification and elimination activities. Assistance is crucial for giving developing countries the financial and technical capacity to fully participate in the regime and to comply with their treaty obligations.

\textsuperscript{413} Israel, Statement before the First Committee of the UN General Assembly, (UN Doc. A/C.1/46/PV.19, 28 October 1991) 23
\textsuperscript{414} Israel, Statement before the First Committee of the UN General Assembly, (UN Doc. A/C.1/50/PV.8, 20 October 1995) 5
\textsuperscript{415} Israel, Statement at the First Conference of States Parties to the CWC, The Hague, 6–23 May 1997.
\textsuperscript{416} North Korea, Statement before the First Committee of the UN General Assembly, (UN Doc. A/C.1/50/PV.7, 19 October 1995) 16.
Secondly, over the past ten years, the majority of non-States Parties were Middle Eastern states. In light of political and military tension in the region, a concern about the possible exploitation of highly intrusive inspections for espionage on military facilities led these states to oppose the ratification of the CWC. Opponents also argue that the economic costs of remaining outside the CWC regime are over-estimated and that sanctions are unlikely to be imposed. 418

Finally, strong cooperative links between the OPCW and the chemical industry have been crucial to the advancement of the CW regime. The participation of the global chemical industry already began during the negotiations of the CWC. This link has since been able to ensure the industry’s ongoing cooperation with the CWC’s industrial verification regime.

Finally, the Syrian disarmament mission constitutes a significant step forward, not only for the region, but also for international participation and cooperation. The extraordinary collective effort launched in reaction to the use of CW in Syria illustrated the cooperative nature of chemical disarmament. The partnership of the OPCW with the UN in dealing with logistical and security challenges was essential to the success of the mission. It was a reminder that there are pathways for institutional cooperation in chemical disarmament.

More importantly, Syria’s accession to the CWC as its 190th State Party constitutes a major breakthrough in the pursuit of not only universality but also a WMD-free zone in the Middle East. The accession of a host state to a major disarmament treaty was an important step which had never been achieved before as part of a disarmament mission. Given that in the four years prior to Syria’s accession no new states had acceded to the CWC, 419 it is possible that Syria’s accession as well as the attention generated by the OPCW’s Nobel Peace Prize, could serve as an impetus for the remaining non-States Parties to join the CWC regime.

2.3.2. Institutional Capacity for Chemical Disarmament

To what extent are multilateral institutions equipped with the necessary resources and instruments for the achievement of effective disarmament? All the 190 CWC States Parties are automatically members of the OPCW, the organisation which has been given the most

419 between 26 April 2009 and 14 October 2013
specific and comprehensive mandate in chemical disarmament. The infrastructure of the OPCW centres on its three organs with a body of over 450 employees. Its principal organ, the Conference of the States Parties, oversees the implementation of the convention and consists of all members of the OPCW. The Executive Council, the political organ of the OPCW, is charged with monitoring of operation and consists of 41 members. Finally, the Technical Secretariat organises and carries out all activities which are related to verification.

It is important to note that the OPCW performs these tasks on a small annual budget of around 70 million euros which is derived from proportional contributions of States Parties. In 2005, the organisation adopted a ‘result-based budgeting’ approach, adapting the budget to the definition of core objectives which are set out based on the OPCW’s Medium Term Plan. This approach presents a risk for the equality of States Parties, as dominant States Parties which pay a large contribution are able to exercise undue influence on the scope and scale of the budget.

One of the OPCW’s main achievements is that less than twenty years after the entry into force of the CWC it has achieved near-universal membership. While every treaty pursues universality with the goal of strengthening its regime, the effectiveness of the CWC regime cannot be automatically inferred from the overwhelming number of ratifications. As mentioned above, the largest CW possessor states, namely the US and Russia have not yet been able to fully eliminate their own CW stockpiles. As a result, the tremendous legacy of chemicals from the Cold War era continues to pose a threat to international security. On the other hand, non-signatory states have expressed their commitment to the elimination of CW. This indicates that the link between universality and effectiveness is not straightforward.

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420 Article VIII A, 1), CWC gives the OPCW a mandate ‘to achieve the object and purpose of [the] Convention, to ensure the implementation of its provisions, including those for international verification of compliance with it, and to provide a forum for consultation and cooperation among States Parties.’


424 During its 23rd meeting on 23 October 2003 the OPCW Executive Council adopted an action plan for the pursuit of this goal.
For a long time, the OPCW has worked behind the scenes and maintained a low profile. It did not become a household name until its involvement in Syria and has done little to develop relations with other bodies. For instance, the OPCW’s involvement in the Moscow theatre hostage crisis (2002), the launching of a global partnership for chemical, biological and nuclear disarmament at the G8 summit in Russia (2002), the verification of the presence of WMD in Iraq (2003) and the US-UK initiative to convert Libya from a ‘rogue state’ to a CWC state party (2004) remained largely insubstantial. Although it was technically equipped for such events, its practical inertia limits its role in the initiation of multilateral processes. Consequently, its ability to react to events as they unfold and to become technically and diplomatically involved requires further strengthening.

Furthermore, the lack of transparency inherent to the OPCW is often subject to criticism. The CWC’s Confidentiality Annex constitutes a solution to the dilemma which negotiators faced in finding the right balance between effective control and the protection of confidential information in the military, commercial and industrial fields. The negotiators of the CWC were concerned about confidentiality because the cooperation of States Parties, and that of their chemical industries, depended on the protection of commercial information.

It has also been argued that transparency ‘is crucial to the effectiveness of international regimes’ as it is necessary to build confidence among regime members. If a multilateral disarmament process were to be entirely secret, it would be impossible for the vast majority of states, that do not possess sophisticated global information-gathering capabilities, to have confidence in their treaty partners’ compliance. Still, in situations where verification would be harmed without confidentiality, it can be argued that the latter takes precedence over transparency.

The assessment of the OPCW’s capacity to perform chemical disarmament must be based on its achievements in fulfilling this task both during times of peace as well as under extraordinary circumstances. The Syrian disarmament mission stretched the OPCW to new limits as it demanded flexibility and innovation on the part of its member states as well as that of the UN. For example, inspection personnel who had not been trained to operate in a

426 Stephen Krasner, (Fn 89) 185.
war zone, was forced to wear bulletproof vests for the first time. For this reason the UN security support was crucial to the success of the mission.

The flexibility of the OPCW, however, is limited by its rigid and archaic structure which requires ‘100% solutions’. Although it has the technical capacity to effectively disarm and verify, it is often constricted by its own rules. In other words, its procedures demand absoluteness, which prevent it from reaching its full potential in situations which are not regulated under the CWC. For example, in the case of the Sellström mission, both the UN and the OPCW had tissue and soil samples, which could not be joined and technically compared, due to strict confidentiality and chain of custody requirements. In an interview with the BBC, an OPCW official admitted that the treatment of evidence was ‘a political question, not a technical one’.

Considering that Syria was not Party to the CWC at the time of the attacks, the convention’s mechanism for the investigation of the alleged use of CW was not available. In such cases, investigations concerning the alleged use of CW by non-States Parties are regulated under Part XI, para 27 of the CWC Verification Annex, which rely on the SGM. It was on the basis of this provision combined with the UN-OPCW Relationship Agreement (2000) that the UN-OPCW joint mission was established.

Under this special arrangement, the UN and OPCW recognise the need to work jointly to achieve mutual objectives and agree to cooperate closely within their respective mandates. While avoiding any duplication of activities, the Relationship Agreement aims to strengthen institutional capacity for chemical disarmament by combining their resources. In such cases, the OPCW acts as a subcontractor to support the SGM by making experienced inspectors and inspection equipment available, providing relevant information and advice, as well as access to its network of designated laboratories.

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428 Part XI, para 27, CWC Verification Annex, States Not Party to this Convention: “In the case of alleged use of chemical weapons involving a State not Party to this Convention or in territory not controlled by a State Party, the Organization shall closely cooperate with the Secretary-General of the United Nations. If so requested, the Organization shall put its resources at the disposal of the Secretary-General of the United Nations.”

429 The Relationship Agreement was approved by the OPCW Conference of the States Parties (C-VI/DEC.5, 17 May 2001) and by the United Nations General Assembly (A/RES/55/283, 24 September 2001).

430 Article 1, UN-OPCW Relationship Agreement.
On the other hand, the limitations of the UN-OPCW joint mission highlighted the benefits of the CWC procedure for the investigation of the alleged use of CW in contrast with investigations under the Secretary-General Mechanism. The guidelines and procedures of the SGM provide that, if requested, any UN member state must grant access to its territory to investigation teams.\(^431\) However, acceptance and adherence to the guidelines and procedures rests at the discretion of the Secretary-General and of the affected member state. This weakness in the SGM caused the initial delay in the deployment of the investigation team to Syria. An additional obstacle can be seen in the fact that any obligation imposed on a state requires a Security Council resolution which can be vetoed by its five permanent members.\(^432\)

In contrast, the CWC’s mechanism for the investigation of the alleged use of CW is much more reliable. In the case of an investigation of alleged CW use by a CWC State Party, Part XI of the Verification Annex provides that, once a request is received by the OPCW Director-General, a team of inspectors must be sent immediately and must be granted access to any area affected by the alleged use of CW. In other words, a state party on whose territory CW use is suspected to have taken place, must comply with all its obligations under the CWC. Two possible remedies exist to this problem. Either the CWC reaches universality, which would also make its IAU mechanism universally applicable to all states. Alternatively, the SGM could be updated.

Finally, it can be argued that the International Criminal Court (ICC) could play a role in both verification and enforcement of the CW ban. Indeed, in a joint request of 14 January 2013, the governments of 57 countries had emphasised the importance of accountability for the achievement of peace in Syria and urged the UNSC to take action by referring the Syrian situation to the ICC.\(^433\) Yet, Syria not being a signatory of the Rome Statute, only either a UNSC referral of the situation or a referral by the Syrian government itself could have given

\(^{431}\) Report of the Secretary-General to the UNGA, ‘Chemical and Bacteriological (Biological) Weapons’, (A/44/561, 4 October 1989).

\(^{432}\) Rene Pita and Juan Domingo, ‘The Use of Chemical Weapons in the Syrian Conflict’ (Toxics, 2014) 393.

jurisdiction to the ICC. Such a requested referral was vetoed by both Russia and China on 22 May 2014. Both dismissed a judicial solution in favour of a political one, a position which reflected their protectionist motivations. Justifications for the veto related to fears of regime change were based on the Libyan experience.

It can be argued that even if the referral to the ICC had been successful, the ICC’s role for chemical disarmament per se would have been limited. Individuals can be prosecuted for the use of CW in Syria only as part of a charge of crimes against humanity or as part of the war crime of intentionally directing attacks against civilians. In other words, proving the use of CW would not be necessary to sustain either charge. Moreover, an ICC investigation would only cover the use of CW and not the non-compliance under the CWC.

In contrast with the immediate investigation procedures under the SGM, the dimension of time is entirely different in the context of the court. Due to lengthy investigation processes, it may take a year or longer to build a case, which implies that key pieces of evidence risk disappearance in the meantime.

In conclusion, assuming that even if the forensic standards held up to those of the CWC regime, the ICC would not constitute a reliable complement to this regime. Alternatively, ‘post-conflict, the international community could pressure a fledging Syrian government to ratify the Rome Statute, enabling the ICC to investigate the situation unencumbered.’

434 Article 12 (3), Rome Statute
435 UNSC press release, ‘Referral of Syria to International Criminal Court Fails as Negative Votes Prevent Security Council from Adopting Draft Resolution’, UN Doc SC/11407, 22 May 2014: The Russian Permanent Representative to the UN accused supporters of the referral of “using the Court to inflame political passions for outside military intervention” for this purpose.
436 Ibid: The Chinese Representative argued that a forced referral to the ICC constituted a breach of Syria’s judicial sovereignty and the principle of complementarity.
438 For example, the ICC opened the investigations in the Lubanga affair in 2004, he was arrested in early 2006 and the trial did not start until 2009. http://www.ijmonitor.org/thomas-lubanga-timeline/ accessed 12 October 2014
3.4. Verification of Compliance

From a legal point of view, regime effectiveness can be measured by the extent to which regime members comply with their contractual obligations.\(^{440}\) The Iraq-Iran conflict showed the importance of addressing compliance in a meaningful way, in order to maintain the confidence of States Parties in a treaty regime.\(^{441}\) Before the entry into force of the CWC, compliance was determined unilaterally by individual states or by a small group of states. Today, the CWC charges the OPCW with this task, for which it puts a comprehensive verification regime at its disposal. To date, the CWC remains the only treaty which bans an entire class of weapons under intrusive international verification.

Verification is a multi-faceted undertaking. In an overall sense, the process of verification encompasses information gathering, information analysis, the identification of instances of non-compliance, the evaluation of their significance and as well as the determination of an appropriate response with the goal of bringing the state in question back into compliance.\(^ {442}\) Having represented the most contentious issue during negotiations, today the CWC’s verification regime is often regarded as its cornerstone and as a model for future disarmament agreements. Since the entry into force of the CWC, the OPCW has verified the destruction of 85% of the world’s declared CW. This central role of verification is reflected in the substantial share of the OPCW’s annual budget which is allocated to verification activities.\(^ {443}\)

Verification under the CWC comprises mandatory declarations by its States Parties about their industrial and military activities, which provide the basis for up to four annual routine inspections. The Convention’s Verification Annex covers verification procedures for each

\(^{440}\) Oran Young, ‘Effectiveness of International Environmental Regimes: Existing Knowledge, Cutting-Edge Themes, and Research Strategies’ Vol 108 (50) (PNAS, 2011) 19857.


\(^{442}\) UNODA, Verification in all its aspects, including the role of the United Nations in the field of verification, Study Series 32, 2008 (A/61/1028).

\(^{443}\) OPCW Conference of the States Parties, Decision: Programme and Budget of the OPCW for 2012 (C-16 (DEC.12) 2 December 2011: 33.29 out of 70.56 million euros in 2012; Executive Council, Draft Decision : Draft Programme and Budget of the OPCW for 2015 (EC-77/DEC/CRP.7) 2 October 2014 : 32.83 out of 69.32 in 2015
category of chemicals and their precursors as well as each of the areas covered by the prohibition, namely stockpiles, production facilities and the destruction process.

In addition to mechanisms for routine inspection, the CWC allows its States Parties to request challenge inspections. This mechanism can be used by any member to call for investigation of another member on the basis of well-founded concerns over compliance. If applied, the Director-General of the OPCW appoints a challenge inspection team which is immediately dispatched. This instrument can be considered a failure, as political obstacles have prevented it from being used to this day.

Today, there is a wide consensus that a ban on CW cannot be effective in the absence of intrusive verification. The question whether the widespread use of CW by Iraq during the 1980s could have been prevented had such a comprehensive ban been in force can only be answered in speculative terms. However, it can be argued that the existence of authoritative verification and enforcement mechanisms would have significantly limited the liberty of the international community to turn a blind eye to the flagrant violation of the ban on the use of CW established in 1925.

The standard which must be applied in the assessment of the effectiveness of a verification regime is its capacity to enable a quick and effective response to violations of a ban. In other words, a verification regime

‘seeks to detect non-compliance early enough to enable States parties to deal with the situation by bringing the violator back into compliance, counter the security threat presented by the violation and thereby deny the violator the benefits of non-compliance.’

The quick and decisive reaction of the international community in assessing and stopping the use of CW in Syria, despite the high security risk for inspectors, is indicative of the potential and importance of verification measures for effective disarmament. Furthermore, the

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444 Chemical Weapons Convention, Annex on Chemicals: Schedule 1 chemicals are substances which have “been developed, produced, stockpiled or used as a CW as defined in Article 2” of the Convention; Schedule 2 chemicals possess “such lethal or incapacitating toxicity (...) that could enable it to be used as a CW”; Schedule 3 chemicals have “been produced, stockpiled or used as a CW”


446 William Elliott Butler, Control Over Compliance with International Law, (Martinus Nijhoff, 1991) 32.

447 UNODA, (fn 454).
unprecedented involvement of the international community in the detection and elimination of CW in Syria, will likely act as a deterrent for other states, which are tempted to use CW in the future. On the other hand, the Syrian disarmament mission highlighted some of the limitations of the CWC’s verification regime.

Verification was a complex and difficult task in the hostile climate of the Syrian civil war, where military movements were fast and unpredictable, in particular under the given timeframe which was accelerated in contrast to procedures envisaged by the CWC. Although this acceleration can be attributed to a lack of trust in the Syrian regime and the resulting need to remove CW as quickly as possible, it can be argued that this ad hoc approach minimised the CWC’s impact in the mission. Hence, it is not justified to criticise the CWC verification regime per se for the shortcomings of the Syria mission. A preferable solution might have been to wait for Syria to accede to the CWC in order to make its verification procedures available.

Verification efforts in reaction to the use of CW in Syria have illustrated the complex and controversial relationship between national intelligence agencies and international verification organisations, such as the OPCW. Elements of national intelligence were put forward by governments prior to and throughout the disarmament mission, confirming the use of CW and, in large part, the regime’s responsibility.

The degree of openness and willingness with which national governments put forward the information which their intelligence agencies had acquired, indicates a change in the international community’s attitude towards covert intelligence gathering. It can be argued that the verification mandate of the UN-OPCW joint mission was so narrow that national intelligence was needed to shed light on areas which the verification regime of the SGM could not cover. Based on the argument that a successful verification regime draws on all available information, is it justified to assume that information and data gathering practices are being gradually integrated into the CW verification regime, thus enhancing its effectiveness?

Covert intelligence gathering lacks not only the cooperative spirit inherent to regimes, but also a legal foundation, given that the CWC itself does not provide a legal foundation for a role of national intelligence agencies in multilateral verification activities. Moreover, since the US and British intelligence failure prior to the 2003 Iraq war, there is a heightened suspicion
of Western intelligence,\textsuperscript{448} which calls for healthy scepticism towards this type of information. There were clear indications in the debates of the psychological effect of the intelligence failure leading up to the 2003 invasion of Iraq.\textsuperscript{449} This invasion was justified based on information which was deemed ‘extensive, detailed and authoritative’, yet later turned out to be ‘limited, sporadic and patchy’.\textsuperscript{450} Consequently, it was argued that there was a risk that the supposedly clear evidence of the Assad regime’s culpability could prove to be unfounded.

Furthermore, the final assessment of compliance must be performed by an authoritative body.\textsuperscript{451} In conclusion, intelligence information is a valuable but unreliable element of verification as states make the decision to share intelligence on a case-by-case basis depending on their national interests.

First, the inability to verify the precise circumstances of the chemical attacks and the resulting lack of certainty regarding the non-compliant party was not regarded as an obstacle to the legality of a military intervention, as verification was mostly bypassed in US, British and French parliamentary debates. Supporters of military action went directly from reaffirming the ban on CW to seeking a remedy against its violation, simply skipping the question of verification. While there was consensus on the attribution of responsibility as a necessary preliminary step to any military action, this was done on purely speculative grounds, instead of by means of established verification mechanisms.

In conclusion, today the necessary verification architecture is in place, but in the Syrian case it was not applicable. The CWC’s verification regime was ‘designed against a more static and deterministic concept of CW production dependent on synthetic routes involving scheduled chemicals.’\textsuperscript{452} In other words, the rigid nature of the CWC’s verification provisions may not be able to reliably cover current and future approaches to CW production, which highlights a need for 80% solutions and compromise. It is crucial to prevent the CWC verification regime from becoming ‘frozen in time’.

\textsuperscript{448} James Acton, ‘International Verification and Intelligence’, (Intelligence and National Security, 2014) 341.
\textsuperscript{449} Paul Schulte, ‘Proliferation, Intelligence and the Case for Normalising a Technical Accountability Obligation in Arms Control’, (Intelligence and National Security, 2014) 436.
\textsuperscript{450} Jack Straw in HC Deb 29 August 2013, vol 566, col 1451.
\textsuperscript{451} Ibid
\textsuperscript{452} Ibid.
3.5. Enforcement of Chemical Disarmament

Upon detection of contraventions to the CWC by means of verification, the difficult question of how to handle non-compliance must be addressed. During the negotiations surrounding the question of enforcement, concerns emerged regarding the conflict between the prerogatives of the UNSC under Chapter VII on one hand, and the OPCW’s competence on the other. While negotiators took caution in preserving the UNSC’s rights, the failure of the latter to effectively respond to violations of the CW ban during the Iran-Iraq conflict, made it clear that the CWC required its own mechanisms to address non-compliance. Yet, there was an understanding that enforcement mechanisms available to both organisations had to be complementary, which led to the reliance on enforcement under the UN Charter.

Today, Article XII, paragraph 1 of the CWC is the cornerstone of a system of measures designed to remedy violations. It confers exclusive competence to the Conference in the determination of the measures to be taken, based on information obtained by the Technical Secretariat. The sole purpose of such measures is to bring the behaviour of the State Party in question into harmony with its obligations under the Convention. Solely punitive measures are excluded from the scope of Article XII. Indeed, ‘the provisions of Article XII demonstrate that there is a point at which the internal treaty compliance mechanism is essentially exhausted and it is left to the States Parties to take action in concert, or to ‘fall back’ on the UN.’

The CWC is widely criticised for its failure to explicitly and adequately address the question of enforcement. The primary complaints concern its inability to enforce its provisions regarding countries that have not yet ratified the treaty, to impose its provisions with respect to terrorist groups, and finally, the fact that the OPCW cannot itself authorise military force. While all international treaties are based, to some extent, on comity, it can be argued that the absence of enforcement mechanisms significantly reduces the effectiveness of the CWC regime. In other words,

453 Walter Krutzsch, Ralf Trapp, (fn 311) 220.
454 Ibid
455 Ibid 221
‘although arms control treaties rely on the self-interest of the parties and the pressure of world public opinion to restrain would-be violators, moral restraints by themselves may not be sufficient. Without a credible threat of economic or even military sanctions in response to a persistent pattern of violations, the CWC will never play a truly effective role in containing and reversing the spread of CW.’

A number of solutions are available, which are based on non-conventional enforcement mechanisms under general international law. While reciprocity in the form of retaliatory use of CW or abandonment of disarmament obligations is not permitted under the CWC, collective measures as well as “name and shame” are available mechanisms, which can be applied in order to restore the respect of obligations under the CWC.

This absence of a mandate for the enforcement of the CWC implies that collective measures in the form of the use of force cannot be decided by the OPCW itself. Its role is limited to recommendations made to the other State Parties or consultations with the UNSC if it deems military action to be necessary. These recommendations are not legally binding, may not infringe upon the prerogatives of the UNSC. The Conference has yet to make use of this mechanism.

Considering that Syria was a non-State Party at the time when measures were sought to end the use of CW by the Assad regime, the OPCW had no legal basis for making such recommendations to the UN. Neither did the UNSC adopt measures independently from the OPCW. For this reason, collective measures suggested and adopted in the Syrian case took the form of ad hoc enforcement mechanisms.

While the US and France threatened airstrikes for this purpose, such a purely punitive military intervention would not only have been inconvenient for both parties concerned but would also have fallen outside the scope of Article XII and contravened a number of international principles and norms. The question of whether the resolution would authorise the use of force in the event of non-compliance represented the most contentious issue during negotiations of resolution 2118 (2013) between the US and Russia. In paragraph

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457 Jonathan Tucker, (fn 414) 15.
458 Article 34 Vienna Convention (1986): ‘A treaty does not create either obligations or rights for a third State without its consent’
459 ‘Syria “Chemical Attack”: France says force may be needed’, BBC News, 22 August 2013
460 OUP Debate Map (fn 395).
21 of the resolution, the Council ‘decides, in the event of non-compliance with this resolution (...), to impose measures under Chapter VII of the United Nations Charter.’\textsuperscript{461} This formulation does not imply that non-compliance automatically triggers a right to the legal use of military force against Syria. Instead, it should be read as effectively imposing a legally binding\textsuperscript{462} disarmament regime on Syria.\textsuperscript{463}

Eventually, the threat of force, in combination with the Russian rejection of an automatically militarily enforceable UNSC resolution, exercised pressure on both Syria and the international community to explore collective measures in the form of a diplomatic solution. This solution was eventually adopted in the form of the US-Russian Framework Agreement, which included an ad hoc chemical disarmament regime as a way of ending the use of CW in the conflict. It can be argued that it is unjustified to criticise the lack of enforcement mechanisms in the CWC given that ad hoc enforcement measures are available on a case-to-case basis and, therefore, likely to provide solutions which are more adapted to specific situations.

The second type of enforcement mechanism relates to the publication of a state’s cheating with the aim of both forcing him to bring his actions back into compliance and deterring potential cheaters. Name and shame, implies public statements regarding a state’s offensive behaviour. It is most effective for the enforcement of compliance, when such statements are made by authoritative international organisations such as the UN or the OPCW. Still, statements made by individual members of the international community are not to be underestimated, as they can compel international organisations to address the issue. On the other hand, as the Iraqi and Syrian examples show, the OPCW and UN are reluctant to make official statements regarding the culpability of a state, given that often action in the form of sanctions or judicial measures are expected of them.

For example, in the Syrian case, responsibility for the attacks was attributed through channels external to the CWC regime.\textsuperscript{464} Neither the UN inspector team’s mandate under the SGM nor

\textsuperscript{461} UN Security Council, resolution 2118 (2013), 27 September 2013, para 21.
\textsuperscript{462} Ibid: ‘Underscoring that Member States are obligated under Article 25 of the Charter of the United Nations to accept and carry out the Council’s decisions.’
\textsuperscript{464} French Defence Ministry, ‘Syria/Syrian chemical programme – National executive summary of declassified Intelligence’, Intelligence Report, 3 September 2013; French National Assembly, XIVe legislature, Deuxième session extraordinaire de 2012-2013’ 4 September 2013; CBS/AP, ‘Syria forces keep bombing area of alleged
that of the UN-OPCW mission aimed at establishing attribution. The results of verification efforts had to remain objective, given that collected evidence might not have been sufficiently clear to determine which party to the conflict had used CW. When leading UN and OPCW staff was repeatedly asked about who was responsible for the chemical attacks in Syria, they all argued that “attribution would require more efforts and resources”\(^\text{465}\) and that the evidence indicating Syria’s responsibility for the chemical attacks, would not stand in court.\(^\text{466}\)

The absence of any provisions on attribution in both the Geneva Protocol and the CWC can be interpreted as indicating the separation of disarmament and the attribution of responsibility. Attribution is not necessary to achieve disarmament. On the contrary, it even risks undermining disarmament efforts given that the cooperation of the host state is crucial for the elimination of CW. A further explanation for the absence of provisions on attribution could be the fact that the possibility to attribute varies from case to case.

In light of the difficulties surrounding the publication of violations in the form of attribution, accountability must also be excluded as a reliable enforcement mechanism. Calls for accountability would not only have to be addressed outside of the CWC regime, but would also have to imply a commitment to end the Assad regime. However, given the slow procedures of the ICC and the need for the host state’s cooperation in disarmament activities the parallel activation of a judicial process risks undermining the principal goal of ensuring effective disarmament. In Syria, only if Assad were to be overthrown, would Syrian officials responsible for the chemical attacks be likely to face prosecution and imprisonment.

Finally, the effectiveness of the CW disarmament regime further implies that it is capable not only of dealing with today’s threats but also with those emerging in a constantly changing international security environment. It has become clear that in light of the CWC’s quasi-universal status, a shift is taking place from the use of CW by sovereign states for whom the CWC is binding, to the ‘irregular use of chemicals in scruffy, low intensity war (waged by non-state actors) that was never expected by the CWC.’\(^\text{467}\)

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\(^\text{466}\) Robert Parry, ‘UN Investigator Undercuts NYT on Syria’, \[Consortiumnews\], (23 December 2013).

\(^\text{467}\) Paul Schulte, (fn 386).
The enforcement of disarmament vis-à-vis non-state actors remains an important issue to be resolved. A remedy to this lacuna can be seen in Article VII of the CWC (national implementation measures), given that effective national implementation is necessary to prevent non-state actors from gaining access to the CW stockpiles of states. Its paragraph 1, a) provides that States Parties are responsible for prohibiting national and legal persons on its territory from undertaking any activity prohibited to a State Party under the CWC. On one hand, this provision can be interpreted as creating an environment of enforceability vis-à-vis non-state actors. On the other, States Parties have lagged behind in this area, despite the adoption of an action plan by the OPCW to encourage States Parties to effectively implement the Convention.

In the same line, UNSC resolution 1540 (2004) aims to remedy this weakness by calling on all states to take enforce national measures regarding the elimination and non-proliferation of WMD, including CW. It recognises the tremendous damage which non-state actors can potentially cause with only small, militarily insignificant quantities of chemical agent and, therefore, emphasises the necessity to block the access of non-state actors to CW stockpiles through the adoption of effective measures on a national level.\textsuperscript{468}

In conclusion, there is an increased urgency for enforceability of chemical disarmament norms. For this purpose universality is essential, given that assurances of enforceability will be difficult as long as some states refuse to join the CWC.

\textbf{Conclusion}

This chapter has assessed the effectiveness of the chemical disarmament regime. A first conclusion regarding the impact of this treaty was drawn by means of contrasting the paralysis of the international community prior to the establishment of the CWC regime during the Iran-Iraq war, to the strong moral outrage of the international community which facilitated \textit{ad hoc} disarmament measures in response to the use of CW in Syria.

The effectiveness of the CWC regime was evaluated on the basis of the four key components which make up its architecture, namely compliance, verification, enforcement as well as the

\textsuperscript{468} Ron Manley, ‘Restricting Non-State Actors’ Access to Chemical Weapons and Related Materials: Implications for UNSCR 1540’ in Olivia Bosch, Peter van Ham (eds), \textit{Global Non-Proliferation and Counter-Terrorism: The Impact of UNSCR 1540}, (Global Non-Proliferation and Counter-Terrorism, 2007) 73–85.
capacity of the OPCW and the UN to perform chemical disarmament. The findings of this chapter can be divided into two aspects: the strengths and weaknesses inherent to the structure of the treaty itself on one hand, and its practical application on the other.

Regarding the structure of the regime, it can be concluded that it provides a solid foundation for chemical disarmament. The level of participation is satisfactory overall and multilateral institutions such as the OPCW and the UN are equipped with the necessary infrastructure and instruments for chemical disarmament. Moreover, a sophisticated verification regime is attached to the CWC and mechanisms for the enforcement of the CWC are available.

Despite this conclusion, it was argued in this chapter that the structure of the CW regime is not sufficiently flexible to ensure the full exploitation of its potential. For example, the mandate of the OPCW does not allow for the shared treatment of samples with the UN, nor does it provide guidelines for dealing with emerging challenges such as non-state actors. Furthermore, this chapter highlighted the grey areas caused by the lack of enforcement mechanisms inherent to the CWC regime. In this respect, the reliance on the UNSC for enforcement exposes the regime to the bias and veto of the P5, thus allowing close relations to a P5 member to protect violators from sanctions.

On the other hand, practical obstacles limit the scope of the regime and, consequently, its applicability. For example, the Syrian case has highlighted the limited scope of the CWC regarding non-state parties. Furthermore, a lack of political will constitutes a recurring problem for the effective application of the CW regime. For instance, political implications have caused the failure of challenge inspections and risk undermining any measure taken by the UNSC.

To remedy these shortcomings, ad hoc disarmament regimes may serve as a complement to the CWC disarmament regime. This has been illustrated using the example of the UN-OPCW joint disarmament mission in Syria. While it can be argued that the existence of such ad hoc regimes undermines the authority of the CWC regime, both must be regarded as complementary. In order to serve as an effective complement, such ad hoc regimes must be based on a wider mandate than that of the UN-OPCW mission, which only provided quick, short-term solutions and deprived chemical disarmament of the long term effects the CWC regime offers. Moreover, these findings highlight the importance of the time factor in disarmament operations, as the crisis situation in Syria has allowed the intensification of
efforts in terms of participation of states in the operation, the quick implementation of verification measures and the cooperation between the UN and OPCW in the mission.

In conclusion, this chapter assesses the overall effectiveness of the CWC regime for the advancement of chemical disarmament. It is argued that while the entry into force of the CWC has significantly decreased the risk of chemical warfare, the complete and permanent elimination of CW requires universal adherence to the CWC regime.
Chapter 4 - The Effectiveness of Nuclear Disarmament

Introduction

As elaborated above, the chemical disarmament regime is rooted in a comprehensive, verifiable and quasi-universal treaty imposing precise obligations. In contrast, the legal structure underlying the elimination of nuclear weapons remains to date much less developed. Pending the negotiation and adoption of a comprehensive nuclear disarmament treaty, a limited regime currently governs the behaviour of states leading up to the elimination of nuclear weapons.

First, this regime will be positioned within its historical context for the purpose of highlighting the key legal, political and scientific factors which gave impetus to the disarmament movement, in particular leading up to the adoption of the 1968 Non-Proliferation Treaty (NPT). The NPT was long regarded as the cornerstone of the nuclear disarmament regime. Therefore, the analysis of the internal effectiveness of the nuclear disarmament regime will begin with an examination of the NPT. In its Article VI it establishes an obligation to negotiate in good faith on legal measures leading to nuclear disarmament under strict and effective international control. Although its precise legal nature and scope remains controversial, this provision was conceived as a first step in nuclear disarmament, envisaging the verified elimination of nuclear weapons to take place in a second step under such a regime.

For almost five decades following the adoption of the NPT, multilateral negotiations involving the nuclear weapons states have yet to be initiated. While bilateral and unilateral reductions have allowed the containment of the nuclear threat during and since the end of the Cold War, they have stagnated as a consequence of the deterioration of US-Russian relations and no longer constitute reliable substitutes for nuclear disarmament. On the contrary, nuclear

469 Article VI: “Each of the Parties to the Treaty undertakes 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.”

470 Eric Schlosser, ‘Today’s Nuclear Dilemma’, Vol 71 (6) (Bulletin of the Atomic Scientists, 2015) 12-13; Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 ICJ 311-12 (Dissenting Opinion of Vice-President Schwebel): ‘One way of surmounting the antinomy between practice and principle would be to put aside practice. (…) State practice demonstrates (…) that in that deployment inheres a threat of possible use; and that the international community, by treaty and through action of the United Nations Security Council, has (…)
weapons states have recently engaged in the renewal, modernisation and expansion of their nuclear weapons programmes, which can be seen as further undermining the disarmament agenda.

The legality of such measures was the object of the 2014 lawsuit of the Marshall Islands at the ICJ against the nine de facto nuclear weapons states for their failure to comply with Article VI, NPT. Among the issues raised in the Marshall Islands’ memorial were the qualification of the obligation in Article VI as an obligation of result or conduct, its customary nature, as well as the compatibility of the good faith obligation contained in the Article with the renewal and modernisation of nuclear weapons programmes. As the cases eventually did not reach the merits stage, these questions remain open.

Unilateral and bilateral measures are regarded as indispensable in the preparation of a multilateral disarmament regime. Unilateral and bilateral measures are regarded as indispensable in the preparation of a multilateral disarmament regime. For this reason, the effectiveness of such nuclear disarmament measures in practice will be examined using two case studies. First, an analysis of the unprecedented unilateral denuclearisation of South Africa at the end of the Cold War will offer insights into the role of the NPT, as well as other international norms in ad hoc nuclear disarmament processes. Secondly, nuclear reductions under the US-Russian bilateral framework will on the one hand highlight a number of factors which have influenced their effectiveness and on the other demonstrate their appropriateness as a foundation for a multilateral disarmament regime.

A crucial shift towards a multilateral approach occurred in 2017 with the adoption of the Treaty on the Prohibition of Nuclear Weapons, which aims to universally banning nuclear weapons. Upon its entry into force, a wide range of activities linked to the development, possession and deployment of nuclear weapons will be banned, for the first time making nuclear disarmament a legally binding commitment for all States Parties. Despite its strong potential as ‘a means to exert greater normative pressure on all states to pursue nuclear abolition goals,’ the strong initial opposition to the treaty on the part of the nuclear possessor

recognized in effect or in terms that in certain circumstances nuclear weapons may be used or their use threatened.’; Jess Sleight, ‘Study: The Risk of Nuclear Use is too Damn High’ (Global Zero, 2 March 2016) http://www.globalzero.org/blog/study-risk-nuclear-use-too-damn-high?utm_source=soc&utm_medium=FB&utm_campaign=DA

471 see 200 RevCon 13 Steps.
states raises the question whether this ban approach can eventually gain the full support of key nuclear states.

In particular, the fresh impetus in the nuclear disarmament debate during the Obama administration has faded under US President Trump who adopted a clear stance in opposition of multilateralism in nuclear matters. The announced withdrawal from the INF Treaty and the unilateral US withdrawal from the Joint Comprehensive Plan of Action (Iran Nuclear Deal) in May 2018 illustrate this clear lack of US leadership in nuclear disarmament. A brief discussion of the current geopolitical landscape, in light of which key efforts such as the JCPOA and the TPNW must be evaluated, will provide an outlook on how the political and legal spheres in nuclear disarmament are likely to evolve.

Finally, this chapter will proceed to the assessment of the external effectiveness of the nuclear disarmament regime in practice. The factors examined will include its ability to achieve the levels of state participation and cooperation necessary for effective disarmament, as well as levels of compliance with the obligation to negotiate in good faith on nuclear disarmament measures. Furthermore, given the lack of an institutional framework providing mechanisms for the verification and enforcement of obligations, the role of the NPT review process and the UN disarmament machinery in providing these elements will be evaluated.

1. Approaches to Nuclear Disarmament

1.1. Overview

Concerns about the devastating potential of nuclear weapons and the desire to prevent their military use, have been expressed since the very early days of their existence, including by the creators of the atomic bomb themselves.472 Prior to the attacks with first-generation fission bombs on Hiroshima and Nagasaki, US scientists and policy-makers considered secrecy over the discovery of nuclear weapons to be an appropriate means for curbing the nuclear

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danger and preventing an arms race. However, given the increasing public awareness of
their destructiveness resulting from these first nuclear attacks, new measures became
necessary.

Initial attempts at nuclear disarmament were undertaken under President Truman in the
immediate aftermath of WWII. Yet, following the arms race of the 1930s, disarmament was
no longer regarded as a reliable means for achieving peace and security. This led to only
hesitant attempts during this period to limit a weapon which could be potentially influential
in a future conflict. Finally, the central role of the nuclear question was highlighted by the
adoption of the first resolution of the UNGA on 24 January 1946. This resolution envisaged
the establishment of a Commission to deal with the problems raised by the discovery of
atomic energy and in particular the ‘elimination from national armaments of atomic
weapons.’

The United States Atomic Energy Commission, in its first report to the UNSC on 30 December
1946, asserted that an ‘effective system for the control of atomic energy must be
international, and must be established by an enforceable multilateral treaty or convention,
which in turn must be administered and operated by an international organ or agency within
the United Nations.’ However, in a climate of suspicion and heightened hostility between
the superpowers, the Soviet Union rejected this on the grounds that scientific knowledge and
technical expertise would allow the US to rebuild NW at any time. This position illustrated the
interrelation between non-proliferation and disarmament, as well as the necessity to pursue
both simultaneously, in order to assure disarming states against the nuclear re-armament by
others.

By the mid-1950s, the lack of progress in nuclear disarmament negotiations led to the
abandonment of a comprehensive approach for the elimination of nuclear weapons and the
pursuit of partial measures. The notion of arms control pursued under the Eisenhower

474 ‘Pearl Harbor Anniversary and the Moscow Conference’ Vol 1 (1) (Bulletin of the American Scientists, 1945)
1; Robert Jungk, (fn 485).
475 John Baylis, Strategy in the Contemporary World: An Introduction to Strategic Studies, (OUP, 2007) 230.
476 UNGA resolution 1 (I).
478 Alva Myrdal, (In 157) 74-78; Hedley Bull, ‘Disarmament and the International System’ in Robert O’Neill, David
Schwartz (eds), Hedley Bull on Arms Control, (Palgrave Macmillan, 1987) 32.
administration reflected the idea that comprehensive nuclear disarmament was not achievable and that the ‘management’ of nuclear competition constituted a more suitable strategy for avoiding nuclear war. Consequently, the reduction of nuclear weapons was viewed as a means to an end rather than an end in itself.

Following the development of nuclear weapons by China, France and the UK, consensus grew in the late 1950s and early 1960s on the need to counter such realist motivations to acquire nuclear weapons with normative restraints in the form of a verifiable international agreement. Both Eastern and Western nuclear powers warned each other that the passiveness of leaders in addressing the nuclear arms race would lead to a gradual loss of control over the matter.

This prediction proved true when on 14 October 1962 with the Cuban Missile Crisis, which upset the nuclear equilibrium between the US and the Soviet Union, for the first time leading the world to the brink of nuclear war. Several practical and psychological effects resulting from this shock generated additional impetus for non-proliferation and disarmament efforts. The crisis demonstrated that once the strategic nuclear balance was lost, it would be difficult to prevent a full-scale nuclear war.

This realisation highlighted a mutual interest in crisis management, as well as the need for a common approach to nuclear arms control based on non-power-related measures. This demonstrated that diplomatic compromise was possible, even in a context of extreme political and military tension. US historian Arthur Schlesinger Jr., in a memorandum to President Kennedy shortly after the end of the Crisis, described it as ‘a beginning of fresh initiatives for peace, including a new attack on nuclear testing [and] disarmament (...)’

479 John Baylis, (fn 488) 230.
480 UNGA Resolution 1665 (XVI), 4 December 1961: on measures to prevent the spread of NW
481 Joint Message John F. Kennedy with Prime Minister Macmillan to Chairman Khrushchev on the Forthcoming Disarmament Negotiations in Geneva, 7 February 1962: ‘Unless some means can be found to make at least a start in controlling the quickening arms competition, events may take their own course and erupt in a disaster which will afflict all peoples (...);’ Soviet Memorandum on Partial Measures in the Field of Disarmament transmitted to UNGA, 20 September 1957, para 1.
Indeed, this experience provided fresh impetus for the negotiation of the NPT, which began in 1965 in the Eighteen-Nation Disarmament Committee (ENDC), a UN negotiating body which considered treaty proposals by the US and Soviet Union.\textsuperscript{484} It was charged with negotiating a treaty on nuclear non-proliferation, which was regarded as crucial in keeping the road to nuclear disarmament open.\textsuperscript{485} Aware of the dangers of continued expansion and diversification by NWS of their nuclear capability, the non-nuclear armed states sought security assurances not in guarantees of non-use, but in nuclear reductions and a promise of eventual disarmament.\textsuperscript{486} Hence, they insisted in a two-sided bargain, at the minimum imposing an obligation on nuclear armed states not to increase their arsenals.\textsuperscript{487}

When the NPT was adopted in 1968, its Article VI established an obligation to negotiate towards nuclear disarmament for the NWS as a counterpart to the non-proliferation obligations imposed on NNWS.\textsuperscript{488} The strong interest in pursuing disarmament repeatedly expressed by the NWS during and after the conclusion of negotiations had generated sufficient levels of confidence in the urgent pursuit of concrete disarmament measures, which now seemed achievable.\textsuperscript{489}

By 1978 no disarmament negotiations had been initiated and no real progress was achieved in halting this arms race. The UNGA convened its First Special Session Devoted to Disarmament (SSOD I) in 1978 with a view to organising future disarmament measures.\textsuperscript{490} For the first time, international consensus on a comprehensive disarmament strategy was achieved. With respect to nuclear disarmament, the Final Document elaborated a ‘Declaration of Principles’ which accorded priority to nuclear disarmament negotiations.\textsuperscript{491}

\textsuperscript{484} China and France did not take part in negotiations
\textsuperscript{485} Lord Chalfont (UK), ENDC PV.219, Meeting 219, 29 July 1965, p 8: recalls a statement made by John F. Kennedy correlating high numbers of nuclear armed states with low prospects of disarmament.
\textsuperscript{486} Lord Chalfont (UK), ENDC PV.231, Meeting 231, 9 September 1965, p 14
\textsuperscript{487} See Sweden (ENDC/PV.222 p. 13), India (ENDC/PV.223 p.15), United Arab Republic (ENDC/PV.224 p. 10), Brazil (ibid p. 14), Mexico (ibid p.30), Ethiopia (ENDC/PV.229 p. 12); UNGA resolution 2028 (XX), 19 November 1965; Gro Nystuen, Torbjorn Graff Hugo, \textit{The Nuclear Non-Proliferation Treaty}, (CUP, 2014) 378; UN Disarmament Commission Resolution 130/225, 15 June 1965: introduced disarmament as an essential element of the NPT bargain.
\textsuperscript{489} Foster (US), ENDC/PV.230, 7 September 1965, p 24; Protitch (Special Representative of the Secretary-General), ENDC/PV.381, 16 July 1968, p 6; Rosshohin (USSR), Ibid, p 10,11; Foster (US), Ibid, p 20; Myrdal (Sweden), ENDC/PV.383, 23 July 1968, p 4.
\textsuperscript{490} UNGA resolution 31/189 B, 31 December 1976
\textsuperscript{491} Final Document of SSODI, UNGA resolution A/S-10/4, p 5, para 20.
Secondly, the ‘Programme of Action’ emphasised the importance of ‘taking into account [both] the relative qualitative and quantitative importance of existing arsenals’ In this respect, it urged the negotiation of mechanisms to verify a) the cessation of the qualitative improvement of nuclear weapons systems, b) the cessation of the production of nuclear weapons and fissile material and c) a comprehensive programme including time-frames for the reduction and elimination of stockpiles.

Additionally, it recommended further bilateral US-Soviet talks on the reduction of and qualitative limitation on strategic nuclear arms. A further initiative to create a common strategy for the elimination of nuclear weapons was undertaken At the Reykjavik Summit in 1986. US President Reagan and Gorbachev, then-leader of the Soviet Communist Party, presented very diverging proposals and were unable to reach an agreement. Moreover, the success of India, Israel and Pakistan in acquiring nuclear weapons fundamentally changed the attitude of the formerly exclusive nuclear club, in particular given that these new de facto NWS remained outside of the NPT regime.

Following the end of the Cold War and the thawing of East-West relations, the diminishing deterrence value of nuclear weapons and a growing potential for dialogue generated hope for the facilitation of disarmament negotiations. Initial successes included the indefinite extension of the NPT in 1995, as well as the dismantlement of the Iraqi nuclear programme between 1991 and 1997. Furthermore, the abandonment by Belarus, Kazakhstan and

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492 Ibid, p 7, para 49.
493 Ibid, para 50.
494 Ibid, para 52.
Ukraine under the Budapest Memorandum in return for security assurances by the nuclear powers,\(^{499}\) demonstrated the practical feasibility of eliminating NW from national militaries. The following sections illustrate two important examples of practical approaches to nuclear disarmament. First, in Section 1.2., the nuclear disarmament of South Africa in 1991 will be discussed, as an example of unilateral denuclearisation. Secondly, in Section 1.3., the US-Russian approach to the reduction and elimination of nuclear stockpiles will illustrate the potential and challenges of a bilateral approach to nuclear disarmament.

### 1.2. Case Study: South African Unilateral Nuclear Disarmament

South Africa remains the only NWS to have voluntarily and unilaterally abandoned its NW programme to date. This case of unilateral nuclear disarmament merits closer attention, as it offers unique insights into early disarmament efforts, as well as an opportunity to evaluate the influence of the NPT regime in this case.

South Africa started its peaceful nuclear research programme in 1961, under the Atomic Energy Board. Possessing abundant uranium reserves, it built a uranium enrichment plant, the Y-Plant, for the purpose of developing its uranium enrichment technology.\(^{500}\) Despite the peaceful nature of this research, the sensitivity surrounding the enrichment process required this process to remain secret.\(^{501}\) In 1971, the South African Ministry of Mines approved an investigation into the applicability of nuclear explosives for mining and construction purposes, which concluded affirmatively. This led to the development of the first nuclear explosives for peaceful application and the construction of underground testing sites.

Several internal and external factors leading to the international political isolation of South Africa, prompted the transition from peaceful nuclear ambitions to the pursuit of a nuclear deterrent. For instance, during the 1970s, the international community, in particular the US, began to react more strongly to South Africa’s racially-influenced internal politics, restricting sales of conventional armaments to South Africa. Moreover, Soviet expansionist motivations

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\(^{499}\) Lisbon Protocol to the 1991 START; Budapest Memorandum: although these States successfully denuclearised, this did not constitute nuclear disarmament, as NW were merely handed over to Russia.


\(^{501}\) See also adverse international reaction to the detonation of a nuclear device by India in 1974
in South Africa and the presence of Cuban forces in Angola from 1975 made the government fearful of an invasion.

Despite the continued secrecy of the South African nuclear programme, growing suspicions in this respect led the international community to apply pressure on South Africa through nuclear isolation, in order to halt the development of its nuclear capability.\textsuperscript{502} In addition to the refusal by the US to export pre-paid fuel elements to South Africa in 1976, the US Congress additionally adopted the US Nuclear Non-Proliferation Act two years later, prohibiting the transfer of nuclear materials and technology to states not party to the NPT. Furthermore, the IAEA denied South Africa seats in both its Board of Governors and General Conference and the NWS unilaterally imposed restrictions on nuclear trade with South Africa.

This combination of conventional weakness, an increasing external military threat and growing political isolation led South Africa in 1977 to pursue a nuclear deterrent as the only means of preserving national security, in defiance of nuclear sanctions. The production of HEU was achieved at the Y-Plant by 1978.\textsuperscript{503} The government approved a three-phase plan, starting with continued ambiguity over its nuclear capability, followed by a phase combining deterrence with diplomacy, consisting in disclosure to selected states such as the US to solicit military support in the face of a threat to South African territory. Finally, in the case of denial of such support, the government would publicly disclose its nuclear programme accompanied by an underground nuclear detonation. In other words, no offensive tactical capability was envisaged and the nuclear deterrent was limited to only seven warheads.

In the 1980s South Africa’s accession to the NPT was contemplated and discussed with the US, the UK and the Soviet Union. However, the government at the time concluded that substantial political reform was necessary in order to make accession beneficial to South Africa. However, several events significantly improved South Africa’s external and internal security situation, including Namibian independence, the withdrawal of Cuban forces from South Africa and the presence of Cuban forces in Angola from 1975 made the government fearful of an invasion.

\textsuperscript{502} 1976, when a German spy working for the Soviet Union reported on the progress of the South African nuclear programme, leading the Soviets to turn to the US for support in a pre-emptive strike (the US rejected); Liberman, 2001, 50: In August 1977, the US discovered two test sites through satellite imagery, the US threatened to cut off the supply of fuel for the production of nuclear energy; 1979: possible nuclear test discovered off the coast of South Africa.

\textsuperscript{503} Waldo Stumpf, (fn 555).
Angola, the foreseeable dissolution of the Soviet Union and a beginning process of democratisation in South Africa, initiated by the new President de Klerk in 1989. These developments were critical to the decision of de Klerk to reverse South Africa’s nuclear programme. Shortly after being elected, he requested an expert committee to evaluate the costs and benefits of maintaining a nuclear deterrent.\textsuperscript{504} This committee recommended the abandonment of the nuclear deterrent but advised the government to maintain secrecy over it until after South Africa’s accession to the NPT. Following this report, de Klerk mandated a working group with the establishment of a timetable for disarmament with a view to joining the NPT at the earliest possible date.

The production of HEU was stopped immediately and South Africa’s nuclear programme was fully dismantled without any incidents by June 1991. Following its accession to the NPT in July and the conclusion of a safeguards agreement with the IAEA in September, an IAEA inspection team began to verify the completeness of South Africa’s declared inventory of nuclear materials in November 1991. Despite the government’s policy of transparency and openness this process took almost two years, given the necessity to verify South Africa’s nuclear activities over the previous two decades. In March 1993, President de Klerk revealed South Africa’s past nuclear programme to the public in an announcement. Special IAEA verification ended with the confirmation of the completeness of South Africa’s declaration by the General Conference of the IAEA in September 1993 and was followed by usual safeguards verification.\textsuperscript{505}

A number of observations can be made regarding the factors and motivations which drove South Africa’s successful denuclearisation. Different explanations for the decision to reverse its nuclear programme have been advanced. A first explanation is based on the realist argument that the threat justifying the development of a nuclear deterrent faded with the sudden improvement of South Africa’s security environment in the late 1980s.\textsuperscript{506} According to this explanation, the continuation of a nuclear programme was not only illogical, but also constituted an obstacle to South Africa’s acceptance within the international community.

\textsuperscript{506} Maria Babbage, (fn 290) 6-8.
However, it has been argued that the absence of appropriate delivery systems severely restricting the range of South Africa’s NW, as well as its conventional superiority to its direct neighbours, indicates that the removal of external threats does not explain the decision to disarm. The crucial role of threat removal has been further questioned by the drawing of parallels to the reluctant denuclearisation of the former Soviet republics Ukraine, Belarus and Kazakhstan, which only transferred their NW to Russia under severe pressure from the US and Russia despite the disappearance of the security threats related to the Cold War.

Alternatively, a second explanation is linked to South Africa’s three-phase deterrence strategy, which suggests that it only acquired NW for the purpose of coercing Western powers into defending it against the Soviet Union and to gain international acceptance, and intended to abandon its NW after the end of the Cold War. Given that its deterrence strategy never moved beyond phase one and accession to the NPT was more likely to lead to international acceptance than the continuation of a nuclear deterrent, it decided to denuclearise. This argument has also been questioned on the basis that, given the secrecy of the nuclear programme at the time, it might have been sufficient to end the apartheid regime to achieve the lifting of sanctions and the achievement of international acceptance.

A final explanation links South Africa’s decision to internal political factors. As the final apartheid government under de Klerk had already initiated a democratisation process and wanted to ensure continued domestic security, it wished to minimise the future internal political uncertainty implied by a future ANC government. The benefits stemming from reducing political uncertainty outweighed the sovereignty costs implied. Considering this, it has been argued that the apartheid regime pursued the dismantlement of its NW and the accession to the NPT with the aim of preventing its employment of NW and the reproduction of a nuclear capability by a future ANC government by binding it to the NPT.

While it is difficult to isolate one key justification for South Africa’s decision, a number of important factors can be identified, that are useful to consider in future disarmament efforts. For example, South Africa’s imminent democratisation made its government open to nuclear disarmament, thus suggesting that regime change facilitates such a decision. Indeed,

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508 Maria Babbage, (fn 290) 8-12.
509 Maria Babbage, (fn 290) 12-15.
democratic regimes have been considered more likely to forgo NW, suggesting that it is useful to concentrate efforts to incite disarmament measures on leaders of governments in transition. Furthermore, such a decision can be strengthened by offering assistance to states in transition through security assurances and thereby reducing the sovereignty costs implied by the abandonment of a nuclear deterrent.

Furthermore, given that South Africa continued to pursue a nuclear deterrent despite international pressure, this case demonstrates that the beneficial effects of profound domestic political change in reversing proliferation, outweigh economic or military pressure. In fact, international isolation resulting from such pressure reinforced South Africa’s nuclear ambitions.\(^{510}\) It can also be argued that pressure emanating from superpowers outside of the region of the state that is to be disarmed, is only effective to a certain extent.\(^{511}\) In other words, external pressure cannot compensate for ongoing real or perceived regional security threats.

The voluntary nature of South Africa’s decision to denuclearise also played a central role in the success of the disarmament process. This demonstrates that while imposed \textit{ad hoc} disarmament as undertaken in Iraq is likely to fail, a unilateral decision to disarm, based on higher perceived security benefits in relation to sovereignty costs can lead to sustainable nuclear disarmament.

However, it must be noted that the secrecy of South Africa’s nuclear programme allowed it to proceed on its own terms without the pressure of having to report to an international body such as the IAEA. Finally, the limited scope and level of technical sophistication of South Africa’s nuclear programme facilitated its dismantlement, allowing it to complete this process without international institutional support.\(^{512}\)

Despite its success, the South African decision to disarm is unique to its particular situation at the time and has not been reproduced since. Consequently, it does not constitute a generalisable model of nuclear disarmament. Moreover, its usefulness for clarifying the dynamics of the disarmament process itself is limited, as it was already completed at the time

\(^{510}\) See also, North Korea.

\(^{511}\) Waldo Stumpf, (fn 555).

\(^{512}\) Waldo Stumpf, (fn 555).
of its disclosure. A similar decision by one of the current NWS to give up its NWS status would generate pressure for other NWS to follow suit.\textsuperscript{513}

1.3. US-Russian Bilateral Disarmament Framework

These diverging positions on the necessity to establish a legally-binding multilateral nuclear disarmament treaty contradict the idea underlying Article VI NPT which consisted in the elaboration of such an instrument as a prerequisite for the practical elimination of NW. Although the understanding persists among the majority of NPT States Parties that ‘the final phase of the nuclear disarmament process (...) should be pursued within an agreed legal framework’,\textsuperscript{514} States Parties have failed to enter this final phase through the negotiation and conclusion of a nuclear disarmament instrument.

In the absence of a multilateral disarmament framework during the Cold War, disarmament measures were promoted through bilateral arms control measures and pursued as an auxiliary objective to non-proliferation. The US and the Soviet Union addressed the need for the reduction of their vast strategic nuclear forces on a bilateral level starting with the Strategic Arms Limitations Talks (SALT I) in 1969. As prospects for multilateral negotiations under the NPT faded with time, this bilateral disarmament framework was further developed, extended and renewed.

In total, the US and the Soviet Union/ Russia have adopted a total of eight treaties imposing limitations on the use of NW and reducing the number of warheads. Today, US-Soviet and US-Russian disarmament measures account for the vast majority of NW reductions to date. The US nuclear arsenal has been continuously reduced since its peak at 31,225 warheads in 1967 to a total inventory of approximately 7,000 warheads in 2016.\textsuperscript{515} While the Soviet/Russian arsenal was reduced from 45,000 warheads at its peak in 1988 to 7,300 warheads in 2016.\textsuperscript{516}

\textsuperscript{514} 2010 RevCon Final Document, Article VI, para 82
\textsuperscript{516} Hans Kristensen, Robert Norris, ‘Status of World Nuclear Forces’ (FAS, 2016): as of 1 March 2016 http://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/
Given the development over several decades of legal provisions and technical aspects including verification and enforcement mechanisms within this bilateral framework, it can be argued that ‘the road ahead for [a future multilateral disarmament] treaty will be influenced greatly by the road behind’.\(^{517}\) In other words, it is to be expected that this bilateral foundation will be used as a template for a multilateral nuclear disarmament regime. For this reason, it is useful to examine the development of this framework and its principal characteristics.

Bilateral negotiations between the US and the Soviet Union began to intensify shortly after the Cuban Missile Crisis in 1962, scared leaders attempted to counter the ongoing arms race with a prohibition on nuclear testing. However, as the issue of verification stood in the way of agreement on a comprehensive test ban, a provisional solution was favoured: the 1963 Partial Test Ban Treaty. It did not provide for verification by on-site inspection which therefore relied exclusively on NTM.\(^{518}\)

The search for internationally verifiable measures continued while verification of US-Soviet arms control relied on NTM, given that OSI had been a constant obstacle in bilateral negotiations. The objective of the negotiations was to determine verification methods that were sufficiently effective without being unacceptably intrusive.\(^{519}\) The result of this progress was ‘the emergence of a multitude of verification mechanisms varying in intrusiveness as one moved from the bilateral to the multilateral spheres.’\(^{520}\)

The first round of Strategic Arms Limitation Talks (SALT I) started in 1969. They produced the Anti-Ballistic Missile Treaty (ABM) in 1973, from which the US withdrew in 2002. Its follow-on SALT II, limiting ICBM and SLBM, was signed in 1979 but was abandoned when the Soviet Union invaded Afghanistan.

The Intermediate-Range Nuclear Forces Treaty (INF) was signed in December 1987 and entered into force in 1988, imposing the verifiable elimination of all ground-launched ballistic and cruise missiles.\(^{521}\) Its unprecedented intrusive verification system laid the ground work

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\(^{517}\) Statement by UN Under Secretary-General for Disarmament Affairs, Jayantha Dhanapala, ‘The NPT – Yesterday, Today and Tomorrow’ keynote address at the second PrepCom, 29 April 2003.

\(^{518}\) Berhanykun Andemicael, John Mathiason, (fn 269) 37.

\(^{519}\) Ibid, 40.


\(^{521}\) 500 – 5,500km range.
for verification of the subsequent START. In 1989, intrusive OSI were eventually agreed upon by both sides. This was a breakthrough which enabled a rapid progress in relations between the US and the Soviet Union. Measures of mutual OSI were added to the verification techniques available for both sides.

The first Strategic Arms Reduction Treaty (START I) was signed in 1991. START I was the first treaty to impose deep cuts in strategic NW stockpiles, by limiting the number of deployed strategic NW to 6,000 warheads and 1,600 delivery vehicles and proscribed the destruction of excess delivery vehicles. An intrusive verification system, based on OSI, data exchange (telemetry) and NTM (satellite imagery) was implemented to verify reductions ensured the predictability and stability of the strategic balance and provided a framework for further reductions. While reduction activities soon exceeded imposed limits, verification and transparency provisions maintained in place until the end of the treaty. START I was considered too complicated and expensive to continue and efforts were undertaken to replace it with a new treaty. START II was signed but abandoned as Russia withdrew from it in response to the US withdrawal from the ABM Treaty.

In 2010, the START process was revived. New START was signed between the US and Russia in 2010 and entered into force in February 2011. Although it fails to address missile defence, it limited US-Russian arsenals to 1,550 warheads and 700 strategic delivery systems. These treaty limits will take effect seven years after its entry into force and will be in effect for ten years. Its verification regime was further developed from that of START I.

Today, this bilateral framework is under strain, as the deterioration of US-Russian relations resulting from the Ukraine crisis has made a constructive dialogue difficult. As a consequence, the bilateral sphere no longer appears to be a reliable forum for nuclear disarmament. Bilateral reductions must therefore be replaced with effective negotiations on a multilateral disarmament agreement, using key elements from bilateral framework such as verification measures.

Moreover, the construction of an effective bilateral framework for NW reductions can be attributed to similarities in the composition of US-Russian nuclear forces making their

522 OSI, exhibitions, data exchange, notifications relative to strategic offensive arms and facilities, exchange of telemetry (missile flight-test data).
arsenals a class of their own. Consequently, the alignment of warhead numbers across NWS must be pursued part of efforts to establish a multilateral disarmament regime.\footnote{Lukasz Kulesa ‘Nuclear Disarmament (Multilateral, bilateral and humanitarian initiative)’ Special Session 11, EU Non-Proliferation and Disarmament Conference 2013, Brussels, 1 October 2013.} For this reason, bilateral reductions must remain in place. As the largest NW possessor states, the US and Russia remain key actors in NW activities, influencing not only the nuclear policies of other NWS but the dynamics of nuclear disarmament in general. Given their power to slow down, accelerate or block the disarmament process, they possess a particular responsibility for leadership in multilateral nuclear disarmament.\footnote{George Shultz, William Perry, Henry Kissinger, Sam Nunn, (fn 542); John Burroughs, ‘Treaty Regimes and International Law’ in Weapons of Mass Destruction Commission, Nuclear Disorder or Cooperative Security? May, 2007, 20: ‘The US is uniquely positioned to shape the development of the framework formed by [WMD treaties];’ David Lidington, Col 313WH, 6 November 2014 \url{http://www.publications.parliament.uk/pa/cm201415/cmhansrd/cm141106/halltext/141106h0001.htm}; Henry Sokolski, ‘Avoiding a Nuclear Crowd’ (Policy Review, 2009) 24: Twenty-one possible strategic relationships between NWS have been identified, of which the six central ones involve the US; Council of the European Union, ‘EU Strategy against Proliferation of Weapons of Mass Destruction’ 10 December 2003, para 20: ‘disarmament measures can lead to a virtuous circle, just as weapons programmes can lead to an arms race.’}

2. The Legal Nuclear Disarmament Regime

2.1. The Nuclear Non-Proliferation Treaty – Article VI

The NPT is often referred to as the ‘cornerstone’ of the nuclear non-proliferation and disarmament regime and remains the only multilateral instrument establishing legally-binding obligations related to nuclear disarmament to date.\footnote{‘High Representative Kane Calls Cornerstone of the Global Nuclear Non-Proliferation Regime a “Living” Treaty’, UNODA Updates, 12 May 2012 \url{http://www.un.org/disarmament/update/20120512/}; US Delegation to the 2015 NPT RevCon, ‘The Nuclear Non-Proliferation Treaty: Disarmament Pillar’ (Bureau of Public Affairs, 2015) \url{http://www.state.gov/documents/organization/239797.pdf}; Those States which had conducted NW tests before 1967.} The NPT’s quasi-universality reflects the long-standing global consensus on the need to regulate, and eventually eliminate, NW. Yet, it is the only weapons-related treaty dividing its membership into two classes, on the one hand imposing a detailed and comprehensive non-proliferation regime on NNWS, while establishing Article VI as a relatively vague stand-alone obligation for NWS on the other.\footnote{Those States which had conducted NW tests before 1967.} Over 45 years since its adoption, the exemption of NWS from the legal prohibition of NW possession persists, despite reaffirmations that the NPT only constituted a first step towards
disarmament and was not intended to be a license for the indefinite possession of NW.\textsuperscript{527} Against this background, the scope and compulsoriness of the legal obligation embodied in Article VI will be determined, in order to define the standard of duty against which the performance of States Parties will be measured. In other words, this section will assess the internal effectiveness of the nuclear disarmament provision. Article VI reads as follows:

“Each of the Parties to the Treaty undertakes 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.”\textsuperscript{528}

Article VI requires States Parties to achieve the three goals listed, namely the cessation of the nuclear arms race at an early date, nuclear disarmament and a treaty on GCD, through good faith negotiations. However, controversy endures regarding the exact content of the obligation ‘to pursue negotiations on effective measures (...) relating to nuclear disarmament’. Indeed, interpretations of this obligation put forward by NWS and NNWS vary, reaching from an attempt to extrapolate the maximum value from it by requiring effective nuclear disarmament, to an interpretation watering down the text to the point where obligations become reduced to mere ‘goals.’\textsuperscript{529}

The VCLT provisions on the interpretation of the legal obligation in Article VI underlie this analysis.\textsuperscript{530} For instance, the drafting history of Article VI and the circumstances of the NPT’s conclusion offer important insights into the different interests put forward during the elaboration of the text. Moreover, ‘subsequent agreements’ between states such as NPT RevCon Final Outcome Documents will reflect a consensus on the interpretation of the text.\textsuperscript{531}

\textsuperscript{527} Statement by Jayantha Dhanapala, the President of the 1995 NPT Review and Extension Conference, (NPT/CONF.1995/PV.19), 13 May 1995: ‘permanence of the treaty does not represent a permanence of unbalanced obligations, nor does it represent the permanence of nuclear apartheid between nuclear haves and have nots.’; UN Secretary-General U Thant, Official Records of the UNGA, Twenty-First Session, supplement 1A/201/Add.1.

\textsuperscript{528} Randy Rydell, ‘Turning the Page on Pax Atomica’, Arms Control Today, October 2015, 33.

\textsuperscript{529} Daniel Joyner, (fn 38) 70.

\textsuperscript{530} NPT was concluded prior to the entry into force of the VCLT. However, the rules on treaty interpretation (Article 31, 32 VCLT) are considered customary international law and are thus applicable to the NPT.

\textsuperscript{531} A supplementary means of interpretation in the sense of Article 32 VCLT; Article 31 (3) (a) VCLT: ‘There shall be taken into account, together with the context, any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions’; Daniel Joyner, (fn 38) 411; Burrus Carnahan, ‘Treaty Review Conferences’, Vol 81 (AJIL, 1987) 226 – 229: document whose substance reflects ‘an agreement as to the interpretation of a provision’
The ICJ adopted a finalistic approach in its 1996 advisory opinion, concluding that Article VI required states to effectively reach an agreement on disarmament. 532 This view is affirmed by the Final Outcome Documents of both the 2000 and 2010 RevCons, which speak in favour of a positive obligation to achieve, not simply pursue, nuclear disarmament. 533 Furthermore, the 1965 UNGA resolution 2028 (XX) appears to reflect the intention of drafters to create a treaty on nuclear non-proliferation and disarmament leading towards GCD. 534

Inversely, NWS tend to dilute the obligatory character of disarmament negotiations, in some cases reducing the obligation under Article VI to a ‘good faith effort in pursuit of disarmament negotiations.’ 535 In addition to this exclusion of actual negotiations from the scope of the obligation, NWS marginalise the disarmament pillar of the NPT by placing excessive emphasis on non-proliferation issues. 536 This practice is in line with the absence of references to nuclear disarmament in the early drafts of the NPT proposed by both the US and the Soviet Union. 537

A third, intermediate, construal of Article VI challenges the two-fold obligation suggested by the ICJ, while upholding the view that Article VI calls for the pursuit of good faith negotiations. 538 Indeed, it can be argued that during negotiations, the US and the Soviet Union only accepted to undertake negotiations but not to achieve a disarmament agreement. 539 Moreover, the phrase ‘to pursue negotiations in good faith’ was originally proposed by

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532 Para of advisory opinion which speaks of the obligation to reach an agreement “and bring to a conclusion”
533 Daniel Joyner, (fn 38) 412-413.
534 UNGA resolution 2028 (XX) 19 November 1965, see third principle of negotiations of an NPT listed ‘the treaty should be a step towards the achievement of GCD and, more particularly, nuclear disarmament’
535 Christopher Ford, ‘Debating Disarmament: Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons’ Vol 14 (3) (Nonproliferation Review, 2007) 403, 411: argued that the language drafters chose in Article VI, ‘leaves open the possibility that such negotiations may not take place, let alone succeed.’
538 Daniel Joyner, (fn 38) 97: the ICJ opinion might “stretch the meaning of the terms of Article VI”; Lord McNair, The Law of Treaties, (Clarendon Press, 1961) 2ed, 27, 29: an ‘obligation assumed by two or more parties to negotiate in the future with a view to the conclusion of a treaty’; see also PCIJ, Railway Traffic between Lithuania and Poland, Advisory Opinion, 15 October 1931, No. 42 para 29
539 Mohammed Shaker, (fn 582) 567.
Mexico, which later reaffirmed that Article VI did not impose the achievement of an outcome. Others argue that this would be beyond the power of any individual state. A comparison of Article VI with Article III (4), NPT, which explicitly mentions the obligation of NNWS to conclude safeguards agreements with the IAEA, and with Article 33, UN Charter, which requires states to seek solutions through negotiations, consolidates such an interpretation. Furthermore, taking into account the context, object and purpose of the treaty, it can be argued that Article VI has an aspirational character.

The good faith requirement included in Article VI and widely accepted in international law, adds a nuance to its interpretation. In short, the good faith standard requires a degree of openness to concessions on the part of both parties, sustainability in the negotiation process, as well as a manifestation of a vision of the ultimate goal of nuclear disarmament. Hence, it can be argued the mere process of initiating and conducting negotiations absent the intention of reaching an agreement do not fulfil compliance requirements under Article VI.

Several further elements require clarification. Firstly, the absence of a timeline for results, lamented by NNWS, raises questions regarding the temporal requirements for negotiations

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540 See Article 31 (1) VCLT; Statement delivered by the Delegation of Mexico, Geneva, 2015 Session of the Conference on Disarmament, Switzerland, August 17, 2015: http://mision.sre.gob.mx/oi/images/stories/pdf/disarmament_17ago.pdf ‘Negotiating is not the same as reaching an agreement, and an agreement is not the same as an outcome. We believe that the CD can start negotiations, without reaching an agreement immediately. Reaching an agreement is a privilege of a negotiation. It is not the negotiation itself.’


542 Daniel Joyner, (fn 38) 407.

543 Article 31 (1) and (2) VCLT; the Preamble of the NPT requires ‘effective measures in the direction of nuclear disarmament’, Richard Gardiner, Treaty Interpretation (OUP, 2008) 186-187: preamble as a source of the object and purpose of the treaty; Daniel Joyner, (fn 38) 392.

544 Ian Brownlie, Principles of Public International Law, 7th ed (OUP, 2008) 19; Article 2 (2) UN Charter; Article 26 VCLT; ICJ Advisory Opinion, para 102.

545 ICJ, North Sea Continental Shelf Cases (Federal Republic of Germany v. Denmark; Federal Republic of Germany v. Netherlands), Judgment of 20 February 1969, 7 para 2; see also: Lake Laxou Arbitration (France v. Spain), Award of 16 November 1957, 24 ILR 101, 128 (‘the obligation to negotiate in good faith may be violated by an unjustified breaking off of the discussions, abnormal delays, disregard of the agreed procedures, systematic refusals to take into consideration adverse proposals or interests.’); Government of Kuwait v. American Independent Oil Company (Aminoil), Award of 24 March 1982, 66 ILR 519, 578: (‘sustained upkeep of the negotiations over a period appropriate to the circumstances, awareness of the interests of the other party, and a persevering quest for an acceptable compromise.’); PCIJ, Railway Traffic between Lithuania and Poland, Advisory Opinion, 15 October 1931, No. 42 para 29: negotiations must be pursued ‘as far as possible.’; ICJ, Gabčíkovo-Nagymaros Dam Project (Hungary v. Slovakia), Judgment of 25 September 1997, para 142; Anthony D’Amato, ‘Good Faith’ in Rudolf Bernhardt, Max Planck Institute for Comparative Public Law and International Law (eds), Encyclopedia of Public International Law (North-Holland, 1992) 599 – 601.

546 Daniel Joyner, (fn 38) 407.
under Article VI.\textsuperscript{547} A general reading of the terms of the provision suggest that the sole time element included, namely ‘at an early date’, only applies to the cessation of the arms race, implying that the nuclear disarmament and GCD goals are less urgent. What could be qualified as an ‘abnormal delay’ in the sense of the \textit{Lake Lanoux Arbitration}, also remains unclear. This ambiguity allows NWS to speak of the ‘ultimate elimination of NW’ and postpone negotiations indefinitely.

Second, contrary to the obligation to ‘pursue negotiations in good faith…on treaty on GCD under strict and effective international control’, the obligation to negotiate measures on nuclear disarmament lacks a clear reference to a treaty, suggesting that the negotiation towards a treaty is not necessary. For instance, the Thirteen Practical Steps adopted at the 2000 RevCon, listed the adoption of the CTBT, FMCT and START II as necessary measures for the implementation of Article VI.\textsuperscript{548} Adopted by consensus, they reflect a ‘subsequent agreement’ on the interpretation of Article VI and in particular the term ‘effective measures’.\textsuperscript{549} Consequently, measures to implement the 13 Steps constitute acts of compliance with Article VI.\textsuperscript{550}

2.2. The Marshall Islands Lawsuits

While the NNWS have repeatedly criticised the inaction of the NWS in starting a multilateral negotiating process, no effective attempts to enforce this obligation had ever been undertaken prior to 2014.\textsuperscript{551} However, on 24 April of that year, the Republic of the Marshall Islands (RMI), a small Pacific island state, brought nine separate but related lawsuits against all NWS at the ICJ, for breach of their legal obligation under Article VI to ‘pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament (...)’.

\textsuperscript{547} Mohammed Shaker, (fn 581) 575.
\textsuperscript{548} NPT Review Conference Final Documents, constitute ‘subsequent agreements’ in the sense of Article 32 VCLT and can therefore be referred to in the interpretation of Article VI.
\textsuperscript{549} Article 31 (3) (a) VCLT: ‘Subsequent agreement between the party’
\textsuperscript{550} Peter Weiss, John Burroughs, Michael Spies, ‘The Thirteen Practical Steps: Legal or Political?’ (LCNP, 2005) \url{http://lcnp.org/disarmament/npt/13stepspaper.htm}
\textsuperscript{551} E.g. Statement by Ambassador Hesham Badr, Assistant Minister of Foreign Affairs for International Organisations and Multilateral Affairs of Egypt, Second Session of the NPT PrepCom to the 2015 NPT RevCon, General Debate, 23 April 2013, 3.
\textsuperscript{552} Application para 2; Advisory Opinion para 105, point 2F.
This unprecedented step came as a surprise to the international community, in particular to the NWS who are in the midst of undertaking or planning the modernisation of their nuclear forces. The *de jure* NWS had thus far justified the absence of negotiations on the grounds of a legal understanding of their Article VI obligation which is favourable to the licit continuation of their nuclear programmes.

The seemingly unlikely adoption of enforcement measures against nuclear powers such as the US and Russia also offered the remaining non-NPT NWS a sense of security. In addition, they believed that the non-opposability of Article VI to them protected their nuclear programmes from external legal measures. In other words, the NWS were unprepared for the eventuality of an individual state challenging the legality of their nuclear activities and potentially obstructing the established dynamic of inaction within the nuclear disarmament context. Indeed, these lawsuits attempted to challenge this *status quo* while attempting to reiterate and clarify existing legal obligations under Article VI.

This self-imposed responsibility of the RMI to take on the world’s largest military powers in an international court, stems from its personal experience with NW. Following US military occupation of the Marshall Islands during WWII, the US continued to exercise administrative control over the islands, which they soon began to use as a ground to conduct 67 nuclear tests between 1947 until 1958. The radioactive fallout from these tests spread across the Islands, having serious health implications for the islanders, including birth anomalies and illnesses, sometimes forcing people to leave the Islands.553

The US and the Marshall Islands concluded an agreement in 1986, which made their sovereignty in internal and foreign affairs conditional on the acceptance of the continued military authority of the US over the islands.554 The desire of the Marshall Islands to gain independence was exploited by the US for the purpose of securing the continued operation of test sites on the islands. Although the RMI gained full independence in 1990, the agreement excluded all responsibility of the US for the future or past effects of its nuclear testing programme.

For years, the RMI pursued compensation for the damage suffered from the nuclear tests but all attempts were rejected in US courts on procedural grounds (statutes of limitation). Eventually, the RMI ran out of judicial avenues and the necessary funds to further pursue monetary compensation. The realisation that the US was going to escape any responsibility for the wrongdoing the Marshallese population had suffered, the government of the RMI decided to address the dangers posed by the continued existence of NW in a larger forum. Despite its personal agenda, the RMI asserted that its legal action against the NWS at the ICJ was driven by its frustration about the violation by NWS of their international obligations.

On 24 April 2014, the RMI deposited nine Applications in the ICJ to hold the NWS accountable for violations of international law. The legal basis of the RMI’s claim was the obligation under Article VI NPT to negotiate in good faith on effective measures and for those who are not States Parties to the treaty, to abide by their corresponding obligations under customary international law.

The lawsuits neither sought monetary compensation nor intended to re-open question of legality, but rather seek on the one hand, to obtain the legal qualification of the inaction of NWS with regard to their Article VI- and corresponding customary obligations, and on the other hand, compliance by NWS with this obligation. For this purpose, the RMI requested declaratory and injunctive relief by asking the ICJ to make a judgment of breach and to order the states in question to take all necessary measures to comply with their legal obligations within one year.

Given that only the UK, India and Pakistan consented to the compulsory jurisdiction of the ICJ under Article 36 (2) of the ICJ’s Statute, the remaining six cases against China, France, Israel, North Korea and the US could not be heard by the ICJ.

In 1996, the ICJ addressed nuclear weapons for the first time in its advisory opinion on the Legality of the Threat or Use of Nuclear Weapons. The UNGA had first raised this matter in 1961. Following more than three decades, it requested the ICJ to render an advisory opinion

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555 Zohl De Ishtar, (fn 63) 300 – 301.
556 RMI Application instituting proceedings against the UK, 24 April 2014, 3, para 2.
557 Article 36 (2), ICJ Statute: ‘The states parties to the present Statute may at any time declare that they recognize as compulsory ipso facto and without special agreement, in relation to any other state accepting the same obligation, the jurisdiction of the Court in all legal disputes (...)’
558 ICJ, Anglo-Iranian Oil Case [1952] ICJ Rep 93: Unless these states provided it with an ad hoc competence to do so under the doctrine of forum prorogatum.
on this question in 1994. In this opinion, it only offered an incomplete answer, leaving open the question of their legality under ‘extreme circumstances of self-defence’.

Admitting the dangers of such ambiguity ‘with regard to the legal status of weapons as deadly as NW’ for the stability of the international legal, it considered ‘long-promised nuclear disarmament’ as the most appropriate remedy to this legal uncertainty. In this sense, the lawsuits presented the Court with an important opportunity to clarify several key legal issues related to the scope of the obligations under Article VI which remained open since its 1996 advisory opinion.

The first legal question to be addressed by the Court was whether a customary obligation existed corresponding to the obligation contained in Article VI NPT. The RMI contended that ‘the obligations enshrined in Article VI of the NPT are not merely treaty obligations; they also exist separately under customary international law’ which extends their personal scope to states which formally remain outside of the NPT regime. This was crucial as the existence of a legal obligation for India and Pakistan hinged on the bindingness of the obligation contained in Article VI on states not parties to the NPT.

Secondly, in its Applications, the RMI qualified the obligation to negotiate under Article VI as a two-fold obligation to adopt a certain conduct and to achieve a precise result, namely nuclear disarmament in all its aspects. Regarding this point, the Court would have had an opportunity to clarify the exact scope of the obligation to negotiate under Article VI, as an obligation of conduct or result, which continues to remain controversial.

The third legal issue concerned the breach of the good faith obligation contained in Article VI alleged by the RMI. Had the Court found that the Respondents were, in fact, under no obligation to conclude negotiations, it would still have had to assess with ‘utmost rigour’ whether their conduct leading up to and during negotiations was coherent with the good faith obligation in Article VI. In the context of Article VI, the good faith conduct requires NWS not to ‘betray the legitimate trust NNWS have invested in hopes that the promised

559 Application RMI against India, 24 April 2014, para 41 and Application RMI against Pakistan, 24 April 2014, para 36, citing Nicaragua, ICJ Reports 1984, 392, 94.
560 See above, 13 - 15
negotiations would lead swiftly to an agreement’ \(^{562}\) by failing to undertake genuine efforts to bring about negotiations or engaging in conduct which risks hindering the achievement of this goal. \(^{563}\)

‘The UK’s maintenance and qualitative improvement of nuclear forces presenting all the threats outlined above, taking place at the same time as the UK is failing to live up to its central obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament.’ \(^{564}\)

Thus far, NWS have attempted to demonstrate their good faith performance of Article VI obligations and their general commitment to nuclear disarmament by referring to the numerical reductions of their arsenals. \(^{565}\) However, the RMI cases intended to challenge this narrow focus on the size of stockpiles by arguing that the parallel diversification modernisation, upgrade and like-for-like renewal of their nuclear programmes is incompatible with their good faith requirement under Article VI. \(^{566}\)

The fourth legal issue, which was raised by India in the context of its preliminary objections, was the justification for the continuation of NW programmes on the grounds of self-defence in the sense of Article 51 UN Charter. \(^{567}\) The ICJ would have had to examine whether the current regional security environment in South Asia creates such an ‘extreme situation of self-defence’ which could preclude the unlawfulness of both the continuation and upgrade of its NW programme and the continuation of the nuclear arms race. \(^{568}\) In addition, it would have had to prove that the maintenance of its NW programme constitutes an act of self-defence.

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\(^{563}\) Final Document of the Tenth Special Session of the UNGA on Disarmament, A/RES/S-10/2, 30 June 1978, paras 20, 47, 50.

\(^{564}\) RMI v. UK Memorial, 16 March 2015, 20, para 28

\(^{565}\) Application RMI against UK, para 111; Application RMI against India, para 62; Application RMI against Pakistan, para 57: the RMI contends that such measures stand in conflict with the Respondents’ commitment to nuclear disarmament and the cessation of the nuclear arms race.

\(^{566}\) Ibid, 10 – 11; 12; 14-15; 16: The US is planning to maintain and modernise all three legs of its triad; it is suggested that Russia intends to replace obsolete NW and prioritises the upgrade of its force; France is currently completing the modernisation of its sea- and air components, extending their life cycle to 2050; while China’s modernisation programme focuses on the improvement of survivability and retaliatory capability of its arsenal, is the only NWS engaging in the quantitative expansion of its NW programme (new warheads); North Korea aims to develop a NW to be delivered by a long-range missile.


\(^{568}\) ILC, Draft Articles on State Responsibility, Article 21: ‘The Wrongfulness of an act of a State is precluded if the act constitutes a lawful measure of self-defence taken in conformity with the Charter of the United Nations’
A re-examination by the Court of the issue of self-defence would have clarified uncertainties regarding the threat or use of NW in ‘extreme situations of self-defence’ more generally. Such a clarification may have reduced opportunities for NWS to justify the maintenance of their nuclear forces on these grounds. However, the cases did not reach the merits stage at which these issues would have been addressed. Following the submission of the RMI’s memorial on 16 March 2015, the UK raised five preliminary objections to the jurisdiction of the Court and the admissibility of the case, which led to the suspension of the proceedings on the merits of the case. On 16 September 2015 and 1 December 2015 respectively, India and Pakistan made similar preliminary objections to those raised by the UK.

Ob 5 October 2016, the Court upheld the first objection to jurisdiction on the grounds of the absence of a dispute between the Parties and found that, lacking jurisdiction, it could not proceed on the merits of the case. The court recalled that

‘in order for a dispute to exist, the two sides must hold clearly opposite views concerning the question of the performance or non-performance of certain international obligations. It states that a dispute exists when the evidence demonstrates that the respondent was aware, or could not have been unaware, that its views were positively opposed by the applicant.’

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570 The Strategic Defence and Security Review, published on 19 October 2010 Cm 7948: in its 2010 Strategic Defence and Security Review the UK stated that it would ‘consider using nuclear weapons in extreme circumstances of self-defence, including the defence of [its] NATO allies.’

571 Article 79 para 5 of the Rules of the Court; 1. No justiciable dispute existed on the date of the filing of the Application (Preliminary Objections of the UK, 15 June 2015, 12 – 25); 2. A substantial part of the alleged period of breach falls outside the time frame for which the parties’ optional clause declarations confer jurisdiction on the Court (ibid para 63 – 64, 74); 3. A reservation included in the UK’s optional clause declaration (ibid para 76, 82, Declaration of the UK Recognising the Jurisdiction of the Court as Compulsory, 31 December 2014, para 1, (iii) http://www.icj-cij.org/jurisdiction/?p1=5&p2=1&p3=3 &code=GB ; Declaration of the Marshall Islands Recognising the Jurisdiction of the Court as Compulsory, 24 April 2013); 4. The absence of other states whose essential interests are directly engaged by the RMI’s claim (ibid para 83, 92 -93, 95, 97, 103); 5. ICJ Judgment would not be capable of effective application (‘susceptible of any compliance’) given that willingness of third states to negotiate with UK would be needed (ibid para 109).


The Court dismissed the Court’s assertion that the RMI’s statements in multilateral fora were evidence of a dispute between it and the UK. It noted that they could not be interpreted as allegations that the UK in particular was in breach of its legal obligations and that consequently, the UK could not have been aware that the RMI was making such an allegation against it.\textsuperscript{574}

\subsection*{2.3. The Treaty on the Prohibition of Nuclear Weapons}

Similar to the RMI’s frustration with the status quo in nuclear disarmament, a sentiment of discontent has also become noticeable within the wider international community. Until 2017, the legal environment regulating the use and possession of NW on a global level remained fragmented and was made up of only partial instruments centring on the controversial Article VI. In its 1996 Advisory Opinion on the \textit{Legality of the Threat or Use of Nuclear Weapons}, the ICJ admitted the dangers for the stability of the international legal order of ambiguity ‘with regard to the legal status of weapons as deadly as NW.’\textsuperscript{575} It considered ‘long-promised nuclear disarmament’ as the most appropriate remedy to this legal uncertainty.\textsuperscript{576} This growing understanding that the achievement of a world free of nuclear weapons required the further development of international law, led NNWS to take more active steps towards concrete disarmament measures.

A first development was highlighted by the Humanitarian Initiative, which consisted in a series of three international conferences convened to address the humanitarian impacts of nuclear weapons. The initiative, a rhetorical way of reinstating Article VI, had a significant impact by reviving the multilateral diplomatic debate surrounding nuclear disarmament. It underscored the need to codify a prohibition on the use and possession of NW, claiming that the inherent incompatibility of NW with IHL makes their abolition imperative. The Humanitarian Pledge promoted a treaty to outlaw nuclear weapons by seeking ‘to identify and pursue effective measures to fill the legal gap for the prohibition and elimination of nuclear weapons.’\textsuperscript{577}

\textsuperscript{574} Ibid (Marshall Islands v UK) paras 49, 52, 57
\textsuperscript{575} ICJ, Advisory Opinion, \textit{The Legality of Nuclear Weapons}, para 89.
\textsuperscript{576} Ibid.
\textsuperscript{577} Federal Ministry of Austria, Humanitarian Pledge, ‘Vienna Conference on the Humanitarian Impact of Nuclear Weapons’ Humanitarian Pledge, issued by Austria at the Third Conference on the Humanitarian Impact of Nuclear Weapons, Vienna, Austria (December 9, 2014)
This initiative gave fresh impetus to developments in the UNGA. In its resolution 70/33, the UNGA convened an open-ended working group on taking forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons. The OEWG concluded that ‘concrete effective legal measures, legal provisions and norms will need to be concluded to attain and maintain a world without nuclear weapons.’ The Group recommended the convening of a conference to negotiate a legally binding treaty to prohibit nuclear weapons. The UNGA followed this recommendation and convened a ‘United Nations Conference to Negotiate a Legally Binding Instrument to Prohibit Nuclear Weapons, Leading to their Total Elimination’ in resolution 71/258 of 23 December 2016.

Official records show that 135 states participated in negotiations. On 7 July 2017, the Treaty on the Prohibition of Nuclear Weapons was adopted in the UNGA by 122 votes in favour of the treaty, one vote against (Netherlands) and one abstention (Singapore). This vote successfully concluded the negotiations and the Treaty was opened for signature on 20 September 2017 and enter into force 90 days following the 50th ratification. In 2017, ICAN received the Nobel Peace Prize ‘(...) for its ground-breaking efforts to achieve a treaty-based prohibition of [nuclear] weapons’ which ‘have not yet been made the object of a similar international legal prohibition’ as biological and chemical weapons.

Indeed, it is the first legal instrument aiming to universally outlaw nuclear weapons. In contrast to the NPT, the TPNW categorically prohibits any possession of nuclear weapons. It establishes a comprehensive set of prohibitions on participating in any nuclear weapon

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activities including the development, testing, production, acquisition, possession, stockpiling, use or threat to use nuclear weapons.\textsuperscript{585}

Furthermore, the treaty prohibits the transfer and deployment to and stationing in the territory of any State Party or place under its jurisdiction or control.\textsuperscript{586} This signifies that NNWS are no longer authorised to accommodate nuclear weapons on their territories. This is important in particular given the tactical nuclear weapons the US continues to deploy in European NNWS.\textsuperscript{587} TPNW States Parties will no longer be authorised to receive US nuclear weapons following the entry into force of the Ban Treaty.

The Effectiveness of the Ban Treaty

All nine \textit{de facto} NWS remained absent from all stages in the negotiation and adoption process of the Ban Treaty. The NWS put forward different arguments for their non-participation in negotiations, including concerns regarding hold-out states such as North Korea, security considerations and the ineffectiveness of the treaty. US Ambassador to the UN, Nikki Haley asserted that

\begin{quote}
\textquote{t}here is nothing I want more for my family than a world with no nuclear weapons. But we have to be realistic. Is there anyone that believes that North Korea would agree to a ban on nuclear weapons? (...) In this day and time, we can’t honestly say that we can protect our people by allowing the bad actors to have [nuclear weapons] and those of us that are good, trying to keep peace and safety, not to have them.\textsuperscript{588}
\end{quote}

The British Ambassador to the UN, Matthew Rycroft justified the United Kingdom’s absence from negotiations by questioning the ability of the treaty to lead to nuclear disarmament. He explained that ‘the UK is not attending the negotiations on a treaty to prohibit nuclear weapons because we do not believe that those negotiations will lead to effective progress on global nuclear disarmament.’\textsuperscript{589} The French Ambassador Alexis Lamek stated that ‘in the current perilous context, considering in particular the proliferation of weapons of mass

\textsuperscript{585} Article 1 (a), (d), TPNW.
\textsuperscript{586} Article 1 (c), (g), TPNW.
\textsuperscript{589} Ibid.
destruction and their means of delivery, our countries continue to rely on nuclear deterrence for security and stability.'\(^{590}\)

In 2016, the US published a non-paper which it submitted to its NATO allies. Emphasising NATO policy on security and deterrence, as well as the ‘proven step-by-step approach to nuclear disarmament’, it urged its allies to ‘vote “no” on any vote in the UN First Committee on starting negotiations for a nuclear ban treaty.’\(^{591}\) On the day of the conclusion of the TPNW, the US, UK and France issued a joined statement which emphasised their continued commitment to the NPT and reflected the US stance in its NATO paper. It declared that they

‘do not intend to sign, ratify or ever become party to it [and that] a purported ban on nuclear weapons that does not address the security concerns that continue to make nuclear deterrence necessary cannot result in the elimination of a single nuclear weapon and will not enhance any country’s security.’\(^{592}\)

This definite non-participation of the NWS and their vigorous rejection of the treaty appears to stand in contradiction to their ‘continued to commitment to the NPT.’ Given that nuclear disarmament is the ultimate objective of Article VI NPT, the joint declaration to not ‘ever become party’ to the TPNW may be interpreted as the absence of a genuine intention to pursue nuclear disarmament.

The four de facto NWS, namely India, Pakistan, North Korea and Israel, also remained absent from negotiations on the TPNW. At the General Debate of the UNGA First Committee, India insisted that the TPNW does not create any legal obligations for it, but expressed its willingness to work with TPNW signatories in disarmament forums to ‘prohibit their use under any circumstance and to eliminate them globally under international verification.’\(^{593}\) Pakistan, without explicitly naming the TPNW, insisted that solutions to the ‘impasse of the disarmament machinery’ must be pursued in established forums with ‘the participation of all

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590 Ibid.
592 United States, United Kingdom and France, Joint Press Statement from the Permanent Representatives to the United Nations of the United States, United Kingdom, and France following the Adoption of a Treaty Banning Nuclear Weapons, 7 July 2017.

Besides raising new questions regarding the compliance of the de jure NWS with their good faith obligation in Article VI, their stance raises questions regarding the TPNW’s future adequacy in serving as a legal framework for actual elimination efforts. In other words, can a nuclear disarmament treaty can ever be effective without the participation of the states possessing the arms which it aims to outlaw? How much can the treaty achieve in practice without their participation?

In his Factual Summary, the Chair of the 2018 PrepCom presented the different views that were expressed in the PrepCom in favour and against the TPNW.\footnote{NPT PrepCom Chair, Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Draft Chair’s Factual Summary, 3 May 2018, NPT/CONF.2020/PC.II/CRP.3. (http://reachingcriticalwill.org/images/documents/Disarmament-fora/nnpt/prepcom18/documents/factual-summary.pdf accessed 19 December 2018).} He noted that some proponents of the TPNW considered it as ‘an effective measure under Article VI of the NPT by creating a legally binding prohibition on nuclear weapons.’\footnote{Ibid p 6, para 40.} It was also described as a measure further strengthening the NPT, to which it was complementary.\footnote{Ibid.} Other states expressed their opposition to the treaty, asserting that the TPNW ‘would not contribute to the reduction or limitation of nuclear weapons’ and ‘could create an alternative and contrary standard to the NPT.’\footnote{Ibid, para 41.}

Proponents of the treaty may assert that, rather than having been a futile effort, the adoption of the Nuclear Ban Treaty was a logical next step for the NNWS. Not simply because forgoing
the participation of the NWS made it achievable, but because it generated normative pressure by the NNWS against the NWS, which Ritchie and Egeland call “productive power.”601 Indeed, the existence of clear and legally binding norms banning nuclear weapons is very likely to contribute to the delegitimisation of nuclear weapons as military tools and thereby reduce the likelihood of their use, which are important steps on the path to their elimination.602 As Rebecca Johnson of ACRONYM argues,

“[i]nternational law won’t uninvent the weapon but will contribute to accelerating its marginalisation as an instrument of policy or defence. [It] will change ... the calculus of political and military decision-making about acquiring, replacing, keeping, modernising nuclear weapons [and] give the world better tools to prevent the rogues or extremists at the margins from ever getting hold of these weapons of mass destruction.”603

Ramesh Thakur explains that although the TPNW may not develop immediate effects for nuclear disarmament, it is intended as a tool to ‘reshape the global normative milieu (...) lessen their attractiveness and change the incentive structures for states that possess them and others that rely on extended nuclear deterrence.’604

The TPNW also constitutes a significant and necessary contribution to the development of the international law governing WMD disarmament in that it puts nuclear weapons on the same footing as chemical and biological weapons, which have been outlawed by comprehensive disarmament treaties for decades. However, unlike the comprehensive disarmament regimes of the CWC and BWC, the Ban Treaty was not intended as a detailed legal regime containing all sophisticated technical mechanisms required for elimination measures.

Rather, it is intended to serve as a normative core around which the technical aspects of the TPNW regime will be constructed through additional negotiations. For instance, the question of verification will be crucial with regards to Article 4 which allows States still possessing nuclear weapons to join the treaty under the condition that it adheres to ‘a legally binding,
time-bound plan for the verified and irreversible elimination of that State Party’s nuclear-weapon programme. Hence the capacity and effectiveness of the ‘competent international authority to (...) verify the irreversible elimination of nuclear weapons programmes’ will be decisive for the further development and strengthening of the TPNW regime.

The treaty will also need to gain sufficiently wide adherence in order to develop its effects on a large enough scale. Borrie, Caughley, Ritchie and Wan argue that

‘the legitimacy of the TPNW’s norms and the value of the treaty as an effective measure for nuclear disarmament will need cementing through the translation of the 122 “yes” votes in favour of the treaty into signatories and ratifications up to (...) the 50 States requires for entry into force. Only then will the TPNW begin to take on wider “authority” in global nuclear politics.’

Little doubt remains regarding the ability and likelihood of the TPNW influencing the discourse surrounding nuclear weapons going forward. The continuous inclusion of the TPNW into debates surrounding the NPT, the further exploration of its relationship with Article VI and its acknowledgement in NPT Review Conference Final Documents will confer it the political and legal authority it requires to gradually develop real influence on the NWS and their allies.

In conclusion, while the TPNW’s evolution, in particular in terms of adherence, verification and institutionalisation, will have to be monitored over the coming years the potential it carries for the elimination is significant. For the first time, it makes of nuclear disarmament a possible reality of the not too distant future. It has raised debates surrounding nuclear disarmament from the usual sphere of legal controversies on Article VI to a level where concrete legal obligations will impose concrete measures for the elimination of nuclear weapons.

605 Article 4 (2), TPNW.
606 Article 4 (6), TPNW.
1.4. The Trump Presidency and the Joint Comprehensive Plan of Action

Following from the discussion of efforts undertaken by the NNWS to create conditions conducive to nuclear disarmament, it is useful to also examine the current geo-political atmosphere surrounding nuclear issues, and in particular multilateral measures to enforce nuclear norms and US leadership. Although it relates to nuclear non-proliferation rather than disarmament obligations, the Joint Comprehensive Plan of Action (Iran Deal) concluded in July 2015 between the Islamic Republic of Iran, the P5 +1 (Germany) and the European Union, is a useful for highlighting two important facets of the nuclear disarmament regime.

First, it demonstrates how a state in breach with its obligations under the NPT may be brought back into compliance through both diplomatic means and sanctions. In particular, it is a useful opportunity to discuss the role of the UNSC in policing the NPT regime and enforcing nuclear related norms. Secondly, it highlights the vulnerability of agreements dealing with nuclear weapons to sudden changes in their membership and their strong need for continuous leadership.

The Joint Comprehensive Plan of Action (Iran Deal) was adopted following over two years of negotiations. The landmark agreement was created to reduce the proliferation risks associated with Iran’s nuclear programme and to assure the international community of its peaceful nature. In exchange for its commitment to ‘under no circumstances (…) seek, develop or acquire any nuclear weapons,’ Iran was to be relieved of international nuclear-related economic sanctions. 609

The JCPOA’s central objective is to contribute to regional and international peace and security by increasing the period it would take Iran to create a nuclear bomb from around three months to one year. This is achieved through increased transparency and verification activities carried out by the IAEA. On 16 January 2016, following IAEA certification of Iran’s compliance with the terms of the JCPOA, the implementation of the deal began and all nuclear-related EU, US and UN sanctions on Iran were lifted.

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On 20 July 2015 the UNSC endorsed the JCPOA in its unanimously adopted resolution 2231 (2015). In this resolution, the UNSC expressed its support for the political and diplomatic efforts in ensuring that Iran’s nuclear programme is exclusively peaceful. Called the JCPOA a comprehensive, long-term and proper solution to the Iranian nuclear issue. Resolution 2231 (2015) provides for the termination of previous UNSC resolutions imposing economic sanctions which may be re-instated in the event of a violation by Iran of its obligations under the JCPOA.611

Resolution 2231 (2015) provides for the Security Council to undertake directly tasks related to the implementation of the resolution, particularly with respect to the specific restrictions established in its Annex B. For example, paragraph 6.10 of the JCPOA Annex IV provides that the Joint Commission reports to the UNSC every six months on implementation issues. The UNSC is also to

‘monitor and take action to improve implementation of the resolution, answer inquiries from Member States and International Organisations, respond appropriately to information regarding alleged actions inconsistent with the resolution, undertake outreach to promote proper implementation of the resolution, review and decide on proposals by States for nuclear, ballistic missile, or arms-related transfers to or activities with Iran, and grant exemptions to the restrictions.’612

Does this strong inclusion of the UNSC in the JCPOA regime imply that it has adopted a special role in enforcing nuclear commitments and policing the nuclear regime? The P5 appear to attach a strong role to the UNSC in the area of non-proliferation, as they (the five de jure NWS) have consistently turned to the UNSC for assistance with nuclear proliferation concerns.613

‘Under pressure from [nuclear proliferators], the P5 can seem as united as they have ever been. The relative rapidity with which China and the US were able to agree on strengthening UN sanctions against DPRK – and the fact that Beijing enforced these quite firmly, badly hurting Pyongyang economically – also suggests that the P5 remained committed to cooperation on non-proliferation.’614

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614 Ibid.
However, this P5 consensus required for effective UNSC action has faded in the past, in particular over measures taken in Iraq in 2003, and can neither be consistently relied on today. The fundamental differences among the P5 hampering their effective cooperation in dealing with chemical weapons in Syria and over the sanction regime imposed on North Korea, as well as growing suspicions over their respective modernisation activities have weakened this consensus in recent years.

The JCPOA itself has served as an example of how flawed cooperation among the P5 can endanger multilateral non-proliferation efforts and prevent the UNSC from playing a reliable and coherent role in policing nuclear agreements. When US President Trump took office in January 2017 he had previously consistently called the JCPOA ‘a terrible deal’. In January 2018, he announced that the US would withdraw from the deal and reinstate sanctions in May of the same year unless the US Congress and the other parties to the deal successfully addressed its ‘disastrous flaws’. 

President Trump criticised the limitations of the IAEA inspections regime under the treaty for not being able to grant inspectors immediate access to all sites, including non-nuclear military sites. Secondly, he considered the non-inclusion of measures on Iran’s ballistic missile programme into the JCPOA as a critical weakness. The third shortcoming unacceptable to President Trump were the sunset provisions in the deal which provide for the expiration of restrictions on Iran’s nuclear programme.

Richard Nephew, a lead sanctions advisor for the US negotiating team from 2013 to 2014, considers Trump’s ultimatum to fix the deal disingenuous, as it was clear that US concerns about Iran went beyond the deal and Iran was unlikely to agree to one-sided amendments. When, despite efforts on the part of the UK, France and Germany, no solution acceptable to

the US could be reached, Trump formally withdrew from the JCPOA. This not only opened new questions for the future of the deal but also for the future of US leadership.

In a collective assessment of the implications of Trump’s withdrawal, the large majority of commentators called the deal effective, underlined its highly intrusive inspection regime and its ability to roll back Iran’s nuclear programme by a decade, and asserted that to date the JCPOA had achieved Iran’s compliance with its commitments under the deal.\(^{619}\)

Graham Allison called the decision to withdraw a ‘bad choice’ giving Iran a ‘way out’ of the deal, while Ernest Moniz (lead negotiator of JCPOA) considered it a ‘major strategic mistake’ damaging US influence on Iran’s nuclear activities. Harvard Belfer Center senior fellow Elizabeth Sherwood-Randall described Trump’s decision as a ‘reckless strategic mistake of immense consequence [which] handed a gift to hardliners and undermined US credibility as a negotiating partner and set back global non-proliferation efforts.’ One commentator, however, considered it a ‘much needed move to correct a historically catastrophic policy by Obama’ and argued that the deal only ‘pushed the Iran problem further down the road’ (Nawad Obaid, Belfer).\(^{620}\)

Iran’s President Rouhani expressed his continued commitment to the deal. He asserted that Iran will remain in the deal despite US withdrawal and re-imposition of sanctions, under the condition that Iran’s national interest would be protected.\(^{621}\) Indeed, since the lifting of UN, EU and US sanctions in 2016, Iran has concluded important commercial deals with European companies (in particular oil companies and car and aircraft manufacturers) which are now threatened by US sanctions with extraterritorial effect.\(^{622}\) In fact, the commercial benefits for Iran under the original JCPOA membership were a decisive element in its cost-benefit calculation. For this reason, the most urgent task for the UK, France and Germany is to identify


\(^{620}\) Ibid.


solutions for maintaining economic and trade relations with Iran, while European companies have begun to leave Iran.  

In conclusion, the example of the JCPOA appears to negate a strong and consistent role for the UNSC in policing nuclear non-proliferation, and eventually, nuclear disarmament commitments. The new low in relations among the P5, caused by the unilateral US withdrawal, is likely to disable effective action of the UNSC in the nuclear and other fields until the end of Trump’s presidency. In addition to undermining the effective enforcement of NPT commitments, it also undermines the authority of international institutions such as the IAEA, which play an indispensable role in nuclear disarmament and non-proliferation. It remains to be seen whether the deal and its parties possess the necessary resilience to overcome such an early challenge.

President Trump’s attitude towards the JCPOA is a reflection on his general abandonment of multilateral approaches to dealing with nuclear weapons. The categorical rejection by the Trump administration of the TPNW, Trump’s formal six-month notice on 2 February 2019 of US withdrawal from the INF treaty, as well as the 2018 Nuclear Posture Review (NPR) may be interpreted as steps to remove multilateral obstacles hampering the free management of its nuclear forces. Although the 2018 NPR reflects the continuation of many elements from Obama’s 2010 NPR, it warns of the return of “great power competition” among the nuclear powers. As it does not suggest any strategies on how to deal with this renewed rivalry, is possible that Trump’s abandonment of multilateral mechanisms is aimed at gaining greater flexibility in its nuclear responses to developments in other nuclear states.

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626 Ibid 6.

3. The Effectiveness of the Nuclear Disarmament Regime

3.1. Participation and Cooperation

The establishment of a regime with a view to regulating the behaviour of states in the area of nuclear disarmament can be regarded as a common goal, which is best achieved through the political participation of all states and a high-level cooperation between them. Moreover, given the politically charged nature of NW elimination, voluntary participation and cooperation must be reinforced by a degree of formalisation and institutionalisation.

The NPT is the most widely adhered to arms-related agreement. Today, 96% of all democracies are party to the NPT and 40% of countries that became democratic after 1950 ratified it after they transitioned towards democratic rule. A number of explanations for this quasi-universality of the NPT have been identified, including the lack of a perceived need for national NW stockpiles, existing assurances of protection through alliances with NWS, the renunciation of NW as a consequence of political or diplomatic pressure, the technological, scientific or financial inability to develop NW or the desire to work towards a ban.

However, the ability of the NPT regime to advance nuclear disarmament is limited by two factors related to participation and cooperation. First, despite the quasi-universality of the NPT, key nuclear powers remain outside the treaty. Hold-out states such India, Israel and Pakistan became NWS without violating international law and continue to refuse to join the treaty. Israel, which has ratified none of the major arms control treaties, argues against a global regime like the NPT and in favour of regional solutions and consequently continues to condition its participation in nuclear disarmament efforts on the improvement of security in the Middle East.

The withdrawal of North Korea from the NPT in 2003 constituted a recent step away from universality. It remains unclear whether the weakness of the NPT is a cause or effect of such

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629 Srinir Sitaraman, State Participation in International Treaty Regimes, (Ashgate, 2009) 85


However, it must be noted that Article X of the treaty sets the requirements for withdrawal relatively low, making it simply procedural, and disregards the destabilising effects it can have on the operation of the treaty. While maintaining withdrawal from the treaty as an option is crucial for states to adhere to it, stricter conditions must be attached to withdrawal.

As adherence to a new treaty by all states would be necessary for any state to implement it. This lack of universality undermines the sense of security the NPT offers NNWS, as their commitment not to acquire NW is not matched with a legal commitment to disarm by these hold-out states. Consequently, adherence by hold-out states to the NPT would be an important step, as this would significantly raise the levels of trust among States Parties and provide a platform for negotiations.

However, the exclusiveness of the NPT nuclear club makes hold-out states reluctant to join the NPT regime, given that they would be required to join as NNWS. While a future non-discriminatory treaty would make their adherence more likely, this solution can be ruled out for the time being, given the longstanding rejection of the NPT by India, Israel, North Korea and Pakistan. Consequently, the urgent goal of universality remains a remote prospect.

Furthermore, this divisive structure of the NPT disregards the interdependent nature of disarmament obligations. In other words, the obligation of each state to disarm or not to possess NW is ‘necessarily dependent on a corresponding performance (…) in return for a similar undertaking by others.’ This reciprocity of obligations, which is imperative for the effectiveness of a disarmament regime, is not given in the NPT.

Although it is important to note that all NPT States Parties are under the obligation to negotiate, it can be argued that NWS have failed to assume the necessary leadership in initiating not only negotiations but also a move from security competition to security

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633 Randy Rydell, ‘Turning the Page on Pax Atomica’, Arms Control Today, October 2015, 34
634 2010 NPT RevCon Final Document
635 Yearbook of the ILC, Vol II, 1957, 54, para 126: travaux preparatoires of the VCLT
637 Article VI: ‘Each of the Parties to the Treaty’
cooperation, which is indispensable for progress in nuclear disarmament. In other words, the necessary transformation of relations, both between NWS and NNWS and within these parties, has not yet been achieved.

For instance, the P5 Process, which includes all five de jure NWS, has been described as one of ‘the earliest successful efforts to enhance the type of multilateral transparency, dialogue, confidence-building and mutual understanding needed for future progress toward the verifiable elimination of NW’ Yet, this evaluation of the P5 Process offered by the US does not reflect the limited cooperation within this grouping in reality.

First, although all NPT States Parties have the legal obligation to work towards nuclear disarmament, the P5 Process fails to acknowledge the different levels of responsibility among the P5 in achieving this goal. In fact, it can be argued that their relative strategic powers determine the different degrees of leadership required from them. However, the willingness of the US to use NW for the achievement of strategic goals makes other P5 reluctant to give up their own NW.

This undermines the purpose of the P5 process as a whole, namely to collectively achieve progress on the implementation of nuclear disarmament obligations. This explains why debates are restricted to technical obstacles, such as transparency, confidence building and verification and negotiations on legal measures are not taking place. Indeed, progress made by this grouping has been considered ‘extremely underwhelming’. The P5 have been

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638 Regina Karp, ‘Nuclear Disarmament: Should American Lead?’ Vol 127 (1) (Political Science Quarterly, 2012) 51: ‘Arms control that aims at disarmament has its intellectual roots in the belief that the anarchic system can be transformed, that security competition can be replaced by security cooperation and that such a cooperative system can be maintained.’

639 Shultz, Perry, Kissinger, Nunn, ‘Deterrence in the Age of Nuclear Proliferation’, WSJ, 2011: ‘A world without NW will not simply be today’s world minus NW.’

640 Statement by Frank Rose, Assistant Secretary of State, UNGA First Committee, New York, 12 October 2015 http://reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com15/statements/12October_USA.pdf


642 Ibid


accused of using this process merely to ‘limit the damage’ at the RevCons and to preserve the faith of NNWS in the NPT bargain, as the cooperation of the latter is necessary for non-proliferation.\textsuperscript{646}

Furthermore, the deterioration of US-Russian relations as a consequence of the Ukraine crisis has also made constructive dialogue difficult. The presence of US missiles in Europe as part of its extended deterrence strategy and resulting Russian threats to employ NW against the US.\textsuperscript{647} In other words, the improvement of US-Russian relations, including an end to their deterrent relationship is a pre-condition for the achievement of consensus not only in the P5 Process but also on a global level.\textsuperscript{648}

On the other hand, the New Agenda Coalition (NAC), a grouping of eight NNWS grew out of a heightened sense of empowerment of middle powers after Cold War. It aims to unify the international community by bridging the North-South divide. It also pursues cohesion and common action on disarmament. For instance, the NAC was instrumental in the achievement of consensus at the 2000 NPT RevCon. Moreover, the NAC has repeatedly emphasised the need for a legally-binding nuclear disarmament instrument. In this respect, it has submitted a number of resolutions to the UNGA calling for a world free of NW, and has adopted strong language on disarmament, such as the phrase ‘unequivocal undertaking to completely eliminate NW and immediately begin work’.\textsuperscript{649}

\subsection*{3.2. Compliance}

While concerns regarding the non-compliance of NPT States Parties have been expressed,\textsuperscript{650} it is difficult to measure compliance with Article VI, given the absence of guidelines in this

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\begin{itemize}
\item \textsuperscript{646} Wikileaks (2009), Day 3: US-South Africa Non-proliferation and Disarmament Dialogue: Upcoming Events, Concluding Remarks, and Next Steps, Cable Reference: 09STATE100252, 25th September
\item \textsuperscript{647} ‘Russia can turn US to radioactive ash - Kremlin-backed journalist’ (Reuters, Moscow, 16 March 2014): Russia referred to its NW as Russia’s ‘teeth and claws’ necessary for its survival http://www.reuters.com/article/ukraine-crisis-russia-kiselyov-idUSL6N0MD0P920140316; Paul Sonne, ‘As Tensions With West Rise, Russia Increasingly Rattles Nuclear Saber’ (WSJ, Moscow, 5 April 2015): Putin threatened to turn the US into ‘radioactive ash’ http://www.wsj.com/articles/as-tensions-with-west-rise-russia-increasingly-rattles-nuclear-saber-1428249620
\item \textsuperscript{648} Michael O’Hanlon, (fn 49) 87.
\item \textsuperscript{649} the most recent resolution A/RES/65/59 was entitled ‘Towards a nuclear-weapon-free world: accelerating the implementation of nuclear disarmament commitments’; Joint Declaration of Ministers of Foreign Affairs of NAC states, 9 June 1998.
\item \textsuperscript{650} 2010 Rev Con Final Document; General Statement of Egypt to the Second Preparatory Committee of the 2010 NPT Review Conference, 28 April 2008: ‘(…) serious doubts on commitments to nuclear disarmament and the
\end{itemize}
respect. Hence, the compliance of States will be assessed against the standard defined in the interpretative outline of Article VI provided above. In other words, this section will assess whether negotiations on nuclear disarmament measures have been undertaken and whether they meet good faith requirements.

NWS have repeatedly reaffirmed their commitment to nuclear disarmament. In accordance with the restrictive interpretation of Article VI presented above, NWS advance their unilateral and bilateral reductions in their arsenals as evidence of their compliance with their obligation under Article VI. In fact, a template shared by NWS at First Committee-, NPT PrepCom and RevCon meetings has been identified, consisting in a reiteration of their commitment to Article VI obligations, followed by a reference to quantitative reductions as proof of compliance.

It appears that these statements constitute mere lip service to Article VI, as they fail to reflect both an understanding of the obligation and an intention to pursue multilateral efforts to advance the goal of nuclear disarmament. Indeed, reductions of NW stockpiles have not been undertaken under the constraint of international obligations, but rather on a unilateral or bilateral basis.

It can be argued that the extension of the NPT in 1995 was the result of the failure of States Parties to achieve disarmament objectives within the treaty’s original 25 year life span. This
lack of progress persisted, given that, aside from US-Russian bilateral negotiations on New START in 2009 and the conclusion of the CTBT in 1996, no multilateral negotiations on disarmament measures have taken place or been initiated since.656 Other steps ahead have been agreed but not materialised.657

Indeed, despite the elaboration of concrete steps ahead, the disarmament debate has become increasingly theoretical. The 13 Steps, the only measures agreed by all States Parties, have been outright rejected by the US and France and remain almost entirely unimplemented. Consequently, regardless of the construal of the obligation under Article VI, a breach can be identified, as negotiations have not taken place and the 13 Steps have been disregarded. One can go so far as to argue that this unsatisfactory disarmament record demonstrates that in 1968, the NWS ‘made disarmament promises that they had no intention of honoring.’658

Mere numerical reductions of arsenals from very high numbers neither have a profound strategic impact nor fulfil requirements of Article VI to negotiate toward a legally binding agreement.659 Unilateral and U.S.-Russian reductions that have been neither transparent, verifiable nor irreversible, 660 have been perceived by many NNWS as nothing more than efforts to streamline existing nuclear arsenals, rather than steps towards complete nuclear disarmament.

Additionally, it can be argued that several aspects related to the behaviour of States Parties indicate a breach of the good faith requirement included in Article VI. It does not appear that efforts undertaken by NWS are aimed at reaching an agreement with NNWS. Their unwillingness to move away from traditional paradigm of State security, arguing that the

656 2010 RevCon Final Document, NPT/CONF.2010/50 (Vol I) par 83: reaffirmation of the crucial role of the CTBT for nuclear disarmament
657 Statement by Ambassador Hesham Badr, Assistant Minister of Foreign Affairs for International Organisations and Multilateral Affairs of Egypt, Second Session of the NPT PrepCom to the 2015 NPT RevCon, General Debate, 23 April 2013, 3
660 See 2010 RevCon Final Document, 2000 rev con 13 steps (step 5)
current security setting is not suitable for nuclear disarmament, does not reflect an openness to concessions.661

Moreover, ambiguous allusions by NWS officials to the possible use of NW, against state as well as non-state actors, suggest that the vision of a NWFW does not stand at the centre of efforts.662 The restrictive legal understanding of Article VI advanced by NWS, as well as the prioritisation of the non-proliferation pillar over the disarmament pillar, suggests an intention to gain an ‘unfair or unjust advantage’ over NNWS. This not only contravenes the NPT bargain, but also exacerbates the pre-existing imbalance in the treaty, which undermines the purpose of the treaty.663

The time passed since the adoption of the NPT and the repeated postponing of efforts to achieve a multilateral disarmament agreement over a period of several decades, may be understood as an ‘abnormal delay’ in the sense of the Lac Lanoux arbitration.664 Given that the unjustified attachment of conditions to multilateral disarmament, as well as ‘extensive delays and fuzzy timelines’ advanced by NWS turns this goal into an ‘aspiration for the indefinite future’, the ICJ may qualify such conduct as a continued violation of the good faith obligation in Article VI.665

A more contentious question concerns the compatibility of the NW modernisation, and the resulting extension of their lifespan, with the good faith requirement under Article VI. Indeed, it has been argued that the reductions which have taken place were reductions in redundancy, as they only concerned outdated warheads. At the same time, remaining

663 A D’Amato, ‘Good Faith’ in R. Bernhardt, Max Planck Institute for Comparative Public Law and International Law (eds), Encyclopedia of Public International Law (North-Holland, 1992) 599 - 601
warheads are being brought to higher standards in precision and yield. This suggests that NWS not only continue to plan for their eventual use but also seek permanent possession of NW, which is contrary to the object and purpose of the NPT. This constitutes a violation of the good faith requirement, which obligates States Parties to refrain from any behaviour prolonging the achievement of a NWFW.

A further question to be addressed by the ICJ in the Marshall Islands lawsuit is whether this non-compliance constitutes only a treaty breach or keeps Article VI from becoming CIL.

3.3. Institutional Capacity for Nuclear Disarmament

Since the first suggestion to institutionalise the elimination of NW in the Baruch Plan, efforts have been made to establish fora for states to find a common ground, adopt a collective approach to security and work together on tasks, such as verification and enforcement measures. Multilateral institutions are needed, given that sustainable nuclear disarmament can neither be negotiated nor achieved on an individual basis. While such fora exist within the UN disarmament machinery, no standing secretariat exists, tasked with overseeing the implementation of Article VI obligations and progress in stockpile reductions.

The lack of a standing secretariat severely limits the NPT’s ability to compel states to initiate negotiations and makes the NPT the weakest among the WMD treaties with regard to implementation. The IAEA Board of Governors, the policy-making body of the IAEA, does not replace such a Secretariat. Currently, there are two ways of dealing with nuclear disarmament, the NPT review process and the (Conference on Disarmament) CD, which both deal with it within their competences.

The NPT RevCon is the only formalised forum in which the implementation of existing legal obligations is discussed periodically. However, the review process is unable to offer an

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667 Statement by HE Ambassador Li Baodong, Head of the Chinese Delegation at the 2010 RevCon, 4 May 2010; Statement by Ambassador Don Mackay, Permanent Representative of New Zealand to the UN in Geneva, on behalf of the New Agenda Coalition, to the 2010 NPT PrepCom, General Debate, 28 April 2008; Statement by Ambassador Gusti Agung Wesaka Puja of the Republic of Indonesia, on behalf of the NAM states parties to the NPT, General Debate, Second Session of the NPT PrepCom for the 2010 NPT RevCon, 28 April 2008.
668 Marco Roscini, (fn 585).
669 Additionally, delegates have the annual opportunity to address disarmament issues within the UNGA First Committee.
effective substitute for an institutionalised body, as the NPT does not provide for consultations or special meetings of States Parties to consider cases on non-compliance or to assist them in the implementation in the period between RevCons. Moreover, it operates under consensus, which has led to conclusion of a number of review cycles without the achievement of consensus or any substantial results, including the 2015 NPT RevCon. In other words, little effective progress on disarmament has been achieved within the review process thus far.

The CD in Geneva constitutes the only permanent multilateral forum for the negotiation of disarmament treaties. This 65-member negotiating body was established as an essential element in the UN disarmament machinery in 1979. Its non-inclusive nature has been criticised, as over two thirds of the UN membership are not represented in the CD and it has not been enlarged since 1999. This creates problems regarding the necessary participation of all states, as discussed above.

In addition, it has suffered from an ongoing stalemate for over two decades, not only failing to conclude negotiations since the CTBT in 1996, but also to establish a programme of work. This stagnation in negotiations can be, in part, attributed to the paralysing consensus approach of the CD, a practice which is a remainder from the Cold War. In other words, every member state possesses a veto to block negotiations, which explains why the CD has been unable to commence negotiations on an FMCT.

As a consequence of this stumbling block, a recent trend of establishing informal discussion forums for nuclear disarmament has emerged. For example, the re-establishment of an Open-Ended Working Group (OEWG) has been debated. An OEWG was previously established by the UNGA in 2012 to circumvent the stalemate in the CD. A follow-up was recommended in the 2015 NPT RevCon Final Document as a way to advance multilateral negotiations, but has been met with rejection by key NWS. Some argue that it does not fit into the NPT framework, as it would focus on nuclear disarmament only, contrary to the 2010 NPT action.

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672 Final Draft Document of the 2015 NPT Review Conference, 20, item 154/19
plan, which covered all three pillars equally. Some NNWS dismissed it as a ‘simulation that the [CD] is working’ and as an extension for the problems in the NPT.

The UN disarmament machinery remains deeply divided on fundamental questions concerning nuclear disarmament, not only as a consequence of the different levels of importance governments attach to nuclear disarmament. Furthermore, some NWS misuse the UN disarmament institutions as arms control rather than disarmament fora.

### 3.4. Verification

Verification is crucial throughout all stages of the disarmament process. First, verification mechanisms increase the willingness of NWS to consider the reduction of their NW stockpiles and facilitate negotiations, as they offer a certain degree of certainty that NNWS do not acquire NW in parallel. On the other hand, a staged elimination process requires intrusive inspections.

Given that the numerical decrease of NW stockpiles is accompanied by the simultaneous increase in the significance of individual NW, thus raising suspicions regarding the retention of individual warheads by some NWS. Hence, challenges for the verification of disarmament at very low warhead numbers must be anticipated. In other words, verification mechanisms capable of detecting individual warheads must be in place in order for NWS to be willing to reduce their stockpiles to only several hundred warheads.

Finally, they are indispensable to provide a sufficient level of certainty to NNWS that fissile materials are irreversibly eliminated, but also to allow the adoption of enforcement measures.

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673 Voting result in the First Committee, (A/RES/67/56), 6 November 2012: The United States, United Kingdom, France, and Russia voted against A/RES/67/56, arguing that an OEWG would undermine established fora, such as the CD, while China India, Pakistan and Israel abstained.


675 The Disarmament Commission, the UNGA’s First Committee, and the Conference on Disarmament.

676 Randy Rydell, ‘The Secretary-General and the Secretariat’ in Jane Boulden, Ramesh Thakur, Thomas Weiss (eds), *The United Nations and Nuclear Orders* (UNU Press, 2009) 75; Angela Kane, UN High Representative for Disarmament Affairs, ‘The Nuclear Disarmament Regime?’ (Speech at the EU Non-Proliferation and Disarmament Conference, Brussels, 30 September 2013).

in the case of non-compliance. Verification will remain important even after the full elimination of NW, as a NWFW will unlikely be a ‘utopia in which governments will never feel tempted to cheat on their global obligations.’

Although the NPT has significantly enhanced nuclear transparency, the disarmament pillar of the NPT is not verifiable. While Articles III.4, NPT and Article III.5 IAEA Statue provide for the verification of non-proliferation obligations, there is no multilateral verification system for disarmament. Acting as a framework obligation, it requires states to negotiate disarmament measures, which include technical aspects such as the comprehensive verification of a multilateral disarmament instrument.

The sophisticated verification systems of NWFZ and the CTBT demonstrates the feasibility of achieving consensus on verification. It is important to acknowledge that a nuclear disarmament treaty would not be fully verifiable and the technical know-how to build NW would not be eliminated along with the warheads. While nuclear reactors and enrichment facilities are easy to spot, the detection of fissile materials and their use for non-peaceful purposes is challenging.

Yet, the verification of NW reductions in the absence of an institutionalised verification mechanism is very unreliable. Given the classification of information regarding nuclear weapons, it is difficult to verify the non-diversion of fissile materials in both military and civilian stockpiles. Hence, alternative means of verification are solicited by states, including intelligence services, societal verification and information provided by dissidents and whistle blowers. While these sources offer valuable insights into the nuclear activities of states, they do not compensate for the absence of institutional verification and provide mere indications rather than reliable information.

The need for a sophisticated rule-based verification system was illustrated by the failure of intelligence services in Iraq, who assumed that Iraq was in non-compliance with UN resolutions mandating the elimination of its NW. This experience also highlights time-sensitive character of nuclear disarmament, and in particular verification. Given the profound

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implications of nuclear disarmament for both NNWS and NWS, verification efforts must both be aimed at ensuring compliance and preventing its premature enforcement.

Concerns have been expressed, that inspections carried out by personnel from NNWS on the territory of NWS could result in a breach of Article I, NPT, which prohibits NWS from assisting NNWS in the acquisition of NW. Such concerns have not been expressed in the context of the CWC and may be dismissed in the nuclear disarmament context, given that an international control system for nuclear disarmament would necessarily involve inspectors from both NWS and NNWS.\textsuperscript{681}

Moreover, the Trilateral and UK-Norway Initiatives have demonstrated ways of addressing this concern. Similarly, in December 2014, the US and the Nuclear Threat Initiative (NTI) launched the International Partnership for Nuclear Disarmament Verification, involving 27 NWS and NNWS. The purpose of this initiative is to explore tools and technologies needed to effectively verify future nuclear disarmament agreements without sharing sensitive NW-related information.\textsuperscript{682} Hence, granting access to facilities for the purpose of verifying disarmament does not constitute a proliferation risk.

3.5. Enforcement

Similarly to verification, enforcement must be exceptionally reliable for NWS to be willing to give up their NW.\textsuperscript{683} The purpose of enforcement measures is to both deter states from breaching their obligations and deny states the benefits of any violation by raising the costs of violating disarmament obligations.\textsuperscript{684} However, the question of enforcement poses a number of challenges both for the achievement of a nuclear disarmament treaty in the near future and the effectiveness of such an instrument.

\textsuperscript{681} Treasa Dunworth, (fn 625).
\textsuperscript{682} Statement by Frank Rose, Assistant Secretary of State, UNGA First Committee, New York, 12 October 2015 http://reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com15/statements/12October_USA.pdf
\textsuperscript{684} Henry Sokolski , (Fn 617) 28.
First, the obligation to negotiate under Article VI is difficult to enforce, given the absence of designated institutions charged with overseeing its implementation. This lack of conventional means to compel states to initiate negotiations raises the question whether legal dispute settlement offers an alternative way of achieving the implementation of Article VI. While some argue that reliable mechanisms for peaceful dispute settlement are crucial to the achievement of a NWFW, others regard weapons-related disputes are unsuitable for legal resolution, due to their politically sensitive nature and the slow nature of proceedings.

Given the early termination of proceedings, the ICJ was unable to demonstrate the potential of judicial decisions for the enforcement of legal obligations related to nuclear disarmament in the RMI Lawsuits against the nine NWS. While a judgment by the could have clarified the language of the NPT and offered a legally-binding interpretation of Article VI, this case illustrates that dispute settlement cannot be fully relied upon for the enforcement of a disarmament agreement. First, attempts by defendant states to side-step the case on jurisdictional grounds demonstrate that some cases may be excluded from legal dispute resolution. Secondly, even if the dispute reaches the merits stage, there is a risk that a party to the dispute will reject the decision of the court. Such a situation may raise secondary compliance issues. It appears that, at the current stage in nuclear disarmament and in the absence of an institutional framework, the diplomatic track offers the highest potential for achieving the implementation of Article VI obligations.

Secondly, enforcement would remain challenging, even in the presence of a verifiable ban. Currently, the UNSC currently remains the only body possessing the authority to enforce a prohibition of NW, the NPT relying upon it to provide sticks and carrots to ensure compliance with non-proliferation obligations. However, a future role of the UNSC as the enforcing body

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687 James Fry, (fn 34) 358; *Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. US)*, 1986 ICP Rep 14., 168; see also Rebecca Bornstein, (fn 750) 149: Bornstein argues that legal resolution must be categorically excluded for disputes concerning vital interests of States, such as disputes related to a state’s national armaments.

688 The US rejected the Court’s jurisdiction on the basis that courts have no power to order the government to negotiate for disarmament, on the basis that the breach is “speculative”, meaning that compelling the US to negotiate would not redress any harm to the Marshall Islands. Finally, the US rejects jurisdiction on the basis that the suit raises a “non-justiciable” or non-legal question related to vital interests such as national security, which cannot be addressed by judges.
of a disarmament instrument would require a reconsideration of the veto in this context, given that five of the nine NWS possess a veto power. In other words, enforcement would be shaped by the will of the P5, as each P5 NWS could veto the enforcement of its obligations. 688 This would create a discriminatory disarmament process and perpetuate the exclusivity of the NPT nuclear club. It is likely that the de facto NWS, in particular India, will refuse to cooperate in such a setting.

Furthermore, as discussed above, the interests and security strategies of the P5 diverge, hindering their effective cooperation. 689 For instance, the P5 could not agree on how rigorously to enforce compliance in Iraq. Generally, the UK, Russia and China are always more reluctant to impose sanctions than the US and France. Sanctions are ineffective. 690 This can be, in part, explained by a wide range of forms of non-compliance and threat perceptions leave room for ambiguity and disagreement over the necessity and nature of enforcement measures. 691

Given that violations of disarmament obligations may require immediate measures, enforcement is a very time-sensitive requirement. Hence, the case-by-case determination of appropriate enforcement measures may weaken disarmament obligations. For this reason, automatic enforcement mechanisms, non-discriminatory sanctions predetermined by an enforcement body and adopted without a vote from the enforcement body, are considered for a future disarmament instrument. 692 It is unlikely that major powers will accept the automatic adoption of sanctions against them.

More importantly, effective multilateral disarmament would require independent body for the authorisation of enforcement measures, which would enjoy international legitimacy and be sufficiently timely and authoritative. Such an enforcement mechanism would have to be adapted to the existing security environment as well as the security interests of states. Enforcement of non-proliferation obligations are essential to effective disarmament. Dispute resolution could contribute to enforcement of a nuclear disarmament agreement. Legal disputes over the convention would be referred to the ICJ with mutual consent of SP.

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688 Rebecca Bornstein, (fn 750) 149; Lawrence Freedman, (fn 726) 24.
689 Rebecca Bornstein, (fn 750) 149.
690 Hedley Bull, (fn 492) 35.
691 Rebecca Bornstein, (fn 750) 149.
692 Henry Sokolski, (fn 617) 29; Rebecca Bornstein, (fn 750) 149.
referral of a case of non-compliance to the UNSC would only take place in the most severe circumstances.

**Conclusion**

This chapter assessed the ability of the existing legal framework for nuclear disarmament to advance the goal of a NWFW. It was concluded that, although both structural flaws and the divisive nature of the NPT have limited its ability to produce meaningful progress in nuclear disarmament, Article VI contains a clear obligation for States Parties to undertake multilateral negotiations towards disarmament measures, which is reinforced by an additional good faith requirement.

Hence, it was argued that the failure of the international community to collectively establish a nuclear disarmament regime, can also be attributed to a compliance gap. Indeed, despite the absence of guidelines in Article VI for measuring progress in this respect, the continued failure of States Parties to initiate multilateral negotiations in existing fora and to begin the implementation of the 13 Practical Steps, was qualified as a violation of Article VI in this chapter. Furthermore, given the incompatibility of the modernisation of NW with the purpose of the treaty, it was concluded that such practices breach the good faith requirement.

The formation of this compliance gap was attributed to a number of factors. First, it was concluded that while the quasi-universal adherence to the NPT reflects a global consensus on the necessity to eliminate NW, key NWS remain outside the NPT, thus limiting its ability to create sufficient levels of trust for multilateral negotiations.

Difficulties in constraining the behaviour of States and compelling them to negotiate have also been attributed to the lack of a standing secretariat mandated with overseeing the implementation of the disarmament pillar of the NPT. The absence of an institutional framework providing States Parties with a negotiating forum has created a dependency on the UN disarmament machinery and the NPT review process, which have both proven unable to yield consensus.

Finally, the issues of verification and enforcement constitute obstacles to the willingness of NWS to negotiate towards disarmament. Although all states agree that highly sophisticated mechanisms to verify and enforce compliance with disarmament obligations are to offer
sufficient certainty to NWS that the reduction and eventual elimination of their NW stockpiles does not create security threats, agreement on the precise characteristics of such mechanisms has proven challenging.

In conclusion, while necessary legal obligations are in place, architectural flaws and external security considerations, not addressed by the current legal framework, have allowed states to disregard their obligation to negotiate for several decades. However, a number of factors yield hope that this deadlock can be overcome. For instance, the Marshall Islands lawsuit constitutes the first translation of a sense of frustration among NNWS into a legal reality. Should the case move to the merits stage, the judgment of the ICJ will likely clarify legal ambiguities and thereby leave less room for NWS to argue the legal continuation of their NWS programmes, regardless of the outcome.

Furthermore, it was concluded from the analysis of the historic South African nuclear disarmament case that nuclear disarmament based is feasible, that profound domestic political change in combination with security assurances can facilitate the decision of NWS to abandon their NW. Finally, the Humanitarian initiative serves as a reminder of the fundamental humanitarian principles underlying nuclear disarmament, contributing to the necessary delegitimisation of NW.
Introduction

The biological disarmament regime constitutes the third pillar for efforts of the international community to rid itself of weapons of mass destruction. Adopted as the first multilateral disarmament treaty in 1972, the Biological and Toxin Weapons Convention (BWC) has been in force for more than four decades. During this time, it has successfully strengthened the taboo against biological weapons and achieved the renunciation of their use in warfare by the vast majority of states.693

While biological weapons have seldom been used in wartime, their short- and long-term risks of the deliberate infliction of disease for human and animal health, the environment and the economy of the attacked state, continue to pose a threat to international peace and security. Their destabilising properties and potential for misuse by terrorists have been compared with those of lethal autonomous weapons, which once deployed, are difficult to contain.694 Moreover, the destructiveness of biological pathogens, including their rapid spread to across continents, has been demonstrated by the outbreaks of the Ebola and Zika viruses in recent years.

For these reasons, the BWC regime, and in particular its central objective to outlaw the possession of biological weapons, remains highly relevant. While it is widely perceived as a weak disarmament treaty in comparison with the comprehensive CWC, it is unclear by what standards it can be evaluated as such. Biological weapons have killed less than 100 persons in the 40 years since the BWC’s entry into force.695 In contrast, the use of chemical weapons in

695 Robert Johnston, ‘Summary of Historical Attacks Using Chemical or Biological Weapons’, last updated on 30 November 2016 http://www.johnstonsarchive.net/terrorism/chembioattacks.html; Jean-Pascal Zanders, ‘The BTWC – Maintaining Relevance’, Presentation at the EU Non-Proliferation and Disarmament Conference, 2-4

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warfare and by non-state actors has caused around 2,000 fatalities since the entry into force of the Chemical Weapons Convention (CWC) almost 20 years ago. In other words, the number of fatalities caused by such weapons does not, on its own, offer a reliable indicator of strength or weakness of disarmament regimes.

Therefore, this chapter seeks to establish criteria for assessing the legal effectiveness of the biological disarmament regime with the aim of evaluating its capacity to ensure the irreversible destruction of all biological weapons. For this purpose, it will examine levels of participation in the regime, as well as levels of compliance by States Parties with their disarmament obligations. Moreover, this chapter will evaluate the extent to which the absence of verification and enforcement mechanisms, as well as an institutional body from the treaty, affects the irreversibility of biological disarmament.

5.1. The Biological Disarmament Regime

5.1.1. The Taboo on Biological Weapons

Biological and toxin warfare has been named ‘public health in reverse’. The term encompasses the deliberate administration of the disease-causing (pathogenic) effects of bacteria, viruses, fungi and toxins for military purposes. An attacker deliberately administers infectious or toxic substances to enemy troops with the aim of militarily weakening them by inducing disease. Biological weapons rely on the reproductive capacity of such organisms, as any human or animal infected with a pathogen can become a host and further spread the disease. As a result, only a small amount of pathogenic agent may suffice to spread a disease across populations and vast geographical areas.

The military benefits of disease were exploited long before scientists understood its biological origins and mechanisms and the means of delivering and spreading such agents evolved over time. For instance, an early method of administering infectious or toxic substances to enemy troops consisted in polluting wells and drinking water with decaying corpses of humans and

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696 Theodore Rosebury, Peace or Pestilence: Biological Warfare and How to Avoid It, (McGraw-Hill, 1949).

697 Erhard Geissler (ed), Biological and Toxin Weapons Today, (SIPRI, OUP, 1986) 4-7: toxins are substances which are products of the activities of organisms such as bacteria, viruses or fungi. For example, some diseases, such as anthrax, are caused by toxins produced within the host (human, animal, plant).
animals. More advanced forms appearing later consisted in the administration of particular diseases, such as smallpox (Black Death), cholera or typhus. This approach was able to cause devastating loss of life in enemy troops on the battlefield.

A sentiment of disgust and moral rejection emerged as a result of early demonstrations of the indiscriminate effects of both chemical and biological weapons, and in particular the unnecessary suffering they caused. Hence, their prohibition was sought in parallel to their development, as part of efforts to both restrict means and methods of warfare, and to preserve honour and morality on the battlefield.

The oldest written prohibition of non-conventional weapons was established in the Hindu Code of Manu (around 500 BC), which laid down rules against the use of treacherous methods of warfare by the king. Despite advocating the spread of disease as a method of warfare, Kautilya warned that the principal objective was to ‘consolidate peace’ and that restraint must be exercised in using disease to terrorise the enemy.

This early norm against biological warfare was repeated in modern agreements. The Brussels Declaration of 1874 reflected an attempt to codify a European prohibition on the ‘employment of poison or poisoned weapons’ and ‘the employment of arms (…) calculated to cause unnecessary suffering.’ The text of this Declaration was largely reproduced in Article

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698 As early as 300 BC the Greeks polluted the wells and drinking water supplies of their enemies with the corpses of animals. Later, the Romans and Persians used the same tactics. In the medieval era, the bodies of human victims of disease were catapulted over city walls in order to fight off besieging armies. In 1155 at a battle in Tortona, Italy, Barbarossa broadened the scope of biological warfare, using the bodies of dead soldiers, as well as animals to pollute wells. In 1863 during the US Civil War, General Johnson used the bodies of sheep and pigs to pollute drinking water at Vicksburg.


701 Sharad Chauhan, Biological Weapons, (APH Publishing, 2004) 443-444; George Bühler (translation), The Laws of Manu, (Clarendon Press, 1886) 230, Chapter VI, verse 90: ‘Fighting in a battle, he should not kill his enemies with weapons that are concealed, barbed, or smeared with poison or whose points blaze with fire’; verse 93: ‘(…) let him remember the duty of honourable warriors.’

702 Ibid note 6, Chapter II, 596.

703 ‘Project of an International Declaration concerning the Laws and Customs of War, Brussels, 27 August 1874’, reproduced in Dietrich Schindler and Jiri Toman, The Laws of Armed Conflicts, (Martinus Nijhoff Publisher, 1988) 22-34: Articles 12 – 14
23 of the Fourth Hague Convention of 1907 on the laws and customs of war on land, which constituted the first legally-binding treaty restricting the use of biological weapons.\textsuperscript{704}

Following the Great War, both a desire to further develop a prohibition on biological weapons and efforts to prepare the ‘the first steps towards the general reduction and limitation of armaments’ led to the convening of the Geneva Conference in May 1925.\textsuperscript{705} This conference resulted in the adoption of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare (Geneva Protocol) on 17 June 1925. As an extension of the prohibition on the use of chemical weapons, the Protocol also prohibited the use of bacteria and other biological agents such as viruses as methods of warfare.

The use of biological weapons was henceforth ‘justly condemned by the general opinion of the civilised world’. The text of the Protocol suggests that it was intended to become ‘universally accepted as a part of international law.’\textsuperscript{706} However, it did not impose a complete ban on biological weapons, as it did not prohibit the study, production or storage of biological weapons and could not be verified or enforced. Moreover, states attached important reservations to it, in particular to preserve the right to use chemical and biological weapons in retaliation.\textsuperscript{707} Allied powers also engaged in biological warfare research and development and Winston Churchill declared the need for acquiring a germ warfare capability as a deterrent.

Today, individuals, terrorist groups and military leaders display a continued interest in acquiring biological weapons due to their devastating potential and asymmetric advantages. The general appeal of biological weapons lies in the fact that they are much cheaper and easier to produce than chemical and nuclear weapons. The production of biological warfare


\textsuperscript{705} Georges Clemenceau, note to the German Foreign Minister, Count Brockdorff-Rantzau, 16 June 1919; Conference for the Supervision of the International Trade in Arms and Ammunition and in Implements of War (May-June 1925).

\textsuperscript{706} BWC, ‘Universally accepted as a part of international law, binding alike the conscience and the practice of nations.’

\textsuperscript{707} Following the adoption of the BWC and the CWC, many reservations were withdrawn. A number of countries maintain their reservations, including Algeria, Angola, Bahrain, Bangladesh, Cambodia, China, Fiji, India, Iraq, Israel, Jordan, Democratic People’s Republic of Korea, Republic of Korea, Kuwait, Libya, Nigeria, Papua New Guinea, Serbia, Solomon Islands, Syria, Thailand, the United States, and Vietnam.
agents does not require large production plants or extensive expertise, as is the case for chemical weapons. Given that natural diseases are easily accessible they can be produced in any hospital or private establishment. Biological weapons could potentially be carried by ICBMs and released from a distance.

Yet, when biological weapons have been employed in battle, they have proven relatively ineffective, thus offering only limited military value.\(^{708}\) It is impossible to reliably contain pandemics in space and time. Difficulties in reversing their effects once released into the environment, exposes not only the civilian population of the attacked state, but also the attacker to pathogenic agents, thus making the grounds inaccessible.\(^{709}\) For this reason, no military resources have been allocated to the training of forces in using biological weapons and the creation of decision-making processes for such use.

While with the BWC the norm prohibiting the use the use of biological weapons is well-established in international law and is believed to have acquired a customary character, the norm prohibiting their possession requires further development and strengthening.\(^{710}\)

### 5.1.2. The Biological and Toxin Weapons Convention

After the end of the war, concerns surrounding the inability of the global security system to contain and stabilise the effects and spread of new powerful weapons, for the first time raised the question of disarmament.\(^{711}\) The UNGA called for the elimination of all weapons ‘adaptable to mass destruction,’ thus initiating first discussions on biological disarmament within the wider context of proposals for the general and complete disarmament of all weapons of mass destruction.\(^{712}\)

The UNGA assigned the task of seeking an agreement on the cessation of the development and production of such weapons to the Eighteen Nation Disarmament Committee (ENDC) in

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\(^{708}\) Jeffrey Ryan, Jan Glarum, *Biosecurity and Bioterrorism: Containing and Preventing Biological Threats*, (Butterworth-Heineman, 2011) 305


\(^{710}\) ICRC, ‘Rule 70 of Customary IHL’: this rule affirms that ‘the use of means and methods of warfare which are of a nature to cause superfluous injury or unnecessary suffering is prohibited.’ The commentary of this rule cites biological weapons as an example of this type of weapon.


\(^{712}\) UNGA res 1 (1), 24 January 1946
Several states including Canada, the UK, France and the US abandoned their biological weapons programmes unilaterally while negotiations on the BWC were still ongoing. In particular, the renunciation by the US of its offensive biological weapons programme in 1969, irrespective of the outcome of negotiations, and its offer to open biological facilities for public inspection, added impetus to negotiations on the BWC.

Eventually, at its 26th session in 1971, the UNGA adopted resolution 2826 (XXVI) with the Convention on the Prohibition of the Development, Production and Stockpiling of Biological and Toxin Weapons and on their Destruction (BWC), as an annex. Although the BWC, the first multilateral treaty banning an entire class of weapons, was a landmark agreement, it was considered to be a first step in the evolution of the biological disarmament regime. This explains the lack of key elements in the convention, such as verification mechanisms, which were still deemed unachievable at the time of its conclusion.

As part of efforts to supplement the 1925 Geneva Protocol, the UK initially proposed a treaty banning the production and research of microbiological agents usable for non-peaceful purposes. Following the adoption of the Nuclear Non-proliferation Treaty in 1968, the United Kingdom began to advocate biological disarmament more actively and succeeded in gathering sponsors for a treaty outlawing biological weapons. In parallel, the US and the Soviet Union focused on their ongoing bilateral Strategic Arms Limitation Talks (SALT). As it was clear that, towards the end of the nuclear talks, these two states would not dedicate their time and resources to negotiating a stronger BWC, the British delegation to the ENDC contented itself with a modest convention based on extensive compromise.

In addition to time restrictions, the absence of provisions for verification may also be explained by the fact that biological disarmament was regarded as unverifiable at the time. As argued by the UK, ‘organisms which would be used [in the production of biological

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713 General Assembly resolution 2162 B (XXI), 5 December 1966.
714 United States: Disarmament Conference documents (CCD/PV.585), 655; UK: Disarmament Conference documents (CCD/PV.659)
716 Conference of the Committee on Disarmament, Draft Convention for the Prohibition of Biological Methods of Warfare’, submitted by the United Kingdom (ENDC/255, 10 July 1969; ENDC/255/Rev.1, 30 July 1969)
weapons] are required for medical and veterinary uses and could be produced quickly, cheaply and without special facilities either in established laboratories or in makeshift facilities.\textsuperscript{718} Despite this verification challenge, the British delegation to the ENDC urged that the rapid adoption of new obligations was not only crucial for containing the risk of the eventual use of microbiological methods of warfare, but also for preserving the possibility of reversing it.\textsuperscript{719}

Originally considered jointly with a treaty on chemical disarmament, progress on the BWC was made possible by the decision in the ENDC to pursue biological disarmament separately. In fact, much stricter verification requirements were attached to a chemical disarmament treaty than the BWC. Difficulties in overcoming verification challenges led to the much later conclusion of the CWC in 1992.

The BWC opened for signature on 10 April 1972 and entered into force on 26 March 1975. Despite its shortcomings, ‘the BWC was a pioneering, multilateral treaty that for the first time in history banned an entire category of WMD.’\textsuperscript{720} This treaty ‘would supplement but not supersede the 1925 Geneva Protocol,’ which remains an essential element of the biological disarmament regime today.\textsuperscript{721} Indeed, although the BWC does not explicitly prohibit the use of biological weapons, its Article VIII affirms that the prohibition on their use established by the Protocol remain valid. Moreover, the BWC has made reservations under the Protocol void for BWC States Parties. At the seventh Review Conference in 2011, States Parties have agreed that

‘reservations concerning retaliation, through the use of any of the objects prohibited by the Convention, even conditional, are totally incompatible with the absolute and universal prohibition of the development, production, stockpiling, acquisition and retention of bacteriological (biological) and toxin weapons, with the aim to exclude completely and forever the possibility of their use.’\textsuperscript{722}

Comprising only fifteen articles, the BWC was intended to be the core of a much wider regime of non-proliferation measures, export controls, the criminalisation of the misuse of


\textsuperscript{719} Ibid.

\textsuperscript{720} Secretary-General Lauds Move to Strengthen Biological Weapons Convention; Measures under Review to Monitor Implementation, Verify Compliance, SG/SM/7897-DC/2797

\textsuperscript{721} Ibid, para 4-5, 7

\textsuperscript{722} Final Document, Seventh Review Conference of the BWC, BWC/CONF.VII/7, 13 January 2012, para 45
pathogenic microbes and toxins, rather than serving as a unique instrument for ensuring the elimination of biological weapons.723 Indeed,

‘(...) the primordial function of the BWC was to assert a norm of abstention from biological weapons armament, to reassert the taboo against resorting to the use of biological weapons, and to provide a nucleus around which international action against transgressors could crystallise.’724

It was assumed that crucial elements could still be attached to the convention following its entry into force. For instance, the verification of state compliance with these measures was ‘not at that time (...) seen as a cost-effective addition to the array, especially since the technical component of such measures was relatively undeveloped.’725

The BWC’s ‘strength lies in the simplicity of its absolute prohibition,’ which covers the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons.726 Article I defines the scope of the ban on biological weapons. It provides that States Parties are under the obligation to

‘never under any circumstances to develop, produce, stockpile or otherwise acquire or retain:

(1) microbial other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;

(2) weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.’

This article establishes a definition of biological weapons. Rather than listing criteria for their identification, it defines biological weapon agents on the basis of the general-purpose criterion. The dual-use nature of biological agents imposes such a limitation on the ban on biological agents usable for non-peaceful purposes. Only quantities and types of agents whose retention, production and acquisition cannot be justified for prophylactic, protective or other peaceful purposes are banned.

723 Secretary-General Lauds Move to Strengthen Biological Weapons Convention; Measures under Review to Monitor Implementation, Verify Compliance, SG/SM/7897-DC/2797
725 ibid
726 Nicholas Sims, (fn 803) 9.
Any microbial agent, biological agent or toxin which cannot be used for peaceful purposes is covered by the definition. In particular, the general-purpose criterion allows the prohibition in Article I to remain comprehensive in the face of scientific and technological progress as it covers yet unknown technologies. It restricts the criteria for the exclusion of substances from this definition to those which are used for purely peaceful scientific purposes, but may possess dual-use characteristics. It thereby encourages such peaceful use of bacteriological agents and toxins. The BWC also supports the development of the peaceful uses of biological science and technology and contributes to strengthening national public health, veterinary, agricultural and emergency-response capacities.

This approach to defining biological weapons has only been contested by Switzerland, which ratified the Convention with the reservation that it would maintain the right to decide which items are covered by the definition. This reservation was contested by the US which warned that such unilateral decisions would undermine the general-purpose criterion.

The BWC is a disarmament- rather than an arms control treaty, as its primary contribution is to the general and complete elimination of WMD. Article II provides that states which acceded to the BWC prior to its entry into force were under the obligation to destroy all stockpiles within nine months after its entry into force. At the Fourth Review Conference States Parties clarified that new states acceding to the BWC after its entry into force would have to complete the destruction or diversion of its stockpiles prior to their accession. Consequently, in the absence of a deadline for destruction, all States Parties have equal rights and obligations under the convention as non-possessor states.

This eliminates the need for biological arms control measures in the Convention. Given the absence of de jure possessor states equivalent to those recognised by the NPT, the obligation in Article III not to transfer, encourage or induce other states or private persons to acquire or retain biological weapons must be understood as measures preventing the acquisition rather than the proliferation of biological weapons.

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727 See Article X, BWC
728 Note by US Secretary of State to the Swiss government, 18 August 1976.
729 Secretary-General Says Biological Weapons Convention has made Important Contribution to Efforts to Eliminate Weapons of Mass Destruction, SG/SM/7341, 26 March 2000
730 Final Document Fourth Review Conference (BWC/Conf.IV/9), 16, para 1.
The requirement imposed on acceding states to destroy and dispose of their biological weapons stockpiles or their conversion to peaceful uses, places such activities outside of the temporal scope of the Convention. Consequently, the effectiveness of this destruction, as required by Article II, cannot be verified. Indeed, in contrast to chemical weapons, very little attention has been given to the destruction of biological agents themselves, as the quantities of end products to be destroyed are much smaller than in chemical weapons.731

Further key provisions include Article VI, which obliges States Parties to consult bilaterally and multilaterally to solve any problems with the implementation of the BWC, and Article VI, which provides that any States Party may request the UNSC to investigate alleged breaches of obligations. These two provisions highlight the fact that, despite the treaty’s comprehensiveness in terms of the scope of the prohibition, the treaty was strongly criticised for its lack of an institutional element, verification mechanisms, as well as conventional mechanisms for enforcement. This led some states to only reluctantly join the convention much later or to remain outside of it.732

The incompleteness of the convention and the vagueness of the terms it applies are, in part, remedied by periodical review conferences. They have built up ‘a significant body of interpretative statements, politically binding commitments, definitions and procedures,’ which albeit legally non-binding, may be taken into account in the interpretation of the BWC’s provisions.733 In other words, they put ‘flesh on the skeleton (...) of a rather emaciated text.’734

As mentioned above, the BWC was regarded as a starting point for the addition of further measures to ensure compliance with the prohibition of biological weapons. However, despite the gradual clarification of the BWC’s provisions, efforts to complement the treaty with additional measures for the verification of compliance, including the adoption of a legally binding verification protocol, have been largely fruitless.

731 ‘Swedish Working Paper on the Destruction of Chemical and Biological Means of Warfare’, 30 March 1971, CCD/324, 180: This working paper only suggests that the destruction of biological agents may be destroyed by combustion, in autoclave or by means of disinfectants. In contrast, it offers a much more nuanced description of the chemical weapons destruction process.
732 See France and China who both joined in 1984.
733 Article 31 VCLT, para 3, a),b): the use of subsequent agreements and practices for the interpretation of treaties.
734 Nicholas Sims, (fn 803) 10, 11.
5.3. Effectiveness Evaluation

5.3.1. Participation and Cooperation

In the years following its entry into force, the membership of the BWC increased rapidly. By the time the CWC entered into force, the BWC had been joined by 140 states, including all of the P5 states. Yet, in recent years, the rate of accession has slowed down significantly. As of July 2016, only 178 States have acceded to it, making it the least ratified out of the three WMD treaties.735 In December 2015, the UNGA adopted a resolution in which it stressed the continuing need to achieve the universalisation of the BWC and called upon all signatory States to ratify the convention without delay.736 This importance to reinforce the universal scope of the Convention had previously been reaffirmed by the UNSC in its Ceasefire resolution of 1991.737

There is a widespread understanding among States Parties that this lack of universality is considered to be one of the BWC’s principal weaknesses. Indeed, the rejection by all States of the very notion of biological warfare is crucial for making the norm against biological weapons effective. Recognising this need for universality, States Parties agreed at the seventh Review Conference of the BWC in 2011 ‘that a concerted effort by States Parties is needed to persuade States not party to join the Convention.’738 Such efforts include

- the promotion of universalisation through bilateral contacts with states not party and through regional and multilateral fora and activities.
- reports on the activities of non-States Parties at annual meetings of States Parties,
- and the sharing of relevant information on activities related to the promotion of universalization of the Convention.739

The Chairs of meetings of States Parties were mandated with the coordination of universalisation activities, and the preparation of annual reports on universalisation activities.

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736 UNGA resolution A/RES/70/74, 7 December 2015, adopted without a vote: second and third introductory paragraphs.
737 UNSC resolution 687 (1991), S/RES/687, 8 April 1991, 2
738 Final Document, Seventh Review Conference of the BWC, BWC/CONF.VII/7, 13 January 2012, para 27
739 Ibid, para 28.
as well as progress reports.740 The most recent progress report identified ten states whose accession or ratification process is under way,741 and fourteen states who are not expected to accede to the BWC in the foreseeable future.742

This process offers insights into the reasons why States hesitate or decide not to join the BWC. Reasons for delays in ratifying the BWC given by signatory states included the domestic and regional situation of states, such as elections, political transitions and other political considerations.743 For example, the unwillingness of key hold-out states include Egypt, Israel and Syria can be attributed to the political situation in the Middle East.

While non-signatory states provided very limited information on their reasons for remaining outside of the BWC, four states listed ‘concerns about the obligations under the Convention, including [obligations such as] financial contributions and national reporting, [which they do] not have the capacity to fulfil.’744 The validity of this justification for non-accession may be questioned on the grounds that 21 states parties to the much more demanding CWC have chosen to remain outside of the BWC regime. Indeed, the obligation to make contributions toward the OPCW and the CWC’s strict verification regime, which imposes declarations and inspections, makes CWC membership much more onerous both in financial and practical terms.745

On the other hand, it must be noted, that the majority of non-States Parties display a commitment to the principles embodied in the convention. None of them have explicitly rejected particular provisions of the treaty, but have instead expressed a willingness to ratify the BWC in the near future. However, a fundamental lack of awareness of the BWC, even among delegates to meetings of States Parties and Review Conferences, has made the promotion of universality especially challenging.746 Public awareness is important for support

740 Ibid, para 29.
741 Chairperson of the Meeting of States Parties to the BWC, ‘Report on Universalisation Activities’, Item 11, BWC/MSP/2015/4, 5 November 2015, para 7: Djibouti, Guinea, Haiti, Namibia, Tanzania (process started); Angola, Comoros, Côte d’Ivoire, Nepal (process well advanced).
742 Ibid: Central African Republic, Chad, Eritrea, Liberia, Kiribati, Micronesia, Samoa, Somalia, South Sudan, Tuvalu (waiting for further information, assistance, or have other priorities); Egypt, Israel, Syria (no action expected in near future); Niue (no information or feedback yet received).
743 Ibid, para 8 – 17.
744 Ibid, para 29, 30, 33, 35.
746 Jean-Pascal Zanders, (fn 763).
on the part of NGO and for the allocation of funding. Regional BWC workshops have been held as a remedy to this lack of awareness.

In terms of cooperation among States Parties, the BWC is a very active treaty. Article X of the Convention provides for such international cooperation among States Parties in activities relevant to the object and purpose of the convention. Achieving effective cooperation has proven challenging on a multilateral level, as States Parties have been unable to converge their ideas and approaches in official fora such as the Conference on Disarmament, the First Committee of the United Nations and Review Conferences. As a consequence, discussions tend to remain abstract and produce few concrete proposals. This has generated a lot of frustration among States Parties, which has led to the emergence of more informal forms of cooperation on a regional and sub-regional level.

States Parties to the BWC have organised themselves into three groups for the purposes of facilitating discussions, namely the Eastern European Group, the NAM and the Western Group. The further breakdown of the three Cold War blocks into informal groupings may have benefits for cooperation. For instance, the EU, a group of Latin American states and the JACKSNZ group have submitted joint working papers and proposals in preparation of the Sixth Review Conference in 2006. Such groupings benefit from the like-mindedness of their members, flexibility and loose coordination.

While such regional and cross-regional approaches demonstrate that cooperation in the implementation of the BWC is possible, they lack a degree of coordination sufficient for the translation of such efforts into the multilateral sphere. In other words, they are undermined by the lack of political support for such initiatives by key states, including the US, Russia and China. In particular, since the withdrawal by the US of its support for a verification protocol

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747 Article X, BWC: (1) provides for the exchange of equipment, materials and scientific and technological information between States Parties for the use of bacteriological (biological) agents and toxins for peaceful purposes, the collaboration with other states or international organisations in scientific research and the prevention of disease. (2) provides that such exchange must avoid hampering economic or technological development of States Parties.


749 Latin American Group: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Ecuador, Guatemala, Mexico, Peru and Uruguay; JACKSNZ: Japan, Australia, Canada, South Korea, Switzerland, Norway, New Zealand; Working Papers are available at BWC/CONF.VI/WP.1-19
in 2001, the lack of US leadership has limited the ability of the States Parties to converge their national interests around a common approach.\textsuperscript{750}

\subsection*{5.3.2. Compliance}

While the loose terms used in Articles I and II of the BWC enable the prohibition of biological weapons to be comprehensive in scope, it also makes it difficult to define compliance. Article I excludes only such agents and toxins from the definition of biological weapons, whose acquisition or retention may be justified for prophylactic, protective or other peaceful purposes. The term ‘justification’ in the first paragraph does not set a clear threshold beyond which certain biological or toxin agents may no longer be needed for ‘peaceful purposes’. In particular, it does not establish a clear dividing line between research for entirely peaceful purposes and dual-use research.\textsuperscript{751}

This may be explained by the fact that, in some cases, the quantity or type of biological agent alone does not indicate a specific intent regarding its peaceful or non-peaceful use. As a consequence, the identification of agents which must be destroyed or converted as part of biological disarmament efforts is not a straightforward task. However, given that the BWC imposes the elimination of an entire class of weapons, the impact of instances of non-compliance in the form of the concealment of weapons during disarmament efforts or the manufacture of new weapons can be severe.

For this reason, efforts undertaken by States Parties to increase confidence in compliance, have been accompanied by conceptual discussions of compliance; how it can be defined and demonstrated.\textsuperscript{752} Yet, little consensus has been achieved on appropriate methods to identify compliance. Indeed,


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‘many parties have different understandings of compliance. Accordingly, confidence can hardly be easily measured, but will be perceived as gradually changing when trust in compliant behaviour grows or decreases.’

It is unclear ‘whether compliance is a binary state or a continuum.’ In other words, does the term ‘justification’ in Article I intend to set a clear quantitative and qualitative cut-off point beyond which biological and toxin agents may no longer be used for peaceful purposes? Or must the presence of certain types or quantities of such agents in national facilities be evaluated in combination with other factors, such as the intent of the state in question or the perception of threat by other States Parties as a result of an alleged violation?

In terms of the intent underlying activities relevant to the BWC, it has been argued that ‘almost any activity conducted with defensive intent will be compliant with the BWC.’ Others warn that such an understanding of ‘peaceful purposes’ in Article I may promote biological weapons proliferation rather than prevent it.

Neither of the two approaches clarifies the question who must be charged with such an assessment. Some states claim the right of states to perform this task, while others argue that only a formal multilateral body would be able to provide such a politically impartial assessment. Given that a multilateral implementation body does not exist under the current legal architecture of the BWC, compliance assessments are carried out unilaterally by States Parties under no common approach. Confidence-building measures support such unilateral evaluations, in that they offer a certain, albeit limited, degree of transparency into the activities of States Parties in the biotechnological field.

Such unilateral compliance assessments have indicated that the vast majority of States Parties has successfully implemented their disarmament obligations under Article II. However, strong

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755 Ibid, para 24: ‘states can provide data that will add up to an impressionistic picture of its state of compliance, not a “yes-no” judgment about its compliance status.’
756 ‘Ensuring Compliance with the Biological Weapons Convention’, Report on the Meeting on BWC Compliance Review Processes, July 2009, 1 http://cissmdev.devccloud.acquia-sites.com/sites/default/files/papers/bwc_compliance_review_report.pdf; see ‘Material on Compliance by the Union of Soviet Socialist Republics with the BWC’, BWC/CONF.III/3/Add.1, 9: the Soviet Union argues that it is in compliance with Article I, despite keeping ‘at its disposal agents of infectious diseases and toxins only of those kinds and in those quantities which are indispensable for research in a programme of defence against bacteriological warfare.’
757 Ibid.
suspicions on the part of many exist that a number of States, including North Korea, Iraq, Iran, Libya, China and Russia, have actively pursued biological warfare programmes. For example, at the third Review Conference of the BWC in 1991, Australia, the UK and the US collectively accused the Soviet Union of having developed biological weapons in violation of the convention. At the fifth Review Conference in 2001, the US made similar allegations against four BWC States Parties - Iraq, Iran, North Korea and Libya.\textsuperscript{758}

The biological weapons programme Iraq had operated in violation of the BWC and other related obligations imposed by the UNSC constitutes one of the most prominent cases of non-compliance. Iraq ratified the BWC in 1991 and claimed to have eliminated its biological weapons stockpiles as part of the cease-fire agreement ending the Gulf War.\textsuperscript{759} It was later revealed that Iraq had produced anthrax spores, botulinum toxin, aflatoxin, and possibly plague and ricin, and had initiated a programme on several viral agents.\textsuperscript{760}

Despite ratifying the BWC in 1975, South Africa operated a smaller-scale biological warfare programme under the code name ‘Project Coast’ beginning in the early 1980s. The biological agents acquired and tested under the programme were anthrax, cholera and plague.\textsuperscript{761} It was dismantled under President De Klerk in 1993 as the result of international pressure, in particular from the US. The disarmament process and the comprehensive elimination of all biological weapons stockpiles was not verified by an external entity.\textsuperscript{762}


\textsuperscript{759} UNSC resolution 687 (1991), S/RES/687, 8 April 1991, 5, para 8, a).

\textsuperscript{760} ‘Global Chemical and Biological Weapons Survey’, \textit{Iraq WMD Assessments, October 2002 to March 2003}, JIC Current Intelligence Group Assessment, 28 October 2002 http://www.iraqinquiry.org.uk/media/232640/2002-10-28-cig-assessment-global-chemical-and-biological-weapons-survey.pdf: ‘We assess that Iraq has continued with an offensive BW programme. Research, development and production is assessed to continue under cover of a number of outwardly legitimate institutes and covert facilities. Confirmed intelligence reveals that transportable BW production facilities have been constructed. Iraq has possibly already made significant quantities of BW agents and intelligence indicates it has continued to produce biological agents. We judge that Iraq is self-sufficient in its BW programme and currently has available, either from pre-Gulf War stocks or more recent production, anthrax spores, botulinum toxin, aflatoxin, and possibly plague and ricin.’

\textsuperscript{761} Truth and Reconciliation Commission (TRC), Hearings on South Africa’s Chemical and Biological Warfare Programme, testimony of Jan Lourens, Daan Goosen, Mike Odendaal, and Schalk van Rensburg; Centre for Conflict Resolution, Basson Trial: Weekly Summaries of Court Proceedings, October 1999 - April 2002, testimony of André Immelman and James Davies.

It has been argued that these instances of non-compliance suggest the BWC’s ineffectiveness in dissuading governments and military leaders from pursuing biological weapons programmes.\textsuperscript{763}

### 5.3.3. Institutional Capacity

Unlike in the cases of the CWC and the NPT, no international agency or other permanent body oversees activities related to the BWC. While this absence of an implementation body from the BWC has been interpreted as limiting the legally binding nature of the treaty, it must be noted that the provisions of the convention are legally-binding even in the absence of such a body.\textsuperscript{764} Rather, the responsibility to monitor relevant activities and the implementation of the treaty lies with the States Parties themselves.

Article XII of the Convention provides that a Conference of States Parties was to be convened five years after its entry into force for the purpose of reviewing the operation and implementation of the BWC. The purpose of Review Conferences is to reaffirm the treaty’s binding power and to shape its evolution by creating and recording political consensus.\textsuperscript{765} The first Review Conference in 1980 served as a useful forum for clarifying the terms and provisions of the BWC and affirming the comprehensive scope of its prohibition.\textsuperscript{766} In particular, the review process has provided States Parties with a forum for the development of initiatives for addressing the BWC’s challenges.

Such initiatives include the adoption of Confidence-Building Measures (CBMs) at the second and third Review Conferences, as well as the establishment of working groups for the advancement of verification measures.\textsuperscript{767} At the fifth Review Conference (2001), it was decided that the review process would be complemented with intersessional Meetings of

\textsuperscript{764} See EU Non-proliferation and Disarmament Conference. BWC session Q&A, 1 October 2013: notes.
\textsuperscript{765} Nicholas Sims, (fn 803) 11.
\textsuperscript{766} 2\textsuperscript{nd} (1986) Rev Con: the convention covers relevant scientific and technological developments, as well as bioterrorism; 3\textsuperscript{rd} (1991) Rev Con: covers agents relating to humans, animals and plants; 4\textsuperscript{th} (1996) Rev Con: destruction or conversion prior to accession; 6\textsuperscript{th} (2001) Rev Con: applies to all current and future relevant and scientific technological developments also effectively prohibits the use of biological weapons by anyone, anywhere, at any time, for any purpose.
\textsuperscript{767} 2\textsuperscript{nd} (1986) and 3\textsuperscript{rd} (1991) Rev Cons: adoption of CBMs; establishment of an Ad Hoc Group of Governmental Experts (VEREX) in 1994 to identify and examine appropriate legally-binding verification measures from a scientific and technical standpoint.
Experts and Meetings of States Parties ‘to discuss and promote common understanding and effective action on’ a number of issues with the aim of strengthening the Convention.\textsuperscript{768}

At the sixth Review Conference in 2006, the BWC’s long-standing institutional deficit was addressed. The Implementation Support Unit (ISU), a three-person body was created as part of UNODA in Geneva. The ISU was mandated with providing administrative support to member states in the implementation of the BWC, facilitating the exchange of confidence-building measures and the universalisation of the convention.\textsuperscript{769} The creation of the ISU was among the Review Conference’s greatest successes, as it provided States Parties with secretarial support for the first time.

Yet, it has been unable to achieve any tangible results. This can, in part, be explained by its modest set-up and the failure of States Parties to expand this body and its resources. While CWC and NPT States parties have provided their respective institutions with budgets of approximately USD 66 million (OPCW) and 361 million (IAEA) in 2016, proposals for the expansion of the ISU from three members of staff to five were rejected.\textsuperscript{770}

It has been estimated that if the costs of enhancing the ISU were included in the annual budget of the BWC, the total costs 4.5\% of the OPCW’s annual budget.\textsuperscript{771} This unwillingness of States Parties to invest little resources in the strengthening of the BWC’s institutional support, illustrates the relatively low priority of the convention among their security concerns and the level of seriousness they attach to its implementation.\textsuperscript{772}

In other words, none of the initiatives launched in the Review Conference have offered permanent solutions to the BWC’s most pressing issues, including rapid advancements in biotechnology, the absence of an international organisation overseeing the implementation

\textsuperscript{768} Final Report, Fifth Review Conference of the States Parties to the BWC, BWC/CONF.V/17, para 18, a).
\textsuperscript{769} Final Doc, Sixth Review Conference of the States Parties to the BWC, BWC/CONF.VI/6, Geneva, 2006, 19.
\textsuperscript{771} Jean-Pascal Zanders, (fn 763); Working Paper submitted to the Seventh Review Conference of the BWC, ‘Biological Weapons Convention Implementation Support Unit: Future Planning’, (BWC/CONF.VII/WP), para 2: ‘The budget for the ISU consists of the salary costs for the three staff, plus a small amount for travel ($10,000 or $20,000) and office equipment ($5,000).’
of the convention, a continued lack of transparency and verification, and the resulting lack of confidence in compliance. The Final Documents of the most recent Review Conferences have revealed a stalemate stemming from the inability of States Parties to reach consensus on steps forward.

The Final Document of the eighth Review Conference in November 2016 reveals a regression in efforts to strengthen the BWC. The meetings of experts have been stopped and the meetings of States Parties will continue, albeit without a clear mandate beyond preserving the ISU. Again, proposals for an increase in the number of ISU staff were not approved. To some, the Review Conferences have been reduced to a ‘talk shop’ or an ‘empty ritual exchange of predictable arguments but no forward movement’.

In light of the continued absence of an implementation body from the BWC, the question has been raised whether this institutional ‘weakness’, may actually make the BWC better equipped to deal with certain issues than the other WMD treaties. For instance, it has been argued that this approach may offer more flexibility in addressing future challenges, as it is less rigid than institutionalised. Indeed, in fixed institutions are based on agreements, the terms of which States Parties are very reluctant to modify in light of changing circumstances. Moreover, negotiating process are slowed down by bureaucratic obstacles and may be easily blocked by vetoes. In other words, such disadvantages may outweigh the benefits of institutions.

Cooperation between States Parties for the purpose of ensuring the implementation of the convention, constitutes a new form of governance. However, while the facility to achieve agreement on important issues is a pre-condition for success in following this approach, recent review conferences have revealed that this is not given. Instead, regional centres of decision-making have emerged, allowing regional actors to converge their approaches to strengthening the BWC. The development of autonomous sets of values and expectations on the regional level may be more beneficial to the BWC. On the other hand, such a

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773 Spanish veto in 2011.
774 Nicholas Sims, ‘What Future for Biological Disarmament?’ The Trench, 10 April 2015
776 Ibid.
fragmented form of governance might gradually break up the BWC into regional instruments challenge the multilateral norms contained in the BWC.

5.3.4. Verification

As mentioned above, Article II of the BWC provides that all joining states must eliminate their biological weapons materials prior to their accession. However, no mechanisms are in place to verify the destruction of stockpiles or of their diversion to peaceful purposes. An acceding state is not obliged to declare the completion of the destruction or conversion process. Moreover, States Parties have been unable to adopt multilateral mechanisms for providing each other with the confidence that the destruction of biological warfare agents has not been reversed. Consequently, in the absence of a multilateral monitoring body, the responsibility to ensure each other with sufficient confidence in compliance, lies with the States Parties themselves.

The ‘recognition that effective verification could reinforce the Convention’ features in the Final Documents of each Review Conference. The treaty regime mandates that states-parties consult with one another and cooperate, bilaterally or multilaterally, to solve compliance concerns. A verification regime would facilitate a State party’s compliance with the Convention and provide accountability among its parties. It substantially improves the prospects for expanded international cooperation involving the peaceful uses of biological materials and technology and the exchange of scientific and technological information, which is a legal right of all parties to the Convention.

Challenges for verification, which go beyond those encountered in the verification of the CWC and the NPT, have not been overcome since the negotiation of the BWC. In particular, a number of difficulties created by the dual-use nature inherent to biological weapons agents has made classic approaches to verification unfeasible. Given that organisms producing pathogenic agents possess a strong reproductive capacity, comparatively small quantities of biological weapons agents can be militarily significant. In contrast, chemical agents must be

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777 Final Declaration, Final Document Fourth Review Conference of the BWC, BWC/Conf.IV/9, 14
deployed in multi-ton quantities and spread across large areas in order to be militarily significant.

Furthermore, while most chemical warfare agents have no peaceful application, a number of biological weapons agents may also be used in biomedical research, vaccines or for industrial purposes. Consequently, the application of such agents must be assessed on a case-by-case basis and requires the subjective identification of intent. Finally, traces of biological weapons agents can be eliminated from biopharmaceutical equipment in a very short time, making even short-notice inspections an ineffective means for proving or disproving breaches of the BWC.  

Concerned by the inability of States Parties to achieve an agreement on multilateral means of verification, the UNGA mandated the Secretary-General of the UN in its resolution 42/37 (1987) to carry out investigations in response to reports that may be brought to his attention by any Member State concerning the possible use chemical and bacteriological (biological) or toxin weapons that may constitute a violation of the Geneva Protocol or other relevant rules of customary international law in order to ascertain the facts of the matter and to report promptly the results of any such investigation to all Member States.  

While this Secretary General Mechanism (SGM) was primarily intended and used for the investigation into alleged uses of chemical weapons prior to the adoption of the CWC, it has also been used to investigate biological weapons use. It was an important addition to the biological weapons regime which continued to lack means for verification, other than national technical means, consultations among States Parties and the filing of formal complaints with the UNSC, for the investigation of alleged use of biological weapons.

Yet, the full potential of the SGM remains unexploited. It has fallen into disuse as a consequence of the entry into force of the CWC in 1997 and was put on hold to avoid pre-empting the development of field investigation procedures. While efforts have been undertaken to reinvigorate this mechanism, some states are sceptical about the reliance on

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779 UNGA resolution 42/36C (1987), reaffirmed by the UNSC in its resolution 620 (1988)
the SGM for verification. Their principal concern is the possibility the Secretary-General might refuse to investigate allegations against a P5 States Party.

At the second Review Conference of the BWC, States Parties adopted confidence-building measures (CBM), ‘in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions [regarding the misuse of biological agents or technologies for non-peaceful purposes], and to improve international co-operation in the field of peaceful bacteriological (biological) activities.’ Information exchanges under the CBMs remain the only means for enhancing transparency among BWC States Parties to date. However, they have been relatively ineffective in doing so. Infrequent participation and the provision of inadequate information often make data gathered difficult to analyse and verify. This lack of investment in the CBM process can be explained by hopes in the late 1990s that a Verification Protocol would be adopted.

In the late 1980s, the Western Group, a group of 33 BWC member states, pushed for renewed efforts to negotiate verification measures. It reminded States Parties that, under the present BWC regime, one could not be fully certain that all biological weapons had been destroyed and new ones were not being built. As a result, an Ad Hoc Group was established in 1994 to address these obstacles to verification. It was mandated with the negotiation of a verification protocol for ensuring greater transparency into facilities capable of dual use, rather than identifying breaches with a level of confidence comparable to that of the NPT or CWC.

The idea was to provide States Parties with a ‘reasonable level of confidence in compliance’ while protecting the commercial interests of industrial actors. For this purpose, the Protocol provided for mandatory annual declarations of dual-capable facilities, routine visits of such...
facilities and short-notice challenge investigations requested by a States Party suspecting a violation.784

After six years of negotiations on a verification protocol under this group, failure to achieve consensus on its terms, and in particular the withdrawal by the US of its support for the draft protocol, led to its abandonment in 2001.785 Its principal objection to the Protocol consisted in the argument that, while being ineffective in deterring proliferators, its verification measures would compromise commercial and industrial secrets.786 Following the US announcement of its withdrawal, most States Parties were unwilling to continue talks on the Protocol, which had constituted the only prospects for a legally-binding, multilateral verification instrument.

Over the years, ambitions to achieve a multilateral verification regime were replaced with a unilateral approach consisting in unfounded accusations of non-compliance. This risked undermining the BWC’s credibility.787 The continued failure to attach a verification regime to the BWC both prior to and following its entry into force solidified the idea that biological disarmament is not verifiable.788

However, the general discussion surrounding verification in the context of the BWC fails to address the concrete signification of ‘verification’ in the present context of biological disarmament, which has to be reconsidered in light of the present verification practices and technologies.789 While early forms of verification relied upon national technical means such as satellite surveillance and aerial observation, modern verification measures including OSI are applied by multilateral bodies.

784 ‘Protocol to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction’, UN Doc, BWC/AD HOC GROUP/CPR.8, 3 April 2001: Article 4, Article 9
786 Ibid
789 Ibid
The notion of verification in the 1960s and 1970s differed tremendously from its current function. During the 1970s, verification was regarded as an appropriately rapid means of detecting a militarily significant breach of treaty obligations. This idea of verification was adapted to the reduction of weapons which take a long time to develop, produce and deploy.\textsuperscript{790} In contrast, disarmament treaties such as the BWC require a different type of verification, given that even very low numbers of illegally retained weapons may bear great military significance. Measures to ensure confidence in compliance must be adapted to the nature of the ‘uncertainty’ related to potential breaches.

It is therefore necessary to depart from an entirely different angle when contemplating measures for the verification of biological disarmament on the one hand, and the verification of chemical and nuclear disarmament, on the other. A simple copy of the CWC verification system into the BWC context would not work. A declaration and inspection-based approach based on material accountancy is not considered practicable in biological disarmament due to the dual-use nature of pathogenic agents.\textsuperscript{791} A more process-oriented approach consisting the surveillance of industrial activities with the aim of ensuring their peaceful nature may be more appropriate than verifying the presence of certain technologies at a certain point in time.

Since the entry into force of the BWC, actors, tools and processes for verification have multiplied and diversified and participate in BWC related information exchanges. They include the WHO, WTO, Interpol, WCO, the biopharmaceutical industry, research institutes, UN agencies, environmental protection.\textsuperscript{792} This diversity illustrates the shared responsibility to prevent the reconstitution of biological weapons programmes.

For instance, the World Health Organisation (WHO) ‘investigates unusual outbreaks of disease.’ Following the anthrax attacks in the US 2001, the World Health Assembly of the

\textsuperscript{790} Ibid, 481
\textsuperscript{792} Jean Pascal Zanders, Amy Smithson, ‘Ensuing the Future of the Biological Weapons Convention’ Vol 18 (3) (Nonproliferation Review, 2011) 481: off-site and on-site inspections to prove compliance and non-compliance; a shift from common practice of state secrecy to an international expectation of state transparency in arms control and disarmament regimes; expansion of state surveillance capacity, whistleblowers; strengthened governmental and professional oversight of industry practices and research (including public health and safety, security standards, export control, data collection under the BWC CBM); increase in nongovernmental actors (think tanks, scientific organisations, news media).
WHO added ‘preparedness for deliberate epidemics’ and improved ‘capacity for infectious disease surveillance and response’ to its agenda.\textsuperscript{793} However, it must be noted that such surveillance aims to safeguard international health and does not serve as a reliable tool for ensuring the effective destruction of biological weapons. In cases where the WHO identifies a deliberate use of biological weapons agents, the allegation would have to be brought to the attention of the UNSC. In other words, the fundamental purpose of biological disarmament verification, namely to ensure States Parties of compliance with the treaty, is not satisfied by WHO surveillance.

Additional measures related to the protection of intellectual property over organisms, such as under the WTO, may offer additional insights into the nature of biotechnological activities of states. These measures indirectly contribute to the objectives of the BWC, namely to ensure that biological agents and biotechnology are only used for peaceful purposes.

Finally, it has been suggested that an overlap between the BWC and CWC may partially compensate for the absence of verification measures in the BWC. Both treaties prohibit the development, production and stockpiling for non-peaceful purposes of so-called ‘mid-spectrum agents’, such as toxins produced by living plants, animals and microorganisms.\textsuperscript{794} Consequently, such agents are verifiable under the CWC verification regime.

However, such dispersed methods and instruments do not amount to a coherent and sufficiently intrusive verification regime. Past instances of non-compliance and continued interest by state- and non-state actors in biological warfare agents raises the requirements for verification, which can no longer be met by unilateral or regional efforts. In other words, an overarching multilateral entity mandated with the continued surveillance of the activities of States Parties, remains indispensable.

Yet, the lack of US leadership and the recent US-Russian differences, have created further obstacles to a common approach. In particular, the Obama administration surprisingly followed former President Bush in rejecting multilateral approaches to verifying compliance.

\textsuperscript{793} World Health Assembly resolution WHA55.16, ‘Global Public Health Response to Natural Occurrence, Accidental Release or Deliberate Use of Biological and Chemical Agents or Radio-nuclear Material that Affect Health’, 18 May 2002

with the BWC. Instead of strengthening the BWC as the principal instrument for outlawing biological weapons, it places an increased emphasis on preventing the acquisition and use of biological weapons by non-state actors, thus neglecting the disarmament objective of the convention.

5.3.5. Enforcement

The notion of enforcement of biological disarmament must be considered within the context of the BWC’s legal architecture. The absence of both an implementation body and a corresponding verification regime raise the question on what grounds and by what entity compliance issues might be addressed.

Article V of the BWC places the responsibility on its States Parties to consult with one another and cooperate, bilaterally or multilaterally, to solve ‘any problems that may arise in relation to (...) the Convention,’ including compliance concerns. The initial identification of such problems may be undertaken by any States Party, but a ‘specific, timely response to any compliance concern alleging a breach of their obligations under the Convention’ must be provided. In addition, Article VI provides that such a response may take the form of a formal complaint with the UNSC. Article VI constitutes the only provision of the BWC which offers a procedure for addressing suspicions or allegations of non-compliance. It provides that

‘Any State Party to this Convention which finds that any other State Party is acting in breach of obligations deriving from the provisions of the Convention may lodge a complaint with the Security Council of the United Nations. Such a complaint should include all possible evidence confirming its validity, as well as a request for its consideration by the Security Council.’

This Article has been considered weak, since the negotiation of the BWC for reasons related to the likely use of the veto by the P5 in the case of allegations of non-compliance against them. Concerns persist regarding the establishment of a discriminatory practice between the

797 Article V, BWC.
P5 and their allies on the one hand, and the remaining BWC States Parties on the other. As a result, Article VI may only be applied to states other than the P5 and their allies. In other words, its credibility continues to hinge upon the responsible use by the P5 of their veto power.

At the third Review Conference of the BWC, States Parties reiterated this concern by inviting the UNSC to ‘consider immediately any complaint lodged under Article VI and to initiate any measures it considers necessary for the investigation of the complaint’

More recently, States Parties have affirmed that Article VI does not limit the right of states ‘to consider jointly cases of alleged non-compliance with the provisions of the Convention and to make appropriate decisions in accordance with the Charter of the United Nations and applicable rules of international law.’

This clarification of measures to be taken under Article VI stems from a joint US-Canadian proposal of 17 September 1991 to include sanctions as a possible response to violations of the BWC. The intent of this addition was to strengthen the credibility of Article VI as a deterrent to violations by providing further options for enforcement in cases where UNSC measures would be vetoed.

It is known that a number of States, including North Korea, Iraq, Iran, Libya, China and Russia, have actively pursued biological warfare programmes. Still, Article VI has not been invoked to date, neither in the form of a UNSC complaint nor in the form of sanctions. This reluctance of BWC States Parties to enforce the convention, a responsibility which was placed upon them

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799 Nicholas Sims, *The Evolution of Biological Disarmament*, (OUP, 2001) 53-54: the draft conventions between 1969 and 1971 provided for the adoption of a UNSC resolution (‘Accompanying Resolution’), in which it declared its of its intent to ensure the activation of the complaint procedure under Article VI, (i.e. to use the veto power sparingly). The P5 expressed their unwillingness to constrain their veto power in the context of the BWC.


802 Joint US-Canadian Proposals for the Final Declaration, ‘Article V’, BWC/CONF.III/23, Part III, 16 September 1991, 75: ‘The Conference notes declarations by States Parties of their intention to consider individually the application of sanctions against any State which uses biological or toxin weapons, as well as to consider individually measures, including sanctions, in response to any violations of the Convention. Such measures might include cessation of scientific and technical collaboration on any biological activity, trade restrictions or denial of economic assistance.’

as a substitute for institutional enforcement, illustrates how the institutional weakness and inability to verify compliance undermine the treaty’s authority as a whole.

The current measures in place, including CBMs and the ISU, do not enable States Parties to make compliance assessments which are sufficiently reliable to allow them to adopt appropriate and effective enforcement measures. Given that the terms of Article VI do not specify the nature of the ‘breach of obligations’, it is unclear what evidence may confirm the validity of such a breach.\textsuperscript{804} As a result, the assessment of non-compliance is made unilaterally and on the basis of evidence available to one or a small number of states only.

The serious political implications of such allegations explain why States Parties may be reluctant to lodge formal complaints with the UNSC or adopt unilateral sanctions on the basis of provisions which offer only vague guidelines. In other words, even four decades after the entry into force of the BWC, it is unclear how States Parties must respond to violations. Review Conferences have not been able to reconcile the objective to contain the potentially severe consequences of non-compliance with difficulties in assessing non-compliance. As a consequence, the convention has remained unenforced.

At the opening of the fifth Review Conference of the BWC, the US delegate openly accused six states of violating the Convention, namely Iran, Iraq, Libya, North Korea and Sudan. However, these allegations were not made with the aim of bringing those states back into compliance, but for the purpose of highlighting the BWC’s ‘ineffectiveness in dissuading these States from pursuing biological weapons programmes’ and to express the conviction that ‘the draft BWC Protocol would have likewise failed to do so.’\textsuperscript{805} Instead, the US proposed ‘a voluntary cooperative mechanism for clarifying and resolving compliance concerns by mutual consent,’ including the criminalisation of certain behaviours on a national level.\textsuperscript{806}

As noted above, measures to address non-compliance must be adapted to the nature of uncertainty created by a suspected violation of the BWC. While the BWC does not ban the

\textsuperscript{804} Article VI, BWC: ‘Such a complaint should include all possible evidence confirming [the] validity [of the breach].’


use of biological weapons, any violation which may be directly aimed towards their acquisition or the establishment of a biological warfare programme (i.e. militarily significant violations) must be addressed in a systematic and legally-binding, rather than voluntary manner. As affirmed by the fourth BWC Review Conference in 1996, instances of ‘non-compliance should be treated with determination in all cases, without selectivity or discrimination.’

The reluctance of States Parties to address suspected violations without access to sufficiently reliable information on the suspected violator’s activities on the one hand, and the need for rapid, adequate and coherent measures to address such allegations on the other, limit the BWC’s ability to deter future breaches. This explains why ‘instances and allegations of use have historically been dealt with outside of the BWC context and there have been few biological weapons-related crises that might have forced States Parties to grapple with the effectiveness, or lack thereof, of the BTWC.’

In conclusion, unilateral enforcement measures, as envisaged by Articles V and VI do not constitute an effective substitute for an institutionalised and legally-binding verification and enforcement regime.

**Conclusion**

Considering the modest origins of the BWC and in particular the compromises made during its negotiation, tremendous progress has been made in further developing and broadening its structure. Ambiguities stemming from the limited legal architecture have been clarified through a regular dialogue of States Parties in the review process. This dialogue has enabled States Parties to adopt subsequent agreements on the legal interpretation of provisions, which have provided additional support to the already comprehensive prohibition of biological weapons embodied in the BWC. In addition, the activities related to the Convention have broadened, inviting more actors to participate in advancing its objectives.

While the legal architecture of the Convention has become denser, expectations that its fundamental flaws would be remedied through the adoption of additional mechanisms have

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807 Fourth Review Conference of States Parties to the BWC, BWC/Conf.IV/9, 16 para 9
been largely disappointed. The BWC’s lack of universality is considered to be one of its principal weaknesses. While ongoing efforts to promote universality are likely to further increase the treaty’s membership, a persistent group of hold-out states is expected to remain outside of the treaty, thereby limiting the confidence of States Parties in the non-use of biological weapons.

Moreover, more than four decades since the entry into force of the treaty, States Parties are still unable to cooperate effectively on a multilateral level. Indeed, the absence of a multilateral implementation body from the BWC has challenged States Parties to assume the responsibility to achieve consensus on important matters without such institutional support. As a result, only succeeded in partial and regional initiatives have been launched, which have yet to be integrated into the BWC regime. However, the failure to adopt a Verification Protocol illustrates the lack of political will among States Parties to invest time and resources into the strengthening of the treaty and to make necessary concessions.

The continued lack of institutional support and verification mechanisms has continuously weakened the BWC. Indeed, it has not only been unable to dissuade states from pursuing biological warfare programmes, but its States Parties also lack appropriate means for addressing such instances of non-compliance. This inability to maintain and enforce compliance has earned it the name ‘the toothless convention.’

In conclusion, the architectural shortcomings of BWC and the inability of its States Parties to remedy them limit its legal effectiveness as a disarmament treaty. The effective and irreversible destruction of all biological weapons cannot be guaranteed under the current regime. However, it must be noted, that despite these weaknesses and the continuing questioning of its relevance, the evolution of the BWC regime is ongoing. The BWC remains the cornerstone of the biological disarmament regime to date. Although its role in the advancement of ‘general and complete disarmament’ is undisputed, further opportunities for placing such activities under ‘strict and effective international control’ must be sought.


Conclusion

This thesis has demonstrated that legal regimes are crucial instruments for disarmament, but that their mere existence sufficient for their effective advancement of disarmament goals. In order for disarmament regimes to have a significant impact in the sharply political environment in which they operate, they must be provided with a strong legal architecture and undergo a continuous effectiveness evaluation.

The central aim of this research was to remedy the absence of tools enabling disarmament practitioners to better understand and enhance the role which legal regimes play in advancing disarmament. For this purpose, it first provided a comprehensive and up-to-date analysis of the law on disarmament before it proceeded to an evaluation of the three WMD disarmament regimes on the basis of criteria of effectiveness.

In this chapter, the principal findings with regard to the research questions are summarised and general conclusions drawn from these results. Then, practical application and implications for disarmament practitioners, legal advisors and policy-makers will be discussed. Furthermore, the limitations of this research will be outlined. The chapter concludes with recommendations for further research building on this study and contributing to the further development of evaluative tools for testing the effectiveness of disarmament regimes.

1. Research Findings and Limitations

This thesis has recalled that while states have historically sought the elimination of the most destructive weapons for as long as they have existed, ‘in an international community that was still chaotic, [and without strong legal structures], the first attempts at disarmament were timid, few and far between, narrow in scope and generally destined to fail.’ Yves Collart, (fn 21) 3.

811 Yves Collart, (fn 21) 3.
peace and security, states grew more willing to limit their sovereignty and subject themselves to legal disarmament instruments.

An examination of the legal sources of disarmament in Chapter 1 revealed the key conclusion that the general principle of voluntarism in international law also governs disarmament regimes. In other words, the effectiveness of disarmament regimes rests primarily on the consent given by states to disarmament obligations. In the absence of consent, special obligations to disarm may arise for third states under customary international law or be imposed by the UNSC under Chapter VII of the UN Charter.

Historically, coerced disarmament, such as the disarmament of Germany in the inter-war period, has not led to sustainable and irreversible disarmament. It can be argued that by pushing the boundaries of an obligation to disarm on a state, the effectiveness of an existing legal regime is undermined as this casts doubt on the consistency and integrity of the law. Indeed, if the state that is the object of coercive measures appears to be singled out, this calls into question the authority of the treaty regime. As a consequence, the multilateral, consent-based, legally-binding, verifiable and enforceable elimination of individual classes of weapons was reaffirmed as the most effective approach to WMD disarmament.

Chapter 1 identified key sources of international law and their interaction. It was concluded that the law on disarmament does not constitute lex specialis overriding general international law and that disarmament regimes cannot be qualified as self-contained regimes given their strong reliance on the latter for treaty interpretation, the enforcement of compliance and for institutional support from the UN.

A state’s consent to being bound by a disarmament obligation is not sufficient for it to be effective. It is crucial that the scope of the obligation is clear (internal effectiveness). The discussion of Article VI, NPT in Chapter 4 revealed that inaccurate and unclear language can leave the exact scope of an obligation open to interpretation. The RMI lawsuits further illustrated this, as it resorted to a customary rather than conventional obligation to disarm.

The disarmament debate is part of a broader question of non-use. The elimination aims are preventing the use of these weapons. However, these questions must be kept separate. Disarmament law is embedded in broader disputes from which it needs to be distinguished.
Findings Related to the External Effectiveness of Disarmament Regimes

The substantive chapters (Chapters 3 – 5) provided an in-depth examination of the chemical, nuclear and biological disarmament regimes. They revealed that ‘the rule of law for disarmament has evolved very unevenly,’ each regime having gone through its own distinct evolution. This serves as a reminder that disarmament measures must always account for the technical particularities of weapons and their evaluation must take into consideration their distinct political challenges.

The chemical disarmament regime constitutes the most comprehensive and sophisticated out of the three WMD regimes. It was concluded that the CWC’s legal structure provides a solid foundation for chemical disarmament. The level of participation is satisfactory overall and multilateral institutions such as the OPCW and the UN are equipped with the infrastructure and instruments necessary to deal with the technical requirements of chemical disarmament. Moreover, a sophisticated verification regime is attached to the CWC and mechanisms for the enforcement of the CWC are available.

The effectiveness evaluation in Chapter 3 indicated a high capacity of the CWC regime to influence state behaviour. A first conclusion regarding the impact of this regime was drawn by means of contrasting the silence of the international community in response to the use of chemical weapons during the Iran-Iraq war (1980 – 1988, prior to the adoption of the CWC), to the strong moral outrage of the international community in the Syrian context, which facilitated ad hoc disarmament measures in response to the use of CW in Syria (2013).

However, it was argued in this chapter that the structure of the CW regime is not sufficiently flexible. For example, the mandate of the OPCW does not allow for the shared treatment of samples with the UN, nor does it provide guidelines for dealing with emerging challenges such as non-state actors. Furthermore, this chapter highlighted the grey areas caused by the lack of enforcement mechanisms inherent to the CWC regime. In this respect, the reliance on the UNSC for enforcement exposes the regime to the bias and veto of the P5, thus allowing close relations to a P5 member to protect violators from sanctions.

On the other hand, practical obstacles limit the scope of the regime and, consequently, its applicability. For example, the Syrian case highlighted the limited scope of the CWC regarding non-state parties. To remedy this shortcoming, *ad hoc* disarmament regimes may serve as a complement to the CWC disarmament regime. This has been illustrated by the example of the UN-OPCW joint disarmament mission in Syria. However, it was concluded that the narrow mandate of the UN-OPCW mission only provided quick, short-term solutions and deprived chemical disarmament of the long-term effects the CWC regime offers.

Moreover, these findings highlight the importance of the time factor in disarmament operations, as the crisis situation in Syria has allowed the intensification of efforts in terms of participation of states in the operation, the quick implementation of verification measures and the cooperation between the UN and OPCW in the mission. Finally, it was argued that while the entry into force of the CWC has significantly decreased the risk of chemical warfare, the complete and permanent elimination of CW requires universal adherence to the CWC regime.

The nuclear disarmament regime constitutes the most limited WMD regime to date. With the adoption of the Treaty on the Prohibition of Nuclear Weapons, the legal architecture of the regime may finally take shape. This analysis centred on Article VI, NPT which contains the disarmament pillar of the NPT. The failure of the Marshall Islands Lawsuits at the ICJ to produce authoritative conclusions with regard to the legal scope and nature of Article VI highlighted the continued relevance of this question.

It was argued in this chapter that the application of the interpretative rules of the VCLT (Article 31, VCLT) does not indicate an obligation to disarm, but rather an obligation of conduct to take concrete steps to initiate the negotiation of disarmament. In other words, the standard of behaviour contained in Article VI is a standard of *due diligence* which only requires states to take active measures, but not specific outcomes.

However, a number of types of behaviour indicate a violation of this weak standard of behaviour. The legal ambiguity of Article VI has enabled states to justify the continuation and even modernisation of their NWS programmes. Although the Marshall Islands lawsuits have failed to contribute to the clarification of the legal standard in Article VI.
Difficulties in achieving necessary levels of trust for multilateral negotiations on disarmament can be explained in part by the fact that key nuclear weapons states remain outside NPT regime. Furthermore, difficulties compelling states to negotiate have also been attributed to the lack of a standing secretariat mandated with overseeing the implementation of the disarmament pillar of the NPT. The absence of an institutional framework providing States Parties with a negotiating forum has created a dependency on the UN disarmament machinery and the NPT review process, which have both proven unable to yield consensus. Finally, the inability of states to agree on the key characteristics of verification and enforcement mechanisms has constituted a disincentive for states to initiate formal negotiations.

However, the Marshall Islands Lawsuits and the Humanitarian Initiative constitute the first translations of a sense of frustration among non-nuclear weapons states into a legal reality. They added to the momentum which enabled the adoption of the new Treaty on the Prohibition of Nuclear Weapons. Following its entry into force, this treaty will establish much clearer and sharper standards of behaviour for states offer alternative approaches to overcoming this deadlock. Moreover, the South African case of nuclear disarmament illustrated that profound domestic political change in combination with security assurances can facilitate the decision of a nuclear weapons state to abandon their nuclear weapons.

The evaluation of the biological disarmament in Chapter 5 revealed that although no cases of biological weapons have been known in recent years, the BWC regime’s fundamental shortcoming lies in the lack appropriate means for addressing instances of non-compliance. Due to ambiguities in the treaty language resulting from the reduced legal architecture of the BWC and reliance on the general-purpose criterion, states parties rely on the subjective identification of instances of non-compliance. This inability to maintain and enforce compliance has earned it the name ‘the toothless convention.’

Furthermore, the BWC’s reduced membership in contrast with the CWC and NPT is another key weakness. While ongoing efforts to promote universality are likely to further increase the treaty’s membership, a persistent group of hold-out states is expected to remain outside of

the treaty, thereby limiting the confidence of States Parties in the non-use of biological weapons.

The BWC’s States Parties are still unable to cooperate effectively on a multilateral level. Indeed, the absence of a multilateral implementation body from the BWC, efforts to achieve consensus on important matters without such institutional support have only resulted in partial and regional initiatives, which have yet to be integrated into the BWC regime. The failure of its States Parties to adopt a Verification Protocol illustrates the lack of political will among States Parties to invest time and resources into the strengthening of the treaty and to make necessary concessions.

A key strength of the BWC is its review process. The review process has enabled States Parties to achieve consensus on the legal interpretation of provisions, which has provided additional support to the already comprehensive prohibition of biological weapons embodied in the BWC. In addition, the activities related to the Convention have broadened, inviting more actors to participate in advancing its objectives. It was concluded that despite the absence of verification mechanisms, adequate institutional support and enforcement mechanisms, the evolution of the BWC regime is ongoing.

2. Limitations of Research

The subjectivity of Effectiveness Analysis

Given that there is no commonly agreed definition of effectiveness in IR literature, the understanding of effectiveness is inherently subjective and depends on the theoretic perspective and expertise of the analyst. Therefore, a systematic quantitative measurement of effectiveness is not possible. However, qualitative analysis is better suited for examining the trajectory of a regime over time.

Limited Generalisability of the Findings

The application of the same criteria to all three WMD regimes has highlighted the different levels of completeness of the legal architectures of the nuclear, chemical and biological

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regimes linked to the different stages in their development. Their evolution not being linear and responding differently to external influences, it is difficult to draw generalisable conclusions across regimes and to draw useful comparisons regarding their performance. Furthermore, as effectiveness analysis is a very subjective field of research, it is difficult to find empirical evidence which connects the legal potential of a regime to the positive results it achieves in practice.

**Further Testing of the Criteria for Effectiveness**

Given the novelty of this approach to assessing WMD regimes, it must be further challenged and adapted in order to be consolidated. As Levi, Young and Zürn noted, criteria for regime effectiveness which have not been ‘explored systematically across a range of international regimes (...) remain hypotheses in need of testing.’ In other words, a further application of these criteria would enable the long-term testing of the criteria themselves and over time lead to their sharpening and strengthening of the criteria as evaluative tools.

**Extension to Conventional Disarmament Regimes**

This research was limited to non-conventional disarmament regimes, not covering conventional multilateral disarmament treaties such as the Convention on Certain Conventional Weapons, the Convention on Cluster Munitions, the Mine Ban Treaty and others. The applicability of the framework for effectiveness used for WMD regimes to conventional disarmament regimes remains to be explored.

3. **Practical applications and implication**

Disarmament practitioners with little or no legal expertise would benefit greatly from this research, as it provides them with important clarifications of the legal structure underlying the regimes they engage with on a routine basis. It allows them to better understand the implications of the legal obligations which their governments subscribe to which enhances the likelihood of their consistent adherence to them. A clearer understanding allows non-

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legal disarmament practitioners to adopt a more proactive and informed role in the negotiation of new legal instruments and measures.

For disarmament actors with more advanced legal expertise, this research may serve as a useful reminder of the ways in which general international law interacts with disarmament norms. For instance, legal ambiguities can be better addressed through knowledge of the Law of Treaties rules on treaty interpretation. Experts in one WMD regime may draw valuable insights from the legal analysis of another.

The criteria for effectiveness established in this thesis offer practical tools for participants in review processes, as they serve as guidelines for areas and issues to navigate in identifying the strengths and weaknesses of a regime as well as practical steps to address them. This research facilitates a more constructive exchange between policy-makers, legal experts, national security advisors and other actors, as it acknowledges a range of interests which must be considered yet focuses on the common goal of preserving and strengthening disarmament measures.

Finally, think tanks, NGOs and international disarmament organisations can draw from this research as a source of training materials for disarmament practitioners. For example, the joint training programme of The Asser Institute for International Law and the OPCW provides ‘multidisciplinary education on nuclear, chemical, and biological weapons and threats through a historic, legal, technical, diplomatic, and geopolitical framework.’816 This research addresses each of these perspectives and joins them into a holistic framework for effectiveness.

4. Recommendations for future research

Given the legal emphasis of the research question, this research has primarily covered the legal and political spheres of disarmament, while integrating scientific, technological and military factors only as secondary considerations. The multifaceted nature of WMD disarmament invites disarmament actors from different background to contribute to a better

understanding of the different factors influencing disarmament dynamics. For this reason, the integration of further insights from the technological, scientific and military communities could further contribute to the refinement of the framework for testing the effectiveness of WMD regimes.

For example, further research is needed to better understand how political will is generated and sustained. While this cannot be explained on the grounds of a legal analysis, legal effectiveness heavily depends on the presence of sufficient political will. The degree of political will manifests itself both at the negotiation and implementation levels. In other words, it affects the internal and external effectiveness of a regime. A better understanding of the factors influencing political will and its own influence on a regime’s legal structure would better inform future effectiveness evaluations.

Furthermore, there is little long-term value in a singular assessment of the status quo of a disarmament regime. As discussed in the introduction, disarmament regimes are dynamic entities which are susceptible to rapid change. For this reason, only their continuous re-evaluation using the same framework for effectiveness can allow for a long-term effectiveness analysis.

For example, the adoption of the Treaty on the Prohibition of Nuclear Weapons constitutes a significant addition to the nuclear disarmament regime, occurring following several decades of stagnation in its evolution. However, its long-term significance may only become clear through a repeated re-assessment of its legal architecture which is limited as of now but expected to be expanded through further negotiations. Hence, further research is required.

While this thesis has affirmed the crucial role which international law plays in the pursuit of disarmament. However, it must be noted that given the diversity of competing interests, it is difficult to define the precise extent to which states consider legal and non-legal in a given situation. On this issue, Daniel Joyner affirms the ‘complexity of the issue area [of disarmament], and the difficulty of finding a clear place for international law on issues of such high priorities and national security sensitivity.’

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Yet, the analysis of the international law on disarmament and in particular on international custom, has revealed that new disarmament norms may crystallise slowly over time and become relevant in unforeseeable situations, as illustrated by the case of Syrian disarmament. The immediate attention which states dedicate to the legal dimension of disarmament is not indicative of its long-term impact in practice. Furthermore, this thesis highlighted the fact that new factual circumstances create new legal issues. For this reason, it calls for and encourages the continued examination and clarification of issues of the international law applicable to disarmament addressed in this thesis.

5. The Role of International Law in Disarmament

Through its in-depth and up-to-date analysis of international disarmament law, this thesis has made an important contribution to the thus far limited legal literature on disarmament regimes. Yet, the role of international law in disarmament is permanently questioned, given that disarmament obligations are not directly enforceable, the factors driving or hampering disarmament are of primarily political nature and consequently the authority of legal disarmament norms may appear negligible.

As Daniel Joyner notes, the 1996 Advisory Opinion on the Legality of Nuclear Weapons ‘stands as a testament to the complexity of the issue area, and the difficulty of finding a clear place for international law on issues of such high priorities and national security sensitivity.’818 While international law may indeed rarely be the most influential factor in disarmament debates, States tend to use disarmament treaties as political instruments to promote their national interests.

Therefore, when legal norms enter the disarmament debate, they have to be as effective as possible in establishing clear obligations with as little opportunity for states to take advantage to vague and ambiguous provisions, to invoke their lack of confidence due to inexistent or flawed verification mechanisms and other regime weaknesses. In other words, by strengthening legal disarmament instruments, their impact as political tools will be heightened and ultimately the legal and political spheres will interact more constructively. By

setting benchmarks for state behaviour surrounding weapons, disarmament treaties shape public discourse.

This research attempts to suggest that the legal format is indispensable for WMD disarmament by arguing without it, states would not be able to achieve sufficient levels of confidence in each other’s commitments. In other words, that legal commitments establish clearer and stronger boundaries for state behaviour than mere political commitments. In a similar vein, Sergio Duarte warns:

‘Just imagine the conditions facing the rule of law that would exist if one day all legal constraints on the world’s deadliest weapons were suddenly to disappear. We would face a world in which arsenals of WMD were not only growing – both in quantity and in quality – but also appearing in more and more states. Risks would increase that non-state actors would acquire WMD, as the legal and political barriers to such acquisition would fall. This would be a world of might-makes-right – a dark, nightmarish vision indeed.’

In conclusion, this thesis showed that this is not the end of disarmament regimes. All three WMD regimes currently provide such crucial legal barriers to the re-acquisition of WMD. Despite the use of chemical weapons in Syria, modernisation efforts on the part of nuclear weapons states the lasting absence of means to verify weapons activities, the wheels of WMD disarmament are turning, albeit slowly. Building on the understanding that they continue to be indispensable for international peace and security and that they have not yet reached their full potential, this research has served as a contribution to the continuous investment in these regimes.

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