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Nuclear Non-Proliferation in International Law

Volume I

Jonathan L. Black-Branch
Dieter Fleck *Editors*

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Foreword

The discovery of nuclear fission in 1939 and its subsequent use for deadly purposes in 1945 changed the world forever, and created immense challenges for the regulation of nuclear energy, minimizing and preventing its misuse for destructive military purposes while its peaceful uses were available for the benefit of humankind. How to establish nuclear governance continues as a challenge. As with other areas of human activity, nuclear governance is a mix of policy and legal considerations. To this end there exist universal, regional and bilateral treaties and agreements as well as the International Atomic Energy Agency (IAEA), regional organizations and the United Nations.

Over the past seven decades or so, a lot of good work has been accomplished in developing the legal frameworks for the peaceful uses of nuclear energy, including in the areas of nuclear safety, nuclear security and nuclear liability. And in the area of the legal framework for nuclear disarmament and non-proliferation there exists the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and its verification system, the 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT), regional and bilateral treaties and the 1996 advisory opinion of the International Court of Justice (ICJ). However, the legal frameworks both for the peaceful use of nuclear energy as well as for the prohibition of its use for military purposes are far from comprehensive or universally accepted.

This book series identifies and explores various legal issues relating to the development of nuclear energy for military and peaceful purposes. In independent and peer-reviewed research essays, the series examines the status of international law regarding the development of nuclear capability and the legal obligations of States in this regard. It provides academic and practical analyses of legal issues within a contemporary global context through a combination of scholarly research articles and critical commentaries on relevant treaty law, customary practice and legal case developments. This first volume starts with a comprehensive audit of relevant legal issues and international concerns written by the editors, Jonathan L. Black-Branch and Dieter Fleck, followed by eight select contributions:

Kate Deere revisits the obligations of nuclear-weapon States (NWS) not to transfer nuclear weapons and devices to any recipient (Article I, NPT) and also discusses the role of States possessing nuclear weapons not party to the Treaty. She concludes, *inter alia*, that despite evidence of some actions potentially

amounting to breaches of Article I, there appears to be a general commitment by the five NPT nuclear-weapon States not to contribute directly to proliferation, nor to overtly accuse one another of breaches, but rather to focus on related proliferation concerns, particularly the potential for inadvertent transfer or misuse of nuclear or dual-use materials. The changed security environment after the end of the Cold War has also raised new proliferation concerns, with heightened attention being paid to the need to address the security of nuclear facilities and materials and prevent the potential for non-State actors to access nuclear weapons.

Daniel Rietiker offers an analysis of Article VI of the NPT under the rules of treaty interpretation and notes that this article is certainly one of its most controversial provisions; the views of scholars and practitioners differ considerably concerning the nature and scope of the rights and obligations of the States Parties, and it seems clear that none of the objectives has been met almost half-a-century after the adoption of the NPT. He explains that Article VI obliges the States Parties to pursue negotiations in good faith in view of three specific goals: (1) the ending of the nuclear arms race at an early date, (2) achieving nuclear disarmament and (3) the conclusion of a treaty on general and complete disarmament. Rietiker affirms that States can no longer, in good faith and in the light of the rule *pacta sunt servanda*, invoke military constraints or the allegedly vague wording of Article VI to delay serious steps towards nuclear disarmament, in particular taking into consideration that the international community has shown the will and capacity to find agreement to abolish entire categories of weapons and to denuclearise five inhabited regions entirely.

Kimberly Gilligan discusses the NPT's purpose, its historical context and content. She observes that technology alone will not stop the spread of nuclear weapons. Deterrence has not worked as well as some practitioners had hoped and keeping secrets is not a guarantee for success. Thus, international non-proliferation policies are necessary and several such policies have been developed over the decades taking the form of treaties. Treaties are important because they are the main mechanism for controlling proliferation and the NPT is central to the nuclear non-proliferation regime.

Susan Breau interprets the rule of distinction under international humanitarian law and its application to the use of nuclear weapons. She recalls the 1996 Advisory Opinion of the International Court of Justice on the *Legality of the Threat or Use of Nuclear Weapons* that maintained that it is a cardinal principle that a State must never make civilians an object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets. She notes that a counterargument has been advanced that it would be possible to use battlefield nuclear weapons that only target military personnel and equipment and thus, such use would not violate the rule of distinction in international humanitarian law. Breau concludes that the claim that use of low yield tactical nuclear weapons does not offend these rules is an impossibility, not only because of the risk of escalation to full-scale nuclear war but because of the very nature of nuclear weapons. Furthermore, the rule of distinction has to include consideration of future, not just immediate, consequences for a civilian population.

Gabriella Venturini discusses global efforts to prohibit nuclear test explosions, including the 1963 Partial Test Ban Treaty and the 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT), neither of which has achieved universal adherence as yet. She maintains that international law concerning nuclear test explosions has developed slowly during the past 50 years and it is highly fragmented at the present time. Venturini considers options to bring about the implementation of the CTBT, such as provisional application of the Treaty, or an amendment instrument *de facto* bringing into effect the treaty immediately, or the UN Security Council enacting an *erga omnes* ban. She concludes that all options have drawbacks and none seems credible at the present time, but there may be a progressive emergence of a customary norm prohibiting all nuclear test explosions.

Anguel Anastassov undertakes an overview of environmental issues related to peaceful uses of nuclear energy. He concludes that the peaceful nuclear option cannot be effectively exercised by one State alone; cooperation with other States on the bilateral, regional and global level is indispensable. The shift in the understanding of sovereignty from independence to cooperation is a part of the wider issue of resolving the environmental concerns of the modern contemporary world, and a specific way of implementing a cooperative approach in the regulation of the safe use of peaceful nuclear energy involving international organisations. Anastassov asserts than an essential part of the concept of sovereignty is cooperation between States and non-State actors to prevent and mitigate environmental damage caused by any nuclear accident, and to strengthen the existing legal regime for both civil and international liability.

Katja Göcke discusses international legal issues related to uranium mining on indigenous lands. In particular, she examines the potential impact of uranium mining on indigenous communities, national and international legal frameworks governing uranium mining on indigenous lands, and assesses the substantial and procedural rights of indigenous peoples under international law. Due to the many negative experiences of the past as well as the inevitable risks associated with uranium mining, exploitation of uranium on indigenous lands is a very sensitive issue. She notes that the rejection of uranium exploration and exploitation on its lands is an expression of an indigenous peoples' right to self-determination, which has to be respected by the respective home States—not only for moral reasons but also as a legal obligation under international law. This does not mean, however, that all uranium deposits on indigenous lands have to remain unexploited forever. Instead, it means that it should be up to indigenous peoples to decide on their path of development in accordance with democratic standards following a majority vote in a referendum.

Jana Hertwig reviews the European Union's (EU) 'Strategy Against the Proliferation of Weapons of Mass Destruction' with the ultimate objective 'to prevent, deter, halt and, where possible, eliminate proliferation programmes of concern worldwide', through effective multilateralism, stable environment and close cooperation. She notes that since the EU membership comprises nuclear-weapon States (France and United Kingdom) and non-nuclear-weapon States, as well as NATO members and non-NATO members, the EU has been challenged to find a

balanced and realistic approach towards nonproliferation and disarmament issues. For the EU to take any initiative on nuclear nonproliferation, it must first achieve internal consensus, thus the EU is not a unitary actor. Hertwig notes that the EU has an important role in strengthening international security and it is making a significant contribution towards preventing the spread of WMD as well as confronting the threat of terrorism. The EU WMD Strategy does not explicitly state under which conditions pursuant to the UN Charter and international law, the EU may act, and the use of force has not been clearly defined. She posits that the EU should explicitly state under which conditions pursuant to the UN Charter and international law, the EU may use force and which role is thereby left to the UN Security Council.

In subsequent volumes there will be further discussion on some of these and other related issues.

I am pleased to write this Foreword. Naturally the views expressed in the essays are those of the authors and do not necessarily reflect my own views. The compendium should provide interesting and thought-provoking reading for both legal experts and policy makers. It should hopefully serve as a stimulus for the completion of a comprehensive and universally accepted legal regime to govern such an important human activity that could have significant economic and social impacts but if misused could lead to self-destruction.

February 2014 Mohamed ElBaradei

Contents

Abbreviations

ACommHPR	African Commission on Human and Peoples' Rights
ADRIP	American Declaration on the Rights of Indigenous Peoples
AJIL	American Journal of International Law
CFSP	Common Foreign and Security Policy of the EU
CTBT	Comprehensive Test Ban Treaty
CTBTO	Comprehensive Test Ban Treaty Organization
DPRK	Democratic People's Republic of Korea
ESS	European Security Strategy
EU	European Union
FMCT	Fissile Material Cut-off Treaty
FPIC	Free, Prior and Informed Consent
GTRI	Global Threat Reduction Initiative
GYIL	German Yearbook of International Law
HCoC	Hague Code of Conduct Against the Proliferation of Ballistic Missiles
IACtHR	Inter-American Court of Human Rights
IAEA	International Atomic Energy Agency
ICLQ	International and Comparative Law Quarterly
LOAC	Law of Armed Conflict
MTCR	Missile Technology Control Regime
NATO	North Atlantic Treaty Organization
NNWS	Non-Nuclear-Weapon State[s]
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NSG	Nuclear Suppliers Group
NSS	Nuclear Security Summit
NTEs	Nuclear Test Explosions
NWFZs	Nuclear-Weapon-Free Zones
NWS	Nuclear-Weapon State[s]
NZYIL	New Zealand Yearbook of International Law
OPCW	Organization for the Prohibition of Chemical Weapons
PSI	Proliferation Security Initiative
PTBT	Partial Test Ban Treaty
RdC	Recueil des Cours de l' Académie de droit International de la Haye
RDGIP	Revue générale de droit International Public

TEU	Treaty on European Union
UK	United Kingdom
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNIDIR	United Nations Institute for Disarmament Research
US	United States
VCLT	Vienna Convention on the Law of Treaties
WMD	Weapons of Mass Destruction

Chapter 1
Nuclear Weapons, Non-Proliferation and Disarmament: A Comprehensive Audit of Relevant Legal Issues and International Concerns

Jonathan L. Black-Branch and Dieter Fleck

Abstract This chapter provides an audit of legal issues relevant for nuclear non-proliferation, peaceful uses of nuclear energy and nuclear disarmament. The authors discuss existing loopholes in pertinent treaty regulation; they address the question of the development of customary international law and identify gaps in regulation. Countermeasures, sanctions and pacific settlement of disputes are discussed with a view of supporting compliance with existing obligations. Finally, some preliminary suggestions for further research and cooperation are presented.

Contents

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1.1 Introduction

The development of nuclear weapons has transformed the world. Few areas of law provoke as much debate and discussion in the international community as issues regarding the regulation of nuclear capacity, non-proliferation and disarmament law. Recent[1] and ongoing activities[2] highlight the need for further research and scholarly analysis on contentious issues that might lead to strengthening legal cooperation in this field. 'Indeed, it could be argued that nuclear weapons and non-proliferation law should constitute a subject discipline in its own right; separate from other fields of international law, and to be distinguished from conventional weapons law and international humanitarian law. There is the need for a paradigm-shift in how we approach, interpret, and apply this area of law, separate from other forms of law'.[3] A rather dense treaty regulation is in place that requires evaluation and comprehensive assessment.[4] Its central piece, the 1968 Nuclear

[1] Committee on Arms Control and Disarmament Law, Final Report, in *International Law Association, Report of the Seventy-First Conference,* Berlin 2004 (London 2004) pp. 488–526; Dahlitz 1991, 1994, 1996, 1999 and Dahlitz et al. 2002.

[2] Committee on Nuclear Weapons, non-proliferation and Contemporary International Law, Report on Legal Aspects of Nuclear Disarmament, forthcoming in *International Law Association, Report of the Seventy-Sixth Conference,* Washington D.C. 2014 (London 2014).

[3] Jonathan Black-Branch, 'Opening Remarks to the Third Round Table (London) on Nuclear Weapons, Nuclear Energy and non-proliferation under International Law: Current Challenges and Evolving Norms (14–15 February 2013 Oxford and Cambridge Club)', http://www.ila-hq.org/en/committees/index.cfm/cid/1025.

[4] For a Table of Relevant Treaties and Other International Instruments see http://www.ila-hq.org/en/committees/index.cfm/cid/1025.

Non-Proliferation Treaty (NPT),[5] prohibits the proliferation of nuclear weapons beyond the five nuclear-weapon States under the Treaty, namely the United States, Russia, the United Kingdom, France and China. In 1995, it was extended indefinitely and has been ratified by 190 States.[6] The NPT is based on three main pillars: non-proliferation, peaceful uses of nuclear energy and disarmament. The *first* pillar effectively requires non-proliferation of nuclear weapons. Non-nuclear-weapon States agree not to import manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices. Those States with nuclear weapons are obliged not to transfer them to non-nuclear-weapon States. The *second* pillar ensures the right of all Parties to develop research, production and use of nuclear energy for peaceful purposes, as an inalienable right, and provides that each non-nuclear-weapon State Party must accept and comply with International Atomic Energy Agency (IAEA) safeguards. The *third* pillar, disarmament, requires that all Parties undertake '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'. The Treaty has a built-in review process with conferences every five years to assure that its purposes and provisions are being realized. At the Review Conference in 2000,[7] State Parties to the Treaty agreed on '13 practical steps' to meet their disarmament commitments and the last Review Conference in 2010[8] adopted an 'action plan on nuclear disarmament which includes concrete steps for the total elimination of nuclear weapons'.

The International Court of Justice's Advisory Opinion on the legality of the threat or use of nuclear weapons[9] marked a significant turning point regarding legal and diplomatic approaches to nuclear issues in the international community. Almost two decades on, legal issues relating to uranium enrichment, the development of nuclear capacity, testing and use of nuclear weapons continue to raise controversial debates regarding the status and effectiveness of international law in promoting disarmament, non-proliferation and regulating nuclear weapons. This is particularly relevant within the present-day context of terrorist threats, and it affects all three pillars of the Treaty both individually and as a comprehensive

[5] Treaty on the non-proliferation of Nuclear Weapons (1 July 1968) 729 *UNTS* 161. For a new legal analysis of the NPT see Joyner 2011, with Foreword by Mohamed I. Shaker, author of *The Nuclear Nonproliferation Treaty: Origin and Implementation 1959–1979*, three volumes (London/Rome/New York: Oceana, 1980). See also 2010 Review Conference of the Parties to the Treaty on the non-proliferation of Nuclear Weapons, Final Document (NPT/CONF, 2010/50), pp. 2–19.

[6] See http://www.un.org/disarmament/WMD/Nuclear/NPT.shtml.

[7] NPT/CONF.2000/28 (Parts I and II), pp. 14–15.

[8] NPT/CONF.2010/50 (Vol. I), pp. 19–24.

[9] ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996 (General Assembly Opinion), *ICJ Reports* (1996), p. 226, 35 *ILM* (1996), p. 809.

whole. Indeed, UN Secretary General Ban Ki-moon, in a speech regarding security in a nuclear-weapon-free world stated:

> There are also concerns that a "nuclear renaissance" could soon take place, with nuclear energy being seen as a clean, emission-free alternative at a time of intensifying efforts to combat climate change. The main worry is that this will lead to the production and use of more nuclear materials that must be protected against proliferation and terrorist threats.[10]

The development of international nuclear law is not static, but subject to progressive development. Many legal issues relating to uranium enrichment, the right to nuclear energy, nuclear weapons and non-proliferation as well as the interpretation and implementation of relevant treaties require continual scholarly examination. The present book series is designed to support transparency and open debate on these issues. It also serves as an invitation for constructive dialogue and cooperation between academics, practitioners and relevant institutions.[11]

The purpose of this chapter is to provide a comprehensive audit of relevant legal issues of nuclear capacity and non-proliferation within a contemporary context, highlighting areas requiring further legal analysis and scholarship. Divided into four main areas, it will cover the following topics: (1.2) non-proliferation of nuclear weapons; (1.3) the use of nuclear energy for peaceful purposes; (1.4) nuclear disarmament; and (1.5) considerations on countermeasures, sanctions and pacific settlement of disputes, followed by (1.6) preliminary conclusions.

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[10] Secretary-General Ban Ki-moon, Address to the East-West Institute: 'The United Nations and Security in a Nuclear-Weapon-Free World (24 October 2008), http://www.un.org/apps/news/infocus/sgspeeches/search_full.asp?statID=351.

[11] The wide range of relevant institutions may best be characterized by the following non-exhaustive list: International Atomic Energy Agency (IAEA), http://www.iaea.org; Preparatory Commission for the Comprehensive Nuclear-Test-Ban Organization (CTBTO), http://www.ctbto.org; UN Disarmament Commission (UNDC), http://www.un.org/Depts/ddar/discomm/undc.html; United Nations Office for Disarmament Affairs, http://www.un.org/disarmament/HomePage/about_us/aboutus.shtml; United Nations Institute for Disarmament Research (UNIDIR), http://unidir.org/html/en/home.html; International Law Commission (ILC), http://www.un.org/law/ilc/; Pugwash Conferences on Science and World Affairs, http://www.pugwash.org/about.htm; The Nuclear Threat Initiative, http://www.nti.org; The Arms Control Association, http://www.armscontrol.org; Acronym Institute, http://www.acronym.org.uk; World Institute for Nuclear Security (WINS), https://www.wins.org/index.php?article_id=61; The World Nuclear Association, http://www.world-nuclear.org; International Nuclear Law Association (INLA), http://www.nlain.org/links/international-links; Global Zero, http://www.globalzero.org; The Verification Research, Training and Information Centre (VERTIC), http://www.vertic.org; International Campaign to Abolish Nuclear Weapons (ICAN), http://www.icanw.org; The *Carnegie Endowment,* http://carnegieendowment.org; James Martin Center for Nonproliferation Studies, *Nonproliferation Review,* http://cns.miis.edu/npr/20-1.htm; National Defense University's *Center for the Study of Weapons of Mass Destruction,* Washington, DC, http://www.ndu.edu/wmdcenter; Center for Energy and Security Studies (CENESS), Moscow, http://ceness-russia.org/engl; PIR Center. The Russian Center for Policy Studies, http://www.pircenter.org/en; The Landau Network based in Como (Italy), http://www.centrovolta.it/landau; The Insubria Center on International Security (University of Insubria, Italy), http://eeas.europa.eu/delegations/iraq/press_corner/all_news/news/2010/20100829_01_en.htm; Istituto Affari Internazionali, http://www.iai.it; Stiftung Wissenschaft und Politik, http://www.swp-berlin.org; The American Physical Society, http://www.aps.org/meetings.

1.2 Non-Proliferation of Nuclear Weapons

Focusing on the non-proliferation of nuclear weapons, this section highlights the status of relevant international law today, identifying areas that require further study. Specifically, it covers (1.2.1) the obligations of nuclear-weapon States; (1.2.2) the obligations of non-nuclear-weapon States; (1.2.3) nuclear-weapon-free zones; (1.2.4) the threat of weapons of mass destruction in the hands of non-State actors; (1.2.5) relevant other branches of international law; (1.2.6) the impact of voluntary arrangements; (1.2.7) safeguards and verification; and (1.2.8) further issues.

1.2.1 The Obligations of Nuclear-Weapon States

The nuclear-weapon States Parties defined in Article IX(3) NPT are under an obligation not to transfer nuclear weapons or other nuclear devices or control over such weapons or devices to *any recipient whatsoever* (Article I NPT). Whilst an estimated 95 % of the world's total nuclear armament is currently in the custody of the U.S. and Russia, other nuclear powers already include three non-parties to the NPT which are, however, members of the IAEA (Israel,[12] India,[13] Pakistan[14]), and one State, the Democratic People's Republic of Korea, that has withdrawn from the NPT and has been requested by the Security Council to retract its withdrawal and abandon all nuclear weapons and existing nuclear programs in a complete, verifiable and irreversible manner.[15] The legal basis and extent of the obligation not to transfer nuclear weapons and devices should not be limited to the NPT and its State Parties. Those other States with nuclear weapons capacity who are not formally bound by the Treaty may be facing similar security interests and responsibilities. Yet it will be difficult to draw pertinent obligations from general principles and rules. The UN Charter and other treaty law are to be revisited for this

[12] Unconfirmed estimates for Israel's nuclear weapons stockpile range around 80 intact nuclear weapons and additional inventories of fissile materials of 0.3 tonnes highly enriched uranium (HEU) plus 0.84 ± 0.13 tonnes of separated plutonium, see Schell and Kristensen 2013 and Glaser and Mian 2013. See also reports by the Federation of American Scientists (FAS), http://www.fas.org/nuke/guide/israel/nuke/; Cohen 1998.

[13] See SC Res 1172 (1998); Agreement for Cooperation Between the Government of the United States of America and the Government of India Concerning Peaceful Uses of Nuclear Energy—U.S.-India 123 Agreement, named after the relevant Section of the U.S. Atomic Energy Act—(10 October 2008), http://www.cfr.org/india/agreement-cooperation-between-government-united-states-america-government-india-concerning-peaceful-uses-nuclear-energy-123-agreement/p15459.

[14] See SC Res 1172 (1998); Agreement between the Government of Islamic Republic of Pakistan and the Government of Republic of India on Reducing the Risk from Accidents Relating to Nuclear Weapons (21 February 2007), http://www.stimson.org/research-pages/agreement-on-reducing-the-risk-from-accidents-relating-to-nuclear-weapons/.

[15] See SC Res 1718 (2006), 1874 (2009), 2050 (2012), 2087 (2013), and 2094 (2013).

purpose. While a review of relevant obligations may involve a certain amount of controversy, State practice and actions taken by the Security Council as well as a review of associated and/or complementing steps warrant an analysis that should lead to authentic interpretation and identification of emerging customary international law. Special focus should also be laid on the rights and obligations of States Parties in respect of the withdrawal clause in Article X(1) NPT, and the role of the Security Council. How can 'extraordinary events, related to the subject matter of this Treaty' be defined? Should the procedure for withdrawal be further specified? What is the role of the Security Council, the Secretary General and the IAEA in this context?

1.2.2 The Obligations of Non-Nuclear-Weapon States

The obligation of non-nuclear-weapon States, 'not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear devices or of control over such weapons or explosive devices directly, or indirectly' and 'not to manufacture or otherwise acquire nuclear weapons or other nuclear devices' (Article II NPT) requires clarity. Conflicting interpretations are offered regarding the meaning of Article II, therefore requiring further analysis. What exactly is meant by the Treaty terms 'nuclear weapons or other nuclear devices or of control over such weapons or explosive devices'? What is meant by the term 'indirectly' in this context? It may also be considered that relevant obligations are not confined to transfers from Parties to the NPT, an aspect that requires specific verification efforts. Furthermore, attention should be paid to the fact that relevant commitments are often far from being technically specified. Specific Security Council Resolutions have been challenged by a practice of non-compliance,[16] thus raising issues of counter-measures. Iran as a State party to the NPT has been determined by the IAEA to be in non-compliance with applicable safeguards[17] and has disregarded relevant Security Council resolutions.[18] The recent interim arrangement[19] provides elements of a comprehensive solution expressly referring to the standard principle that 'nothing is agreed until everything is agreed'. Hence, these elements still need

[16] See also Kile 2005.

[17] See IAEA Report GOV/2013/40 of 28 August 2013, http://www.iaea.org/Publications/Documents/Board/2013/gov2013–40.pdf. The Committee will focus on legal aspects of verification in its forthcoming Third Report.

[18] See SC Res 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010), and 1984 (2011). See Joint Statement by EU High Representative Catherine Ashton and Iran Foreign Minister Zarif (24 November 2013), http://www.eeas.europa.eu/statements/docs/2013/131124_02_en.pdf.

[19] Joint Plan of Action adopted by the 'EU3+3' and Iran (24 November 2013), http://eeas.europa.eu/statements/docs/2013/131124_03_en.pdf.

to be confirmed and eventually supplemented by the Parties, before and agreement is in place. Effective implementation will depend on new efforts of verification. For such efforts, specified information may be expected under a new framework of cooperation,[20] but an agreement on the application of necessary safeguards is yet to be reached. There is a need for a comprehensive analysis of pertinent rules and a continuous review of their effectiveness for correct and complete implementation.

1.2.3 Nuclear-Weapon-Free Zones

Nuclear-weapon-free zones have been established in the Antarctica,[21] the Outer Space,[22] the Seabed[23] and even in populated world regions.[24] The Final Document of the 2010 NPT Review Conference has called for a zone free of nuclear weapons as well as other weapons of mass destruction in the Middle East.[25] There seems to be agreement that this WMD-free zone should cover the Arab League States as well as Iran and Israel.[26] Some of these States are already

[20] *Joint Statement on a Framework for Cooperation* signed by the Director General of the International Atomic Energy Agency (IAEA) and the Vice-President of the Islamic Republic of Iran with Annex (11 November 2013), http://www.iaea.org/newscenter/pressreleases/2013/prn201321.html.

[21] Antarctic Treaty (1 December 1959), http://www.ats.aq/index_e.htm.

[22] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies—Outer Space Treaty—(27 January 1967), http://www.unoosa.org/oosa/SpaceLaw/outerspt.html.

[23] Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and the Subsoil Thereof—Seabed Treaty—(11 February 1971), http://www.nti.org/treaties-and-regimes/treaty-prohibition-emplacement-nuclear-weapons-and-other-weapons-mass-destruction-seabed-and-ocean-floor-and-subsoil-thereof-seabed-treaty/.

[24] Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean—Treaty of Tlatelolco—(14 February 1967), http://www.iaea.org/Publications/Documents/Treaties/tlatelolco.html; South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga) and Protocols thereto (6 August 1985); http://www.iaea.org/Publications/Documents/Infcircs/Others/inf331.shtml, http://www.iaea.org/Publications/Documents/Infcircs/Others/inf331a1.shtml; Treaty on the South-East Asia Nuclear Weapon Free Zone—Treaty of Bangkok—(15 December 1995), INFCIRC/548, http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc548.pdf; African Nuclear-Weapon-Free Zone Treaty—Treaty of Pelindaba—including Annexes, Protocols, and the Cairo Declaration (11 April 1995), http://www.fas.org/nuke/control/anwfz/index.html; Treaty on a Nuclear-Weapon-Free Zone in Central Asia—Treaty of Semipalatinsk—(8 September 2006), http://www.iaea.org/newscenter/news/2009/canwfztreaty.html.

[25] See Final Document of the 2010 NPT Review Conference, http://www.un.org/en/conf/npt/2010/, para 104.

[26] As non-Party to the NPT, Israel did not participate in the Review Conference. Israel has often stated that the WMD-free zone would be the consequence, and not the cause, of a successful broader peace process. No agreement has been reached so far on the role of the Palestinian Authority.

Parties to the *Pelindaba Treaty*, with which the new treaty will have to be coordinated to avoid conflicting obligations. A more problematic issue is whether the proposed zone will cover any marine areas and, if so, whether they should include only the territorial waters of the States Parties (as in the *Pelindaba Treaty*) or also their exclusive economic zones (as in the *Bangkok Treaty*) or even international waters (as in the *Tlatelolco Treaty*). The problem is that several critical waterways are situated in this area, including the Straits of Tiran, Hormuz and Bab al-Mandeb, as well as the Suez Canal. Moreover, the navigational rights of nuclear ships of third States might be affected by the inclusion of such waterways in the WMD-free zone. The conditions for entry into force of and withdrawal from the treaty also need to be discussed, as well as the verification, settlement of disputes and enforcement measures in case of non-compliance by the Parties. While for nuclear weapons, the principal verification element is a requirement for the application of IAEA safeguards, and chemical weapons verification could be ensured by inserting a reference in the new treaty to the Organization for the Prohibition of Chemical Weapons (OPCW) procedures, at present there is no verification system applicable to biological weapons. A special regional organization or organ for at least certain verification purposes would therefore have to be established, although it is yet to be negotiated what organizational model would be preferable. As to third States, India and Pakistan are in close proximity to the zone, yet opening a Protocol on negative security assurances to their signature would mean recognizing their nuclear status, which NPT Parties are reluctant to do.

From a wider perspective, the establishment of further zones free of weapons of mass destruction is discussed also for Central Europe, the Korean Peninsula and South Asia. Article 1(3) of the *Charter of the Association of Southeast Asian Nations* of 20 November 2007 defines, as one of the purposes of ASEAN, 'to preserve Southeast Asia as a Nuclear Weapon-Free Zone and free of all other weapons of mass destruction'.[27]

There is a need for comparing existing treaty provisions, particularly regarding additional legal issues, various forthcoming activities and perspectives. A comprehensive study on the state of implementation of the relevant nuclear-weapon-free zones treaties is required to compare provisions and procedures, control mechanisms and dispute settlement practice, and to consider the relevance of this experience for further studies under discussion. It is worthwhile considering through what legal framework nuclear-weapon States could support nuclear-weapon-free zones. This may be particularly relevant to questions regarding navigation and overflight. The declarations and reservations made by nuclear-weapon-States to nuclear-weapon-free zones in the context of negative security assurances[28] deserve specific consideration.

[27] See http://www.aseansec.org/21069.pdf.

[28] See SC Res 984 (1995).

1.2.4 The Threat of Weapons of Mass Destruction in the Hands of Non-State Actors

The global challenge of non-State actors getting access to WMD has led to a number of activities at both international and regional levels. Whilst it may be assumed that genuine production of nuclear weapons is still in the realm of States, as sufficient control of fissile material, technical knowledge and adequate infrastructure is not easily available to non-State actors, it appears realistic that the latter might steal nuclear material and radioactive sources, transfer or acquire them through the black market or criminal means.

The NPT prohibits relevant transfers 'to any recipient whatsoever' (Article I). Likewise, it prohibits any acceptance of such transfers 'from any transferor whatsoever' (Article II), yet its applicability is confined to States who bear the responsibility to ensure these obligations even towards non-State actors.

In 2006, the UN General Assembly adopted a comprehensive counter-terrorism strategy which aims to develop legal and operational frameworks for cooperation in suppressing terrorist networks; capacity-building to suppress them; and control over WMD materials[29] This strategy was reaffirmed in 2012,[30] again underlining that,

> international cooperation and any measures taken by Member States to prevent and combat terrorism must fully comply with their obligations under international law, including the Charter of the United Nations, in particular the purposes and principles thereof, and relevant international conventions and protocols, in particular human rights law, refugee law and international humanitarian law.

Full compliance with these standards is a continuing challenge that needs convincing work with actors and monitoring of all aspects. The Security Council has taken relevant measures, in a number of cases acting under its Chapter VII powers.[31] While some of these measures came under critical judicial scrutiny,[32] the Council has developed its own procedures for reviewing sanctions and delisting persons where individual repressions may not be justified.[33] More specific legal standards for such review may become necessary over time. But also activities to ensure

[29] UN Doc A/RES/60/288 (20 September 2006).

[30] UN Doc A/RES/66/282 (12 July 2012).

[31] See in particular SC Res 1540 (2004).

[32] See e.g. *Yassin Abdullah Kadi and Al Barakaat International Foundation vs. Council of the European Union* [Kadi I] Judgment of the Court of Justice (3 September 2008) ECR I–6351; *Yassin Abdullah Kadi vs. European Commission,* supported by Council of the European Union, the French Republic and the United Kingdom [Kadi II] Judgment of the General Court (Seventh Chamber) of 30 September 2010; *European Commission and the Council of the European Union vs. Yassin Abdullah Kadi* [Kadi (CJEU II)] Judgment by the Grand Chamber of the Court of Justice of the European Union (18 July 2013); Feinäugle 2012, www.mpepil.com; De Wet 2013.

[33] SC Res 1904 (2009).

reliable control of WMD materials need to be intensified. Specific measures are outlined in the IAEA's Nuclear Security Plan 2014–2017.[34] They are multifaceted and require intense international cooperation, but their implementation by the Agency largely depends on national funding and the number and complexity of requests received. This situation that bears the risks of unexpected developments calls for tightening cooperation. Technical and legal expertise is needed for this task. The United States has formed a 'coalition of the willing' to foster multilateral responses including the *Proliferation Security Initiative (PSI)* and the *Global Initiative to Combat Nuclear Terrorism (GICNT)*. The European Union has taken several initiatives including the *EU Strategy Against Proliferation of Weapons of Mass Destruction* in 2003.[35]

An assessment of implementing activities at the regional level including Asia-Pacific States could help to analyse the development of regional custom in these fields. A convincing response to any threat of WMD in the hands of non-State actors cannot be limited to self-defence. Rather, a comprehensive approach is required to reduce existing security risks and secure complete disarmament under effective control. A legal study into pertinent obligations and commitments could contribute to the implementation of relevant projects, disclose existing gaps and develop principles and procedures for addressing open issues. In this context, various measures including a 'prevent or punish' approach must be considered. But it is also necessary to engage in a comprehensive evaluation of the relevance of these activities for ensuring horizontal non-proliferation to other States and non-State actors.

1.2.5 Relevant Other Branches of International Law

As explained above, the law of nuclear non-proliferation, part of the wider branches of arms control and disarmament law, is increasingly influenced by principles and rules of other branches of international law, including the Charter of the United Nations, in particular the purposes and principles thereof, and relevant international conventions and protocols, in particular human rights law, refugee law and international humanitarian law. Both the General Assembly and the Security Council have repeatedly reaffirmed that States must ensure that any measures taken to combat terrorism must comply with these principles and rules. In the light of these rulings, a clarification of the scope and validity of relevant UN Security Council resolutions, in particular: SC Resolution 1540 (2004) in context with SC Resolutions 1810 (2008), 1887 (2009) and 1904 (2009), appears important in order to understand the way forward.

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[34] See http://www.iaea.org/About/Policy/GC/GC57/GC57Documents/English/gc57-19_en.pdf.

[35] For an assessment of present EU activities see Jana Hertwig, Chap. 9. See also Ronzitti 2009.

1.2.6 Voluntary Arrangements

An increasing number of States have joined various informal arrangements to coordinate their export controls on dual-use materials related to WMD. Specific examples include the following: the *Australia Group*; the *Missile Technology Control Regime (MTCR)*; the *Hague Code of Conduct Against the Proliferation of Ballistic Missiles* (HCoC); the *Nuclear Suppliers Group (NSG)*; the *Zangger Committee*; and the *Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies*.[36] The effectiveness of, and coordination among, these various activities raises important questions regarding which legal issues of verification and control, dispute settlement and enforcement, should not be neglected.

1.2.7 Safeguards and Verification

General standards for NPT implementation are provided in INFCIRC/153. The IAEA has developed a Model Protocol additional to the comprehensive safeguards agreements that non-nuclear-weapon States are obliged to conclude under Article III NPT (INFCIRC/540 Corr). Yet the number of States using the Model Additional Protocol remains unsatisfactory and there is no agreement on whether its adoption is mandatory. Activities to support agreement on this question might be achieved from a broader evaluation of the legal issues involved and bring further consensus on the issues. In this context, nuclear non-proliferation issues of national export control laws and regional commitments (such as those of the EU) deserve special consideration.

1.2.8 Further Issues

Further relevant issues may depend on technological development (e.g. high-tech nuclear weapons, mini-nukes) and also on progress in the Conference on Disarmament. These include a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices as well as effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons.[37] In respect of a fissile cut-off treaty, it will be helpful to examine existing obligations and discuss how to delineate what is permitted and what is not permitted under the NPT in respect of production and stockpiling of

[36] See Ronzitti 2009.

[37] See Conference on Disarmament (CD), http://www.unog.ch/80256EE600585943/(httpPages)/2D415EE45C5FAE07C12571800055232B?OpenDocument.

fissile materials. For positive and negative security assurances, the genesis and relevant State practice may deserve a critical evaluation.[38]

1.3 The Use of Nuclear Energy for Peaceful Purposes

In relation to the use of nuclear energy for peaceful purposes, confirmed by the NPT as an inalienable right, this section focuses on the status of relevant international law today, covering the following areas: (1.3.1) the right to civilian nuclear energy (1.3.2) safety standards for nuclear power stations, (1.3.3) liability for injurious consequences and (1.3.4) radioactive waste management.

1.3.1 The Right to Civilian Nuclear Energy

The Brighton Round Table conducted in April 2010 by members and friends of the ILA Committee on Nuclear Weapons, non-proliferation and Contemporary International Law has highlighted the importance of this right as part of the 'grand bargain' which ultimately has led to the conclusion of the NPT in 1968. The legal and policy implications of Article IV, issues of safeguards and verification, legal aspects of the access to fissile materials including the right to uranium and plutonium enrichment and wider issues concerning the effectiveness and enforceability of NPT norms were considered in this context. This work needs to be continued to cover safeguards that non-nuclear-weapon States must accept and comply with including bilateral agreements on waivers of the right of enrichment and reprocessing[39] as well as other regulations for exchanges of equipment, materials and scientific and technological information for peaceful uses of nuclear energy.

[39] See e.g. the '123 Agreements' named after the relevant Section of the U.S. Atomic Energy Act, *inter alia* Agreement for Cooperation Between the Government of the United States of America and the Government of India Concerning Peaceful Uses of Nuclear Energy (10 October 2008); Agreement for Cooperation Between the Government of the United States of America and the Government of the United Arab Emirates of 21 May 2009 Concerning Peaceful Uses of Nuclear Energy; Agreement between the Government of the United States of America and the Government of the Russian Federation for Cooperation in the Field of Peaceful Uses of Nuclear Energy (12 January 2011) Henry J. Hyde United States—India Peaceful Atomic Energy Cooperation Act of 2006 and United States Additional Protocol Implementation Act, H. R. 5682, 22 U.S.C. §§ 8001–8008, http://www.gpo.gov/fdsys/pkg/BILLS-109hr5682enr/pdf/BILLS-109hr5682enr.pdf; Elaine M. Grossman, 'U.S., Taiwan "Discussing Assurances" on Sensitive Nuclear Activities' (19 November 2012), http://www.nti.org/gsn/article/us-taiwan-discussing-assurances-sensitive-nuclear-activities-officials/.

[38] See SC Res 984 (1995) and NPT Review Conference 1995, Final Decision on 'Principles and Objectives for Nuclear non-proliferation and Disarmament' (11 April 1995); Final Document of the 2010 NPT Review Conference, above (n 25), para 89 and Section C.

Effective control of such agreements by the IAEA or at least in cooperation with the Agency will form an important part of this research.

1.3.2 Safety Standards for Nuclear Power Stations

Based on their perspectives regarding the effects of the March 2011 earthquake and tsunami on the nuclear power stations near Fukushima, several States have revisited their statutory law concerning nuclear energy. While some States (e.g. Germany, Austria, Switzerland and tentatively Japan) have announced to end their dependence from nuclear energy in the foreseeable future, others are resolved to even increase nuclear energy production rather than developing alternative means. For example, in October 2013, the British Energy Secretary Ed Davey announced the construction of the UK's first new nuclear power station in a generation.[40]

Pertinent safety standards need to be harmonized at the international level. Yet it is a matter of dispute, to which degree these are to be controlled by the IAEA. Legal considerations of State responsibility and environmental protection might help to develop adequate solutions.

1.3.3 Liability for Injurious Consequences

The question of liability for injurious consequences is far from being settled. While a distinction is to be made between liability for peaceful application of nuclear materials (covered by the 1960 Paris Convention[41] and the 1963 Vienna Convention[42] and other treaties) and liability for damages caused by nuclear weapons (as covered by the law on State responsibility), nuclear exports performed under the guise of peaceful use should be made the subject of special research. Trans-boundary damage caused by nuclear accidents may not be easily attributable to a State. Yet States may own, and even operate, nuclear power stations or have at least authorized their operation. State responsibility in such situations is not fully regulated in the 2001 *Articles on Responsibility of States for Internationally*

[40] Elaine M. Grossman, 'France's EDF Energy will lead a consortium, which includes Chinese investors, to build the Hinkley Point C plant in Somerset. http://www.bbc.co.uk/news/business-24604218 (21 October 2013).

[41] Paris Convention on Third Party Liability in the Field of Nuclear Energy (29 July 1960, amended on 12 February 2004), http://www.oecd-nea.org/law/Unofficial%20consolidated%20Paris%20Convention.pdf.

[42] Vienna Convention on Civil Liability for Nuclear Damage (21 May 1963, amended on 12 September 1997), INFCIRC/556, http://www-pub.iaea.org/MTCD/publications/PDF/Pub1279_web.pdf.

Wrongful Acts. The International Law Commission's 2006 Liability Principles[43] do not solve all open issues and are still controversial. Considering the practical importance of the issue and the vast amount of potential damage, proposals *de lege ferenda* should be developed.

1.3.4 Radioactive Waste Management

Radioactive waste management requires enormous activities to isolate long-lived radioactive waste and ensure its containment from the biosphere for hundreds or thousands of years. This issue is far from being settled on a global scale. It may be too long term to be dealt with satisfactorily in the context of liability for damage. Minimum safety standards to be applied are subject to geological and technological considerations. There is a need for international cooperation to ensure compliance with such standards. As a number of countries are lacking the geological requirements for safe storage of nuclear waste, the question may arise whether the general obligation to cooperate as a principle of international law would extend to a duty to accept such waste under certain conditions.

1.4 Nuclear Disarmament

An in-depth Report on 'Legal Aspects of Nuclear Disarmament' has been submitted to the 76th ILA Conference (Washington, April 2014).[44] It examines the meaning of Article VI NPT, legal issues of the process for the reduction of nuclear weapons and the impact of nuclear disarmament on non-proliferation and peaceful uses, specifically stressing the interdependence of all three pillars of the NPT. First, draft elements are proposed for an *ILA Declaration on Legal Issues of Nuclear Weapons, Non-Proliferation and Peaceful Uses of Nuclear Energy* which include more than twenty elements on nuclear disarmament, nuclear non-proliferation, the use of nuclear energy for peaceful purposes, and compliance and enforcement. The purpose of this Report is to serve consensus-building, but not to close the debate on legal issues relevant to nuclear disarmament. In particular, the proposed draft elements are to be further discussed. Hence, additional aspects will deserve consideration. To encourage further discussion, this section focuses on

[43] ILC, *Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities*, http://untreaty.un.org/ilc/texts/instruments/english/draft%20articles/9_10_2006.pdf; *Pemmaraju Sreenivasa Rao,* Introductory note (2013), http://legal.un.org/avl/ha/palcthaoha/palcthaoha.html.

[44] Committee on Nuclear Weapons, non-proliferation and Contemporary International Law, *Legal Aspects of Nuclear Disarmament*, http://www.ila-hq.org/en/committees/index.cfm/cid/1025.

(1.4.1) revisiting the ICJ Advisory opinion, (1.4.2) the role of nuclear weapons, (1.4.3) START and missile defence and (1.4.4) perspectives for nuclear disarmament.

1.4.1 The ICJ Advisory Opinion Revisited

A reconsideration of the ICJ's Advisory Opinion on *Nuclear Weapons* remains necessary, specifically with an assessment of the controversial positions as expressed in the various Dissenting and Separate Opinions. The positions agreed at the time need to be reviewed critically, as the legal arguments which were expressed some fifteen years ago must be re-evaluated within today's context, still considering the reluctance of certain States to deal with the issue. An overview of policy efforts made in the United Nations General Assembly regarding the Advisory Opinion could provide insights regarding any developments of related normative practice and the question as to which aspects may evolve into customary international law. An in-depth analysis should extend to different branches of international law, such as international humanitarian law, environmental law and the law of self-defence.

1.4.2 The Role of Nuclear Weapons

Whilst today there are more than 22,000 nuclear warheads in the arsenals of nine States, of which 8,000 are still actively deployed, reliance on nuclear weapons for deterrence is widely considered as 'increasingly hazardous and decreasingly effective'.[45] In contrast to these considerations, several nuclear States pursue activities to further develop and/or modernize nuclear weapons, missile systems and platforms. The nature of the problem requires a consideration of future threats, the most relevant aspects of which will be hardly foreseeable, but there could also be security benefits of early advances on further cuts to nuclear weapon stockpiles.[46]

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[45] See Henry A. Kissinger, George P. Schultz, William J. Perry, and Sam Nunn, 'Toward a Nuclear-Free World', *The Wall Street Journal*, 15 January 2008, http://online.wsj.com/public/article_print/SB120036422673589947.html; see also *WMDC Report* 2006 and Commentary *Nuclear Disorder or Cooperative Security? U.S. Weapons of Terror, the Global Proliferation Crisis, and Paths to Peace* (May 2007), http://wmdreport.org/pages/nucleardisorder-announce.htm ("So long as any State has such weapons—especially nuclear arms—others will want them. So long as any such weapons remain in any State's arsenal, there is a high risk that they will one day be used, by design or accident. Any such use would be catastrophic.").

[46] See 2008 Report of The International Commission on Nuclear Non-Proliferation and Disarmament, *Eliminating Nuclear Threats. A Practical Agenda for Global Policymakers*, http://www.icnnd.org/Pages/default.aspx.

A critical comparison of different approaches in contemporary nuclear strategies of Nuclear Powers and groups of States may offer useful parameters in this context, even if there are limits for getting access to relevant information, and important aspects of nuclear strategies will remain classified. Transparency in nuclear policies is different in various cases. A clarification of a State's right to use nuclear weapons, against the backdrop of fundamental threats to its survival, remains an essential element of any meaningful discussion of nuclear disarmament.

In this context, both the scope of the threat and the means available to respond to it need to be evaluated. It will be difficult to arrive at a general conclusion on this matter; nevertheless, critical analysis in the area is vital. A particular challenge will be the legal issue of pre-emptive/anticipatory self-defence in response to threats of nuclear weapons development, acquisition and possession. The different roles of intermediate range and strategic nuclear weapons as opposed to tactical nuclear weapons and the different requirements for their verification have to be considered in this context. Specific legal aspects arise from nuclear sharing as a concept in NATO's policy of nuclear deterrence, which involves member States without nuclear weapons of their own in political and military planning processes. The compatibility of this concept with Article II NPT should be examined. Furthermore, existing test bans and the perspectives for the 1996 *Comprehensive Nuclear-Test-Ban Treaty* need to be evaluated.

1.4.3 START and Missile Defence

The New START Treaty signed on 8 April 2010 could lead to a significant reduction and limitation of 'ICBMs and ICBM launchers, SLBMs and SLBM launchers, heavy bombers, ICBM warheads, SLBM warheads, and heavy bomber nuclear armaments', yet its effectiveness appears to be overshadowed by open issues concerning the correlation between strategic offensive weapons and missile defence.[47] On 25 January 2011, the Russian State Duma has adopted the draft law on the New START treaty ratification with two formal statements, one addressed to the Russian President ('As the US has withdrawn from the Soviet-US Treaty on the limitation of anti-ballistic missile systems, special significance has to be attached to maintaining missile defense systems and all their components at a designated level of preparedness for improvement in case of a military threat against Russia.'), the other to the international community ('The State Duma considers the deployment of the US non-strategic nuclear weapons outside the US unjustified and not complying with today's Euro-Atlantic relations.') The U.S. ratification text specifies that the correlation between strategic offensive weapons and missile defence addressed in the preamble 'does not impose a legal obligation on the parties', with the effect that the United States cannot be constrained in its missile

[47] See: http://gsn.nti.org/gsn/nw_20110201_4215.php.

defence activities. The Russian document asserts otherwise. Russian Foreign Minister Sergei Lavrov, referring in that context to the withdrawal clause in the event of an emergency, stated: 'We are convinced that the implementation of the full-scale global missile defence by the U.S. will be precisely such an emergency.'

Several national leaders, including the Presidents of Russia and the U.S. and NATO's Secretary General, have embraced the idea of a Euro-Atlantic security community and begun stressing the importance of fashioning a stronger and more inclusive European security order. Within the Carnegie Endowment, the Euro-Atlantic Security Initiative (EASI Commission) has addressed the risks of reliance on nuclear deterrence and recommended NATO–Russian cooperation on missile defence, which should be started at shorter range and later extended to strategic systems.[48] Relevant security arrangements are yet to be prepared. At the NATO–Russia Council (Sochi, 4 July 2011), NATO Secretary General Anders Fogh Rasmussen and Russian Foreign Minister Sergei Lavrov could not confirm progress on NATO–Russian cooperation on missile defence, but Rasmussen 'invited Russia to consider ways of linking our two separate systems together. We want to see two systems that would exchange information to make the defence of NATO territory and of Russia territory more effective. Because this would make us both safer. And it would prove that the best way to more security is through more cooperation'.[49]

There is also a need to evaluate the adequacy of any arms control provision as such, but to concentrate on the operation of the relevant principles and rules of international law, it will be necessary to bear in mind relevant treaty obligations and their operation in State practice. Clear legal interpretations of relevant provisions could assist to build greater understandings of these issues and indeed develop viable solutions.

1.4.4 Perspectives for Nuclear Disarmament

The focus on nuclear disarmament, not just nuclear arms control, under the NPT has many facets. In this context, activities at various fora must to be compared, different intentions considered, and the potential for confidence-building explored. Moreover, clarity is needed as to what would constitute 'strict and effective international control'. Nuclear-weapon States, non-nuclear-weapon States and international organizations share responsibilities in this context. While legal consequences for countermeasures and enforcement have become part of daily realities in the practice of States and international organizations, procedures and objectives of verification (e.g., abilities or quantities; numbers of warheads or general ceilings?) as well as issues of data exchange and data publication are still to be assessed

[48] See: http://carnegieendowment.org/; Wolfgang Ischinger, Igor Ivanov, Sam Nunn, 'Toward a Stronger European Security', *The Moscow Times*, 8 December 2009; W. Ischinger, 'Ein Dach für das Haus Europa', *Frankfurter Allgemeine Zeitung*, 20 June 2011.

[49] See http://www.nato.int/cps/en/natolive/opinions_76041.htm.

more thoroughly to ensure effectiveness of follow-up measures. Although hidden stockpiles may have a rather limited role for deterrence, they continue to exist. Nuclear capacities could be detrimental if used for aggressive purposes, irrespective whether such purposes are intended or perceived. Hence, cooperative action will be essential on the route to nuclear balance at lower levels. Furthermore, countermeasures and sanctions in case of non-compliance have to be considered as to their legal conditions, effectiveness and consequences for future cooperation.

1.5 Countermeasures, Sanctions and Pacific Dispute Settlement

Compliance with nuclear non-proliferation obligations is to be implemented in a complex environment of military and civilian activities, legal and policy commitments, national and international regulations, law enforcement and criminal prosecution, transparency and confidentiality. In this context, legal loopholes of existing treaty law need to be investigated, the development of customary rules assessed and gaps in regulation identified.

Special focus must be placed on methods and strategies. Nuclear-weapon States, non-nuclear-weapon States and international organizations share responsibilities to ensure compliance with, and enforce of, existing obligations. Relevant countermeasures and enforcement actions in case of non-compliance have to be considered as to their legal conditions,[50] effectiveness and consequences for future cooperation. Open questions concerning procedures and objectives of verification (e.g., abilities or quantities; numbers of warheads or placing general ceilings), issues of data exchange and data publication are to be identified and assessed to ensure effectiveness of follow-up measures. In the discussion of measures to be undertaken, a consideration of legal consequences should comprise an important thereof.

While relevant disputes may be of very different nature and quality, legal principles and procedures emanating from the relevant Articles 2(3) and 33–38 of the UN Charter should evolve from a comparative study in related agreements and other case materials. This work would invariably add more transparency and clarity in this respect. Third Party dispute settlement is not addressed in the text of the NPT, but it is part of the Treaty's review process. Review conferences are held every five years to review the operation of the Treaty with a view to assuring that its purposes and provisions are being achieved. IAEA safeguards agreements

[50] See Articles on Responsibility of States for Internationally Wrongful Acts—ARSIWA—(2001) UN Doc A/56/10, *Yearbook of the International Law Commission, 2001*, vol. II, Part Two, http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf; Draft Articles on the Responsibility of International Organizations (DARIO), UN Doc A/66/10, para 87, *Yearbook of the International Law Commission, 2011*, vol. II, Part Two, http://untreaty.un.org/ilc/reports/2011/All%20languages/A_66_10_E.pdf.

normally contain arbitration provisions, but no recourse to arbitration has been made to date in the implementation of safeguards.[51] The IAEA's Board of Governors follows the practice of reporting cases of non-compliance to the Security Council. Security Council measures may help to ensure compliance with existing obligations and even create new obligations to maintain or restore peace and security, but it should also be considered that such measures have rarely worked successfully. They have been disregarded in critical situations and affected States have insisted on maintaining their positions. Disobedience of UN sanctions may even be regarded as an exercise of lawful countermeasures, taken as a last resort, against wrongful acts,[52] or it could be based on the allegation, as has been done in some cases, that the sanction is lacking binding force.

1.6 Preliminary Conclusions

The purpose of this chapter was to provide an audit of relevant legal issues and suggestions for cooperation rather than offering final answers. Much work needs to be done in this respect, but certain tasks are more obvious today than decades before:

1.6.1 Legal Sources

There is a need to identify and evaluate existing international law dealing with nuclear matters, including, but not limited to, the relevant

- international agreements (universal as well as regional);
- rules of customary international law and normative practice;
- Security Council Resolutions and implementation activities;
- State practice and policy;
- practice and policy of regional organizations; and
- practice of the IAEA, the CTBTO and other international organizations.

1.6.2 A Special Regime of International Law?

The specific question must be addressed whether formal and informal substantive rules and procedures within the wider field of non-proliferation law form a special regime in that they depart from, or conflict with, rules of general international law.

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[51] See Rockwood 2013, pp. 24–25.

[52] See Tzanakopoulos 2011.

A first examination of this issue[53] confirms 'that fragmentation and special regime theory does have explanatory power when applied to non-proliferation law',[54] but it also shows that this should not be taken as an invitation to exclude the application of principles and provisions of other branches of international law for solving open issues. Indeed, in most if not all cases, it will be essential to find a cooperative solution in full compliance with general principles and rules. In particular, the potentially harmful effect of weapons of mass destruction makes it imperative to consider further legal consequences. It may be accepted today that there is a general legal obligation for States to avoid trans-boundary harm in their activities,[55] whereas precise conditions and limitations of such obligation are still to be specified.

1.6.3 Relevant Other Branches of International Law

A need to consider non-subject-matter-specific international law (treaty and custom) which may have an impact on nuclear issues at both municipal and international levels, such as international humanitarian law, human rights law, international environmental law, international law of the sea,[56] international criminal law and international trade law (e.g. regulation of trade in dual-use items). Such special studies are particularly encouraged. Any result affecting or influencing non-proliferation law may become relevant for the interpretation of rights and obligations and further development of existing practice.

1.6.4 The Relationship Between the Three Pillars

A clarification of the relationship between Articles I and II NPT on the one hand and Articles IV and VI on the other hand should guide all research activities. This should include a review of the balance inherent in the NPT between nuclear and non-nuclear-weapon States and considerations on how to make the present *acquis* more attractive for States still abstaining or having given notice of withdrawal from the NPT.

In summary, legal issues relating to non-proliferation, disarmament and the use of nuclear energy for peaceful purposes, pose monumental challenges for academics and practitioners requiring extensive examination. The overview presented in this

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53 Joyner and Roscini 2012.

54 Ibid., p. 277.

55 See Koskenniemi 2010, at 50; Alan Boyle 2010.

56 See International Tribunal for the Law of the Sea, *The MOX Plant Case [Ireland vs. United Kingdom].*

chapter seeks to identify specific areas needing particular development, serving as a call for scholarship and constructive dialogue and cooperation in this critical area of law affecting all of humanity. Arguably, it is the most important issue facing the international community today.

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Chapter 2
The Obligations of Nuclear-Weapon States Not to Transfer Nuclear Weapons and Devices (Article I NPT)

Kate Deere

Abstract This chapter considers the obligations of Nuclear-Weapon States under Article I of the Treaty on the Non-proliferation of Nuclear Weapons (NPT). The chapter reviews the context applying at the time the NPT was negotiated and contrasts the contemporary security environment, considering how this new context shapes the present approach to commitments on non-proliferation. The chapter also reviews the role and obligations of those States with nuclear-weapon capability who are outside of the NPT regime and considers whether there exists a norm of non-proliferation, notwithstanding that the NPT does not directly constrain those States who have declined to accede to the Treaty. The chapter highlights that while the NPT Nuclear-Weapon States have repeatedly confirmed their commitment to preventing proliferation of nuclear weapons technology, to effect a norm of non-proliferation, the obligation not to transfer requires cooperation by the non-NPT States and a commitment to effective enforcement by the international community in the event of a breach.

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2.1 Introduction

The Treaty on the Non-proliferation of Nuclear Weapons (NPT)[1] has as a principal aim control of the spread of nuclear weapons. A key means of achieving that aim is established by Article I through which nuclear-weapon States (NWS) commit not to transfer nuclear weapons or nuclear explosive devices or control over such weapons or devices to any recipient, and further, not to assist non-nuclear-weapon States (NNWS) to acquire nuclear weapons or explosive devices. Non-proliferation is further supported by the commitment of NNWS not to acquire nuclear weapons, pursuant to Article II NPT and the obligation of all States under Article III NPT not to transfer to NNWS source or special fissionable material or equipment for the processing, use or production of special fissionable material, unless the material is subject to International Atomic Energy Agency (IAEA) safeguards.

This chapter seeks to explore the extent of the obligations created by Article I, particularly in light of the changed security and technological environment in the post-Cold War era, compared to the state of play which led to the negotiation of the terms of the NPT in 1968. It also considers a series of other agreements with varying participation rates, which have been developed overtime, which provide support for a nuclear non-proliferation norm.

The chapter commences with a brief review of the history leading to the conclusion of the NPT and the role of the then NWS in determining the terms on which they would agree to enter the Treaty. The Sects. 2.2 and 2.3 examine the current context within which the NPT operates and the resulting new proliferation concerns of the NWS and the international community more broadly. Given the general consensus as to the desirability of preventing further proliferation of nuclear weapons, Sect. 2.5 considers the role and obligations of States outside of the NPT regime. Section 2.6 reviews other international agreements and initiatives that have been devised to assist in the prevention of nuclear proliferation before the chapter concludes with some observations as to the potential emergence of a customary international law norm of nuclear non-proliferation.

2.2 Negotiation of the NPT

After the end of the Second World War, the United States (US) and the Soviet Union (USSR) had been involved in intermittent negotiations aiming to limit, and ultimately reverse, their nuclear arms race.[2] Linked to those discussions was the

[1] The Treaty on the Non-Proliferation of Nuclear Weapons—NPT—(1 July 1968), 729 *UNTS* 161, http://www.un.org/disarmament/WMD/Nuclear/NPTtext.shtml.

[2] Simpson et al. 2010, pp. 1–3, pp. 1–5.

desire to curb further nuclear proliferation; however, the superpowers had been unable to reach agreement as to the mechanics of such. In 1953, United States President Eisenhower in his 'Atoms for Peace' speech to the United Nations General Assembly noted the terrible potential of nuclear weapons and called for the creation of an organisation to promote the peaceful use of nuclear energy, and which would also ensure that nuclear energy not serves any military purpose.[3] The proposal, which led to the creation of the IAEA, was accompanied by ideas for nuclear disarmament as well as control over technology.[4]

As efforts to try to outlaw nuclear weapons failed in the course of the Cold War, attention shifted to preventing the spread of nuclear weapons to other States.[5] In 1961, the UN General Assembly unanimously approved an Irish Resolution which called for the negotiation of an international agreement to prevent the wider dissemination of nuclear weapons, under which nuclear States would undertake to refrain from relinquishing control of nuclear weapons and from transmitting the information necessary for their manufacture to States not possessing such weapons, and … States not possessing nuclear weapons would undertake not to manufacture or otherwise acquire control of such weapons.[6]

In 1965, the UN General Assembly recommended the principles on which such a treaty should be based, which included among other things, an 'acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear powers' and which should avoid 'any loop-holes which might permit nuclear or non-nuclear powers to proliferate, directly or indirectly, nuclear weapons in any form'.[7]

The national interests of each of the US and the USSR were served by preventing the acquisition of nuclear weapons by other States.[8] The US, it is suggested, was concerned at the possibility of being dragged by nuclear-armed allies into a catastrophic war that it could not control, while the USSR was concerned at the potential security threat associated with having potential NWS bordering its territory, particularly after China tested its first nuclear bomb in 1964.[9] In fact, the acquisition of nuclear weapons by China is thought to have been one of the crucial motivations for the superpowers to reach agreement on a treaty which would curtail further nuclear weapons acquisition.[10]

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[3] Fischer 1997, p. 9.

[4] Ibid.

[5] Den Dekker 2001, p. 271.

[6] United Nations General Assembly, Resolution 1665 (XVI), "Prevention of the wider dissemination of nuclear weapons", 4 December 1961.

[7] United Nations General Assembly, Resolution 2028 (XX), "Non-proliferation of nuclear weapons", 19 November 1965.

[8] Simpson et al. 2010, pp. 1–3.

[9] Ibid.

[10] Fischer 1981, p. 14.

In addition to serving the interests of existing nuclear powers, curbing the spread of nuclear weapons technology was seen as beneficial for States who did not have, or had not yet developed, nuclear weapons capabilities. The bargain thus struck between the NWS and NNWS through the NPT rested upon a perceived shared interest in preventing nuclear proliferation and on mutually compatible, but not identical, national security interests, with NWS interested in maintaining the system in which there were as few nuclear-capable actors as possible, and NNWS benefitting through the ability to act in an international system in which most potential adversaries would not have nuclear weapons.[11] The key mechanism for the operation of the NPT is the divide between NWS and NNWS, with the NWS representing that group of nations which had exploded a nuclear device prior to 1 January 1967.[12] Only five states, therefore, are considered to be NWS for the purposes of the NPT: China, France, the Russian Federation, the United Kingdom and the United States.

While having a fundamental aim to control the spread of nuclear weapons,[13] the NPT operates through the promise by NNWS to not seek to acquire nuclear weapons, in exchange for cooperation in the peaceful use of nuclear technology and a commitment by the NWS to negotiate to achieve nuclear disarmament. These three pillars of non-proliferation, peaceful civil use and disarmament thus form the basis for the NPT. The declared NWS commitment to non-proliferation arises under Article I NPT, with the undertaking not to provide assistance to others to acquire control or ownership of nuclear weapons or associated explosive devices. However, prior to the negotiation of the NPT, the US had been involved in a limited exchange of nuclear weapons technology with key allies. The motivations behind the US decision to provide to its allies certain technical information on its nuclear weapon designs included the desire to share the cost of providing a nuclear deterrent capability, through the provision of delivery capabilities.[14] Also, in light of indications that certain Western European States were involved in indigenous nuclear weapons programmes, the US hoped that providing the capability of delivering US nuclear weapons, if necessary, would remove the incentive for such States to continue with their national programmes to acquire nuclear weapons.[15] The US had also engaged in close collaboration with the United Kingdom (UK) on the development and manufacture of nuclear weapons.[16] In 1985, subsequent to the entry into force of the NPT (and before France joined the NPT), the US also entered into similar cooperative arrangements with France.[17]

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[11] Den Dekker 2001, p. 74.

[12] NPT Article IX.3.

[13] Jonas 2005, p. 420.

[14] Simpson 2010, pp. 1–4.

[15] Ibid.

[16] Ibid.

[17] Ibid.

Given its practice of collaboration with the UK in relation to nuclear weapons technology, the US was concerned that the text of the NPT should allow this arrangement to continue.[18] It also wanted to ensure the Treaty permitted existing NATO arrangements which provided for the transfer of nuclear weapons for use on NNWS-owned delivery systems, in the event of hostilities.[19] The USSR was concerned that the Treaty's terms would not legitimise any multilateral force (MLF) arrangement, where, for example, ships owned by several NATO countries could be armed with US nuclear weapons.[20] The resulting text of Articles I and II thus implicitly permits the storage and deployment of nuclear weapons owned by NWS in the territory of NNWS, but prevents multilateral nuclear weapon sharing.[21] It is suggested that having regard to the NPT's negotiating history, it was not the intention of the US and the UK, nor that of their western allies, that Articles I and II prohibit the placement of nuclear weapons by NWS on NNWS territory, nor to prohibit the transfer of nuclear weapons in the event of war.[22] Mutual assistance between nuclear weapons states was also not proscribed.[23]

The NWS through Article I, then, commit to restrictions on horizontal proliferation to NNWS. Of relevance, the requirement not to transfer nuclear weapons or associated technology rested on the assumption operating in the late 1960s that only a few countries knew how to acquire nuclear weapons. The idea that the technologies needed to make nuclear explosives are a barrier to proliferation is increasingly deficient, such that the decision to acquire nuclear weapons presently is largely a political one.[24] Despite the aim of the NPT being to prevent the spread of nuclear weapons through transfer of weapons or relevant technology, in reality, States have maturing technology such that the premise of the treaty that of basic scarcity and the demanding character of the technology[25] is likely to have limited enduring relevance.

Instead, a prime concern relates to the will of States to comply with the obligation not to proliferate. In circumstances where there are States outside of the NPT regime, this is particularly relevant, as nuclear-capable states outside of the NPT could potentially jeopardise the NPT bargain through the transfer of weapons or technology, or through the supply of materials which are not adequately monitored to ensure their use for civilian purposes. The latter concern is also relevant to the supply of nuclear or dual-use materials generally, as the provision of sensitive material without appropriate safeguards could potentially result in covert development of nuclear weapons programs.

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18 Ibid., at pp. 1–5.

19 Ibid.

20 Federation of American Scientists 2013.

21 Simpson 2010, pp. 1–5; Federation of American Scientists 2013.

22 Simpson 2010, pp. 1–7.

23 Ibid.

24 Fischer 1992, p. 18.

25 Keeley 1998, p. 22.

In light of these proliferation challenges, the Sect. 2.3 of this chapter review the record of the five NPT NWS in complying with their Article I obligations, followed by a consideration of the practice of the other nuclear-weapon capable States, India, Pakistan and Israel, given the latter are not directly constrained by the NPT.

2.3 Nuclear-Weapon States and Compliance with Article I

From the above brief discussion, it is apparent that assistance between NWS occurred prior and subsequent to the entry into force of the NPT. China and France, who were not original signatories to the NPT despite both meeting the definition of a nuclear-weapon State at the time the NPT opened for signature, also have been accused of facilitating nuclear weapons proliferation. Over time, proliferation concerns have also related to the potential for inadvertent assistance to be provided to NNWS or States outside the NPT. This section reviews briefly the nature of charges raised against the NWS in relation to potential failings of compliance with their Article I obligations.

China and France both joined the NPT in 1992. Prior to the negotiation of the NPT, France had cooperated with Israel in relation to nuclear arms production, with its early research assistance said to have allowed Israel to go on to develop a nuclear weapons capability.[26] Subsequently, when the NPT opened for signature, despite not initially signing the Treaty, France did pledge to behave as if it were a signatory State.[27] China, however, had initially subscribed to the view that NNWS should be entitled to acquire nuclear weapons capability on the grounds of non-discrimination and prior to 1984 could be viewed as having been openly hostile to the main objective of the non-proliferation regime.[28] For example, prior to the conclusion of the NPT, China's position had been stated as:

China hopes that Afro-Asian countries will be able to make atom bombs themselves, and it would be better for a greater number of countries to come into possession of atom bombs.[29]

China is believed to have sold unsafeguarded enriched uranium to countries such as South Africa and Argentina in the early 1980s, who at the time were not NPT members nor subject to IAEA safeguards.[30] Further, China also reportedly supplied heavy water to India, through a West German broker, which was ultimately for use in India's unsafeguarded nuclear reactors.[31] China has also been

[26] van Leeuwen 1995, p. 127.

[27] Goldschmidt 1980, p. 75.

[28] Sloss 2006, p. 183.

[29] Marshal Chen Yi, Press Conference, 29 September 1965, cited in Dahlitz 1983, p. 144.

[30] Sloss 2006, pp. 190–191.

[31] Ibid.

accused of providing essential weapons-related nuclear aid directly to Pakistan as well as supplying Pakistan with weapons-grade highly enriched uranium.[32] During a visit to Pakistan in 1981, Premier Zhao Ziyang apparently implied having assisted in the manufacture of the 'Islamic atom bomb',[33] supporting claims of a more direct contribution by China to nuclear weapons proliferation. However, other reports suggest China has been unwilling to transfer actual nuclear-weapon technology to other countries, evidenced in such behaviour as the 'polite refusal' in response to a Libyan request to buy a nuclear bomb.[34]

There was a shift in China's public stance towards nuclear proliferation around the mid-1980s when it joined the IAEA, and subsequently the NPT and the Nuclear Suppliers Group (NSG) (discussed further below). For example, in 1984, Premier Zhao stated that while China had declined to accede to the NPT, it 'by no means favoured nuclear proliferation, nor would China engage in such proliferation by helping other countries to develop nuclear weapons'.[35] In 1985, Vice Premier Li Peng further stated that 'China has no intention, either at the present or in the future, to help nonnuclear countries develop nuclear weapons'.[36]

China's present view is that it does not support nuclear weapons proliferation. However, this has been subject to scepticism, particularly associated with claims China has continued to assist Pakistan with nuclear and missile technology, even after its accession to the NPT. In 1994, some 5,000 ring magnets, which are used in gas centrifuges and allow for the production of weapons-grade highly enriched uranium, were sold to the unsafeguarded A. Q. Khan research laboratory in Pakistan.[37] Further, over the period 1994–1996, while not involving the direct transfer of nuclear weapons or related technology, China is said to have provided other assistance to Pakistan which could have been used for nuclear weapons-related production.[38] In relation to the ring magnet sale, the US did not impose sanctions against China, relying on the fact there was no evidence the Chinese government had 'wilfully aided or abetted' Pakistan's nuclear weapons program via the ring magnet sale, and given China had promised to provide assistance to safeguarded facilities only and had reaffirmed its commitment to non-proliferation and agreed to consultations on export control and proliferation issues.[39]

Russia similarly denies any direct transfer of nuclear weapons technology to other States, even though it has faced accusations in this regard. It has provided support to North Korea to develop a civilian nuclear energy program; however, claims that this has extended to providing sensitive information on nuclear weapons

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[32] Ibid., at p. 191.

[33] M. Goryanov, June 1981, cited in Dahlitz 1983, p. 144.

[34] K. Romachandran 1980, cited in Dahlitz 1983, p. 144.

[35] Tan 1989, p. 879.

[36] Ibid.

[37] Weiss 2003, p. 22.

[38] Ibid.

[39] Ibid.

development have been repeatedly denied by Russia. The former Director of Minatom, as an example, stated, in 1992, 'The nuclear weapons complex of the USSR has never had anything to do with any possible nuclear weapons program in the DPRK. We do not control their potential work in this field'.[40] Zhebin suggests that so far as the Soviet Union was concerned, 'being a great power, on equal footing with the U.N. Security Council's other permanent members, it obviously had no interest in seeing nuclear weapons acquired by such an unpredictable and unreliable partner as the North Korean regime, especially from the early 1960s on'.[41] Reported incidents where action was taken to prevent proliferation, include blocking the departure of 64 Russian missile specialists to a third country that had intended to build military-purpose missile complexes capable of delivering nuclear weapons[42] and the detention of two North Korean citizens trying to sell heroin in order to raise money to buy Russian military secrets, apparently in the nuclear field.[43]

The United States has repeatedly questioned Russia's commitment to enforcement of its statements around non-proliferation, imposing sanctions against certain entities and calling on Russia to increase its border security, better coordinate efforts to control the problem of nuclear smuggling, and ensure any illegal transfer of materials, including missile technology, is appropriately punished.[44] There have been suggestions that Russia could be found wanting in relation to assistance provided to Iran to construct nuclear reactors, having regard to reports that Iran was moving in the direction of achieving a nuclear weapons capability, and the fact that the assistance may have indirectly led to technology transfer which would facilitate a proliferator's nuclear weapons program.[45] The suggestion that Russia may have in effect 'turned a blind eye' to intelligence on Iran's nuclear motives raises the possibility of a willingness to skirt the obligations of Article I via a legalistic interpretation of the Treaty requirement.[46]

In relation to Iran, the US has acknowledged Russia's statements that it does not support nor assist Iran in such initiatives as its ballistic missile program; however, the US has been critical in its calls for Russia to ensure that there is appropriate risk management of any seemingly benign cooperation with determined proliferators, such as Iran.[47] While highlighting concerns around the adequacy of

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[40] Cited in Zhebin 2000, p. 37.

[41] Zhebin 2000, p. 37.

[42] Ibid., at p. 36.

[43] Ibid.

[44] See for example, United States House of Representatives, Resolution 457 on the Iran Missile Proliferation Sanctions Act of 1997, Congressional Record Volume 144, Number 73, 9 June 1998, pp. H4283–4.

[45] Weiss 2003, p. 22.

[46] See footnote 45.

[47] See for example, Testimony of Robert Einhorn, Deputy Assistant of Secretary of State for non-proliferation before the United States Senate Subcommittee on International Security, Proliferation, and Federal Services of the Committee on Government Affairs of the United States Senate, 5 June 1997.

Russian export controls, key US representatives have acknowledged that Russia itself is not interested in seeing other States acquire weapons of mass destruction (WMD), but suggest that its involvement in other nuclear technology transfer could inadvertently compromise non-proliferation efforts.[48]

With the benefit of hindsight, the NWS must reflect critically on what amounts to assistance in nuclear proliferation. As will be discussed further in this chapter, NWS providing nuclear technology assistance must be wary of the potential for alternative use and this has become a key concern of the non-proliferation community. Despite evidence of some actions potentially amounting to breaches of Article I, there appears to be a general commitment by the five NPT NWS not to contribute directly to proliferation, nor to overtly accuse one another of breaches, but rather to focus on related proliferation concerns, particularly the potential for inadvertent transfer or misuse of nuclear or dual-use materials. The changed security environment after the end of the Cold War has also raised new proliferation concerns, with heightened attention being paid to the need to address the security of nuclear facilities and materials and prevent the potential for non-State actors to access nuclear weapons. These issues are discussed in the Sect. 2.4 of this chapter.

2.4 Non-Proliferation in the Post-Cold War Security Environment

It has been suggested that with the end of the Cold War, some of the controversies related to Article I and the transfer of nuclear weapons to NNWS have diminished.[49] As noted earlier in this essay, current proliferation concerns relate not only to the direct transfer of nuclear technology but also to indirect assistance. Further to this, at the time the NPT was negotiated, thinking on proliferation concerned the acquisition of nuclear weapons technology by States. After the end of the Cold War, the potential for nuclear proliferation has extended beyond traditional State parameters, and increasingly concerns around non-State actors' access to nuclear weapons technology, which is the area of focus. Thus, assistance in acquiring weapons has become a major concern, less from deliberate transfer of weapons, than through inadvertent transfer of technology or materials, from loss or theft or weapons and materials or through the unauthorised assistance of nuclear weapons scientists and engineers.[50] A related concern is the fear that NNWS may cooperate or share technology in support of nuclear weapons programs. Sources of transfer concerns of course also lie with those States outside of the NPT, that is Israel, India, Pakistan and—since its withdrawal from the NPT—North Korea.[51]

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[48] Ibid.

[49] Moore and Turner 2005, p. 537.

[50] Ibid., at pp. 537–538.

[51] Ibid., at p. 538.

Post-Cold War, nuclear proliferation has arguably had a renewed focus, and a major stated concern relates to the potential for proliferation to non-State actors. Many commentators have noted that the potential for terrorist groups to actually acquire and use a nuclear weapon is questionable, but access to more crude forms of nuclear weapons technology is not to be dismissed lightly. If the potential for non-State actors to access and use nuclear weapons is to be minimised, States, who have control over existing technology and fissile materials, must continue to exercise responsibility for preventing proliferation. Accordingly, in light of the concern over the potential for nuclear weapons to be transferred to non-State actors, the question whether there is a customary rule preventing the same is thus of critical importance. Equally, the will of the international community to enforce such a norm must be reviewed.

The role of the three non-NPT States is thus crucial in current international efforts to prevent nuclear weapons proliferation. Finding a place for India, Pakistan and Israel in the NPT regime has proved problematic, given the challenge of expecting them to renounce their nuclear programs in order to join the NPT. However, in the wake of the events of September 11, the US has shifted its approach to the non-NPT NWS, to enable it to better address concerns around the adequacy of security over materials.[52] As a result, the US lifted sanctions that had been in force against India and Pakistan as a response to their nuclear weapons development outside of the NPT. While also viewed as a reward for their cooperation in the war on terror, the lifting of sanctions previously designed to punish India and Pakistan acknowledged the nuclear *status quo* and had the effect that the US was able to engage more closely with these non-NPT States in relation to their security and control systems.[53]

The US-India Nuclear Deal warrants particular consideration in this regard. In July 2005, the US announced a strategic partnership with India, involving a commitment by India to subject its nuclear facilities to international monitoring and comply with international guidelines on the export of sensitive materials, in return for cooperation on sensitive dual-use nuclear technologies.[54] While India remains firmly outside the NPT regime, in the joint statement issued by the US President and Indian Prime Minister which formed the basis of the agreement, India agreed to:

> … [refrain] from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread; and [ensure] that the necessary steps have been taken to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines.[55]

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[52] O'Neill 2008, p. 199.

[53] Ibid., at pp. 199–200.

[54] Ibid., at pp. 204–205.

[55] Ibid., at p. 205.

As a result of the negotiated deal, the NSG has agreed to exempt India from the Group's Guidelines which restrict the export of nuclear material and technology to countries which accept IAEA safeguards. The impact is that civilian nuclear cooperation to India is now possible. In return, India made certain commitments on non-proliferation, including that it would comply with NSG Guidelines, place an additional six nuclear reactors under IAEA safeguards and continue its nuclear test moratorium. The agreement went a way towards formalising many voluntary commitments that India had made in relation to its nuclear weapons and related materials, particularly with regards to monitoring and export controls.[56]

The finalisation of the US-India Nuclear deal coincided with the increased emphasis by the US on the priority of non-proliferation over the other arms of the NPT relating to disarmament and peaceful use of nuclear energy. In this context, China has been careful to state that 'Non-proliferation efforts should not undermine the right of all countries, especially that of the developing countries to the peaceful uses of nuclear energy'.[57] Arguably, a side effect of the US-India Nuclear deal was the decision by China to assert the right to provide Pakistan with two power plants by relying on the grandfathering of an agreement which predated China's entry to the NSG.[58] Notably, China did not seek exemptions from the NSG Guidelines for Pakistan.

The issue of controlling the transfer of nuclear technology is heightened in view of contemporary security issues and the non-universality of the NPT, compounded further by the fact that the States who have remained outside the Treaty regime are all nuclear-weapons capable States. Cooperation and a commitment to non-proliferation by India, Pakistan and Israel, who have never signed up to obligations under the NPT, are crucial to the goal of preventing the acquisition of nuclear weapons capabilities by both States and non-State actors. The Sect. 2.5 of this chapter reviews the policies and practice of those States in relation to horizontal proliferation and considers whether they could be viewed as having accepted the obligation not to transfer nuclear weapons and explosive devices to third parties.

2.5 Non-NPT States

While the NPT has reached near-universal status, the four States outside of the regime are all nuclear-weapon capable. The status of North Korea and its purported withdrawal from the NPT is problematic, but in relation to the remaining three

[56] Gahlaut 2005.

[57] See for example, Working paper on the peaceful uses of nuclear energy submitted by China for the 2004 Preparatory Commission for the 2005 NPT Review Conference, NPT/CONF.2005/PC.III/WP.7.

[58] Abe 2009, p. 58.

States, India, Pakistan and Israel, it is useful to consider briefly their nuclear-weapon status and stated views and practice on non-proliferation. India, despite being a critic of the NPT regime, has voluntarily conformed with the obligation not to transfer nuclear technology, maintaining strict controls over nuclear and related sensitive exports.[59] India's objections to the NPT relate to the discriminatory manner with which the regime treats the balance of obligations between NWS and NNWS.[60] That view notwithstanding, India's management of its nuclear capability has become a means of demonstrating its good international citizenship, with its impeccable record of non-proliferation particularly evident in the face of the scandal faced by Pakistan following revelations its scientists had been at the centre of a clandestine network of nuclear exports.[61] India has also maintained the need for other States to meet their obligations, voting against Iran in the IAEA and opposing the North Korean decision to conduct nuclear tests, citing the danger of clandestine proliferation in response to North's October 2006 test.[62] Within the UN General Assembly's Committee dealing with disarmament and international security issues, India has also routinely introduced a resolution calling for the Conference on Disarmament to commence negotiations on a convention prohibiting the use or threat of use of nuclear weapons.[63] Its 'Reducing Nuclear Danger' resolution, first introduced in 1998, further calls for a review of nuclear doctrines and immediate and urgent steps to reduce the risk of unintentional and accidental use of nuclear weapons.[64]

Pakistan, like India, has expressed reservations over the NPT based on the inherent discriminatory nature of the Treaty, as well as the failure to make a concrete step towards complete nuclear disarmament.[65] During negotiation of the NPT, Pakistan had also called for explicit positive and negative security assurances from the NWS for all NNWS.[66] Notwithstanding its reservations, Pakistan supported the final draft of the NPT.[67] While it did not officially state as much, the fact Pakistan withheld its signature is considered to have been a reaction to the decision by India not to sign the NPT.[68] Pakistan currently outwardly subscribes to the position that it does not support proliferation, maintains appropriate safeguards in relation to its nuclear facilities and materials and imposes export controls in line with international standards. However, there is scepticism as to how robust are Pakistan's actions in this regard, given the significant contribution to nuclear weapons proliferation arising from the actions of the A. Q. Khan network. The concern for the international community relates to the

[59] Gahlaut 2005.

[60] Rajagopalan 2008, p. 194.

[61] Ibid., at pp. 193–194.

[62] Ibid., at p. 207.

[63] Ministry of External Affairs, Government of India 2006–2007, p. 111.

[64] Ibid.

[65] Chakma 2009, p. 85.

[66] Ibid.

[67] Ibid.

[68] Ibid.

structural weaknesses in the Pakistani State which enabled the proliferation of nuclear weapons from Pakistani sources.[69] It has been argued that Pakistan should not continue to be penalised for the past, with its response to the Khan scandal resulting in upgraded security and oversight and the enactment of export control legislation.[70] Significantly, Pakistan has emphasised that Khan and his associates had acted independently of the government, and no official was involved or had authorised the transfer of nuclear technology.[71] Whether the actions of Khan and his associates could have occurred without some government knowledge has been questioned, however, the efforts of the government to distance itself from those actions are suggestive of a Pakistan that considers itself bound by the obligation not to contribute to proliferation. Further, the subsequent steps taken to enhance its legislative and policy framework over nuclear security are positive indications of Pakistan's official view that it has an obligation not to transfer nuclear weapons technology.

Israel has followed a policy of caution and constraint in relation to nuclear weapons, evident in the fact it has not ever explicitly acknowledged its nuclear status.[72] Israel maintains a policy of nuclear ambiguity and continues to pledge that it will not be the first to introduce nuclear weapons into the Middle East region, notwithstanding the universal understanding that it has a long-standing nuclear capability, probably superior to that of either India or Pakistan.[73] It complies with NSG guidelines and suggests that its export controls are as strict as India's.[74] Israel is also considered a willing participant in the Comprehensive Test Ban Treaty (CTBT).[75]

While not bound by the NPT Article I obligation not to transfer nuclear-weapons, it does appear that each of India, Pakistan and Israel do feel some compulsion not to do so. Arguably, action by the Security Council has also resulted in legal obligations for the non-NPT States (and others) to take certain steps to prevent the proliferation of nuclear weapons. In 2004, in the aftermath of the discovery of the A.Q. Khan global nuclear supply network, the Security Council, acting under Chapter VII of the UN Charter, adopted Resolution 1540, to address the issue of non-State actors acquiring weapons of mass destruction.[76] Resolution 1540 imposes a number of binding obligations aimed at the prevention of WMD proliferation. Obligations include the requirement to refrain from providing any form of support to non-State actors to develop, acquire, manufacture, possess, transport, transfer or use WMD and their delivery systems. It also requires States to adopt and enforce relevant domestic laws to prevent the proliferation of WMD and prohibit non-State actors from obtaining WMD. States are also required to enforce effective measures to

[69] Ibid., at pp. 121–124.

[70] Khan 2011, pp. 276–277.

[71] Chakma 2009, p. 104.

[72] Cohen 2008, p. 241.

[73] Evans and Kawaguchi 2009, p. 179.

[74] Abe 2009, p. 58.

[75] Evans and Kawaguchi 2009, p. 179.

[76] O'Neill 2008, p. 201.

establish domestic controls over relevant items to combat illicit trafficking and brokering in such items.

Resolution 1540 also established a Committee to report to the Security Council on the implementation of the resolution, and States were required to report to the Committee on steps they had taken or intended to take to implement the resolution. In their national reports, all of the NPT and non-NPT NWS affirmed their commitment to non-proliferation. Accordingly, Israel, India and Pakistan in their reports to the Resolution 1540 Committee also confirmed their commitment to non-proliferation and highlighted applicable laws and practices in this regard.

Israel indicated its policy is designed to prevent proliferation of WMD, with associated legislation and practices covering intelligence gathering and sharing, improving border controls, developing advanced detection and identification devices, enhancing facility security and export controls. Israel also highlighted its cooperation with multilateral export control regimes and support for international initiatives such as the Proliferation Security Initiative (PSI) and the Global Threat Reduction Initiative (GTRI).[77] A further report provided by Israel in December 2012 reiterated its commitment to act to prevent WMD proliferation, particularly to non-State actors.[78]

India similarly highlighted its commitment to prevent the proliferation of WMD and cited its 'impeccable record in this respect'.[79] Its report noted its commitment to maintaining effective laws and domestic controls to prevent WMD proliferation and stated 'India will not be a source of proliferation of sensitive technologies. India does not support, assist or encourage any State to develop weapons of mass destruction or their means of delivery'. It highlighted that it maintains a policy, with associated domestic laws, regulations and administrative measures, to strictly control export of nuclear- and missile-related materials and technologies. Updates provided in 2006 confirmed further legislative and regulatory mechanisms had been put in place to strengthen controls over WMD.[80]

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[77] United Nations Security Council, Security Council Committee established pursuant to resolution 1540 (2004), "Letter dated 22 November 2004 from the Permanent Representative of Israel to the United Nations addressed to the Chairman of the Committee", 29 December 2004, S/AC.44/2004/(02)/84.

[78] United Nations Security Council, Security Council Committee established pursuant to resolution 1540 (2004), "Note verbale dated 10 December 2012 from the Permanent Mission of Israel to the United Nations addressed to the Chairman of the Committee", 3 January 2013, S/AC.44/2013/1.

[79] United Nations Security Council, Security Council Committee established pursuant to resolution 1540 (2004), "Note verbale dated 1 November 2004 from the Permanent Mission of India to the United Nations addressed to the Chairman of the Committee", 6 December 2004, S/AC.44/2004/(02)/62.

[80] United Nations Security Council, Security Council Committee established pursuant to resolution 1540 (2004), "Letter dated 16 January 2006 from the Permanent Representative of India to the United Nations addressed to the Chairman of the Committee", 18 January 2006, S/AC.44/2004/(02)/62/Add.1; United Nations Security Council, Security Council Committee established pursuant to resolution 1540 (2004), "Letter dated 8 February 2006 from the Permanent Mission of India to the United Nations addressed to the Chairman of the Committee", 18 February 2006, S/AC.44/2004/(02)/62/Add.2.

Pakistan's 2004 report confirmed that it fully supported appropriate and effective measures to prevent non-State actors from gaining access to WMD and their means of delivery and had instituted comprehensive administrative, legislative and security measures to ensure the safety and security of sensitive materials, facilities, technologies and equipment, which included the passage of new legislation to strengthen controls over the export of sensitive technologies.[81] Pakistan also noted that while not a Party to the NPT, it fulfilled its obligations as a 'responsible nuclear weapon state' and supported the objective of non-proliferation, through various administrative and legislative controls detailed in the report.

From their statements around horizontal proliferation, and related to the concern of the international community that terrorists may access nuclear weapons, it appears that India, Pakistan and Israel are publicly committed to the norm of non-proliferation and the obligation of the State not to transfer nuclear weapon technologies. This norm is also supported by a series of other international agreements that have been developed since the negotiation of the NPT, and which help to reinforce the regime which restricts cooperation in relation to nuclear weapons technology. These are summarised in the Sect. 2.6 of this chapter.

2.6 Other Agreements Supporting Nuclear Non-Proliferation

The commitment to non-proliferation is supported through two groupings which control the export of nuclear source materials. The Zangger Committee commenced discussions in 1971 as to the nature of items that would trigger the NPT requirement for IAEA safeguards, with the agreed 'trigger list' first published in 1974.[82] The trigger list covers items falling within the scope of NPT Article III.2. The Nuclear Suppliers Group (NSG), which formed in 1975 after India detonated a nuclear explosive device, also developed guidelines applying to nuclear and nuclear-related exports, which were first published in 1978.[83] Whereas the Zangger Committee covers the export of equipment and materials, the NSG extends also to

[81] United Nations Security Council, Security Council Committee established pursuant to resolution 1540 (2004); note verbale dated 3 June 2008 from the Permanent Mission of Pakistan to the United Nations addressed to the Chairman of the Committee, 3 August 2010, S/AC. 44/2007/19.

[82] IAEA Information Circular, Communication Received from Members Regarding the Export of Nuclear Material and of Certain Categories of Equipment and Other Material, 3 September 1974, INFCIRC/209.

[83] IAEA Information Circular, Communication Received From Certain Member States Regarding Guidelines for the Export of Nuclear Materials, Equipment or Technology, February 1978, INFCIRC/254.

technology for the development, production and use of items in the trigger list.[84] The objective of the NSG was to ensure that nuclear transfers for peaceful purposes would not be diverted to unsafeguarded nuclear fuel cycle or nuclear explosive activities.[85] In 1992, the NSG extended its guidelines to govern the export of nuclear-related dual-use items and technologies, that is, to items which have non-nuclear uses.[86] In 1994, the NSG further adopted the 'Non-Proliferation Principle' into its Guidelines, which provides that a supplier may only authorise a transfer if satisfied it would not contribute to the proliferation of nuclear weapons.[87]

In developing the Guidelines, the States making up the NSG argued that they assisted in the implementation of the NPT commitment not to proliferate, as the Guidelines operate so that a supplier State could refuse to transfer nuclear materials if it was believed they might be used to assist in nuclear weapons proliferation.[88] There is no formal treaty basis for either the Zangger Committee or the NSG. Suppliers implement the Guidelines in accordance with their national laws. The five NPT NWS are all members of the NSG. As noted above, each of Israel, India and Pakistan, while not NSG members, claims to comply with the Group's Guidelines on nuclear and related exports.

Other voluntary arrangements also govern exports of nuclear-related materials, including the Missile Technology Control Regime (MTCR); the Hague Code of Conduct against the Proliferation of Ballistic Missiles (HCoC); and the Wassenaar Arrangement on Export Controls for Conventional Arm and Dual-Use Goods and Technologies. The goal of the MTCR is the non-proliferation of rockets and unmanned delivery systems, and participating States adhere to common export policy guidelines for a list of controlled items.[89] In addition to its 38 partners, a number of other States voluntarily adopt export licensing measures for items covered by the MTCR Guidelines. The HCoC aims at delegitimising ballistic missile proliferation, with general commitments to exercise 'maximum possible restraint in the development, testing and deployment of Ballistic Missiles' and where possible to 'reduce national holdings of such missiles', as well as not to contribute to, support or assist ballistic missile programmes in countries which

[84] IAEA Information Circular, Communication received from the Permanent Mission of the Netherlands of behalf of the Member States of the Nuclear Suppliers Group, 29 November 2000, INFCIRC/539/Rev. 1 (Corr.), para 17.

[85] NSG, "History of the NSG", http://www.nuclearsuppliersgroup.org/Leng/01-history.htm. Accessed 1 February 2013.

[86] The Dual-Use Guidelines were issued as an update to INFCIRC 254, see IAEA Information Circular, Communications received from certain Member States regarding guidelines for the export of nuclear material, equipment and technology, July 1992, INFCIRC/254/Rev. 1/Part 2.

[87] International Atomic Energy Agency, "Communication received from the Permanent Mission of the Netherlands of behalf of the Member States of the Nuclear Suppliers group", 29 November 2000, INFCIRC/539/Rev. 1 (Corr.) at para 18.

[88] Simpson et al. 2010, pp. 1–8.

[89] The Missile Technology Control Regime (MTCR), http://www.mtcr.info/english/index.html.

might be developing or acquiring WMD in contravention of non-proliferation norms.[90] Participating States also commit to provide an annual declaration of their policies on ballistic missiles and space launch vehicles, and pre-launch notifications on ballistic missile and space launch vehicle launches and test flights.[91] The Wassenaar Arrangement promotes transparency in transfers of conventional arms and dual-use goods and technologies and includes export controls reporting on transfers and denials of specified controlled items.[92] China is the only NPT NWS not to have signed up to the MTCR, the HCoC and Waassenaar Arrangement. Israel, India and Pakistan adopt control lists for the export of goods, technologies, material and equipment related to nuclear weapons which encompass the lists and scope of controls maintained by the NSG and the MTCR.[93]

The NPT, under Article VII, also provides for States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories. A number of Nuclear-Weapon-Free Zones (NWFZs) have been established through a series of treaties, including the Treaty of Tlatelolco, which covers Latin America and the Caribbean, the Treaty of Rarotonga, which covers the South Pacific, the Treaty of Bangkok establishing the Southeast Asia NWFZ, the Treaty of Pelindaba which covers Africa and the Treaty on a NWFZ in Central Asia. In addition to these international agreements, Mongolia has self-declared its territory as nuclear-weapon free, which was recognised internationally through a UN General Assembly Resolution.[94] Efforts have also been made to reach agreement on a NWFZ in the Middle East, which was a key commitment made at the 1995 NPT Review and Extension Conference although negotiations in this regard have stalled. Governance of nuclear weapons in the Antarctic, Outer Space, on the Seabed and the Moon is also the subject of a series of Treaties.[95]

Protocols to each of the NWFZ Treaties provide for the NWS to undertake to not contribute to any act that would constitute a violation of the relevant Treaty, as

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[90] United Nations General Assembly, International Code of Conduct against Ballistic Missile Proliferation, A/57/724, 6 February 2003.

[91] HCoC 2012.

[92] Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, Guidelines and Procedures, http://www.wassenaar.org/guidelines/index.html.

[93] See correspondence from each of Israel, India and Pakistan to the United Nations Security Council Committee established pursuant to resolution 1540 (2004): 29 December 2004, S/AC.44/2004/(02)/84; 3 August 2010, S/AC.44/2007/19; 6 December 2004, S/AC.44/2004/(02)/62; and the Public statement of the Nuclear Suppliers Group following its June 2010 Meeting in Christchurch: NSG_CHR/Public Statement/FINAL.

[94] UNGA Res 55/33S.

[95] See the Antarctic Treaty; the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; the Agreement Government the Activities of States on the Moon and Other Celestial bodies; and the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof.

well as to abstain from the use or threatened use of nuclear weapons against the State Parties to the Treaties, or within the territory covered by each NWFZ. All of the NPT NWS have signed the relevant Protocols covering the territories of Latin America and the Caribbean, the South Pacific and Africa. However, the United States has not ratified the Protocols relating to the South Pacific and Africa. None of the NPT NWS have signed the Protocols to the Treaties on the Southeast Asia and Central Asia NWFZs.[96]

Work to develop a Fissile Material Cut-off Treaty (FMCT) has also been undertaken by the UN Conference on Disarmament, although agreement to date has proved elusive.[97] In December 1993, by resolution 48/75 L, the UN General Assembly unanimously called for the negotiation of a 'non-discriminatory, multilateral and international effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices'.[98] A mandate calling for the establishment of an *ad hoc* committee within the Conference on Disarmament to negotiate a fissile material treaty was released on 24 March 1995.[99]

Because NNWS Parties to the NPT are already prohibited from producing or acquiring fissile material for weapons, a FMCT would effectively result in new restrictions for the five NPT NWS, and potentially for the NWS outside of the NPT. A major sticking point in negotiations has revolved around whether the ban on fissile material would cover existing stockpiles, which the five NPT NWS and India considered should be outside the ban.[100] Pakistan has been an obstacle to negotiations; primarily concerned that an FMCT which covered only future production, rather than existing stockpiles, would place it at a disadvantage compared to India and its superior nuclear stockpile.[101]

A number of other global initiatives have been developed in response to concerns around the threat of nuclear terrorism. In 1996, the UN General Assembly established an Ad Hoc Committee with responsibility for developing an International Convention for the Suppression of Terrorist Bombings, and subsequently an International Convention for the Suppression of Acts of Nuclear Terrorism.[102] Following negotiations on the scope of such a Convention, in 2005 the General Assembly adopted, without a vote, a resolution to which was annexed

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[96] See the United Nations Office for Disarmament, "Nuclear-Weapon-Free-Zones", http://www.un.org/disarmament/WMD/Nuclear/NWFZ.shtml. Accessed 2 February 2013.

[97] UNIDIR 2010, p. ix.

[98] United Nations General Assembly, 'Prohibition of the Production of Fissile Material for Nuclear Weapons or Other Nuclear Explosive Devices', 81st plenary meeting, 16 December 1993, Resolution A/RES/48/75.

[99] UNIDIR 2010, p. 2.

[100] Ibid.

[101] Arms Control Association, 'Fissile Material Cut-off Treaty (FMCT) at a Glance', http://www.armscontrol.org/factsheets/fmct. Accessed 20 January 2013.

[102] United Nations General Assembly Resolution 51/210, 'Measures to eliminate international terrorism', 17 December 1996.

the International Convention for the Suppression of Acts of Nuclear Terrorism.[103] The Convention essentially criminalises nuclear terrorist acts and the State Parties commit to adopting measures to prohibit such acts and to protect nuclear materials. The Convention entered into force on 7 July 2007. All of the NPT NWS are signatories, although the United States and France are yet to ratify the Convention. Israel and India have also signed and ratified the Convention.

In 2003, the United States encouraged the formation of the Proliferation Security Initiative (PSI), which aims to stop the trafficking of WMD and their delivery systems and related materials to States and non-State actors of proliferation concern. A set of interdiction principles were formulated which PSI participants commit to, in an attempt to 'establish a more coordinated and effective basis through which to impede and stop shipments of WMD, delivery systems and related materials'.[104] The PSI includes over 100 participants, including France, Russia, Israel and the United Kingdom. China, India and Pakistan have not joined the initiative to date. While not participating in the PSI, China states that it is 'firmly opposed to proliferation of WMD and their means of delivery and stands for the attainment of the non-proliferation goal through political and diplomatic means' and further that it 'understands the concern of the PSI participants … and shares the non-proliferation goal of the PSI'.[105] It states that it supports the cooperation among PSI participants within the framework of international law, but is 'concerned about the possibility that the interdiction activities taken by PSI participants might go beyond the international law'.[106] India also is reportedly concerned at the legality of the PSI.[107]

In 2009, the Security Council unanimously adopted Resolution 1887 in which it emphasised the primary role of the Security Council in addressing nuclear threats and that all situations of non-compliance with nuclear non-proliferation obligations should be brought to its attention so it can determine if the situation constitutes a threat to international peace and security. Resolution 1887 covered a series of issues relating to nuclear weapons, but relevantly to non-proliferation, the Council called on States to adopt stricter national controls for the export of sensitive goods and technologies of the nuclear fuel cycle. It further called upon States to improve their national capabilities to detect, deter and disrupt illicit trafficking in nuclear materials throughout their territories.[108]

The Security Council has also extended the mandate of the 1540 Committee several times, most recently in 2011 for a period of 10 years. Resolution 1977

[103] United Nations General Assembly Resolution 59/290, 'International Convention for the Suppression of Acts of Nuclear Terrorism', 13 April 2005.

[104] Office of the Press Secretary, The White House 2003.

[105] Ministry of Foreign Affairs of the People's Republic of China.

[106] Ibid.

[107] Belcher 2011, p. 9.

[108] United Nations Security Council Resolution 1887 (2009).

(2011) included affirmation by the Security Council of the view that the proliferation of WMD and their means of delivery constituted a threat to international peace and security and the need for all States to comply fully with their obligations and commitments in relation to arms control, disarmament and non-proliferation of WMD.[109]

The 2010 Nuclear Security Summit (NSS), an initiative of the US Obama Administration, was notable for its achievement in bringing together representatives from 47 states, including all known NWS other than North Korea, as well as the European Union, the IAEA and the UN. The Communique issued at the conclusion of the Summit noted that 'nuclear terrorism is one of the most challenging threats to international security' and that 'success will require responsible national actions and sustained and effective international cooperation'.[110] Among other things, the Communique called for improving security and accounting of fissile materials, encouraging efforts to secure radioactive substances, universalising key treaties and sharing best practice for nuclear security.[111] While commitments to enhancing domestic security provisions or to work bilaterally or multilaterally to improve global provisions were made by some 30 States, these were offered voluntarily, with no formal mechanism for evaluating implementation of those commitments.[112] While it has been suggested that there is little appetite at the international level, particularly among developing states, for ambitious schemes addressing nuclear security, the outcomes of the NSS are further evidence of a general acceptance as to the desirability of security of nuclear materials and, consequently, prevention of proliferation.

A further NSS was hosted by South Korea in 2012, again with representatives of all nuclear weapon capable States, but for North Korea. The 2012 Communique encouraged universal adherence to the Convention for the Suppression of Acts of Nuclear Terrorism and the Convention on the Physical Protection of Nuclear Material.[113] It also expressed support for UN Security Council Resolution 1540 and the extension of the 1540 Committee mandate, pursuant to Resolution 1977. The Communique further recognised the importance of security of nuclear facilities and materials and further encouraged efforts to combat illicit trafficking and to effectively prosecute offences.

The significance of the initiatives outlined in this section is their role in reinforcing the non-proliferation norm applicable both to the NWS under Article I of the NPT and followed by States outside of the NPT regime. This is particularly noteworthy in light of the challenge presented by trying to bring Israel, India and Pakistan

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[109] United Nations Security Council Resolution 1977 (2011), 6518th meeting, 20 April 2011, S/RES/1977 (2011).

[110] Office of the Press Secretary, The White House 2010.

[111] Ibid.

[112] Bowen 2012, p. 365.

[113] With the exception of North Korea, all of the NPT and non-NPT NWS are party to the Convention on the Physical Protection of Nuclear Material.

within the framework of the NPT, or to negotiate some alternative agreement. Further, the negotiation of various agreements supporting non-proliferation is not hampered by the fact these three States are outside the NPT, and while all agreements are not universally subscribed to, comments by each of the NWS on the subject of non-proliferation, including security of materials and appropriate export controls, give weight to the view that the obligation not to transfer nuclear weapons or related devices extends to States outside of the NPT.

2.7 Conclusion

Article I of the NPT was originally devised to address the potential for horizontal proliferation of nuclear weapons by existing NWS. Subsequent to the entry into force of the NPT, other States have acquired nuclear weapon capabilities. While achieving universal membership of the NPT is a laudable goal, in that it would assist with contemporary problems, such as prevention of terrorist and non-State actor access to nuclear weapons and technology, in terms of the obligations of the NWS under Article I, this chapter has suggested there may already be a norm forming in this regard.

Significantly, compliance by the NWS with their obligations under the NPT relies not on enforcement, but rather on voluntary compliance. It has been suggested that the fundamentally voluntary nature of compliance with the provisions of the NPT is a drawback of the Treaty, in light of its lack of any formal mechanism to compel compliance and punish non-compliance.[114] In light of this shortcoming, ensuring related compliance by States outside of the NPT similarly relies on voluntary restraint.

The Security Council has taken steps to identify that nuclear weapon proliferation and threats arising from nuclear terrorism pose a threat to international security and required States to take steps to ensure effective control over sensitive materials and to prevent terrorists from acquiring access to WMD or associated technology. Further to obligations arising from Security Council resolutions, if it is accepted that the NPT and related instruments have helped to nurture a norm of non-proliferation, it will be important that any future failures to comply with the responsibility not to transfer nuclear weapon technology are appropriately and consistently responded to.[115] Challenges related to the potential for inadvertent technology transfer or assistance will also need to be managed sensitively, to ensure that efforts to comply with the non-proliferation obligation do not unduly impinge on the NPT bargain, that is that access to peaceful, civil nuclear technologies for States parties in good standing should be assured. Accordingly, going

[114] Keeley 1998, p. 23; Zhao 2012, pp. 194–195.

[115] Weiss 2003, p. 21.

forward, mechanisms to balance these competing interests will need to be devised and followed by the international community.

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Chapter 3
The Meaning of Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons: Analysis Under the Rules of Treaty Interpretation

Daniel Rietiker

Abstract Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) obliges the State Parties to pursue negotiations in good faith in order to achieve the cessation of the nuclear arms race, the elimination of nuclear weapons and the ultimate goal of general and complete disarmament under strict and effective international control. The nature and exact scope of the rights and obligations flowing from this provision are uncertain. The present chapter aims at the clarification of some of the questions left open in this debate. It proposes a legal analysis of Article VI in the light of the different means of treaty interpretation according to Articles 31 and 32 of the Vienna Convention on the Law of Treaties (VCLT). Particular attention will be paid to the special nature of the NPT that distinguishes clearly between two different categories of State Parties, the few nuclear weapon States (NWS), on the one side, and the numerous non-nuclear weapon States (NNWS), on the other side. It will also be explained why in a treaty such as the NPT a teleological interpretation, taking into consideration its object and purpose and pursuing its *effet utile*, plays a significant role. Moreover, Article VI has to be analysed in the light of the political, social and technological developments as well as the considerable changes that the international legal order has itself undergone during almost half a century, including a higher protection of the human being. Therefore, this chapter will also reply to the allegation according to which the subsequent practice, since the adoption of the treaty in 1968 that had been surrounded by the special circumstances of the Cold War, has changed substantially the rights and obligations of States under Article VI NPT or even made this provision meaningless.

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Contents

3.1 Introductory Remarks

Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons[1] (hereafter NPT) imposes on the State Parties the obligation to pursue negotiations in good faith aiming at the cessation of the nuclear arms race, the elimination of nuclear weapons as well as general and complete disarmament under strict and effective international control. It constitutes one of the three pillars of the treaty, the so-called 'disarmament pillar'.

Article VI is certainly one of the most controversial provisions, if not the most controversial, of the treaty; the views of scholars and practitioners differ considerably concerning the nature and the scope of the rights and obligations of the State Parties stemming from Article VI. It seems clear that none of the goals addressed in this provision has been met to date, almost half a century after the adoption of the NPT. The aim of the present analysis is neither to search for the exact reasons for these failures nor to identify the responsible States, but to contribute to the

[1] Treaty on the Non-Proliferation of Nuclear Weapons (1 July 1968) 729 *UNTS* 161.

debate on the *legal* meaning of this provision in the light of the principles of treaty interpretation. The starting point lies in Articles 31 and 32 of the Vienna Convention on the Law of Treaties[2] (hereafter VCLT), provisions that provide for a comprehensive 'tool box' as regards the means of interpretation.

Since the adoption of the NPT in 1968, surrounded as it was by the special circumstances of the Cold War, almost half a century has passed. When talking about an arms control treaty, it is obvious that the political, social and technological changes have to be taken into consideration for a contemporary interpretation of the treaty. Moreover, the fact that international law has likewise undergone considerable change also plays a certain role. Special attention will be paid to the particular nature of the NPT, a treaty that, first of all, has today reached almost universal adherence, secondly, distinguishes sharply between two categories of State Parties and, thirdly, governs a special type of weapon, which is of high military and strategic importance, but whose use has disastrous effects on humankind, the natural environment and even for future generations.

The present article starts with a short introduction to treaty interpretation (3.2), followed by the analysis of the different means of interpretation: grammatical and contextual interpretation (3.3), relevance of good faith (3.4), interpretation in the light of the object and purpose of the treaty (3.5), the role of subsequent practice (3.6), the relevance of 'other rules of international law' (3.7), as well as the *travaux préparatoires* and circumstances of the conclusion of the treaty as 'supplementary means of interpretation' within the meaning of Article 32 VCLT (3.8). It will finish with some overall conclusions (3.9).

3.2 The Legal Basis of Interpretation of International Treaties: Articles 31–33 VCLT

When seeking to analyse, from a legal point of view, the meaning of Article VI NPT, the starting point must be the Vienna Convention on the Law of Treaties (hereafter VCLT) of 22 May 1969, that entered into force on 27 January 1980. Certainly, Article 4 of the VCLT states that it 'applies only to treaties which are concluded by States after the entry into force of the present Convention'. As the NPT entered into force on the 5 March 1970, the VCLT cannot be applied directly. However, it has to be recalled that Articles 31 and 32 are widely accepted as the codification of existing rules of international law[3] and apply therefore to the

[2] Vienna Convention on the Law of Treaties (23 May 1969) 1155 *UNTS* 331.

[3] See, among many other authorities, *LaGrand (Germany vs. United States of America)*, ICJ Reports 2001, para 99, or *Avena and Other Mexican Nationals (Mexico vs. United States of America)*, ICJ Reports 2004, para 83.

interpretation of the NPT under this heading and irrespectively whether a State party to the NPT has ratified the VCLT or not.[4]

The operation of treaty interpretation is not an exact science but rather the art of identifying those rules among many others whose application seems appropriate in a certain situation.[5] Legal writers normally agree that Article 31, para 1, VCLT, constitutes the starting point for treaty interpretation and a sound compromise between the three perception-related methods normally adopted: the objective method based on the text, the subjective method based on the intention of the drafters of the treaty and the teleological method in accordance with the object and purpose of the treaty.[6] Article 31, para 1, VCLT reads as follows:

General rule of interpretation:

> A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose (…).

While these provisions avoid taking a firm stand on any of the great doctrinal debates on interpretation, it is hard to think of any approach to interpretation that would be totally excluded by Articles 31–33.[7] Just in order to be complete, it has to be pointed out that Article 33 concerns the 'interpretation of treaties authenticated in two or more languages'. For practical reasons, this means of interpretation will not be dealt with here.[8]

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[4] This follows also from the first sentence of Article 4 of the VCLT: 'Without prejudice to the application of any rules set forth in the present Convention to which treaties would be subject under international law independently of the Convention…'.

[5] ACDI, 1966-II 218, para 4: 'Their suitability [the suitability of principles and maxims in international practice] for use in any given case hinges on a variety of considerations which have first to be appreciated by the interpreter of the document; the particular arrangement of the words and sentences, their relation to each other and to other parts of the document, the general nature and subject-matter of the document, the circumstances in which it was drawn up, etc. Even when a possible occasion for their application may appear to exist, their application is not automatic but depends on the conviction of the interpreter that it is appropriate in the particular circumstances of the case. In other words, recourse to many of these principles is discretionary rather than obligatory and the interpretation of documents is to some extent an art, not an exact science'.

[6] Sinclair 1984, pp. 70–71; Yasseen 1976, p. 16.

[7] International Law Commission, Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law, Report of the Study Group of the International Law Commission, finalised by Martti Koskenniemi, A/CN.4/L.682, 13 April 2006, p. 215, para 427. The latter nevertheless claims that the Convention does not purport to be an exhaustive statement of interpretative techniques and points out that there is no mention, for instance, of *lex specialis* or *lex posterior* rules. See also Bernhardt 1999, p. 14; he observes that the principle that treaties should be interpreted restrictively and in favour of State sovereignty, *in dubio mitius*, is also not mentioned in Article 31 VCLT, rightly claiming that this principle is no longer relevant in international law.

[8] It does not seem that Article 33 VCLT has played a significant role in practice or legal doctrine in the context of the NPT, but this question deserves further investigation. As far as the ABM Treaty is concerned, see the article of Tuzmukhamedov 1994, and more generally, Rosenne 1971; Tabory 1980; Shelton 1997; Labuschagne 1999; Brannan 2004.

3.3 The Text of Article VI NPT 'in Accordance With Its Ordinary Meaning'

3.3.1 Introductory Remarks

According to Article 31(1) VCLT, a treaty shall be determined in accordance with the ordinary meaning. The ordinary, current, normal, regular or usual meaning is the starting point of the process of interpretation.[9] A term may have a number of ordinary meanings, which may change over time.[10] Paragraph 4 of Article 31 provides that a special meaning shall be given to a term if it is established that the parties so intended.

To assess the meaning of Article VI NPT, it is therefore essential to begin with the text itself, which reads:

> 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.

3.3.2 The Addressees of the Obligations: 'Each of the Parties to the Treaty'

According to these words, Article VI addresses all States Parties, both nuclear weapon States (hereafter NWS) and non-nuclear weapon States (hereafter NNWS). Thus, the NTP having almost reached universality of participation, around 190 States are nowadays subject to the obligations set forth in this Article.[11]

It seems justified to explain the main obligations imposed on the States Parties to the NPT and its special nature; indeed, the particularity of this instrument is that it distinguishes sharply between two categories of States Parties and their respective obligations: on the one hand, the NWS, as defined in Article IX(3), are under an obligation not to transfer nuclear weapons or other nuclear devices or control over such weapons or devices to any recipient State (Article I). The obligation of NNWS, on the other hand, is not to receive the transfer from whoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or devices, nor to manufacture or otherwise acquire nuclear weapons or other devices and not to seek or receive any assistance in the manufacture of nuclear weapons

[9] Villiger 2009, p. 426.

[10] Ibid.

[11] See, for the list of State Parties, the United Nations Office for Disarmament Affairs: http://www.un.org/disarmament/.

and other devices (Article II). Article III contains a safeguard provision concerning compliance verification procedures. These three Articles form the so-called first pillar of the NPT (the non-proliferation obligations). The second pillar preserves all States Parties' rights to use nuclear energy for peaceful purposes (Article IV). The third pillar finally consists of Article 6 (the nuclear disarmament obligations), the subject discussed here.[12]

In the light of the different obligations imposed by the NPT, it seems obvious that the NNWS, which represent the vast majority of the States Parties, have a particular interest in the achievement of the aims listed in Article VI.

3.3.3 The Legal Nature and Scope of the Obligations Imposed by Article VI

Article VI obliges the State Parties to pursue negotiations in good faith in view of three specific goals: (1) the ending of the nuclear arms race at an early date (2) achieving nuclear disarmament and (3) the conclusion of a treaty on general and complete disarmament.

On the one hand, included as it is in a legally binding international convention, there is no doubt about the compulsory nature of the expression 'undertakes to pursue'. Moreover, the *Declaration on Principles of International Law concerning Friendly Relations and Cooperation among States in Accordance with the Charter of the United Nations* stipulates that '[a]ll States shall pursue in good faith negotiations for the early conclusion of a universal treaty on general and complete disarmament'.[13] At least some of these principles are considered to reflect customary law.[14] The question whether the obligations stemming from Article 6 fall under this category would deserve further examination. On the other hand, the exact scope of the obligation is highly disputed among scholars and practitioners. Since the entry into force of the NPT, there is uncertainty concerning the question of what conduct the implementation of the provision requires.[15] The question is whether Article VI imposes on the States Parties not only to *conduct* negotiations

[12] See, for more details of the three pillars, Grotto 2009.

[13] UNGA Resolution 2625 (XXV) of 24 October 1970, Declaration of Principles (1 para 11).

[14] In the case concerning *The Military and Paramilitary Activities in and against Nicaragua (Nicaragua vs. United States of America)*, Judgment of 27 June 1986, ICJ Reports 1986, paras 188, 191, 193, 202 and 264, the ICJ held that the prohibition of the use of force and the principle of non-intervention can be considered to be codifications of rules of customary law. See, for further reading on this issue, Keller 2009, paras 36–39. The question whether 'the obligation to pursue in good faith negotiations for the early conclusion of a universal treaty on general and complete disarmament' is of a customary nature can be left open here.

[15] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 19.

in good faith (*pactum de negotiando*) but also to *conclude* them with success (*pactum de contrahendo*). It has to be recalled that in its Advisory Opinion of 8 July 1996, on the *Legality of the Threat or Use of Nuclear Weapons*, the International Court of Justice (hereafter ICJ) concluded that '[t]here exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control'.[16] It suggested that Article VI imposed a twofold obligation, i.e. 'an obligation to achieve a precise result—nuclear disarmament in all its aspects—by adopting a particular course of conduct, namely, the pursuit of negotiations on the matter in good faith'.[17]

These words, pronounced *unanimously*[18] by the principal independent and impartial international judicial organ deciding disputes between States, could hardly have been clearer.[19] It is submitted that the—theoretical—question whether Article VI imposes on States a obligation to conclude such an instrument could even be left open. The distinction is, in any event, not absolute but rather a question of degree of precision in the formulation of the obligations.[20] It can be claimed that the more precise the obligations imposed and the purpose pursued by a certain clause are formulated, the more convincingly the existence of a *pactum de contrahendo* can be alleged.[21] The purpose of Article VI is clear and was confirmed by the ICJ in its 1996 Advisory Opinion, namely the elimination of all nuclear weapons under strict and effective international control. However, it could be said that the material content of such a treaty is widely left open[22] and that neither Article VI nor the Advisory Opinion explain how the result of eliminating nuclear weapons should be met.

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[16] ICJ Reports 1996, § 105(2)(F). The ICJ was asked to give a second Advisory Opinion (*Legality of the Use by a State of Nuclear Weapons in Armed Conflict*), but the Court came to the conclusion that the request that had been submitted by the World Health Organisation (WHO) did not relate to a question which arose within the scope of the activities of that organisation in accordance with Article 96, para 2, of the Charter of the United Nations. Therefore, the Court considered itself unable to give the opinion requested.

[17] Ibid., para 99. See also the Declaration of the former President of the ICJ, Mohammed Bedjaoui, ICJ Report 1996, pp. 268–274, § 23: '…I think …that there is in fact a twofold *general obligation*, opposable *erga omnes*, to negotiate in good faith and to achieve the desired result. Indeed, it is not unreasonable to think that, considering the at least formal unanimity in this field, this twofold obligation to negotiate in good faith and achieve the desired result has now, 50 years on, acquired *a customary character*'.

[18] Emphasis added.

[19] Ford 2007, p. 402, suggests that the Court, that was not explicitly asked to give any advice on Article VI, has acted *ultra vires*.

[20] See in this sense Miaja de la Muela 1968, pp. 392–415, Kron 1971, Cottereau 1998, p. 173, Saaf 1979, p. 449; Marion 1974, pp. 351–398.

[21] Beyerlin 1997, p. 855 and 858.

[22] In this sense Cottereau 1998, 176 ff. See also Owada 2008, para 14: '…whether an instrument constitutes a *pactum de contrahendo* or *pactum de negotiando* and imposes legal obligations is a delicate issue of legal interpretation…'.

Inspiration for a treaty on general and complete, or at least nuclear disarmament, could be found nowadays in the instruments that aim at the abolition of entire categories of weapons, in particular the 1972 Biological Weapons Convention,[23] the 1993 Chemical Weapons Convention,[24] the 1997 Ottawa Convention on Antipersonnel Mines[25] and the 2008 Oslo Convention on Cluster Munitions.[26, 27] Without neglecting the difference in nature between these weapons and nuclear weapons, it is nevertheless worth mentioning these examples of treaties which enjoy broad participation, sometimes almost universality,[28] and rather successfully eliminate a whole range of weapons. Moreover, it must be added that thanks to the adoption of several treaties, entire regions are now completely free of nuclear weapons: Latin America and the Caribbean,[29] the South Pacific,[30] Southeast Asia,[31] Africa[32] and, more recently, Central Asia.[33]

3.3.4 Effectiveness of the Treaty

Reference can also be made to the *effet utile* of a treaty. This principle has not been incorporated by the drafters of the VCLT, but is to some extent a principle

[23] Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (10 April 1972) 1015 *UNTS* 163; Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (13 January 1993) 1974 *UNTS* 45.

[24] Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (10 April 1972) 1015 *UNTS* 163; Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (13 January 1993) 1974 *UNTS* 45.

[25] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (18 September 1997) 2056 *UNTS* 211.

[26] Convention on Cluster Munitions (30 May 2008), registered under Registration No. I-47713 in the UNTS Database.

[27] See, in this sense, Rietiker 2010, p. 228.

[28] See, for the status of ratification of the different treaties: http://www.un.org/disarmament/.

[29] Treaty for the Prohibition of Nuclear Weapons in Latin America and Caribbean (Treaty of Tlatelolco, adopted on 14 February 1967) 634 *UNTS* 326.

[30] South Pacific Nuclear Free Zone Treaty—Rarotonga Treaty—(6 August 1985) 1676 *UNTS* 223.

[31] Treaty on the South–East Asia Nuclear Weapon Free Zone—Bangkok Treaty—(15 December 1995) 1981 *UNTS* 129.

[32] African Nuclear-Weapon-Free Zone Treaty—Pelindaba Treaty—(11 April 1996) 35 *ILM* 698.

[33] Treaty on a Nuclear-Weapon-Free Zone in Central Asia—Semipalatinsk Treaty—(8 September 2006), http://www.opanal.org/NWFZ/CentralAsia/canwfz_en.htm. Moreover, Mongolia had declared itself nuclear-weapon-free State, a status which was internationally recognised through UNGA Resolution 55/33S of 20 November 2000.

underlying para 1 of Article 31, VCLT.[34] It simply implies that the drafters of a treaty have adopted a norm in order to be applied and, thus, the judge has to choose, between different possibilities, that interpretation which, together with good faith, is most likely to guarantee the effectiveness of the treaty (*ut res magis valeat quam pereat*).[35] It can be argued that the effectiveness principle is applicable to Article VI NPT, whose plain text is not free from ambiguities.

First of all, Article VI focuses on 'effective measures', which can be understood as requiring a certain result.[36] Secondly, the words at an early date' impose a time constraint on negotiations, implying that the result must actually be achieved.[37] Thirdly, the clear and precise terms 'under strict and effective international control' seem, from this author's point of view, also to indicate that the drafters had the actual conclusion of a further instrument in mind. Finally, the need for a treaty on general and complete disarmament under strict and 'effective' international control is also repeated in the preamble to the treaty.[38]

These are clear indications of the preference that must be given, in the described situation of doubt, to a broad interpretation of the obligations under Article VI.[39]

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[34] According to Daillier et al. 2009, paras 169, 289, the notion of object and purpose of a treaty refers implicitly to the rule of *'effet utile'*. See also Cançado Trindade 2003, 749 ff. The ICJ mentioned this rule for instance in the *Corfu Channel* case: 'It would indeed be incompatible with the generally accepted rules of interpretation to admit that a provision of this sort occurring in a special agreement should be devoid of purport or effect. In this connexion, the Court refers to the views expressed by the Permanent Court of International Justice with regard to similar questions of interpretation'. In Advisory Opinion No. 13 of 23 July 1926, that Court said (Series B., No. 13, p. 19): 'But, so far as concerns the specific question of competence now pending, it may suffice to observe that the Court, in determining the nature and scope of a measure, must look to its practical effect rather than to the predominant motive that may be conjectured to have inspired it'. In its Order of 19 August 1929, in the *Free Zones case*, the Court said (Series A., No. 22, p. 13): 'in case of doubt, the clauses of a special agreement by which a dispute is referred to the Court must, if it does not involve doing violence to their terms, be construed in a manner enabling the clauses themselves to have appropriate effects' (ICJ Reports 1949, p. 24).

[35] For this reason, the expression '*effet pratique*' has sometimes been preferred (Daillier et al. 2009, p. 288). The International Law Commission held in this respect that '[w]hen a treaty is open to two interpretations one of which does and the other does not enable the treaty to have appropriate effects, good faith and the objects and purposes of the treaty demand that the former interpretation should be adopted' (YBILC 1966 II 219, para 6).

[36] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 16.

[37] Ibid.

[38] Preambular para 11.

[39] Technically speaking, and irrespective of the nature of the obligations, Article VI imposes on the States a 'positive' obligation and, from the standpoint of the international responsibility of States, a continuing obligation in the sense of the Articles on the Responsibility of States for Internationally Wrongful Acts, adopted by the International Law Commission at its fifty-third session, in 2001, and submitted to the UNGA (A/56/49(Vol. I)/Corr.4). Its Article 14 § 2 reads as follows: 'The breach of an international obligation by an act of a State having a continuing character extends over the entire period during which the act continues and remains not in conformity with the international obligation'. See, for this kind of situation, the case *United States Diplomatic and Consular Staff in Tehran*, ICJ Reports 1980, p. 37, paras 78 and 80, or *Rainbow Warrior (New Zealand/France)*, UNRIAA, Vol. XX, p. 217 (1990), at p. 264, para 101.

3.3.5 A Treaty Must Be Read as a Whole: Contextual Interpretation

Paragraph 1 of Article 31 envisages the ordinary meaning to be given to the terms of the treaty 'in their context'. Treaty clauses are not drafted in isolation and their meaning has to be determined in the light of the entire treaty text.[40]

It has been observed above that one of the special features of the NPT consists in the distinction between NWS and NNWS and their respective obligations.[41] It is obvious that this regime, to be efficient, has to be executed simultaneously. There are many voices that recognise in the NTP a discriminatory instrument that expressly stipulates a legal inequality between the parties,[42] or even an unequal treaty,[43] one that would therefore run counter to the principle of equality of States within the meaning of Article 2 § 1 of the UN Charter,[44] confirmed more specifically for the disarmament negotiations in the Final Document of the first special session of the UN General Assembly devoted to disarmament (30 June 1978).[45]

Such a drastic opinion is not necessarily justified, provided that all three pillars of the NPT are fulfilled in parallel (*do et des*). In other words, as long as the disarmament pillar is taken seriously and that concrete steps are undertaken, in particular by the NWS, in order to achieve general and complete disarmament on the basis of Article VI and thus eliminate their military and strategic advantage, there must not necessarily be an imbalance or discrimination between the two categories of State Parties. In other words, an interpretation of the treaty read as a whole confirms far-reaching obligations imposed on the States Parties under Article VI, especially on NWS.[46]

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[40] Villiger 2009, p. 427.

[41] See above, Sect. 3.2.

[42] See, for instance, Lavieille 1997, 151 ff; Boniface 1989, pp. 13–56; Mashhadi 1995, 152 ff; Young 1967, p. 37 ff; Chappuis 1975, p. 183.

[43] *Cf.*, for the topic of unequal treaties in general Caflisch 1992, pp. 52–80; Craven 2005, pp. 335–382.

[44] UN Charter Article 2 § 1: 'The Organization is based on the principle of the sovereign equality of all its Members'. This principle was later confirmed in the *1970 Friendly Relations Declaration*, referred to above.

[45] Doc. A/Res/S-10/2. It was pointed out that the TNP is by far not the only arms control treaty that contains discriminatory features. This is in particular true concerning the older treaties, which were concluded between a small group of States in the cold war environment; see for more details Rietiker 2010, pp. 159–161, in particular for the questions of the mechanism of triple depositary (344–346), the conditions for entry into force of the treaties (346–350) and their amendments (442–451).

[46] See, for instance, the observations of Mexico and Nauru before the ICJ in the 1996 Advisory Opinion proceedings; these governments referred to the obligation under Article VI as constituting a possible way 'to attain a balance between the rights and the obligations of the Parties' (Note Verbale from the Embassy of Mexico (19 June 1995), and Letter from Counsel Appointed by Nauru (15 June 1995)).

3.4 The Obligation (Principle) of Good Faith

3.4.1 Good Faith in the Interpretation and Application of Treaties

Good faith (*bona fide*) dominates the international law as a whole and all relations between States.[47] It is a fundamental principle of international law, one of its most essential parameters.[48] It is one of the principles guiding the conduct and activities of the United Nations and its members, as expressed in Article 2(2) of the Charter.[49] There is no universally accepted definition of 'good faith', but it can be understood, in the field of treaty law, as requiring the parties to an instrument to act honestly, fairly and reasonably, and to refrain from taking unfair advantage.[50] Good faith is particularly vital to the negotiation, interpretation and implementation of treaties.[51]

As mentioned above, Article 31(1) VCLT stipulates that a treaty 'shall be interpreted in good faith'. On the one hand, the VCLT envisages good faith as being at the centre of the application of the General Rule of interpretation set out in para 1 of Article 31 and the notion prevails throughout the process of interpretation.[52] According to Villiger, good faith raises also the presumption that the treaty terms were intended to mean something rather than nothing.[53] This statement is closely linked to the requirement that a treaty has to be interpreted according to its *effet*

[47] Basdevant 1936, p. 521; Verdross 1929, p. 427. See, for a comprehensive study, Kolb 2000; see also Kotzur 2009.

[48] In this sense, Abi-Saab 1987, pp. 328–331.

[49] The principle was confirmed in the above-mentioned *Friendly Relations Declaration*; in its preamble (para 5), it stipulates that the 'fulfilment in good faith of the obligations assumed by the States, in accordance with the Charter, is of greatest importance for the maintenance of international peace and security, and for the implementation of the other purposes of the United Nations'. The last operative paragraph of part 1 of the declaration is also devoted to this principle.

[50] Villiger 2009, p. 425, referring to the case concerning the *Interpretation of the Algerian Declaration of 19 January 1981* by the Iran-US Claims Tribunal, ILR 62 (1982) 605 f. ('spirit of honesty and respect for law'). See also O'Connor 1991, p. 124: 'The principle of good faith in international law is a fundamental principle from which the rule *pacta sunt servanda* and other legal rules distinctively and directly related to honesty, fairness and reasonableness are derived, and the application of these rules is determined at any particular time by the compelling standards of honesty, fairness and reasonableness prevailing in the international community at that time'. For an often quoted definition in French, see Basdevant in the Dictionnaire de la terminologie du droit international (Paris, Sirey 1960, p. 91): '*Esprit de loyauté, de respect du droit, de fidélité aux engagements de la part de celui dont l'action est en cause, absence de dissimulation, de tromperie, de dol dans les relations avec autrui*'.

[51] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 29.

[52] Villiger 2009, p. 426, referring to Yasseen 1976, 22 ff.

[53] Villiger 2009, pp. 426, with further references.

utile, which was explained above. As far as Article VI NPT is concerned, an interpretation of the obligations under Article VI NPT that is limited to a mere obligation to *pursue* negotiations on disarmament would hardly be compatible with an interpretation in good faith, since it would deprive the last part of Article 6 ('under strict and effective international control') of its meaning and effectiveness.

As far as the implementation of treaties is concerned, the ICJ stated that the 'principle of good faith obliges the Parties to apply [a treaty] in a reasonable way and in such a manner that its purpose can be realized.'[54] The preamble of the VCLT builds a bridge to yet another important principle by noting that 'good faith and the *pacta sunt servanda* rule are universally recognised'.[55] Article 26 VCLT contains the rule of *pacta sunt servanda* according to which '[e]very treaty in force is binding upon the parties to it and must be performed by them in good faith'. This rule is seen as the cornerstone of international relations and is customary in nature.[56] It requires that the parties to the treaty must carry out the obligations in good faith and to the best of their abilities to observe the treaty stipulations in their spirit and according to their letter.[57] It is submitted that the obligation to execute a treaty in good faith is even more important in a field such as nuclear disarmament, where essential strategic aspects as well as the prevention of human suffering, even the survival of mankind, are at stake.[58]

3.4.2 The Obligation to Negotiate in Good Faith Under Article VI NPT

Article VI NPT requires from all States Parties to pursue negotiations 'in good faith' on effective measures relating to nuclear disarmament. The *International Association of Lawyers Against Nuclear Arms*, together with the *International Human Rights Clinic* of the Human Rights Program at Harvard Law School, in its Legal Memorandum of 2009 requesting a new Advisory Opinion from the International Court of Justice, identified four features that should govern international negotiations in general and are thus also of high relevance to the obligations to conduct negotiations under Article VI NPT.[59]

Those features can be summarised as follows: First of all, the negotiations must be 'meaningful'. Parties to a treaty must avoid mere formalism and must engage

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[54] *Gabčíkovo-Nagymaros Project (Hungary vs. Slovakia),* ICJ Reports 1997, para 142.

[55] Para 3 of the preamble.

[56] Villiger 2009, p. 363 and 368.

[57] Villiger 2009, p. 367, referring to Harvard Draft, AJIL 29 (1935) Supplement 981.

[58] See, for instance, the 2nd preambular paragraph of the NPT: '*Considering* the devastation that would be visited upon all mankind by a nuclear war and the consequent need to make every effort to avert the danger of such a war and to take measures to safeguard the security of peoples'.

[59] *Op.cit*. n 51, pp. 29–32.

substantively with the issue at stake.[60] Secondly, good faith negotiations require willingness to compromise.[61] In other words, a party would be in breach of the principle of good faith if it demonstrated 'systematic refusals to consider adverse propositions or interests'[62] or consistently rejected a proposed agreement in order to prevent the conclusion of any reasonable agreement even though its objections had been taken into account.[63] Thirdly, States must comply with temporal and procedural requirements.[64] Fourthly, States have to undertake serious efforts to achieve agreement. In the *Gulf of Maine* case, the ICJ held that parties are under a duty to negotiate 'with a genuine intention to achieve a positive result'.[65]

These principles would seem to be fully applicable to Article VI NPT and a more in-depth scrutiny of this provision in the light thereof would be worthwhile. It is obvious that the temporal condition in Article VI NPT, formulated as it is in very strict language and leaving only a narrow margin of appreciation to the States by requiring effective measures in view of the cessation of the nuclear arms race 'at an early date', remained far from reach until today.

One last element could be derived from the above-mentioned discrepancy in the NPT between the obligations of the NWS and those of the NNWS; in fact, in the light of the protection of good faith (*Vertrauensschutz*), which commands that the legitimate expectations created for other parties must be honoured,[66] the question has to be raised whether the handful of NWS has not deceived the rest of the world, at least those States which complain about it, by promising general and complete disarmament, a promise that has ultimately not been followed by concrete measures or proposals.

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[60] In the *North Sea Continental Shelf case*, the ICJ underlined that the parties should 'not merely…go through a formal process of negotiation' but rather that they 'are under an obligation so to conduct themselves that the negotiations are meaningful' (ICJ Reports 1969, para 85).

[61] The 1972 Arbitral Tribunal of the Agreement on German External Debts held that 'parties must make every effort…to reach a mutually satisfactory compromise, even going so far as to abandon previously inflexibly held positions (Genevieve Guyomar, *Arbitration Panel/Tribunal of the Agreement on German External Debt AFDI*, in XIX Recueil des sentences arbitrales [R. Int'l Arb. Awards] 27–64 (1973)).

[62] *Lake Lanoux Arbitration (France vs. Spain)*, 12 Int'l Arb. Awards 281 (1957).

[63] *Tacna-Arica (Chile vs. Peru)*, 2 R. Int'l Arb. Awards 921, 929–940 (1925).

[64] In her separate opinion in the 2004 Advisory Opinion on the *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Judge Higgins noted that, in addition to existing substantive obligations, States should honour the 'procedural obligation to move forward simultaneously' (ICJ Reports 2004, para 18). As the *Lake Lanoux* Arbitral Tribunal explained, good faith would be violated 'in case of unjustified breaking off of talks, of abnormal delay, [or] of failure to follow agreed procedures' (*Lake Lanoux Arbitration, op.cit, supra* n. 62, at 281).

[65] *Gulf of Maine (Canada vs. US),* ICJ Reports 1984, para 87. Similarly, the 1972 Arbitral Tribunal of the Agreement on German external Debts stated that good faith does not imply 'the obligation to reach an agreement, but it does imply serious efforts aimed toward that end' (Guyomar, *op.cit., supra* n 61, p. 535).

[66] Villiger 2009, 425 ff., with reference.

3.5 Interpretation in the Light of the 'Object and Purpose' of the Treaty

3.5.1 Introductory Remarks

Furthermore, a treaty clause has to be interpreted in the light of the object and purpose of the treaty (teleological or functional approach). The idea of a general clause reflecting what could be called the essence of a treaty goes far back in time, namely to the *Advisory Opinion on the Reservation to the Genocide Convention* of 1951.[67] The 'object and purpose' is probably one of the most controversial formula in international law, which for some may be an 'enigma'.[68] Its usefulness tends to be recognised in the process of interpretation, in particular its flexibility and openness, and the teleological aspect is considered to be of importance for the interpretation of Article 6 NPT.

There is no abstract definition of the term 'object and purpose', which thus has to be identified from treaty to treaty.[69] Only rarely, the drafters of an international instrument have made as much effort in order to define the object and purpose as in the Arms Trade Treaty, which was adopted on 2 April 2013,[70] and whose Article 1 (Object and Purpose) reads as follows:

The object of this Treaty is to:

- Establish the highest possible common international standards for regulating or improving the regulation of the international trade in conventional weapons;
- Prevent and eradicate the illicit trade in conventional arms and prevent their diversion;

for the purpose of:

- Contributing to international and regional peace, security and stability;
- Reducing human suffering;
- Promoting cooperation, transparency and responsible action by States Parties in the international trade in conventional arms, thereby building confidence among States Parties.

In order to identify the object and purpose of a specific treaty, international tribunals and authors are generally of the view that the title, preamble and certain elements of the text, especially general clauses or programmatic articles, as well as its *travaux*

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[67] See similar concepts proposed by de Vattel and Wolff in Klabbers 1996, 139 ff.; according to Boisson de Chazournes et al. 2006, p. 610, the object and purpose of a treaty constitutes a 'matrice substantielle, un substratum du droit des traités'.

[68] See, *inter alia*, the title of the contribution of Buffard and Zemanek 1998, pp. 311–343.

[69] Klabbers 1997, p. 141.

[70] In accordance with Article 22, para 1, the treaty shall enter into force 90 days following the date of the deposit of the 50th instrument of ratification, acceptance or approval with the Depositary.

préparatoires, are particularly relevant to this end.[71] An assumption that also seems to be undisputed is that a treaty may have several objects and purposes.[72]

3.5.2 The Object and Purpose of the NPT

As far as the objects and purposes of the NPT are concerned, the title of the treaty as well as the order of its provisions—only in Article VI of the body of the treaty is reference made to disarmament—could imply, on the one hand, that the goal of non-proliferation of nuclear weapons is predominant, perhaps in conjunction with the right of all Parties to the treaty to develop research, production and the use of nuclear energy for peaceful purposes enshrined in Article IV, and the disarmament aspect is only of secondary importance. On the other hand, as mentioned above,[73] the three pillars of the NPT have to be considered together. Moreover, its long and detailed preamble reiterates more than once and in clear words the aims of cessation of the nuclear arms race and general and complete disarmament under strict and effective international control.[74]

In this regard, it might also be relevant to recall that almost all multilateral arms control treaties, regarding Weapons of Mass Destruction (hereafter WMD) as well as conventional weapons, refer, in their preambles, to the concept of the general and complete disarmament.[75] Already in the 1963 Moscow Treaty on a partial nuclear test ban—thus even before the NPT—this formula was inserted and it was

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[71] See, for instance, *The Military and Paramilitary Activities in and against Nicaragua (Nicaragua vs. United States of America)*, Judgment of 27 June 1986, ICJ Reports 1986, paras 273 and 275, *Certain Norwegian Loans,* ICJ Reports 1957, p. 24 or the advisory opinion concerning the *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide,* ICJ Reports 1951, p. 23; see also the European Court of Human Rights, *Golder vs. United Kingdom*, Series A No. 18, para 34; and as far as the authors are concerned Buffard and Zemanek 1998, p. 332; Klabbers 1997, pp. 155–159; Kolb 2000, p. 209; Villiger 2009, p. 428.

[72] Villiger 2009, p. 427, with reference.

[73] See above, Sect. 3.5.

[74] See in particular preambular paras 8 and 11, that read as follows: '*Declaring* their intention to achieve at the earliest possible date the cessation of nuclear arms race and to undertake effective measures in the direction of nuclear disarmament' (para 8) and '*Desiring* to further the easing of international tension and the strengthening of trust between States in order to facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all their existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant to a Treaty on general and complete disarmament under strict and effective international control' (para 11).

[75] See, in particular, the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and Ocean Floor and in the Subsoil Thereof—Sea-Bed Treaty—(11 February 1971) 955 *UNTS* 115, the 1972 Biological Weapons Convention, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques—ENMOD—(18 May 1977) 1108 *UNTS* 151, the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects (10 October 1980) 1342 *UNTS* 137, the 1993 Chemical Weapons Convention, and the 1996 Comprehensive Nuclear-Test-Ban Treaty—CTBT—(24 September 1996) UN Doc A/50/1027, Annex.

not forgotten either in the 2006 Treaty of Semipalatinsk establishing a nuclear-free zone in Central Asia.[76] Having said that, it can be claimed that the States have never departed, for decades, from the idea of general and complete disarmament as the ultimate goal, probably the most important, the ultimate 'purpose' of all arms control measures.[77]

Moreover, other 'purposes' can be deduced from the Preamble of the NPT: firstly, that the nuclear arms race and stockpiling of these horrible weapons are hardly compatible with the purposes and principles of the United Nations as enshrined in Articles 1 and 2 of the Charter; secondly, that the planet's resources must be used for peaceful and useful purposes, such as development of peoples, instead of the nuclear race and mutual destruction, and thirdly, that nuclear weapons constitute a serious threat to the survival of mankind and the security of peoples.

Of course, there is the temptation to reduce these purposes to nice, but empty words and wishful but unrealistic thinking; on the other hand, they can be regarded as valuable indications for the philosophy and humanitarian spirit of the treaty, guiding the interpreter in shaping the exact meaning and scope of Article 6. These ideas will be considered below, under the discussion of the interpretation contemplated in Article 31(3c) VCLT.[78]

Finally, others claim that one of the objects and purposes of each treaty will be to maintain the balance of rights and obligations created by its provisions.[79] It has been pointed out above that one of the distinctive features of the NPT lies in the clear distinction between two categories of States Parties with different obligations and that is probably why it must be considered that the simultaneous fulfilment was a *sine qua non* of the drafters of the treaty.[80]

To sum up, it can be claimed that the efforts in view of the achievement of general and complete disarmament stemming from Article VI is not only one of the key obligations under the NPT, thus one of its 'objects', but that its realisation is also one of the main 'purposes' of the treaty.

3.5.3 The NPT as a 'Law-Making' Treaty

It is relevant, lastly, to mention in this context that the teleological approach plays a particularly prominent role in the interpretation of multilateral, so-called 'law-making' conventions, especially in the field of treaties for the protection of human rights, which are largely deprived of reciprocity of rights and obligations between

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[76] The other four treaties on regional nuclear disarmament also name, explicitly or in essence, the general and complete disarmament as one of their goals.

[77] Rietiker 2010, 610 ff.

[78] See below, Sect. 3.7.2.2.

[79] Villiger 2009, p. 427, with reference.

[80] Above, Sect. 3.5. See also below under 'supplementary means' of interpretation (Sect. 3.8).

the States Parties. The European Court of Human Rights has been very explicit in this regard:

Given that [the European Convention on Human Rights] is a law-making treaty, it is also necessary to seek the interpretation that is most appropriate in order to realise the aim and achieve the object of the treaty, not that which would restrict to the greatest possible degree the obligations undertaken by the Parties.[81]

It is submitted that a similar approach can be advanced for the NPT. It is true that arms control treaties are traditionally considered to be of 'interdependent' (or 'integral') nature, in opposition to a 'law-making' (or 'legislative') instrument (*traité-loi*) or a simple 'contract treaty' ('*traité-contrat*').[82] But it could be said that, for a treaty such as the NPT, especially as it stands today, almost universal, indefinite in duration and imposing a set of objective obligations on the States Parties, the classification as 'interdependent' treaty is no longer contemporary.[83]

3.6 Subsequent Practice (Article 31 Subparagraph 3b VCLT)

3.6.1 Introductory Remarks

Subpara 3b of Article 31 VCLT states that '[t]here shall be taken into account together with the context any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation.'[84] In order to be taken into consideration, such practice should be consistent rather than haphazard and it should have occurred with a certain frequency.[85] Moreover, the practice must establish the agreement of all the parties regarding its interpretation. Thus, it will have been acquiesced in by the parties not having participated actively in the subsequent practice, and no other party will have raised an objection.[86]

According to Villiger, the interpretation in subpara 3b is of a dynamic nature in that it may alter the original ordinary meaning of a treaty.[87] The question can

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[81] *Wemhoff vs. Germany*, 27 June 1968, ECHR, Series A, no. 7 p. 23, para 8.

[82] See, for instance, G. G. Fitzmaurice, Second Report, YBILC 1957 II 54, paras 124–126; Fitzmaurice, ibid., p. 54, para 126, and more recently, Koskenniemi, *op.cit*. *supra* n. 7, para 262.

[83] The legal nature of arms control treaties will be dealt with in a separate chapter of a subsequent volume of this book series.

[84] This means of interpretation is well established in the practice of the Court (see, for instance, the case of *Kasikili/Sedudu Island (Botswana/Namibia),* ICJ Reports 1999, para 48). See, for further reading, Distefano 1994, 41 ff.

[85] Villiger 2009, p. 431.

[86] Waldock Report VI, YBILC 1966 II 99, para 18, ILC Report 1966, p. 222, para 15. See other references at Villiger 2009, note 69, 431 ff.

[87] Villiger 2009, p. 432.

therefore be raised whether Article VI has been modified or has even fallen into desuetude by the general passivity of the States Parties to the NPT.[88]

3.6.2 Article VI NPT

It is generally accepted that the States Parties to the NPT have not done enough in order to achieve the aims under Article VI. In 2006, the Weapons of Mass Destruction (WMD) Commission led by Hans Blix stated that 'it [was] easy to see that the nuclear-weapon parties to the NPT …[had] failed to pursue negotiations in good faith as required of them under the NPT'.[89] But Ford, a US Special Representative for Nuclear Non-proliferation, repeats that Article VI NPT addresses all States Parties to this instrument ('Each of the Parties to the Treaty') and argues that if the NWS were in violation of the treaty, the NNWS must also considered to be non-compliant.[90] Indeed, as pointed out before,[91] it would be in particular in their interest to convince the NWS to get rid of their nuclear weapons and thus to reduce their military and strategic advantage.

It is not exaggerated to claim that, 45 years after the conclusion of the treaty, Article VI has largely remained a dead letter, because neither has it stopped the arms race nor has it led to the conclusion of a treaty on nuclear or general and complete disarmament. The NWS maintain their nuclear weapons capacity and there has even been a nuclear build-up in major military powers such as India, Pakistan and Israel.[92] Moreover, the Democratic People's Republic of Korea withdrew from the NPT and is openly pursuing nuclear armament.[93] The government of Iran, a State party to the NPT, has been declared by the IAEA to be in non-compliance with the applicable safeguards and has disregarded relevant Security Council resolutions.[94] Nuclear weapons also play a role in the actual strategic planning and future policy. NATO insists that it will remain a nuclear alliance as long as nuclear weapons

[88] The rules on modifications and amendments of treaties contained in the VCLT are flexible and of a subsidiary nature. Article 39 of the VCLT reads as follows: 'General rules regarding the amendment of treaties: A treaty may be amended by agreement between the parties…'; See also Article 40: 'Amendment of multilateral treaties: 1. Unless the treaty otherwise provides, the amendment of multilateral treaties shall be governed by the following paragraphs…'.

[89] Weapons of Mass Destruction Commission, *Weapons of Terror: Freeing the World of Nuclear, Chemical and Biological Arms*, 2006, at 94.

[90] Ford 2007, p. 407.

[91] Above, Sect. 3.2.

[92] See, as far as India and Pakistan are concerned, Security Council Resolution 1172 (1998).

[93] The DPRK had declared its withdrawal from the NPT on 12 March 1993, but suspended that declaration on 11 June. On 10 January 2003, it declared that its withdrawal would take immediate effect.

[94] See SC Resolution 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008) 1929 (2010) and 1984 (2011).

exist.[95] The Russian Federation, in its armament planning until 2020, considers nuclear arms as an important guarantee of its sovereignty and territorial integrity.[96] And China is said to be in a process of modernising its stocks.[97]

Thus, it can clearly be observed that a world without nuclear weapons has so far remained an unfulfilled dream. It is nevertheless worth mentioning that a certain success has been achieved in the field of arms control since the adoption of the NPT in 1968.[98] Reference can be made to the above-mentioned treaties on regional denuclearisation as well as to the treaties through which entire categories of weapons must be abolished.[99] These treaties can be considered as 'partial' disarmament measures and are important steps towards general and complete disarmament.

Moreover, it is important to stress that, in spite of this rather clouded record of disarmament performance, the ultimate objective of 'general and complete disarmament' has, over the long years and decades, never been totally lost to view. On the contrary, especially in recent years, this goal seems to have become more fashionable again.[100] Firstly, as pointed out before,[101] almost all the preambles of the most important arms control treaties contain a reference to this goal. Secondly, elder statesmen or public figures with authority,[102] for instance the UN Secretary-General Ban Ki-moon, have made statements underlining the gravity of the present situation and calling for revitalisation of the disarmament agenda.[103] Thirdly, even the Presidents of Russia and the USA, the great rivals during the Cold War, reaffirmed the goal of a nuclear-free world and endorsed further bilateral reductions and other steps in that direction,[104] that have

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[95] *Deterrence and Defence Posture Review*, adopted by Heads of State and Government participants in the meeting of the North Atlantic Council in Chicago on 20 May 2012.

[96] Military Doctrine of the Russian Federation, approved by Decree of the President of the Russian Federation, 5 February 2010.

[97] See Chinese State Council, *China's National Defence in 2010* (Information Office of the Chinese State Council, Beijing, March 2011). See also Lewis and Xue Litai 2012, pp. 45–65.

[98] Shaker 2006, p. 146, referred to 'some achievements in the field of disarmament and arms control', but acknowledged also that there were 'failures and disappointments'.

[99] See above, Sect. 3.3.

[100] In a very recent declaration, the UN Disarmament Commission adopted concrete and detailed principles, objectives and recommendations in view to achieve nuclear non-proliferation and disarmament: Doc. A/CN.10/2013/WG.I/WP.2, 11 April 2013, Disarmament Commission, New York, 1–19 April 2013, 'Recommendations for achieving the objective of nuclear disarmament and non-proliferation of nuclear weapons' (Working paper submitted by the Chair): http://www.un.org/ga/search/view_doc.asp?symbol=A/CN.10/2013/WG.I/WP.2

[101] See above, Sect. 3.5.2.

[102] See for instance the statement by Henry A. Kissinger/George P. Schultz/William J. Perry and Sam Nunn, 'Toward a Nuclear-Free World', *The Wall Street Journal*, 15 January 2008.

[103] Ban Ki-moon, UN Secretary-General, Address to the East–West Institute: The United Nations and Security in a Nuclear-Weapon-Free-World (24 October 2000). See, for other examples, International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009.

[104] Joint Statement by former Russian Federation President Dmitriy Medvedev and US President Barack Obama, Office of the Press Secretary, The White House, 1 April 2009. See also the speech of President Obama in Prague on 5 April 2009.

ultimately been concretised in the 'New Start Treaty' of 8 April 2010.[105] Fourthly, considerable efforts have been made in this field by civil society. For instance, reference can be made to the International Campaign to Abolish Nuclear Weapons (ICAN), whose Joint Statement on Humanitarian Impact of Nuclear Weapons has been signed until to date by 80 States.[106]

Finally, during the 1995 and 2000 Review Conferences of the NPT the goal of general and complete disarmament was reiterated and even strengthened. Indeed, the 1995 Review Conference not only prolonged the NPT for indefinite duration, but also adopted, by consensus, a decision on Principles and Objectives for Nuclear Non-Proliferation and Disarmament, that set forth a 'program of action' in view of the implementation of Article VI.[107] Five years later, on the basis of the 1995 Principles and Objectives, the 2000 Review Conference elaborated, again by consensus, 'Thirteen Practical Steps towards Nuclear Disarmament under Article VI'.[108] One of the steps affirmed the unequivocal undertaking of the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals' (step 6) and another reaffirmed the ultimate goal of 'general and complete disarmament' (step 11).[109] It can be added that, even if these concrete proposals have not so far been followed by practical implementation measures, many of the NNWS nevertheless reiterated the call for further action to implement Article VI NPT at the 2005[110] and 2010 Review

[105] Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, including Protocol and Technical Annexes to the Protocol.

[106] See the Website of this organisation: http://www.icanw.org/. Also partly thanks to this initiative, a series of conferences on this topic have been launched (Oslo 2013, Nayarit 2014, Vienna 2015).

[107] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, 20 ff.

[108] 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), New York, USA, 24 April–19 May 2000, *Final Document*, Part II, at 14, para 15, UN Doc. NPT/CONF.2000/28. For a critical voice concerning the 13 Steps, see Ford 2007, p. 412 ff.

[109] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 21. These authors claim that the 1995 Principles and Objectives and the 2000 Thirteen Steps can be considered 'subsequent agreements between the parties regarding the interpretation of the treaty or the application of its provision', in the sense of Article 31 subpara 3a) of the VCLT. For an opposite view, see Ford 2007, p. 412.

[110] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 22. See, for instance as far as Nigeria is concerned, 2005 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), New York, USA, 2–27 May 2005, *Issue to be considered by Main Committee I: Working Paper Submitted by Nigeria*, at 1, para 4, UN Doc. NPT/CONF.2005/MC.I/WP.2.

Conferences.[111] One of the recommendations made at the end of the 2010 Conference is unambiguous: 'States parties agree to commence multilateral negotiations leading to the conclusion of a nuclear weapons Convention…'.[112]

Apart from these principles, objectives and steps, other concrete proposals have been made for the purposes of the implementation of Article VI of the NPT. Already in 1997, Costa Rica requested the UN Secretary-General to circulate to all UN member States a 'Model Nuclear Weapons Convention'.[113] In 2008, at the request of Costa Rica and Malaysia, the Secretary-General circulated an updated version of this Model Convention[114] and considered it later as 'a good point of departure' for negotiation of a treaty on the prohibition on nuclear weapons.[115] It was prepared by civil society and is largely inspired by the 1993 Chemical Weapons Convention, which has pursued quite successfully the elimination of an entire category of weapons.[116]

What can be inferred from this diverse subsequent practice? Can it really be defended today that Article VI has been modified drastically or even fallen into *desuetude*, since none of the three aims has been fulfilled 45 years later? Villiger points out rightly that subsequent practice might indeed modify a treaty provision contractually, even tacitly.[117] Article 39 para 1 of the VCLT (General rule regarding the amendment of treaties), which stipulates that '[a] treaty may be amended by agreement between the parties', is indeed formulated very broadly and gives the States Parties a wide margin of manoeuvre. But the condition for such an

[111] Also at the 2010 Review Conference, Costa Rica submitted a working paper on the Model Nuclear Weapons Convention (NPT/Conf.2010/PC.I/WP.17). For the consideration by the Conference of the Model Convention, see 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document, Volume II (NPT/Conf.2010/50, Vol. II), pp. 702–705; see moreover the intervention by the representative of Lebanon, speaking on behalf of the Group of Arab States, Final Document, Vol. III (NPT/Conf.2010/50, Vol. III), para 30 ff.

[112] Final Document, Volume II (NPT/Conf.2010/50, Vol. II), p. 705. The full recommendations read as follows: '(a) States parties agree to undertake the preparatory process to explore the legal, technical and political elements required for a nuclear weapons Convention or a framework of instruments; and (b) States parties agree to commence multilateral negotiations leading to the conclusion of a nuclear weapons Convention and invite those States that have not acceded to the Treaty on the Non-Proliferation of Nuclear Weapons to join in such negotiations' (p. 705).

[113] Letter of 31 October 1997 from the Chargé d'affaires a.i. of the Permanent Mission of Costa Rica to the United Nations addressed to the Secretary-General (UN Doc. A/C.1/52/7, 17 November 1997).

[114] Letter of 31 October 1997 from the Chargé d'affaires a.i. of the Permanent Mission of Costa Rica to the United Nations addressed to the Secretary-General (UN Doc. A/62/650, 18 January 2008).

[115] Press Release, Secretary-General Ban Ki-Moon, The United Nations and Security in a Nuclear-Weapon-Free World (UN Doc. SG/SM/11881, 24 October 2008).

[116] International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 26.

[117] Villiger 2009, pp. 432 and 513.

amendment is nevertheless the existence of an 'agreement'. As far as Article VI of the VCLT is concerned, nothing indicates that an agreement, explicit or tacit, has been reached for the modification of this provision or even its deletion. A customary modification of Article VI is also excluded,[118] since in no way can it be inferred from the above-mentioned, diverse practice, including concrete proposals how to reach the goals of Article VI, that there could be a general *opinio juris* among the States Parties in the sense of a modification or even deletion of this provision.[119]

From our point of view, it would be fateful to infer too easily, from the general passivity of NWS regarding Article VI NPT the existence of a rule which runs counter to the clear letter and spirit, analysed in the light of Article 31 of the VCLT; such a conclusion would support conduct which might normally amount to a material breach of Article 60 VCLT.[120]

3.7 Interpretation in the Light of 'Other Rules of International Law' (Article 31, Subparagraph 3c, VCLT)

3.7.1 In General

In accordance with Article 31(3c) of the VCLT, 'any relevant rules of international law applicable in the relations between the parties' must be taken into account in the interpretation of a treaty.[121] In other words, a treaty cannot be interpreted in a vacuum, but must be considered as part of a wider legal system. Therefore, even if

[118] According to Villiger 2009, p. 432, parties may in their practice gradually wander from interpretation to a customary modification of the treaty. He further points out (p. 515) that the 1966 ILC Draft provided in its Article 38 as follows: 'Modification of treaties by subsequent practice: A treaty may be modified by subsequent practice in the application of the treaty establishing the agreement of the parties to modify its provisions' (YBILC 1966 II 236 f). He adds that this provision attracted little support and was eventually deleted.

[119] The *North Sea Cases* confirm that a customary rule requires both material practice and *opinio juris*, and that there is a close affinity between the two (Villiger 2009, p. 10). In particular, State practice should 'show a general recognition that a rule of law is involved' (ICJ Reports 1969, para 74; see also para 77). Villiger adds that from this can be inferred that the *opinio* has to be widespread, including the specially affected States, but that it need not be found in every State or in a particular one (Villiger 2009, p. 10).

[120] According to Article 60 para 3 of the VCLT, a 'material breach' of a treaty, for the purpose of this article, consists in: '(a) a repudiation of the treaty not sanctioned by the present Convention; or (b) the violation of a provision essential to the accomplishment of the object and purpose of the treaty'.

[121] See, for instance, the Judgment of *Demir and Baykara vs. Turkey* (GC), No. 34503/97, 12 November 2008, ECHR 2009, in which the Court clearly stated as far as Article 31 subpara 3(c) VCLT was concerned: 'The Court … can and must take into account elements of international law other than the Convention…' (para 85).

a tribunal may only have jurisdiction with regard to a particular instrument, it must always *interpret* and *apply* that instrument according to its relationship with its normative environment. Koskenniemi refers to this means of interpretation by the expression 'systemic integration'.[122]

The rule taken into consideration need have no particular relationship with the treaty that has to be interpreted, other than assisting in the interpretation of its terms.[123] The 'rules of international law' correspond with the notion of the sources of international law stated in Article 38 para 1 of the Statute of the ICJ.[124] Therefore, the rules to be resorted to may be general, regional or local customary rules, as well as bilateral or multilateral treaties or even general principles of law.[125] Moreover, the rules have to be 'applicable in the relations between the parties', i.e. binding on all the parties to the treaty at issue. This condition restricts the range of relevant rules considerably, in particular as far as multilateral treaties are concerned that do not necessarily reflect customary law.[126]

3.7.2 Application of the Rule to Article VI NPT

3.7.2.1 Relevant Other Arms Control Treaties

It is worth mentioning, even if the overall record in the field of nuclear disarmament is disappointing, that the international community has reached agreement on some important arms control issues.

Firstly, there are the instruments providing for the denuclearisation of certain zones. As far as the universal treaties are concerned, it can be recalled that the Antarctic

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[122] Report Koskenniemi, *op.cit. supra* n. 7, p. 206.

[123] Villiger 2009, p. 432. In the *Oil Platforms* case *(Iran/US)*, the ICJ was confronted with Article XX, subpara 1d) of the US/Iran Treaty of amity, economic relations and consular rights of 1955 which '[did] not preclude the application of measures…necessary to fulfil the obligations of a High Contracting Party for the maintenance or restoration of international peace and security'. The Court considered, invoking Article 31 subpara 3c) of the VCLT, that it '[could not] accept that [Article XX] was intended to operate wholly independently of the relevant rules of international law on the use of force, so as to be capable of being successfully invoked, even in the limited context of a claim for a breach of the Treaty, in relation to an unlawful use of force' (ICJ Reports 2003, para 41).

[124] Waldock Report VI,YBILC 1966 II 97, para 10; Waldock in the ILC, YBILC 1964 I 310, para 10, and 316, paras 13 and 17.

[125] ILC Report 1964, YBILC 1964 II 202 f, para 11, Castren in the ILC, YBILC 1966 I/2 188, para 49, Yasseen 1976, 63; see also Koskenniemi, *op.cit, supra* n. 7, paras 462–469. It is more disputed whether non-binding rules, so-called *soft law,* including memorandum of understandings, can be taken into consideration. For Villiger 2009, 433, the term 'applicable' leaves no room for doubt: in his view, non-binding rules cannot be relied upon.

[126] For this reason, Koskenniemi mentions the possibility of taking into consideration, in the field of Article 31 subpara 3c) VCLT, instruments to which at least all the parties to a specific proceeding are bound (*op.cit. supra* n. 7, para 472).

(1959),[127] Outer Space (1967),[128] the Seabed (1971),[129] as well as the Moon and other celestial bodies (1979)[130] are nowadays legally binding denuclearised zones. It is important to highlight that the prohibitions deriving from these treaties are considered to be opposable *erga omnes*,[131] including thus also to non-States Parties.[132] This is generally explained by the special status of these zones, which have to be used exclusively for peaceful purposes and in the interest of the entire international community and future generations ('common heritage/interest of mankind') and which are not subject to national appropriation (*res communis*).[133]

Furthermore, of even more practical relevance is the regional approach with a view to strengthening global nuclear non-proliferation and disarmament. The legal basis of the group of treaties, mentioned above,[134] which have been concluded in the last few decades, lies in the NPT itself, namely Article VII, which states that '[n]othing in this treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their

[127] Antarctic Treaty (adopted on 1 December 1959).

[128] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (27 January 1967).

[129] Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and Ocean Floor and in the Subsoil Thereof (11 February 1971).

[130] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (18 December 1979).

[131] See, for the definition of this concept, the case concerning *The Barcelona Traction, Light and Power Company, Limited (Second Phase)*, ICJ Reports 1970, para 33: '…an essential distinction should be drawn between the obligations of a State towards the international community as a whole, and those arising vis-à-vis another State in the field of diplomatic protection. By their very nature the former are the concern of all States. In view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes'*. The Court gave as examples of such obligations the prohibition of aggression, genocide and principles and rules concerning the basic rights of the human being, including protection against slavery and racial discrimination (para 34).

[132] Sir Humphrey Waldock had included in his third report on the law of treaties a provision (draft Article 63) on treaties setting up objective *régimes*, that was later deleted. He described them as establishing 'in the general interest general obligations and rights relating to a particular region, State territory, locality, river, waterway, or to a particular area of sea, sea-bed, or air space' (YBILC 1964 II 26 f.).

[133] See, for instance, Article 1 of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies; for an other in favour of an *erga omnes* nature of the *régime* created by this treaty Barnes 2000, p. 129. See also the Preamble of the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and Ocean Floor and in the Subsoil Thereof.

[134] See above, Sect. 3.3.3.

respective territories'.[135] The close relationship that these treaties maintain with the NPT follows also from the procedural aspect; indeed, in order to verify respect for the obligations deriving from the regional treaties, the Parties undertake to conclude with the IAEA and bring into force an agreement for the application of safeguards in accordance with the NPT.[136]

As indicated before, not less than five regions, and among them entire continents, are subject nowadays to a legally binding regime of denuclearisation. Moreover, the establishment of such a zone in the Middle East has been seriously discussed for several years already.[137] It goes without saying that a legally binding instrument making this historically unstable and disputed region nuclear-free for ever would constitute an important step in the peace process in the region and give hope for further steps towards a world without nuclear weapons. Interestingly, the NWS can undertake, by the ratification of Protocols to some of these treaties, the legally binding commitments to the status of the zones and not to use or threaten to use nuclear weapons against States Parties to the treaties.[138] These commitments are not only of a high symbolic character, but also of substantial importance because they restrict considerably, from a geographical point of view, the freedom and margin of manoeuvre of these States in the choice of their nuclear policy.[139]

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[135] As far as the concept of 'nuclear-weapon-free zones' is concerned, reference can be made to UNGA Resolution 3472 B (1975) that defines such zones as 'any zone recognised as such by the General Assembly of the United Nations, which any group of States, in the free exercises of their sovereignty, has established by virtue of a treaty or convention thereby: (a) The statute of total absence of nuclear weapons to which the zone shall be subject, including the procedure for the delimitation of the zone, is defined; (b) An international system of verification and control is established to guarantee compliance with the obligations deriving from that statute'.

[136] See, for instance, Article 8 of the Treaty of Semipalatinsk or Article 5 of the Treaty of Bangkok. See, for a general discussion of the regional treaties, Shaker 2006, pp. 160–178.

[137] See, for a recent document on this topic, Resolution UNGA 66/25 of 13 December 2011 (Establishment of a nuclear-weapon-free zone in the region of the Middle East).

[138] See, for instance, the Protocol to the Treaty on a Nuclear-Weapon-Free Zone in Central Asia, by virtue of which France, China, Russia, the UK and the USA can undertake 'not to use or threaten to use nuclear weapon or other nuclear explosive device against any Party to the Treaty' (Article 1) and 'not to contribute to any act that constitutes a violation of the Treaty or of its Protocol by Parties to them' (Article 2). Such commitments have actually been undertaken by four nuclear weapon States through the ratification of the First Protocol to the Pelindaba Treaty.

[139] As the Court rightly pointed out in the *Nuclear Weapons* Opinion (para 59b), not all the Protocols have been ratified by all nuclear States and those who ratified made declarations and reservations. In the case of the Treaty of Rarotonga, for instance, China declared when ratifying the 2nd Protocol to this treaty, on 21 October 1988, that 'the Chinese Government reserves the right to reconsider these obligations if other nuclear weapon States of the contracting parties to the Treaty take action in gross violation of the Treaty and its attached Protocols, thus changing the status of the nuclear free zone and endangering the security interests of China'. Such a reservation would have to be scrutinised against the provisions of the regime on reservations under the 1969 VCLT (Articles 19–23) and, moreover, repeats in substance Article 6 of the Protocol that allows withdrawal under certain circumstances.

Finally, it has already been mentioned above that the international community has also proven capable of concluding several treaties whose aim is to ban definitively entire categories of weapons.[140] Even if the nature and characteristics of these weapons differ from those of nuclear weapons, the conclusion of and large participation in these treaties, of which two concern WMD, demonstrate nevertheless that the States, including the most powerful ones, are capable of making concessions in the field of arms control if only the political will exists.

3.7.2.2 The Wider Context, Analysed in Particular in the Light of the ICJ's 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons

The Relevance of *jus ad bellum* and *jus in bello*

Modern international law cannot be considered any more as a 'series of watertight compartments'. Therefore, other branches of international law must be taken into consideration in the interpretation of Article VI NPT.[141]

A first provision deriving from international humanitarian law that can be stated as an example for the relevance of this body of law to nuclear disarmament is Article 36 of Protocol I to the 1949 Geneva Conventions, which reads as follows:

In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.

This article touches on the first stage of the production line of a weapon. Moreover, in connection with the 1996 Opinion, some States put forward before the ICJ that the mere possession of nuclear weapons for the policy of deterrence was in itself an unlawful threat to use force.[142] Indeed, there is an obvious link between the existence of nuclear weapons—and thus the obligation to disarm under Article VI of the NPT—and the question of the legality of the threat or use of these weapons against another State. As the ICJ in its 1996 Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons* held, possession of nuclear weapons may indeed justify an inference of preparedness to use them.[143] The Court stated in this respect that '[i]f an envisaged

[140] See above, Sect. 3.3.3.

[141] See, for this expression, Greenwood 1999, p. 252.

[142] ICJ, *Nuclear Weapons*, para 48.

[143] Ibid. The Court added here that '[i]n order to be effective, the policy of deterrence, by which those States possessing or under the umbrella of nuclear weapons seek to discourage military aggression by demonstrating that it will serve no purpose, necessitates that the intention to use nuclear weapons be credible. Whether this is a "threat" contrary to Article 2, para 4, depends upon whether the particular use of force envisaged would be directed against the territorial integrity or political independence of a State, or against the Purposes of the United Nations or whether, in the event that it were intended as a means of defence, it would necessarily violated the principles of necessity and proportionality. In any of these circumstances the use of force, and the threat to use it, would be unlawful under the law of the Charter'.

use of weapons would not meet the requirements of humanitarian law, a threat to engage in such use would also be contrary to that law'.[144]

As far as the actual use of nuclear weapons, firstly under *jus ad bellum*, is concerned, the Court reached the unanimous conclusion that any use of force which runs contrary to the prohibition of the threat or use of force in international relations according to Article 2 para 4 of the Charter, itself a norm of *jus cogens*,[145] and fails to meet the requirements of self-defence in the sense of Article 51, is unlawful.[146] Moreover, and most importantly, in the Court's unanimous view, a use of force that is proportionate under the law of self-defence must, in order to be lawful, at the same time also comply with the law applicable in armed conflict, including the principles and rules of humanitarian law,[147] which include, in particular, the distinction between combatants and non-combatants (civilians), the prohibition to cause unnecessary suffering to combatants that limits the States' choice of weapons that they use.[148] The Court also clarified that these fundamental rules are to be observed by all States whether or not they have ratified the conventions that contain them, because they constitute 'intransgressible principles of international customary law'.[149]

In the light of these principles, the ICJ came to the conclusion that the threat or use of nuclear weapons would 'generally' be contrary to the rules of international law applicable in armed conflict, and in particular humanitarian law.[150] But the Court, in spite of the comprehensive body of law protecting the human being in armed conflict as identified above, nevertheless went on to say as follows:

However, in view of the current state of international law, and of the elements of fact at its disposal, the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake.[151]

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144 Ibid, para 78.

145 See the case concerning *The Military and Paramilitary Activities in and against Nicaragua (Nicaragua vs. United States of America)*, ICJ Reports 1986, para 190: 'A further confirmation of the validity as customary international law of the principle of the prohibition of the use of force expressed in Article 2, para 4, of the Charter of the United Nations may be found in the fact that it is frequently referred to in statements by State representatives as being not only a principle of customary international law but also a fundamental or cardinal principle of such law. The International Law Commission, in the course of its work on the codification of the law of treaties, expressed the view that "the law of the Charter concerning the prohibition of the use of force in itself constitutes a conspicuous example of a rule in international law having the character of *jus cogens"* (para 1 of the commentary of the Commission to Article 50 of its draft Articles on the Law of Treaties, ILC Yearbook, 1966-II, p. 247)…'.

146 Dispositif, para C.

147 ICJ, *Nuclear Weapons*, para 42, and dispositif, para D.

148 Id, para 78.

149 Id, para 79. In it Judgment of 9 April 1949 in the *Corfu Channel* case (ICJ Reports 1949, p. 22), the Court referred to 'elementary considerations of humanity'.

150 Dispositif, para E, first para.

151 Dispositf, para E, second para. See also Kohen 1999, pp. 293–314. The proponents of the lawfulness of nuclear weapons had alleged before the Court that the effects of the use of 'clean', low yield nuclear weapons would be controllable and without escalation; the Court was not convinced by this argument, but was not apply to reply to it definitively because of lack of information and facts (para 94 of the Opinion). See, in this respect, Bodansky 1999, pp. 153–170.

It is regrettable that the Court did not take a stronger stand against the threat and use of nuclear weapons. Since the ICJ rendered its controversial Opinion, more than 17 years have passed and, during all this time, many voices have been raised in favour of a general prohibition of these weapons in international law and convincing arguments have been delivered for the absolute illegality of their threat and use in international law. Some consider that it is time for the Court to reconsider the issue.[152] It is not excluded that the Court would nowadays come to a more firm conclusion as regards the unlawfulness of nuclear weapons under international law.[153]

Norms Protecting Human Rights

Some of the proponents of the illegality of the use of nuclear weapons argued, before the ICJ, that such use would necessarily violate the right to life as guaranteed in Article 6 of the 1966 International Covenant on Civil and Political Rights, whose first paragraph stipulates, *inter alia*, that '[n]o one shall be arbitrarily deprived of his life'. In reply, the ICJ acknowledged the continuing applicability to the Covenant in time of warfare of the right to life. The Court observed, however, that the test of what is an arbitrary deprivation of life, by the use of a certain type of weapon, for instance, has to be determined by the applicable *lex specialis*, namely the law applicable in armed conflict.[154] Even though this straightforward *renvoi* to humanitarian law seems too simplistic nowadays and has been criticised by some authors,[155] the Court nevertheless confirmed thereby the relevance of human rights law to the question of nuclear weapons and the continuity of the application of such treaties in times of armed conflict.

The Court restricted its analysis to the rights that are endangered by the actual use of a nuclear weapon.[156] But this author is of the opinion that already the research, development or production of nuclear weapons are harmful to human existence. The negative influence of the arms race to development has already been recognised for some time. Reference can in particular be made to UNGA Resolution 3281(XXIX) of 12 December 1974 ('Charter of Economic Rights and Duties of States') whose Article 15 explicitly refers to general and complete disarmament:

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[152] See, the above-mentioned request by Harvard Law School.

[153] The Court's refusal to declare the threat or use of nuclear weapons absolutely illegally under international law is probably also due to the nature of an advisory opinion; see in this respect Abi-Saab 1999, pp. 36–50.

[154] ICJ, *Nuclear Weapons*, para 25.

[155] See, for instance, Gowlland-Debbas 1999, pp. 319 and 325.

[156] It was also put forward before the Court that the use of nuclear weapons could constitute genocide in the sense of the Convention on the Prevention and Punishment of the Crime of Genocide (9 December 1948) 78 *UNTS 277* (ICJ, *Nuclear Weapons*, para 26). The Court held that the prohibition of genocide would pertinent if the recourse to nuclear weapons did entail the element of intent according to Article II of the Convention (*dolus specialis)* (ibid.).

All States have the duty to promote the achievement of general and complete disarmament under effective international control and to utilise the resources released by effective disarmament measures for the economic and social development of countries, allocating a substantial portion of such resources as additional means for the development needs of developing countries.[157]

This close relationship between disarmament and development brings us back to the contextual interpretation of the NPT, which requires considering this instrument globally and thus an analysis of its Article VI in the light of Article IV, which guarantees the 'inalienable right' to peaceful uses of nuclear energy. According to para 2 of this provision, the obligations imposed by this provision have to be executed with 'due consideration for the needs of developing areas of the world'.

Norms Protecting the Environment

Nuclear weapons are also of direct relevance to the natural environment of the human being. Apart from their actual use during hostilities, it is obvious that already their production, by the consumption of rare natural resources, as well as their testing, has disastrous effects on the environment.[158]

According to some authors, the ICJ in its 1996 Advisory Opinion 'broke new ground' in affirming international environmental law and in recognising the

[157] These obligations were later confirmed in Article 7 of the *Declaration on the Right to Development* of 4 December 1986, that reads as follows: 'All States should promote the establishment, maintenance and strengthening of international peace and security and, to that end, should do their utmost to achieve general and complete disarmament under effective international control, as well as to ensure that the resources released by effective disarmament measures are used for comprehensive development, in particular that of the developing countries'. See also, concerning the topic, Bourantonis and Kostakos 1996, pp. 117–133; Taylor 2002. See furthermore the Final Document of the Tenth Special Session of the UN General Assembly on Disarmament (23 May–30 June 1978) (Doc. A/S-10/4. Paragraph 35 of the Final Document).

[158] As far as testing of nuclear weapons is concerned, it is interesting to refer to the ICJ's Order in the case concerning the *Request for an Examination of the Situation in Accordance with Para 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand vs. France)*, where the Court stated that its conclusion was 'without prejudice to the obligations of States to respect and protect the natural environment' (Order of 22 September 1995, ICJ Reports 1995, p. 306, para 64). In this case, New Zealand sought to challenge the proposed French underground nuclear tests in the Pacific on the basis of the 1974 Judgment in the *Nuclear Test* cases. While the Court declined jurisdiction because underground and not atmospheric tests, as in 1974, were at stake, Judge Weeramantry, in his dissenting opinion, explicitly argued as follows: 'This Court must regard itself as a trustee of those [future generations'] rights in the sense that a domestic court is a trustee of the interests of an infant unable to speak for itself…New Zealand's complaint that its rights are affected does not relate only to the rights of people presently in existence. The rights of the people of New Zealand include the rights of unborn posterity…' (1995 *Nuclear Test (New Zealand vs. France)*, ICJ Reports 1995, p. 341).

interest of future generations in the actions we take today.[159] Moreover, it considered that the use of nuclear weapons could constitute a 'catastrophe' for the environment.[160] The Court furthermore made it clear that States must take environmental concerns into consideration when assessing what is necessary and proportionate in the pursuit of legitimate military objectives.[161] Thus, the body of environmental law, similar to the right to life, was indirectly taken into consideration by the Court, by implication, via the rules and principles of humanitarian law.[162]

The Court also found it important to explain that, in applying this law, the 'unique' characteristics of nuclear weapons[163] has to be taken into consideration:

> …By its very nature, that process, in nuclear weapons as they exist today, releases not only immense quantities of heat and energy, but also powerful and prolonged radiation. According to the material before the Court, the first two causes of damage are vastly more powerful than the damage caused by other weapons, while the phenomenon of radiation is said to be peculiar to nuclear weapons. These characteristics render the nuclear weapon potentially catastrophic. The destructive power of nuclear weapons cannot be contained in either space or time. They have the potential to destroy all civilization and the entire ecosystem of the planet.

The radiation released by a nuclear explosion would affect health, agriculture, natural resources and demography over a very wide area. Further, the use of nuclear weapon would be a serious danger to future generations. Ionising radiation has the potential to damage the future environment, food and marine ecosystem and to cause genetic defects and illness in future generations.[164]

It is also worth recalling that arms control treaties themselves sometimes refer to the environment. Preambular clauses or operative paragraphs in the main body of a treaty confirm the close relationship between these two fields of international law and, thus, the relevance of environmental protection when it comes to interpreting

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[159] Brown Weiss 1999, p. 338.

[160] ICJ, *Nuclear Weapons*, para 29.

[161] Id, para 30. In the same paragraph, the Court refers to the Principle 24 of the Rio Declaration, which provides that: 'Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary'. See also Momtaz 1999, pp. 355–374, who holds that '[t]he principle of necessity and proportionality were not originally conceived to protect the environment, but it is now clear that they also have a role to play. In clarifying this point, the Court has greatly contributed to improving the legal situation in times of armed conflicts' (p. 354, summary in English).

[162] Brown Weiss 1999, p. 338. Moreover, the Court reiterated those provisions of the Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts—Protocol I—(8 June 1977, 1125 *UNTS* 3) that explicitly provide protection against widespread, long-term and severe environmental damage and prohibit attacks against the natural environment by way of reprisals (Article 35 para 3 and Article 55).

[163] ICJ, *Nuclear Weapons*, para 36.

[164] Id, para 35.

the NPT in the light of Article 31 subpara 3c) of the VCLT.[165] A particularly explicit example for this link is the 1976 Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques (ENMOD Convention),[166] to which the ICJ referred in its 1996 Advisory Opinion,[167] and which combines the concerns of arms control as well as environmental issues.[168]

3.8 Supplementary Means of Interpretation (Article 32 VCLT): Preparatory Work of the NPT and the Circumstances of its Conclusion

3.8.1 In General

Article 32 VCLT reads as follows:

Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of Article 3 or to determine the meaning when the interpretation according to Article 31:

(a) leaves the meaning ambiguous or obscures; or
(b) leads to a result which is manifestly absurd or unreasonable.[169]

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[165] For instance, all the five regional treaties on disarmament contain, in their preamble or the main text, a reference to environmental concerns. Article 6 of the Treaty of Semipalatinsk, as an example, reads as follows: 'Environmental security: Each Party undertakes to assist any efforts toward the environmental rehabilitation of territories contaminated as a result of past activities related to the development, production or storage of nuclear weapons or other nuclear devices, in particular uranium tailings storage sites and nuclear test sites'. Another interesting example constitutes Article 7 of the Treaty of Pelindaba: 'Prohibition of dumping of radioactive wastes: Each Party undertakes: (a) To effectively implement or to use as guidelines the measures contained in the Bamako Convention on the Ban of the Import into Africa and Control of Transboundary Movement and Management of Hazardous Wastes within Africa in so far as it is relevant to radioactive waste; (b) Not to take any action to assist or encourage the dumping of radioactive wastes and other radioactive matter anywhere within the African nuclear-weapon-free zone'. See also the 1996 CNTBT whose preamble points out that 'the Treaty could contribute to the protection of the environment' (para 9).

[166] Adopted on 10 December 1976 and entered into force on 5 October 1978.

[167] See, in particular, paras 27 ff.

[168] See, for more details on the ENMOD Convention or, more general, the protection of environment in armed conflicts, Mollard Bannelier 2001; Bouvier 1992 or Spieker 1993.

[169] Those mentioned in Article 32 are the most important, but not the only supplementary means; see Villiger 2009, p. 445, referring to ILC Report 1966, YBILC 1966 II 223, para 20. He adds, as examples that are not listed in Article 32, *inter alia*, the rational techniques of interpretation, such as *per analogiam, e contrario, lex posterior derogat legi priori, lex specialis derogat legi speciali, in dubio mitis, interpretatio in favorem debitoris,* etc.

It follows from the title and the text of this provision that these means play only a 'supplementary' role. In other words, recourse may be had to them after employing the means of the General Rule of Interpretation in Article 31, either to provide further evidence of or to shed further light on, the intentions of the parties and their common understanding concerning the meaning of treaty terms.[170] Moreover, the recourse to the supplementary means of Article 32 is also governed by the omnipresent principle of good faith.[171]

Both the *travaux préparatoires* and the circumstances of the conclusion of the NPT will be considered jointly here.[172]

3.8.2 The Principles Applied to the Interpretation of Article VI NPT

It should be recalled that nuclear weapons were used for the first—and fortunately so far only—time in August 1945, some weeks after the UN Charter had been adopted, on 26 June 1945.[173] Therefore, the very first resolution of the UNGA addressed the question of these weapons, establishing the Atomic Energy Commission charged with the task of submitting proposals to the Security Council to ensure, *inter alia*, the elimination of these weapons and other weapons of mass destruction, the establishment of a safeguard system, including inspections, and that atomic energy would be used exclusively for peaceful purposes.[174] But the effort to return to a nuclear-free world suffered a setback in June 1946 when the USA proposed the creation of an international agency to ensure that everyone else would refrain from building nuclear weapons and would use atomic energy for peaceful uses only.[175] The USSR countered this with a proposal to destroy all nuclear weapons. Unfortunately, none of this happened. Instead, the USSR itself acquired nuclear weapons in 1949, the UK in 1952, France in 1960 and China in 1964.[176]

In 1956, the International Atomic Energy Agency (IAEA) was created as a response to the fear of further horizontal proliferation and the necessity to control the peaceful use of atomic energy by NNWS.[177] The negotiations towards the conclusion of the

[170] Villiger 2009, p. 446, referring to Waldock Report III, YBILC 1964 II 58, para 21.

[171] Ibid, 447.

[172] See for further reading on the negotiation history of the NPT, Corradini 1993; Myrdal 1982; Nye et al. 1988.

[173] Marin Bosch 1999, p. 376.

[174] Resolution 1 (I) of 24 January 1946.

[175] Marin Bosch 1999, pp. 376 ff.

[176] Ibid, p. 377.

[177] Ibid.

NPT in 1968 were launched with the so-called Irish Resolution, adopted on 20 November 1959.[178] The efforts were initially focused on mere non-proliferation measures, but this narrow approach was soon challenged by NNWS. In particular, Italy insisted already in 1962 on commitments by NWS to get rid of them eventually.[179] The idea of general and complete disarmament was supported, as such, by the USA, as expressed, *inter alia*, by the 'Joint Statement of Agreed Principles for Disarmament Negotiations', negotiated by John J. McCloy for the United States and Valerian A Zorin for the USSR (also called 'Zorine-McCloy Declaration').[180]

Some non-aligned nations, including Nigeria and India, proposed a linkage, from the early 1960s on, between non-proliferation measures and specific disarmament obligations.[181] In 1965, at the UN Eighteen-Nation Disarmament Committee (ENDC), India, Sweden and others urged this linkage and, indeed, the ENDC passed a resolution calling for general and complete disarmament.[182] In September 1965, the Non-Aligned Eight issued a joint memorandum calling for a non-proliferation treaty as a step towards the ultimate goal of general and complete disarmament, adding that such a treaty should be 'coupled with or followed by tangible steps to halt the nuclear arms race and to limit, reduce and eliminate the stocks of nuclear weapons and means of their delivery'.[183] The Eight further submitted a draft resolution to the UN First Committee that stipulated that the treaty should be 'a step towards the achievement of general and complete disarmament and, more particularly, nuclear disarmament'.[184] This resolution was adopted by a 93:0 vote, with five abstentions.[185]

Even if the US and the Soviet Union were in agreement on disarmament as an ultimate goal, they were heavily countering a non-proliferation treaty that entailed specific disarmament obligations. These two States always insisted that it was best not to link formally non-proliferation and disarmament measures, arguing that such a connection, a 'package deal', could jeopardise the outcome of either objective.[186] At a certain stage, the US delegation suggested, rather than requiring concrete disarmament measures in the draft treaty, it could include provisions for a

[178] UNGA Resolution 1378 (XIV) of 20 November 1959. In its preamble, the General Assembly considered that 'the question of general and complete disarmament is the most important one facing the word today'.

[179] See Bunn and Timerbaev 1995, p. 15.

[180] The first point of this statement left no doubt that '[d]isarmament would be general and complete and war no longer be an instrument for settling international problems…'. Point 5 added that '[a]ll disarmament measures would be implemented from beginning to end under strict effective international control, which would provide firm assurances that all parties were honouring their obligations'. For more details and the text of this agreement, see Corradini 1993, 1046 ff.

[181] Ford 2007, p. 405.

[182] Ibid; see for more details of the ENDC negotiations Corradini 1993, pp. 1047–1050.

[183] Ford 2007, p. 405, with further reference.

[184] Ibid.

[185] Ibid., note 27.

[186] Ibid., 405.

review after a certain period of time in order to assess the concerns that the States Parties might have in relation to progress in reducing nuclear stocks.[187]

In 1967, Canada, supported by others, advocated what in effect became the compromise solution. It suggested that the treaty express 'a clear and compelling declaration of intent to embark on the process of nuclear arms control'.[188] Most of the non-nuclear ENDC members, in particular Mexico, asked for more specific objectives, but a revised draft treaty was submitted in January 1968 by the USA and the Soviet Union, including a new disarmament provision that corresponded in substance to the actual Article 6 NPT.[189] In spite of further efforts of the ENDC members towards the inclusion of more concrete disarmament steps and under Soviet and US warnings that formal linkage between non-proliferation and disarmament could jeopardise agreement as such, the current wording of the article was agreed upon and added to the draft on 11 March 1968.[190]

It can be deduced from this brief summary of the *travaux préparatoires* and the circumstances that governed the conclusion of the treaty, that the debate, that is still going on 45 years later, on the exact scope of the obligations flowing from Article VI NPT, was already at the heart of the negotiations with a view to the adoption of the instrument. The preparatory work of this provision thus shows clearly the bargaining that took place over the years, between, on the one hand, the NNWS that favoured the inclusion of concrete disarmament steps and, on the other hand, the NWS trying to conserve their monopoly position and not to commit excessively to disarmament engagements. But what seems nevertheless uncontested, on the basis of the drafting history of the treaty analysed in good faith,[191] is the fact that even the NWS involved in the negotiations, in particular the USA and the Soviet Union, had never contested the ultimate goal of general and complete disarmament. Moreover, in the light of the drafting history, it is likely that the inclusion of Article VI was, especially for the NNWS more than a 'symbolic gesture'.[192] The only contested aspect was *how*? to reach this aim.

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187 Ibid., 406.

188 Ibid.

189 Ibid., 406 ff., with further references.

190 Ibid., 407, with further references.

191 The following statement made by US negotiator Gerard Smith some months after the adoption of the NPT runs clearly against the principle of good faith: '[Article VI] does not require us to achieve any disarmament agreement, since it is obviously impossible to predict the exact nature and results of such negotiations' (Hearing before the Senate Committee on Armed Services, 'Military Implications of the Treaty on the Non-Proliferation of Nuclear Weapons', 27–28 February 1969, at p. 121 (answer to questions submitted by South Carolina Republican Senator Strom Thurmond)).

192 International Association of Lawyers Against Nuclear Arms and International Human Rights Clinic, Human Rights Program, Harvard Law School 2009, p. 16. According to Mohamed Shaker, a member of the Egyptian delegation to the ENDC during the NPT negotiations, the 'obligation to pursue negotiations in good faith…was not admitted without…broad interpretation of its implications' and it 'was generally felt that negotiating was not an end in itself but a means to achieving concrete results' (Shaker 1980, p. 572).

3.9 Conclusions

It has been shown in this chapter that in the light of the different means of interpretation according to Articles 31 and 32 VCLT, all States Parties to the NPT, NWS and NNWS, are under a genuine legally binding obligation to pursue in good faith negotiations leading to a treaty on nuclear disarmament. This obligation was confirmed unanimously by the most important international judicial organ in 1996.

Particularly in the light of the *effet utile* of a treaty, Article VI would remain useless if States could content themselves with a narrow interpretation of this provision, which refers explicitly twice to the term 'effective'. Moreover, it has been observed that the special features of the NPT, distinguishing as it does between two different kinds of States Parties, requires, in order to keep its balance, strong disarmament concessions from the NWS. It has also been shown that the principle of good faith, addressed explicitly in Article VI, is of particular relevance in a treaty governing nuclear weapons, which are of high military and strategic importance to a few States but can also cause disastrous damage to human beings and their environment.

Furthermore, in a treaty such as the NPT, a teleological interpretation in the light of the object and purpose plays a particular role. According to its preamble, one of the purposes of the NPT is clearly general and complete disarmament under strict and effective international control. Other goals are the purposes and principals of the United Nations, as enshrined in Articles 1 and 2 of the Charter, and the avoidance of mutual destruction, thus the survival of mankind and future generations. These conclusions are moreover confirmed by an interpretation according to 'other rules of international law' in the sense of Article 31, subpara 3c), VCLT, in particular when analysed in the light of the ICJ's 1996 Advisory Opinion, which concluded that the use of nuclear weapons would hardly be compatible with international humanitarian law and would affect obligations under human rights and environmental law.

It has also been noted that the subsequent practice has neither changed substantially the obligations of States under Article VI NPT nor made this provision meaningless. It would be a bad precedent and even dangerous if the States could dispense with their conventional obligations simply by their general passivity. It is certainly true that the behaviour and policy of some of the States Parties have run contrary to the goals pursued by Article VI NPT and that the vast majority of States have not paid sufficient attention to their obligations under this provision, but there are nevertheless many positive signs and concrete proposals, triggered in particular by the civil society and a few States, how to achieve the agreed disarmament goals. Moreover, and most significantly, the numerous statements and documents of certain States, international organisations, NGOs and statesmen clearly prove that the ultimate goal of general and complete disarmament has survived over almost half a decade, and it has became even more topical recently. Finally, even a historical interpretation, taking into consideration the *travaux préparatoires*

and the circumstances of the conclusion of the NPT, reveals that the disarmament pillar enshrined in Article VI NPT was, for the NNWS, more than a humble gesture.

Obligation of conduct and/or obligation of result? It is submitted that this question can finally be left open. This author is of the firm opinion that States can no longer, in good faith and in the light of the rule *pacta sunt servanda*, invoke military constraints or the allegedly vague wording of Article VI NPT in order to delay serious steps towards nuclear disarmament, in particular taking into consideration that the international community has shown the will and capacity to find agreement to abolish entire categories of weapons and to denuclearise five inhabited regions entirely. The adoption of these treaties, sometimes followed by protocols ratified by NWS, can be interpreted as proof that States no longer consider these arms as indispensable and can serve as a source of inspiration for a global treaty on nuclear disarmament.

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Chapter 4
The Non-Proliferation Regime and the NPT

Kimberly Gilligan

Abstract This chapter begins with an explanation of the relevant international regimes and the factors that comprise the nonproliferation regime in particular. This is followed by an in-depth introduction to applicable treaties and the non-proliferation regime's centrepiece: the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). This section includes a discussion of the NPT's purpose, its historical context, and the content of each treaty article. Compliance and non-compliance with the NPT are delved into as well as an overview of the recognised vulnerabilities of the NPT as international law. The chapter concludes that the nonproliferation regime is the convergence of expectations based on shared principles and rules and the relevant treaties have an impact on State behaviour.

Contents

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4.1 Introduction

Since 1945, nuclear weapons have played a vital role in international politics. They continue to do so being perceived as overt threats, security enhancers, and prestige enhancers. Given how dangerous nuclear weapons are, the issue of non-proliferation and the international effort to stop the spread of nuclear weapons is critically important. A key step in stopping the spread of nuclear weapons is for States to first commit themselves voluntarily not to acquire the weapons and not to assist other States in their pursuit of the weapons. States make this commitment by ratifying the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).[1]

Technology alone will not stop the spread of nuclear weapons. Deterrence has not worked as well as some practitioners had hoped, and keeping secrets is not a guarantee for success. International policies are necessary, and several such policies have been developed over the decades taking the form of treaties. Treaties are an important concept to understand because they are the main mechanism for controlling proliferation and the NPT is central to the nonproliferation regime. The NPT outlines the regime's beliefs and coordinates the rules. The relevant treaties, and the NPT in particular, articulate almost every nation's commitment to stop the spread of nuclear weapons. The NPT as part of international law is a standard to which State actions can be held and assessed. Even more importantly, the NPT coordinates the non-proliferation regime. There are articles referring to safeguards, export controls, nuclear weapon-free zones (NWFZs), and disarmament.

This chapter starts out with an overview of regimes. A regime is defined as 'a framework of rules, expectations and prescriptions between actors in international relations'.[2] The non-proliferation regime and all that it encompasses are specifically discussed. One of the key components of regimes is international rules and agreements. The international nonproliferation regime is comprised of several treaties and organisations, but the NPT is the 'linchpin' of this regime.[3] Therefore, a discussion is offered on treaties and 'the creation of written agreements whereby the states participating bind themselves legally to act in a particular way'.[4] A brief review of the NPT is offered to create a base of understanding of its history, contents, compliance issues and possible vulnerabilities.[5] Finally, conclusions are drawn.

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[1] Treaty on the Non-Proliferation of Nuclear Weapons (July 1, 1968) 729 *UNTS* 161.

[2] Evans and Newnham 1998, p. 471.

[3] Sidhu 2008, p. 412.

[4] Shaw 2008, p. 93.

[5] For an in-depth review of the NPT, see: Daniel H. Joyner, International Law and the Prohibition of Weapons of Mass Destruction (OUP 2009), pp. 3–76; 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document (NPT/CONF, 2010/50), pp. 2–19.

4.2 The Non-Proliferation Regime

The accepted definition of regimes comes from Stephen Krasner, who wrote that, 'regimes can be defined as sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations'.[6] Regimes are not agreements *per se* but facilitate relevant agreements. Regimes are 'a framework of rules, expectations and prescriptions between actors'.[7] The non-proliferation regime is a commonly accepted regime in international studies. However, Michael Brzoska argues that there are three sub-regimes within the non-proliferation regime that are connected via the International Atomic Energy Agency (IAEA) and the NPT.[8] Brzoska believes the three sub-regimes are based on nuclear suppliers, peaceful uses, and disarmament. This chapter will treat non-proliferation as a single regime, which has a history of being acceptable.[9]

The central principle of the nonproliferation regime is clear: stop the spread of nuclear weapons. The rules and procedures are laid out by the NPT and the IAEA. Who the actors are in the nonproliferation regime is a more interesting question.

The non-proliferation regime actors include most national governments, international organisations (i.e., the IAEA, the Comprehensive Test Ban Treaty Organization, the United Nations Security Council, the Nuclear Suppliers Group, etc.) and non-governmental organisations (NGOs) (i.e. the Nuclear Threat Initiative, the Federation of American Scientists, the International Campaign to Abolish Nuclear Weapons, etc.).

The first group of actors, national governments, can be viewed as the 189 NPT member States.[10] They can also be viewed as the 154 member States of the IAEA.[11] Note these numbers are different because some States are members of the IAEA but not the NPT (such as Pakistan) and some NPT members are not IAEA members.

Despite near universal membership of the Treaty, there are three nuclear-weapon States that have not joined the NPT.[12] Of the nine recognised nuclear-weapon States in the world today, four remain outside the treaty. North Korea was once a Party to the Treaty but withdrew from it in 2003. It has since then tested

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6 Krasner 1982, p. 186.

7 Evans and Newnham, p. 471.

8 Brzoska 1992, p. 217.

9 Nye 1981.

10 Nuclear Threat Initiative, 'NPT Membership', http://www.nti.org/media/pdfs/apmnpt.pdf?_=1316545627&_=1316545627.

11 International Atomic Energy Agency, 'Member States of the IAEA', http://www.iaea.org/About/Policy/MemberStates/.

12 Center for Nonproliferation Studies, 'NPT Membership', Nuclear Threat Initiative, http://www.nti.org/e_research/official_docs/inventory/pdfs/apmnpt.pdf.

three nuclear devices (9 October 2006, 25 May 2009 and 12 February 2013). India and Pakistan might remain outside the NPT as long as they have nuclear weapons because there is no mechanism in the Treaty for recognising nuclear-weapon States that detonated a nuclear weapon after 1 January 1967.

Israel has also not joined the NPT and maintains a policy of ambiguity on its declared nuclear-weapon status. States not part of the NPT and their unique situations are discussed at greater length in the *Possible Vulnerabilities* section of this chapter.

The second group of actors is international organisations. The primary international organisation in non-proliferation is the IAEA, an organisation of about 2,300 people headquartered in Austria that 'works with its member States and multiple partners worldwide to promote safe, secure and peaceful nuclear technologies.'[13] The IAEA is also responsible for the application of safeguards as required under the NPT. The IAEA and former Director General Mohamed El Baradei received the 2005 Nobel Peace Prize in recognition of their key role in the nonproliferation regime. The Prize was awarded 'for their efforts to prevent nuclear energy from being used for military purposes and to ensure that nuclear energy for peaceful purposes is used in the safest possible way'.[14]

The third kind of actor is NGOs. NGOs are usually non-profit groups not associated with a government, which are formed to push a public policy agenda.[15] NGOs play a vital role in international relations and the non-proliferation regime. They conduct research and hold workshops, as well as reach out to the public and regime stakeholders. They participate in NPT review conferences and are observers at the IAEA General Conferences.

Within regimes and related to NGOs are epistemic communities. According to Peter Haas, 'an epistemic community is a network of professionals with recognised expertise and competence in a particular domain and an authoritative claim to a policy-relevant knowledge within that domain or issue area'.[16] These experts share *principled beliefs*, *causal beliefs*, *notions of validity*, and a *set of common practices*.[17] Epistemic communities are transnational and provide expertise that can influence national agendas, which 'may, in turn, influence the interests and behaviour of other states, thereby increasing the likelihood of convergent state behaviour and international policy coordination'.[18] This type of convergence of State beliefs and practices is a key ingredient of every regime. In the nonproliferation regime this community is made of n professional engineers, inspectors (domestic and international), technicians, analysts, and policymakers that specialise in nonproliferation and/or safeguards.

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[13] International Atomic Energy Agency, 'About the IAEA'.

[14] Nobel Foundation, 'The Nobel Peace Prize 2005'.

[15] Encyclopedia Britannica, 'Nongovernmental Organization'.

[16] Haas 1992, p. 3.

[17] Ibid., p. 3.

[18] Ibid., p. 4.

The principles and procedures of international regimes are codified in treaties and international agreements. Like any other regime, the non-proliferation regime is larger than one treaty or one organisation, but the stabilising force of the regime is the NPT. In fact, the NPT is considered a regime constituting treaty.[19] This is because the Treaty also impacts States not party to it. All States party to the Treaty are banned from assisting other States in developing nuclear weapons, independent of whether the other State is a party to the Treaty. Article I and Article II ban transferring from 'any recipient whatsoever'[20] or receiving from 'any transferor whatsoever'[21]—not just Parties to the treaties.

The concept that a treaty influences those States that do not wish to be constrained and therefore remain outside of a treaty (specifically by never ratifying) is unique with the NPT. There are two States that have made persistent objections and whose programmes are now debatably accepted (i.e., Pakistan and India), a State that continues a policy of ambiguity (i.e., Israel), and a State that was once a Party to the NPT and which has a programme that is not deemed as acceptable by most of the international community (i.e., DPRK leaving the NPT and being subject to UNSC sanctions). States are criticised for pursuing nuclear weapons, regardless of whether they are a party to the NPT or not—although the international outcry seems to fade over the time for States that made persistent objections. The Sect. 4.3 goes deeper into treaties and the NPT in particular.

4.3 Treaty Law and the NPT

Non-proliferation is one of the issue areas that has seen significant development in international law. International law is distinct from domestic law because international law is mostly horizontal and domestic law is mostly vertical.[22] In international law, all States are theoretically 'equal' and there is no one above them. Generally, there is no enforcement agency, or world police, and States are the ones that create the laws that they may or may not subsequently obey. The word 'generally' is appropriate here because, perhaps, some international organisations are recognised as being above States. For example, the IAEA is mandated to monitor States and the UN Security Council can take measures on States for violations. The IAEA reports to the UN Security Council in case of non-compliance with NPT and non-NPT safeguards agreements by States, but it does not have any other means of enforcing its mandate. The UN Security Council can vote to take actions, such as implementing sanctions. Within States, the domestic system is a hierarchy and the citizens do not necessarily create the laws but rather have them created for them and enforced upon them by the State.

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[19] Shaw 2008, p. 97.

[20] Article I NPT.

[21] Article II NPT.

[22] Shaw, 6.

International treaties and agreements are the essential basis for this international legal regime. All treaties have some fundamental characteristics based on the Vienna Convention on the Law of Treaties, which entered into force in 1980[23] and is widely accepted as mostly codifying customary law. This Convention defines treaties as follows:

> 'treaty' means an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation.[24]

It goes on to identify the 'rules' of treaty-making. These rules, or issues, include how treaties may be ratified and enter into force. In addition, the concept of *pacta sunt servanda*, the idea that treaties are legally binding and States will comply 'in good faith', is codified in Article 26 of the Convention.[25] The Convention also outlines the conditions under which treaties are voided, such as those concluded under threat of force.[26]

4.3.1 NPT Overview

The NPT states the necessity of security that precipitated the creation of the treaty. The preamble of the NPT sets the Treaty's central purpose:

> Considering the devastation that would be visited upon all mankind by a nuclear war and the consequent need to make every effort to avert the danger of such a war and to make measures to safeguard the security of peoples.[27]

While security is the obvious underlying concern for creating the Treaty, it is important to understand that several factors contributed to nonproliferation taking the form of an international treaty. The alternative (or even complementary) methodologies to a treaty are secrecy and denial.

First, keeping the technology as a military secret was obliviously not enough to stop proliferation.[28] The Soviet nuclear programme made its important early gains through espionage of the United States (US) programme and knowledge provided by other sources, while the United Kingdom (UK) programme was assisted directly by the US. There was serious concern that other States may have their own capabilities with time, even without direct (or indirect) assistance from the US. This becomes truer with time as the interconnectedness of the world increases and technological advances make it easier to transfer nuclear knowledge.

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[23] Vienna Convention on the Law of Treaties—VCLT— (23 May 1969) 1155 *UNTS* 331.

[24] Article 2 VCLT.

[25] Article 26 VCLT.

[26] Article 52 VCLT.

[27] NPT, Preamble.

[28] Simpson et al. 2010, Part I-4.

Second, denial did not appear a viable option as new uranium deposits were being discovered around the world.[29] Keeping the material to an exclusive group for trade would not last. Finally, the increase in available uranium meant an anticipated expansion in nuclear reactors.[30] The concern ultimately being that nuclear reactors can be used for production of electricity and for the production of plutonium.[31]

The failures of secrecy and denial collectively meant that there was not a useful methodology for stopping proliferation and that it had become a 'necessity to do this through voluntary and cooperative international arrangements'.[32] These international arrangements include several treaties, with the centrepiece of the legal framework of nonproliferation being the NPT.

By also being a *law-making treaty*, the NPT is a normative treaty. This means that a large number of States belong to the Treaty and the Treaty expands on the accepted 'perception of international law upon any given topic or establish new rules which are to guide them for the future in the international conduct'.[33] The NPT is an exceptional treaty with almost universal membership and it elaborates upon the shared perception that the spread of nuclear weapons is bad.

Finally, the NPT may be considered a self-enforcing treaty. According to Beth Simmons, a self-enforcing agreement is one in which 'two or more parties adhere to the agreement as long as each gains more from continuing the agreement then from abrogating it'.[34] It is in each individual State's interest to not have other States possess nuclear weapons that could potentially be used against it. This relies on the concept of reciprocity. Under the NPT this reciprocity may lead to a denial of peaceful uses cooperation and a denial of trade of nuclear technologies. If reputation is a serious concern, and a State does not want to be seen as unreliable, the likelihood of compliance increases making the Treaty almost self-enforcing.[35]

4.3.2 Negotiating the NPT

The history of nuclear weapons is only slightly longer than the history of trying to control them via international agreements. Almost immediately following the American use of nuclear weapons against Japan to end World War II, nations began to seek ways to limit the further development and use of nuclear weapons.

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[29] Ibid.

[30] Ibid.

[31] World Nuclear Association, 'The Nuclear Fuel Cycle,' http://www.world-nuclear.org/info/inf03.html.

[32] Simpson et al. 2010, ibid.

[33] Shaw 2008, p. 95.

[34] Simmons 2009, p. 116.

[35] Ibid., p. 117.

The first attempt at an international nuclear nonproliferation agreement was the Baruch Plan. The US introduced the Baruch Plan to the UN Atomic Energy Commission on 14 June 1946.[36] The plan 'proposes that States should transfer national ownership and control over dangerous nuclear activities and nuclear materials to an international atomic development agency'.[37] The plan failed however as the USSR did not support it, most likely because it was already developing a nuclear weapons programme of its own.

The second famous attempt at non-proliferation came from President Eisenhower. He outlined his ideas for controlling nuclear weapons in his famous December 1953 Atoms for Peace speech to the United Nations. Some of his ideas, such as the idea that nuclear weapons must not only be removed from military use but also 'be put into the hands of those who will know how to strip its military casing and adapt it to the arts of peace', later appeared as the core concepts of the NPT and the IAEA.[38] It is not uncommon that non-legally binding language such as speeches proposing treaties later became *enshrined* in treaties.[39]

Under the realisation that nonproliferation would not be successful if only based on denial and that international agreements were needed to stop the spread of weapons, Ireland put forward a new resolution to the UN General Assembly. The *Irish Resolution,* adopted in 1961, called on States not to acquire nuclear weapons nor help others to do so.[40]

As part of the movement for General and Complete Disarmament, the UN pursued several paths. This included items such as negotiating a test ban treaty, a fissile material cutoff treaty, and a nonproliferation treaty.[41] The nonproliferation treaty moved forward via a 1965 UN General Assembly resolution, number 2028, which outlined the necessary principles of the treaty. Using these principles, the US and Soviet Union co-chaired the Eighteen Nation Disarmament Committee and negotiated the NPT. The principles of Resolution 2028 are as follows:

- both the nuclear-weapon States and nonnuclear-weapon States must be obligated not to engage in nuclear weapon proliferation;
- there should be an appropriate balance between the obligations undertaken by the nuclear-weapon States and the nonnuclear-weapon States;
- the treaty should constitute a step toward nuclear disarmament, as well as toward general and complete disarmament;
- there should be practical provisions to ensure the treaty's effectiveness; and

[36] Baruch 1946.

[37] International Atomic Energy Agency, Division of Public Information, 'Revisiting the Nuclear Fuel Cycle', http://www.iaea.org/newscenter/focus/fuelcycle/key_events.shtml.

[38] Eisenhower 1953.

[39] Simmons 2009, p. 261.

[40] Burns 1965, p. 857.

[41] Simpson et al. 2010, Part I-5.

- the establishment of nuclear-weapon-free zones (NWFZs) should not be curtailed in any way under the treaty[42].

The two main negotiators of the NPT, the Soviet Union and the US, did not pursue non-proliferation just for the stated altruistic reasons but because they also had a strong national interest in being among the few States with nuclear weapons.[43] Furthermore, as the Cold War went on, both sides became concerned with the possibility of nuclear war. There was a special concern that their allies could drag them into a war. Each side made a concerted effort to negotiate a treaty that did not compromise its existing arrangements with allies while focusing on not spreading the weapons. The NPT finally opened for signature in 1968, entering into force on 5 March 1970 after the requisite treaty depository States (i.e. UK, US and Soviet Union) and 40 other States ratified, as required under the Treaty.[44]

4.3.3 The Results of the Negotiations: The NPT Articles

The NPT has two main objectives: prevent the spread of nuclear weapons and international disarmament. There is a third, and often ignored objective, to spread the technology and knowledge of peaceful uses of nuclear energy. Collectively, these objectives are often referred to as the three pillars of the Treaty: non-proliferation, peaceful uses of nuclear energy and disarmament.[45] There are eleven articles outlining the responsibilities and commitments of the States that choose to be a Party to the NPT.

4.3.3.1 Non-Proliferation Pillar

Nonproliferation is for some, like the US government, the most important pillar.[46] The first Article of the NPT requires nuclear-weapon States not to transfer nuclear weapons, control over nuclear weapons, nuclear weapon technology, or give any assistance related to developing nuclear weapons to a nonnuclear-weapon State. This is the twin to Article II. The second article is the responsibility of the non-nuclear-weapon States. It requires these states to not receive nuclear weapons or anything related to nuclear weapons. Non-nuclear-weapon States are also committed not to pursue nuclear weapons with or without another State's assistance. Collectively, this is the backbone of the nonproliferation regime.

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[42] Nuclear Threat Initiative, 'NPT Tutorial', http://www.nti.org/h_learnmore/npttutorial/chapter03_04.html.

[43] Simpson et al. 2010, Part I-3.

[44] Article IX NPT.

[45] Government of Canada, 'The Nuclear Nonproliferation Treaty', http://www.international.gc.ca/arms-armes/nuclear-nucleaire/npt-tnp.aspx.

[46] Müller 2005, p. 41.

Article III requires non-nuclear-weapon States to place their facilities under safeguards. This Article mandates States to bring into force a safeguards agreement with the IAEA within 18 months of a State's initiation of negotiations with the IAEA on the safeguards agreement (Art. III.4 NPT). The purpose of this Article is to verify that non-nuclear-weapon States are in compliance with the obligations assumed under the NPT with a view to preventing the diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices (Art. III.1 NPT). The agreement utilised is known as a Comprehensive Safeguards Agreement and the structure and content for negotiating each NNWS's safeguard agreement is known as IAEA Informational Circular 153 (INFCIRC/153/).[47]

How are the nuclear-weapon States that are party to the treaty affected by Article III? They are not required under the NPT to have IAEA safeguards at their facilities. Rather these States have what is known as Voluntary Offer Agreements.[48] The US, Russia, UK, France and China have Voluntary Offer Agreements with the IAEA. Under a voluntary offer agreement, the IAEA applies safeguards to nuclear material in those facilities that have been selected by the IAEA from the NWS's list of eligible facilities in order to verify that nuclear material subject to safeguards is not withdrawn from peaceful activities except as provided for in the agreement (see IAEA Safeguards Statement for 2012). This agreement gives a nuclear-weapon State the opportunity to offer to the IAEA some (or even all) of its civilian nuclear materials and/or facilities for safeguards. This is to minimize the sometimes-perceived commercial disadvantage of having safeguards. It is up to the IAEA to choose whether to apply safeguards on the materials and/or facilities offered.

The technical objective of 'safeguards is the timely detection of diversion of significant quantities of *nuclear material* from peaceful nuclear activities to the manufacture of nuclear weapons or of other nuclear explosive devices or for purposes unknown, and deterrence of such diversion by the risk of early detection.'[49]

Article VII allows parties to the treaty to enter into regional treaties to establish nuclear-weapon-free zones (NWFZ). Many States have chosen to join these treaties. There are currently five regional treaties establishing such zones.[50] These treaties are the Treaty of Tlatelolco (Latin America and the Caribbean NWFZ), the Treaty of Rarotonga (South Pacific NWFZ), the Treaty of Bangkok (Southeast Asia NWFZ), the Treaty of Pelindaba (African NWFZ), and the Central Asia NWFZ Treaty. There are currently calls in the international community for a Middle East NWFZ.[51] There

[47] International Atomic Energy Agency, 'IAEA Safeguards Glossary', in *International Nuclear Verification Series* (Vienna: International Atomic Energy Agency, 2002), p. 7.

[48] Ibid., 8.

[49] International Atomic Energy Agency, 'Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons', in *Informational Circular 153 (Corrected)* (1972).

[50] Arms Control Association, 'Nuclear-Weapon-Free Zones (NWFZ) at a Glance', http://www.armscontrol.org/factsheets/nwfz.

[51] United Nations, 'UN Study on Effective and Verifiable Measures Which Would Facilitate the Establishment of Nuclear-Weapon-Free Zone in the Middle East', ed. Department for Disarmament Affairs (New York, NY: United Nations 1991).

are also related treaties covered by this Article that prohibit the deployment of nuclear weapons in more controversial areas. These are 'the Antarctic Treaty, the Outer Space Treaty, the Moon Agreement, and the Seabed Treaty [that] denuclearise and demilitarise specific areas of the globe, as well as outer space.'[52]

4.3.3.2 Peaceful Uses of Nuclear Energy Pillar

Article IV NPT states that 'nothing in the Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty'. Iran has cited this Article continuously in defence of its enrichment research and production (although some influential members of the international community believe this may be a ploy to conceal a weapons program). Article V explains that nonnuclear-weapon States shall receive any benefits possible from peaceful nuclear explosions by nuclear-weapon States. This provision has been overtaken by the 1996 Comprehensive Nuclear Test Ban Treaty (CTBT).

4.3.3.3 Disarmament Pillar

Article VI NPT may be one of the most important Articles in the entire treaty. It directs that nuclear-weapon States 'pursue negotiations in good faith' to end the arms race (that was happening at the time) and for nuclear disarmament, and to create 'a treaty on general and complete disarmament'. Debatable progress has been made towards nuclear disarmament. Non-nuclear-weapon States and in particular the Non-Aligned Movement often cite this Article in urging the super powers to do more for peace.[53] Disarmament was largely ignored during the Cold War, a time when the Soviet Union and the US were rapidly building their arsenals.

4.3.3.4 Administrative Articles

Article VIII NPT has two main objectives. The first objective is to explain how States can propose and pass amendments to the Treaty. For an amendment to pass, it would require a majority vote that includes all of the IAEA Board of Governors representatives (which also means all five nuclear-weapon States recognised under the NPT). The Treaty has never been amended. The second objective is to create a conference that is to be held every five years. The conference is for 'reviewing the operation of the treaty'. These conferences are always politically charged. Because it can be difficult to accomplish much at an international conference, the States have preparatory meetings in the years between review conferences in order to keep momentum going and discuss ideas.

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[52] Nuclear Threat Initiative, 'NWFZ Tutorial', http://www.nti.org/h_learnmore/nwfztutorial/.

[53] Singh 1998, at 50.

Article IX NPT explains that the Treaty is open to all States for ratification and how the Treaty comes into force. The important detail contained in this Article is that a nuclear-weapon State is one that has 'manufactured and exploded a nuclear weapon or another explosive device prior to 1 January 1967'.

Article X NPT contains two important points. First, a State can withdraw from the Treaty if the State decides it is in its national interest and gives the other treaty members and the UN Security Council three months notice. This has happened only once. North Korea submitted its notice on 12 March 1993 and, after suspending that declaration on 11 June 1993, declared its 'immediate effectuation on 10 January 2003'.[54] Second, after the treaty was in force for twenty-five years, a conference was to be held to decide whether the Treaty shall continue indefinitely or for another fixed period. In 1995, the parties to the Treaty voted to extend the treaty indefinitely.[55] This decision was taken with the backdrop of the newly discovered clandestine activities of North Korea and Iraq.[56] This lengthened the shadow of the future for those States involved and perhaps thinking of taking non-compliant actions.[57]

Finally, Article XI NPT is informative and contains no obligations for the States. This Article explains that authentic translated copies of the NPT will be 'in the archives of the Depositary Governments' and transferred to the Governments of the parties of the Treaty.

4.3.4 Compliance, Non-compliance and Enforcement

A working definition of compliance comes from Merriam-Webster: 'a. the act or process of complying to a desire, demand, proposal, or regimen or to coercion b. conformity in fulfilling official requirements'.[58] Every treaty includes official requirements to which the Parties to the Treaty are committing themselves. Assessing a State's compliance is intended to be a measurement of the level of compliance. In other words, States meet these obligations completely, partially or not at all.

In theory, compliance should be simple to assess. Either a State is meeting its obligations or it is not…or so one would think. As with so many things in life, there is a grey area. A State that has not been found in non-compliance may not

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[54] International Atomic Energy Agency, 'IAEA & DPRK', http://www.iaea.org/newscenter/focus/iaeadprk/fact_sheet_may2003.shtml.

[55] United Nations, 'Extension of the Treaty on the Non-Proliferation of Nuclear Weapons', in *Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons* (New York, NY: United Nations 1995).

[56] Reed and Stillman 2009, p. 145.

[57] Axelrod 1984.

[58] Merriam-Webster, 'Compliance', Merriam-Webster Online Dictionary, http://www.merriam-webster.com/dictionary/compliance.

necessarily be in compliance. It is precisely this grey area that causes international controversy and creates political issues.

There is no formal mechanism to assess compliance with the NPT. Compliance with NPT Safeguards is assessed by the IAEA. A State in non-compliance will likely not readily reveal itself. A violator may attempt to hide details of its transgressions. Not every violation is as blatant as those that make it into the news. Furthermore, anomalies can exist which raise questions about the compliance of a state. In some cases, these anomalies can be resolved quickly, such as by the IAEA conducting an inventory of verification or a State providing more information. In other cases, these anomalies become part of the path to a non-compliance finding, such as with Iraq in 1991, Iran in 2005 and Syria in 2011.[59]

A State is in compliance with its safeguards obligations as long as it is not found non-compliance according to the IAEA Board of Governors based on information submitted by the IAEA Secretariat. There are, of course, politics involved in the Board of Governors' decisions so bias is not completely eliminated.

Non-compliance is occasionally easy to determine: a failure to comply with obligations is a failure to comply. But, as stated above, an apparent lack of compliance is not necessarily non-compliance. For the purposes of this chapter, non-compliance is technically defined as behaviour of a State that has been found in non-compliance by the IAEA Board of Governors. It is not an uncomplicated process for the IAEA Board of Governors to determine and report a non-compliance finding.

Anyone can determine non-compliance for themselves; States are frequently crucified in the media by flippant commentators. However, the IAEA has access to and requires facts (facts often disputed by the country being investigated), and then, the agency requires a drawn out period of debate and votes on various related resolutions. Until fairly recently, the IAEA Board of Governors had always followed the *Spirit of Vienna* for big decisions, such as non-compliance findings.

The 'Spirit of Vienna' refers to the cooperative working environment at the IAEA that focuses on the technical issues rather than be distracted with politics, especially in the first two decades of the Agency's history.[60] A former US ambassador to the IAEA has pointed out that the Spirit of Vienna has been undermined by recent non-compliance finding votes in which divisive politics have played a larger role than science.[61] While the IAEA non-compliance findings may increasingly reflect politics, it is a reasonable measure of compliance.

A formal finding of non-compliance is a political decision among states and therefore is sometimes debatable. It is important to note that the IAEA can find states in violation of Safeguards Agreements (INFCIRC/153) but not in non-compliance of the NPT. The IAEA's purpose is to assess only Article III of the NPT via safeguards not the entire treaty. While non-compliance with the IAEA, and

[59] International Atomic Energy Agency, 'Implementation of the NPT Safeguards Agreement in the Syrian Arab Republic: Resolution Adopted by the Board of Governors on 9 June 2011', in GOV/2011/41, 2011.

[60] Fischer 1997, p. 21.

[61] Schulte 2010.

therefore Article III of the NPT, is likely to mean non-compliance with the NPT, this is not an automatic guarantee. Former Director Pierre Goldschmidt of the Department of Safeguards at the IAEA, has cautioned that 'the fact that there is no official definition of what constitutes non-compliance should not be used as an excuse by the secretariat for not reporting promptly, fully, and factually any significant or intentional failure or breach of safeguards undertaking.'[62]

If the IEA Secretariat detects a possible violation or possible non-compliance, the IAEA Director General has the obligation to submit a report to the Board of Governors. The matter is pursued between the State and the Secretariat and the Board is kept informed about progress in resolving outstanding issues. Updates can also be provided in the annual Safeguards Implementation Report. The Board is the final authority in making a finding of non-compliance and the decision to report the non-compliance to the Security Council in accordance with the IAEA Statute. The Board of Governors is composed of 35 member States.[63] According to Article X11.C of the IAEA Statute, 'the Board shall report the non-compliance to all members and to the Security Council and General Assembly of the United Nations'. There is no definition of non-compliance to guide the Board's decision; however, as Peter Jenkins suggests, the previous decisions can be considered as a kind of case law.[64]

Jenkins found that 'whether the Security Council needs to be informed of a case has been the prime consideration' in deciding whether a State is in non-compliance. The underlying fact is that Article III.B.4 of the IAEA Statute says the Security Council should be informed when matters concern 'international peace and security'.[65] Pursuant to Article XII.C the Board 'shall report the non-compliance to all members and to the Security Council and General Assembly of the United Nations'. The Board has the obligation to report any and all findings of non-compliance, however, in practice the Board may report to the Security Council 'for information only' (i.e. requiring no further action) or for the Council to take further action. The Board of Governors considers the nature of the violation and non-compliance in terms of the obligations of the safeguards agreement, such as diversion of nuclear material from peaceful to nuclear weapon related activities and/or use of nuclear material forf nuclear weapons purposes.

The Board of Governors has found six of the eight States brought before it to be in non-compliance. The non-compliant States are Iraq in 1991, Romania in 1992, Libya in 2004, Iran in 2005, Syria in 2011, and North Korea, which was found in non-compliance in 1993, in 1994, and again in 2003. Egypt and South Korea were discussed by the Board of Governors but not found in non-compliance.

Under Article III NPT, States are required to begin negotiating a Safeguards Agreement with the IAEA within 180 days of entering the NPT into force and

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62 Goldschmidt 2010.

63 International Atomic Energy Agency, 'IAEA Board of Governors', http://iaea.org/About/Policy/Board/.

64 Jenkins 2010.

65 Statute of the International Atomic Energy Agency (IAEA Statute), last amended 1999, http://www.nuclearfiles.org/menu/library/treaties/atomic-energy-act/trty_atomic-energy-statute.htm.

bring the resulting Safeguards Agreement into force within 18 months of beginning the negotiations.[66] There are currently 12 States not in compliance with this provision of the NPT.[67] These States have not been formally found in non-compliance and reported to the UN Security Council, most likely because they are not seen as a threat to international security.[68] There is currently a push within the IAEA to encourage these States to conclude their agreements with the IAEA. The IAEA has limited resources and given the lack of nuclear capabilities in these States (which all have bigger concerns than expending their resources on concluding these agreements) there has not been a strong effort to complete the agreements.

In addition to the cases of non-compliance above, there is the possibility that States can be in non-compliance with Article VI. Under Article VI, nuclear-weapon States that are party to the NPT agree to 'pursue negotiations in good faith' to disarm.[69] There has been progress in arms control and disarmament, but some States have long argued that the nuclear-weapon States are in non-compliance by their failure to negotiate 'in good faith' towards the total elimination of nuclear weapons.[70]

4.3.5 Possible Vulnerabilities

As David Albright states, 'our security should rest on the first lines of defence, such as institutionalised approaches like the Nuclear NonProliferation Treaty'.[71] Sadly, this is not a perfect system and sometimes the first line of defence is not enough. The world has had to rely on last line of defence measures several times. An example of the last line of defence would include the Proliferation Security Initiative seizure of the *BBC China*'s cargo in the *Khan/Libya* case.[72] Another could arguably be the alleged justification of the 2003 Iraq war. This preventive war Waheguru Pal Singh Sidhu of the Geneva Centre for Security Policy in Switzerland calls 'the first (and last) nonproliferation war'.[73] The NPT does have weaknesses but is clearly a desired choice compared to expensive and possibly risky actions.

According to Sidhu, the NPT has been more effective at preventing proliferation to new states than it has been effective in international disarmament.[74] He points to the fact that only four new States have allegedly joined the nuclear weapons club (and

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66 Article III NPT.

67 International Atomic Energy Agency, 'Status List,' http://www.iaea.org/OurWork/SV/Safeguards/documents/sir_table.pdf.

68 IAEA Statute.

69 Article VI NPT.

70 Nye 1985.

71 Albright 2010, p. 245.

72 Frantz and Collins, pp. 309–310.

73 Sidhu 2012, p. 425.

74 Sidhu 2012, p. 410.

several were never signatories of the NPT). As further evidence, he points out that four States (Kazakhstan, Belarus, Ukraine, and South Africa) willingly disarmed in the post-Cold War period. Argentina and Brazil had acquired the nuclear know-how for the fuel cycle, but abandoned any nuclear weapons programmes before becoming Parties to the NPT. Of course, this is all debatable as correlation is not causation. Sidhu's second point, that disarmament has been less effective, is also debatable. As mentioned, four States did disarm. Furthermore, the Russians and Americans have made drastic reductions to their stockpiles.

A more recent international concern is the treaty's inability to address the individual proliferators in the world. The treaty, of course, deals with State-to-State proliferation, and there is no easy way to address the non-State actors of the proliferation underworld. Examples include the Swiss family, the Tinners, who were involved in Dr. A. Q. Khan's proliferation network (Khan himself may or may not have been a non-state actor).[75] Al Qaeda's past attempts at obtaining nuclear weapons is another example of non-state actors causing intense concern not just for the nonproliferation regime but the world in general.[76] New international laws have been passed to address this loophole. The most relevant is the UN Security Council Resolution 1540. This resolution mandates that states not assist non-state actors with any type of weapon of mass destruction and that states pass domestic laws making it illegal for individuals to be involved in proliferation of weapons of mass destruction (of which nuclear weapons most definitely count).[77] This resolution was passed under Article VII and therefore binding on all United Nations members.[78]

The handful of states that remain outside the Treaty is a perceived weakness and even a failure by some. These States are known as INFCIRC/66 States and include, most critically: India, Pakistan and Israel.[79] This means that the States′ are not party to the NPT and that they have entered into a Safeguards Agreement with the IAEA that is modelled after Information Circular 66 Revision 2 of the IAEA (also known as INFCIRC/66/Rev.2). Almost all of the other States′ Safeguards Agreements are modelled after the newer model agreement under INFCIRC/153, not the older INFCIRC/66.[80] INFCIRC/66/Rev.2 is a voluntary agreement under which States place non-military facilities, which they choose, under safeguards. This includes certain nuclear materials, reactors, reprocessing, fuel fabrication, and other fuel cycle facilities.[81] But there were no enrichment plants outside the NPT recognized nuclear-weapon States at the time the INFCIRC was developed and revised.[82]

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75 Salama and Hansell 2005.

76 Albright 2010, p. 181.

77 Security Council Resolution 1540 (April 28, 2004).

78 United Nations, '1540 Committee', http://www.un.org/sc/1540/.

79 International Atomic Energy Agency, 'Status List'.

80 Ibid.

81 International Atomic Energy Agency, 'The Agency's Safeguards System', in *Informational Circular 66 Rev.2* (1968).

82 Boureston and Ferguson 2005.

The safeguards measures under INFCIRC/66/Rev.2 are more comprehensive but are limited to specifically identified material and facilities.[83] States can be found in non-compliance by the IAEA under INFCIRC/66/Rev.2, which may result in a suspension of IAEA membership benefits and a reporting to the UN Security Council.[84] This is not a non-compliance with the IAE agreement, not necessarily a non-compliance with the NPT.

A final and related perceived weakness is the inability for these INFCIRC/66 States to join the NPT without giving up their nuclear weapons. As already covered, the NPT defines nuclear-weapon States as those that have tested a nuclear device before 1 January 1967.[85] Of course, because these States possess nuclear weapons they cannot join as nonnuclear-weapon States. They are in nuclear weapon purgatory and will remain forever outside the NPT, unless they follow South Africa's example of giving up their programmes and dismantling their weapons.

4.4 Conclusions

The nonproliferation regime is the convergence of expectations based on shared principles and rules. This convergence includes a variety of States, organisations, and international agreements. The nonproliferation regime is necessary because decades after the first nuclear weapon was used, States still seek to acquire them. Within the regime, the NPT and the IAEA safeguards requirement under Article III NPT help provide the international community peace of mind against the spread of nuclear weapons.

As mentioned above, Sidhu credits the NPT for being 'more successful in preventing new states from acquiring nuclear weapons than it has been in either slowing down or disarming states that already possess nuclear weapons'.[86] However you interpret the evidence, there are fewer nuclear weapons possessing States today than famously predicted by President Kennedy prior to the creation of the NPT.[87] Perhaps, this is because treaties do have an impact on State behaviour.

'Treaties raise the costs of non-compliance when the international legal system is used to authenticate' a concern.[88] We can see this in nonproliferation and the NPT. The spread of nuclear weapons is a common concern, and yet, new nuclear weapons are still being designed and built around the world. Perhaps this is

[83] Bunn 2004.

[84] International Atomic Energy Agency, 'The Agency's Safeguards System'.

[85] Article IX (3) NPT.

[86] Sidhu 2012, p. 410.

[87] Kennedy, John F, 'Commencement Address at American University, June 10, 1963', paper presented at the American University Spring Commencement, Washington, DC, 1963.

[88] Simmons 2009, p. 130.

because, as States like Pakistan and India have learned, by staying outside the treaty, a State faces less punishment for breaking an international norm as it has not been authenticated for that particular State. Syria and other non-compliant States have faced arguably more severe and long-term punishments for their non-compliance behaviours because they were a Party to the treaty that had laid out specific obligations and expectations.

Much like the law enforcement community's game of cat and mouse with criminal elements, the international community has a game of cat and mouse with proliferators. As proliferators find new pathways to nuclear weapons, the international community responds with a new legal agreement. While the focus of this study is the NPT, other legal instruments (such as UN Security Council Resolutions and domestic export controls) have supplemented its provisions as new methodologies of proliferation were revealed.

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Chapter 5
Civilian Casualties and Nuclear Weapons: The Application of the Rule of Distinction

Susan Breau

Abstract This chapter considers the possible use in armed conflict of low-yield (also known as tactical) nuclear weapons. The *Legality of the Threat or Use of Nuclear Weapons* Advisory Opinion maintained that it is a cardinal principle that a State must never make civilians an object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets. As international humanitarian law applies equally to any use of nuclear weapons, it is argued that there is no use of nuclear weapons that could spare civilian casualties particularly if you view the long-term health and environmental effects of the use of such weaponry.

Contents

5.1 Introduction

No one can ignore the disturbing images of the casualties of the nuclear weapons attacks on Hiroshima and Nagasaki. Hiroshima on 6 and Nagasaki on 9 August 1945 are the only times in history nuclear weapons have been employed in armed

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conflict. The bombings resulted in horrific burns, radiation sickness, birth defects and occasioned cancer deaths many years after the event. One of the major international law arguments against the use of nuclear weapons in armed conflict is that this type of weapon cannot be used in a manner that distinguishes between civilians and combatants. The *Legality of the Threat or Use of Nuclear Weapons* Advisory Opinion (hereafter *Nuclear Weapons* Advisory Opinion) holds that it is a cardinal principle that a State must never make civilians an object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets.[1] The law of armed conflict known as international humanitarian law applies equally to the use of nuclear weapons.[2] Judge Weeramantry stated in his dissent for the *Nuclear Weapons* Advisory Opinion that 'it is by turning the spotlight on the agonies of the battlefield that modern humanitarian law began'.[3] He states in stark terms the argument that is considered here—that nuclear weapons increase the savagery of battle 'a thousandfold'.[4]

However, a counterargument must be considered that it would be possible to use battlefield nuclear weapons that only target military personnel and equipment, and thus, this use would not violate the rule of distinction in international humanitarian law.[5] These weapons are known as 'tactical nuclear weapons' or 'low-yield battlefield nuclear weapons'.[6] These 'low-yield' nuclear weapons were defined before the International Court of Justice from the US Joint Chiefs of Staff's manual *Doctrine for Joint Theater Nuclear Operations*: as very low (<1 kt); low (1 to 10 kt); medium (over 10 to 50 kt); high (over 50 to 500 kt); and very high (over 500 kt).[7] The United Kingdom made the following argument with respect to these types of weapons in their statement to the International Court of Justice in the *Nuclear Weapons* Advisory Opinion:

> The reality . . . is that nuclear weapons might be used in a wide variety of circumstances with very different results in terms of likely civilian casualties. In some cases, such as the use of a low yield nuclear weapon against warships on the High Seas or troops in sparsely populated areas, it is possible to envisage a nuclear attack which caused comparatively few civilian casualties. It is by no means the case that every use of nuclear weapons against a military objective would inevitably cause very great collateral civilian casualties.[8]

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[1] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, [1996] *ICJ Reports* 226, para 78.

[2] Ibid.

[3] Ibid, Dissenting Opinion of Judge Weeramantry, starting at p. 429, at 444.

[4] Ibid, p. 446.

[5] Written statement of the Government of the United Kingdom, http://www.icj-cij.org/docket/files/95/8802.pdf, p. 53, para 3.70.

[6] van Herpen 2011, p. 10.

[7] http://www.fas.org/nuke/guide/usa/doctrine/dod/jp3_12_1.pdf, p. GL-3, accessed 15 September 2012.

[8] Written statement of the Government of the United Kingdom, ibid.

The majority of the Court refused to rule on this issue stating:

> The Court would observe that none of the States advocating the legality of the use of nuclear weapons under certain circumstances, including the "clean" use of smaller, low yield, tactical nuclear weapons, has indicated what, supposing such limited use were feasible, would be the precise circumstances justifying such use; nor whether such limited use would not tend to escalate into the all-out use of high-yield nuclear weapons. This being so, the Court does not consider that it has a sufficient basis for a determination on the validity of this view.[9]

This issue is very much still on the international agenda as in May 2011 it was announced that Pakistan had tested a missile able to carry short-range low-yield tactical nuclear weapons. Experts argued that this meant that Pakistan intended to use battlefield nuclear weapons in the event of an armed conflict with India.[10]

The purpose of this contribution is to assess the above argument that the discriminatory use of low-yield tactical nuclear weapons is not against the rule of distinction in international humanitarian law. A blanket statement that nuclear weapons cannot distinguish between civilians and combatants seems questionable in the face of that argument. The issue of the rule of distinction and nuclear weapons has to be limited to this issue as it seems evident that the use of weapons far more powerful than Hiroshima and Nagasaki by their very nature clearly runs afoul of the cardinal rules of international humanitarian law. However, it is the opinion of this writer that the view that using clean, smaller, low-yield tactical weapons do not offend these rules is an impossibility not only because of the possibility of escalation of the conflict to full-scale nuclear warfare but because of the very nature of these weapons. The prevailing scientific opinion seems to be that such a 'clean' weapon is not viable, as it will not penetrate deep enough to avoid a nuclear explosion.[11] Furthermore, the rule of distinction has to include consideration of future, not just immediate, consequences for a civilian population. One of the difficulties involved is the temporal nature of the rule of distinction that fails to take into account the future use of the battle space. It is argued here that any use of nuclear weapons has to take into account the risk to future civilians who might be subjected to the catastrophic environmental and health results of any use of nuclear-arised weaponry. The rule of distinction cannot be limited to the immediate effects but commanders have to consider the foreseeable results of their attacks.

Section 5.1 will trace the development of the debate concerning tactical nuclear weapons in the context of use and disarmament. Section 5.2 will discuss of the rule of distinction and place the rule in the context of the possible use of nuclear weapons. Reference will be made to the robust debate that took place in the dissenting and separate opinions of the Judges in the *Nuclear Weapons* Advisory Opinion. Section 5.3 discusses the law with relation to low-yield nuclear

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[9] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, para 94.

[10] Reuters, 'Pakistan builds law yield nuclear capability', 15 May 2011, www.Dawn.com, accessed 26 June 2012.

[11] Levi 2004, p. 892.

weaponry. Section 5.4 examines two similar debates that have taken place with respect to nuclear testing in South Australia and the use of depleted uranium in weaponry in modern conflicts.

Although not as widely discussed, tactical nuclear weapons have been part of nuclear arsenals almost as long as strategic nuclear weapons. The United States was the first to invent them in the early 1950s, but the Soviet Union soon followed suit and there began a tactical arms race.[12] The purpose of the development from the standpoint of the West was due to the fact that the conventional armies of the Warsaw Pact outnumbered the conventional forces of NATO and these weapons were to be used in Europe by Western forces to compensate for the numerical inferiority.[13] They were evidently never used, as the troops of the Warsaw Pact never invaded Western Europe. At the peak of the Cold War, it was reported that there were more than 7,000 and as many as 24 different types of tactical weapons deployed by the United States throughout the NATO powers in Europe.[14]

After the end of the Cold War in 1991, both the United States and the Soviet Union announced that they would withdraw from deployment and eliminate from their arsenals many of their tactical nuclear weapons.[15] In 1997, President Clinton and President Yeltsin signed a framework agreement that promised measures related to non-strategic nuclear weapons in a potential Strategic Arms Reduction Treaty (START III).[16] This did not take place and the Bush administration did not discuss these types of weapons during arms control negotiations in 2002. During the Bush administration, officials argued the US should develop and deploy not only low-yield mini-nukes but higher yield bunker busters. The purpose of these weapons was for use in conflicts with Third World countries or for attacks on terrorist groups.[17] The Strategic Offensive Reductions Treaty (SORT) signed in June 2002 only dealt again with deployed warheads on strategic weapons and not tactical nuclear weapons.[18] Nevertheless, it is reported that the United States during this time substantially reduced these weapons and that at the present time in Europe there are only 500 of these weapons.[19]

This is not the case with Russia. Although estimates range between 2,000 and 5,000 (albeit with many in storage), it is the case that the Russians have many

[12] van Herpen, p. 10.

[13] Ibid.

[14] See the Bulletin of the Atomic Scientists, http://www.thebulletin.org/web-edition/op-eds/open-secret.

[15] Woolf 2012, p. 1.

[16] Ibid, p. 2.

[17] Barnaby and Mendelsohn 2003, p. 1.

[18] Ibid, p. 3.

[19] See the Bulletin of the Atomic Scientists, http://www.thebulletin.org/web-edition/op-eds/open-secret.

more tactical nuclear weapons.[20] The reason for this is that Vladimir Putin, before he became Russian President, was instrumental in developing policy for the use of low-yield nuclear weapons due to the now inferiority in the Russian conventional army position.[21] The Russians were now confronted with an expanding NATO that included many former Warsaw Pact states.[22] As Van Herpen argues:

> Not only would this mean that Russian military strategy had taken a U-turn by putting a new emphasis on tactical nuclear weapons, but by introducing these low-yield weapons on such a massive scale, it would trivialise these weapons and make their use in an early phase of a conventional conflict more probable.[23]

This situation has not changed with a new administration in the United States, and it certainly remains the strategy of President Putin. Barack Obama in his April 2009 speech in Prague called for reducing the number and role of nuclear weapons.[24] A year later in April 2010 the Department of Defence released its Nuclear Posture Review Report which contained a section on non-strategic nuclear weapons. It reported that the United States keeps 'only a limited number of forward deployed nuclear weapons in Europe, plus a small number stored in the United States'.[25] The report also stated that the Russians 'maintain a much larger force of non-strategic nuclear weapons, a significant number of which are deployed near the territories of several North Atlantic Treaty Organization (NATO) countries'.[26] The report argued that these weapons should also be included in any future reduction arrangements. Importantly, the report announced the elimination of nuclear-equipped sea-launched cruise missiles.[27] Yet once again, the 2010, The United States–Russian Strategic Armed Reduction Treaty (New START) did not impose any limits on non-strategic, or shorter range nuclear weapons.[28] However, in his speech while signing the treaty, Obama stated that the treaty would set the stage for further cuts including both strategic and tactical weapons.[29] These negotiations have not yet begun and these weapons remain to this day in the arsenal of both powers and worryingly are also being developed by other nuclear powers. India is estimated to have between 60 and 70 tactical nuclear weapons and Pakistan is estimated to possess 60.[30] Although they deny the fact, it is thought that Israel may also possess these weapons.[31]

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[20] van Herpen 2011 and http://www.voanews.com/content/us-russian-short-range-nuclear-weapons-could-be-on-negotiating-table-146122895/180339.html.

[21] van Herpen 2011, p. 11.

[22] Ibid, p. 10.

[23] Ibid, p. 12.

[24] Pifer 2012, p. 414.

[25] *Nuclear Posture Review Report,* Department of Defense, Washington, April 2011, p. 27.

[26] Ibid.

[27] Ibid, p. 28.

[28] Woolf 2012, p. 1.

[29] Pifer 2012, p. 414.

[30] Baylor 2011, p. 57.

[31] Ibid, p. 57 and http://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat accessed 15 September 2013.

The current situation then is that tactical nuclear weapons are still very much part of nuclear arsenals of all nuclear powers and they have not yet begun to reduce their stockpiles in spite of promises to do so. The arguments made about these weapons in the *Nuclear Weapons* Advisory Opinion in 1996 still have currency today and, as the court did not rule on this issue, a debate must take place about their possible use and whether that use would accord with the rules of international humanitarian law.

5.2 The Rule of Distinction

Even though the battles of the Second World War were characterised by the targeting of civilians culminating in the use of nuclear weapons in Japan, the rule of distinction between civilians and combatants dates to the mid-nineteenth century. The Lieber Code in 1863 governing the conduct of the Union Army in the American Civil War contained this statement:

> Article 22. Nevertheless, as civilization has advanced during the last centuries, so has likewise steadily advanced, especially in war on land, the distinction between the private individual belonging to a hostile country and the hostile country itself, with its men in arms. The principle has been more and more acknowledged that the unarmed citizen is to be spared in person, property, and honor as much as the exigencies of war will admit.[32]

Five years later, the next statement of the principle of distinction was in the St. Petersburg declaration of 1868 which states that 'the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy'.[33] It also importantly stated that 'this object would be exceeded by employment of arms which uselessly aggravates the suffering of disabled men, or render their death inevitable'.[34] The importance of this declaration to international humanitarian law was discussed in *Ryuichi Shimoda* et al. *versus The State (1963),* an action brought by survivors of the Hiroshima and Nagasaki bombings and resulted in a finding by a Tokyo court that as at the time of the bombings the nuclear attacks were unlawful as they violated the rule of distinction.[35] The court stated:

> International law of war is not formulated simply on the basis of humanitarian feelings. It has as its basis both considerations of military necessity and effectiveness and humanitarian considerations, and is formulated on a balance of these two factors. To illustrate this, an example often cited in the textbooks may be given, of the provisions of the St. Petersburg Declaration of 1868 prohibiting the use of projectiles under 400 grammes

[32] General Orders No. 100, Instructions for the Government of Armies of the United States in the Field, Prepared by Francis Lieber, Promulgated by President Lincoln, 24 April 1863.

[33] Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight, St. Petersburg, November 29 / December 11, 1868.

[34] Ibid.

[35] *Ryuichi Shimoda,* et al. *versus The State*, Tokyo District Court, 7 December 1963, Japanese Annual of International Law, No. 8 (1964), p. 212.

> which are either explosive or charged with combustible or inflammable substances. The reason for the prohibition is explained as follows: such projectiles are small and just powerful enough to kill or wound only one man, and as an ordinary bullet will do for this purpose, there is no overriding need for using these inhuman weapons. On the other hand, the use of a certain weapon, great as its inhuman result may be, need not be prohibited by international law if it has a great military effect.[36]

The Hague Conventions of 1899 and 1907 relative to the laws and customs of war did not specifically mention the rule of distinction but importantly declared that there was a prohibition against 'the attack or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended'.[37] Also importantly the Regulations attached to the 1899 and 1907 Convention specified:

> Article 22. The right of belligerents to adopt means of injuring the enemy is not unlimited.
> Article 23. In addition to the prohibitions provided by special Conventions, it is especially forbidden;
> (a) To employ poison or poisoned weapons; ….
> (e) To employ arms, projectiles, or material calculated to cause unnecessary suffering; …[38]

Further efforts were made prior to the Second World War to refine these concepts. In 1923, a group of experts drafted what were called the Hague Rules on Aerial Warfare.[39] The critical section related to aerial bombardment and states that 'aerial bombardment to terrorise the civilian population, or to destroy or damage private property, is prohibited'. Military objectives were defined as objects 'of which the destruction or injury would constitute a distinct military advantage to the belligerent'.[40] These rules were not accepted by the international community at the time but they are now regarded as 'an authoritative attempt to clarify and formulate rules of law governing the use of aircrafts in war and a convenient starting point for any future steps in this direction'.[41]

As a result of three separate incidents, the Italian invasion of Ethiopia, the German intervention in the Spanish civil war and the Japanese invasion of China, in 1938, the League of Nations unanimously adopted a resolution that recognised three principles of international law applicable to air warfare. It was argued that they were inspired by the Hague Rules.[42] These were that: (1) direct attacks against the civilian population are unlawful; (2) targets for air bombardment must

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[36] Ibid.

[37] Hague Convention II Laws and Customs of War on Land, Hague 29 July 1899 and Convention IV Respecting the Laws and Customs of War and its Annex: Regulations Concerning the Laws and Customs of War on Land, The Hague (1910) UKTS 10.

[38] Ibid.

[39] Rules concerning the Control of Wireless Telegraphy in Time of War and Air Warfare, drafted by a Commission of Jurists at The Hague, December 1922–February 1923, never adopted [hereinafter 1923 Hague Rules], reprinted in Roberts and Guelff 2000, at p. 139.

[40] Ibid, Article 24(1).

[41] Robertson 1998, p. 197.

[42] Boivin 2006, p. 9.

be legitimate, identifiable military objectives; and (3) reasonable care must be taken in attacking military objectives to avoid bombardment of a civilian population in the neighbourhood.[43] Notwithstanding this brave declaration, all of the warring parties in the Second World War disregarded these principles.

The development of what was called 'Hague Law' suffered a setback in the post-war negotiations for a comprehensive convention on the law of armed conflict. Boivin argues that nuclear weapons created a 'massive political obstacle to dealing with rules governing the conduct of hostilities at the 1949 Diplomatic Conference'.[44] As the nuclear powers were determined to not allow a ban on nuclear weapons, it has been reported that the Conference 'had to abandon its attempt to deal seriously with the rules on the conduct of hostilities, in particular air raids, as it was difficult to see how this could be done without broaching the issue of nuclear weapons'.[45] Therefore, the Geneva Conventions only contained provisions dealing with protections of specific objects such as hospitals, ambulances and safety zones.[46]

The codification of the principle of distinction did not take place until Additional Protocol I to the Geneva Conventions of 1977, a treaty which is not universally ratified. The negotiations for this Convention began in 1974 against the backdrop over the concern about the indiscriminate bombing that had taken place in Vietnam particularly with napalm. Importantly, the parties to the negotiating conference had major issues with respect to the issue of nuclear weapons with the nuclear weapons States particularly wanting to ensure that none of these provisions applied to nuclear weapons. They were not successful in that approach but Kalshoven summarises the understanding that emerged,

> Additional Protocol I does not purport to prohibit the use of nuclear weapons, and neither does it lay down any further restrictions on such use than already result from pre-existent rules and principles of the law of armed conflict (and which were reaffirmed in the Protocol). Without any attempt at completeness, the following items may be listed among the "new law" which on account of its novelty remains inapplicable to the use of nuclear weapons: the "ecological principle" … which protects the natural environment from "widespread, long-term and severe damage"; the sophisticated rules in Article 57 of the Protocol, elaborating the customary principle of proportionality in the protection of the civilian population; and last but not least, the prohibition of reprisals against the civilian population and civilian objects, as now laid down in various paragraphs of Articles 51 to 56 of the Protocol.[47]

This did not include the pre-existing rules that were now codified, particularly the rule of distinction. The main rule is set out Article 48 which states:

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[43] Roberts and Guelff 2000, at p. 140.

[44] Boivin 2006, p. 10.

[45] Sandoz 2001, pp. 115–116.

[46] Geneva Convention IV Relative to the Protection of Civilian Persons in Time of War, 12 August 1949, 75 *UNTS* 287, Articles 14, 15, 18, 19, 21–23.

[47] As cited in the written statement of the Government of the United Kingdom, above, n 5, at para 3.52.

> In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.[48]

The official commentary to this article indicates that this article is 'the foundation on which the codification of the laws and customs of war rests'. The primary purpose is the respect and protection of the civilian population and civilian objects. This system was established in the Hague in 1899 and 1907 and in Geneva from 1864 to 1977 and is argued to be 'founded on this rule of customary law'.[49] Therefore, the argument is that this provision is merely a codification of customary international law.

It is Article 51, however, that provides true specificity to the rule, and thus, it resonates in the debate concerning nuclear weapons. Due to its importance, the relevant sections are set out in full:

> Article 51—Protection of the civilian population
> 1. The civilian population and individual civilians shall enjoy general protection against dangers arising from military operations. To give effect to this protection, the following rules, which are additional to other applicable rules of international law, shall be observed in all circumstances.
> 2. The civilian population as such, as well as individual civilians, shall not be the object of attack. Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited.
> …
> 4. Indiscriminate attacks are prohibited. Indiscriminate attacks are:
>
> (a) those which are not directed at a specific military objective;
> (b) those which employ a method or means of combat which cannot be directed at a specific military objective; or
> (c) those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol;
>
> and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.
> 5. Among others, the following types of attacks are to be considered as indiscriminate:
> (a) an attack by bombardment by any methods or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects;
> and
> (b) an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.
> 6. Attacks against the civilian population or civilians by way of reprisals are prohibited…[50]

These rules codify the critical elements of the rule of distinction and attacks and most particularly Sects. 2, 4, 5 and 6 have direct relevance to the use of nuclear weapons. It can be argued that use of nuclear weapons in armed conflict are the

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[48] Protocol I Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of International Armed Conflicts, 8 August 1977, 1125 *UNTS* 3.

[49] Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, http://www.icrc.org/ihl.nsf/WebList?ReadForm&id=470&t=com.

[50] Protocol I Additional to the Geneva Conventions of 12 August 1949, above, n. 48.

types of attacks that: (a) cannot discriminate between civilian and military objectives because of the nature of the weapon and (b) bombardment which cannot discriminate because of the extent of the effects of nuclear weapons and (c) the use of nuclear weapons could constitute attacks by way of reprisals. The official commentary argues that this is one of the most important articles in the Convention and that it 'explicitly confirms the customary rule that innocent civilians must be kept outside hostilities as far as possible and enjoy general protection against danger arising from hostilities'.[51] Once again there is a view put forward by the commentary that this article is already the codification of custom.[52]

Article 51(2) prohibits acts or threats of violence the primary purpose of which is to spread terror among the population. The official commentary on this provision acknowledges that acts of violence related to a state of war almost always give rise to some degree of terror. However, this provision is intended to prohibit acts of violence where the primary purpose is to spread terror among the civilian population without offering significant military advantage.[53] The commentary specifically notes the prohibition against threatening such an act. Surely threats of nuclear annihilation fall within this category.

The official commentaries regarding Article 51(4) are also very pertinent this debate. The first comment on this article argues the importance of the provision confirming the unlawful character of 'certain regrettable practices' during the Second World War and subsequent conflicts where the purpose of the attack was 'to destroy all life in a particular area or to raze a to the ground' without any 'substantial military advantages'.[54] The commentary with respect to 51(4)(b) is relevant as it states this section refers to weapons such as 'long-range missiles which cannot be aimed exactly at the objective'.[55] It gives the example of the V2 rockets at the end of the Second World War as an example as they often did not strike the intended target.[56] This argument runs perilously close to nuclear weapons.

Again the commentary with respect to Article 51(4)(c) is also relevant to our discussion here. The commentators indicate that there are some means of warfare of which the effects cannot be limited in any circumstances. An example given is of a 10-tonne bomb used to destroy a single building. In that case, it is argued that it is inevitable that the effects will be very extensive and 'will annihilate or damage neighbouring buildings'. Other examples are methods, which by their very nature have an indiscriminate character such as poisoning wells and bacteriological warfare.[57] States made statements that the provision does not mean that there are means of combat of

[51] Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, n. 47 above.

[52] Ibid.

[53] Ibid.

[54] Ibid.

[55] Ibid.

[56] Ibid.

[57] Ibid.

which the use would constitute an indiscriminate attack in all circumstances. The commentary pointed out that the states making these statements were 'concerned with nuclear weapons'. However, it can be argued that it is evident that tactical nuclear weapons can be both destructive and have the poisoning the wells type of effect.

Although Article 51(5)(a) on the prohibition against comprehensive bombardment known in jargon as carpet bombing may be relevant to the consideration of the use of nuclear weapons, generally it does not appear relevant to the argument of battlefield nuclear weapons directed against a singular military objective. However, the second part of that provision 51(5)(b) is very relevant as it is the prohibition against attacks, which have excessive effects in relation to the concrete and direct military advantage anticipated. The commentary to this provision clarifies that an attack must be directed against a military objective with means that are not disproportionate to the objective but are suited to destroying only that objective. This is an effort to limit the effects of the attack as 'incidental civilian losses and damages must not be excessive'.[58] One can argue by implication that a conventional attack would be less likely to cause this type of excessive damage.

These provisions seem to resolve many of the issues here, but unlike the four Geneva Conventions of 1949, there is not universal acceptance of the Additional Protocols of 1977. States, having or alleged to have nuclear weapons, such as the United States, India, Pakistan and Israel, are notable for their lack of accession or ratification of the treaty, and it seems unlikely the United States in particular will ever agree to all of the provisions.[59] Other NATO States specifically exclude nuclear weapons from their ratification of the Protocol. The Declarations made on the ratification of Additional Protocol I by Belgium, Canada, France, Germany, Italy, The Netherlands, Spain, UK and—on signature—by the USA state that the 'new rules introduced by Additional Protocol I' (AP I) were intended to apply to conventional weapons, irrespective of other rules of international law applicable to other types of weapons, with the result that these rules do not 'influence, regulate, or prohibit the use of nuclear weapons'.[60] There seems to be consensus that those 'new rules' include (1) the rules protecting the environment (Article 35, para 3, and Article 55 AP I); (2) the rules elaborating the principle of proportionality in the protection of the civilian population (Articles 57 and 58 AP I); and (3) the prohibition of reprisals against the civilian population and civilian objects (Article 51, para 6; Article 52, para 1; Article 53, lit. c; Article 54, para 4; Article 55, para 2; Article 56, para 4 AP I).[61] The general rules of distinction set out in Article 51(1–5), however, are not part of these new rules, as confirmed in the *Nuclear Weapons Advisory Opinion*.[62] Therefore, only the prohibition against reprisals in Article 51(6) would be excluded.

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[58] Ibid.

[59] For a history of the United States objections see Solis 2010, pp. 121–129.

[60] Roberts and Guelff 2000, pp. 499–512.

[61] Kalshoven 1985, p. 287; Kalshoven and Zegveld 2011, p. 118.

[62] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, [1996] *ICJ Reports* 226, para 78.

Nevertheless, given the controversy regarding the ratification of Additional Protocols I and II, the International Committee of the Red Cross directed that their legal department undertakes a study of the rules of customary humanitarian law, which would be binding on all States.[63] The landmark study was released in 2005 and proposed a series of 161 customary rules.[64] The first part of the rules discussed the rules respecting the distinction between civilians and combatants. It is very important to view these proposed customary rules on the rules of distinction, as they are most relevant to our discussion.

The first rule in the landmark International Committee of the Red Cross Customary Humanitarian Law study states:

> The parties to the conflict must at all times distinguish between civilians and combatants. Attacks may only be directed against combatants. Attacks must not be directed against civilians.[65]

It seems from the discussion of this rule by any number of experts that there is a general acceptance that this rule is customary.[66] In the commentary to the rule, the drafters relied on the statement in the *Nuclear Weapons* Advisory Opinion that the principle of distinction was one of the 'cardinal principles' of international humanitarian law and one of the 'intransgressible principles of international customary law'.[67] American humanitarian law expert Michael Schmitt in his discussion of the rules relevant to targeting argues that Rule 1 'unquestionably represents accepted customary law', and he congratulates the writers of the study for the use of the word 'attacks'; rather than operations as the prior word caused confusion.[68] Rule 2 states that 'Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited'.[69] The commentary to the rule gives examples of the violation of this prohibition, which includes offensive support or strike operations aimed at spreading terror among the civilian population, indiscriminate and widespread shelling and the regular bombardment of cities.[70] The study points to the International Criminal Tribunal for Yugoslavia's Judgment in the *Galić* case in 2003, where the Trial Chamber found the accused guilty of 'acts of violence the primary purpose of which is to spread terror among the civilian population, as set forth in Article 51 of Additional Protocol I, as a violation of the laws or customs of war under Article 3 of the Statute of the Tribunal'.[71]

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63 Henckaerts and Doswald-Beck 2005, Introduction.

64 Ibid.

65 Ibid, Chap. 1.

66 Ibid.

67 Ibid.

68 Schmitt 2007, pp. 136–139.

69 Henckaerts and Doswald-Beck 2005.

70 Ibid.

71 Ibid and ICTY, *Prosecutor v. Stanislav Galić*, Case No. IT-98-29-T, Judgement and Opinion, 5 December 2003, para 769.

The rule of distinction is further refined by Rule 7 in the Customary Study, which states:

> The parties to the conflict must at all times distinguish between civilian objects and military objectives. Attacks may only be directed against military objectives. Attacks must not be directed against civilian objects.[72]

Once again this rule is generally accepted even among non-party States to Additional Protocol I.[73] Schmitt with reference to Rule 7 states that 'it is a cardinal principle of international humanitarian law according to the ICJ and its characterisation as custom cannot be seriously doubted'.[74] The drafters of the commentary make an important clarification to the rule that would apply equally to the provisions of the Additional Protocol. The commentary indicated that several states have made the statements that Article 52(2) of Additional Protocol I provides that 'attacks shall be limited strictly to military objectives' only prohibits direct attacks against civilian objects and does not deal with the question of incidental damage resulting from attacks directed against military objectives.[75] This is often labelled as 'collateral damage'. The commentary agrees with the statement 'that an attack which affects civilian objects is not unlawful as long as it is directed against a military objective and the incidental damage to civilian objects is not excessive'.[76] This statement also points to the debate concerning proportionality, another cardinal principle of international humanitarian law, but one meriting lengthy discussion on its own and will have to be the subject of further analysis.

The customary study also goes further in Rule 11 stating 'Indiscriminate attacks are prohibited'.[77] These are defined in rule 12 as those (a) which are not directed at a specific military objective; (b) which employ a method or means of combat which cannot be directed at a specific military objective; or (c) which employ a method or means of combat the effects of which cannot be limited as required by international humanitarian law.[78] These rules are identical to the important provisions in Article 51(4). Schmitt in his analysis of these two rules states that '[t]here can be no doubt that Rules 11 and 12 reflect the customary textual expressions of that norm'.[79] The commentary to this rule stated that:

> In their pleadings before the International Court of Justice in the *Nuclear Weapons case* and *Nuclear Weapons (WHO) case*, several States invoked the prohibition of indiscriminate attacks in their assessment of whether an attack with nuclear weapons would violate international humanitarian law.[80]

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[72] Henckaerts and Doswald-Beck 2005, Chap. 2.

[73] Ibid.

[74] Schmitt 2007, p. 145.

[75] Henckaerts and Doswald-Beck 2005.

[76] Ibid.

[77] Ibid, Chap. 3.

[78] Ibid.

[79] Schmitt 2007, p. 152.

[80] Ibid.

It is particularly parts b and c of this rule, which is of interest in the use of nuclear weapons. Firstly, the commentary on part b states that '[t]he prohibition of weapons which are by nature indiscriminate, which is applicable in both international and non-international armed conflicts, is based on the definition of indiscriminate attacks contained in Rule 12(b)'. Rule 12(c) is based on the logical argument that means or methods of warfare whose effects cannot be limited as required by international humanitarian law should be prohibited. The commentary argues that '[p]ractice in this respect points to weapons whose effects are uncontrollable in time and space and are likely to strike military objectives and civilians or civilian objects without distinction'.[81] The commentary points to a US Air Force Pamphlet giving the example of biological weapons.[82] It is argued that though 'biological weapons might be directed against military objectives, their very nature means that after being launched their effects escape from the control of the launcher and may strike both combatants and civilians and necessarily create a risk of excessive civilian casualties'.

Surely the same applies to nuclear weapons of whatever variety.

Finally, Rule 13 is relevant stating:

> Attacks by bombardment by any method or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects are prohibited.

This rule based on the provisions in Additional Protocol I 51(5)(a) in direct response to the type of carpet bombing and blitzkrieg that characterised the Second World War and Vietnam. One could also argue that the use of nuclear bombs in Hiroshima and Nagasaki violated this rule as is confirmed in the discussion of bombardment of undefended cities in the *Shimoda* decision.[83] Importantly, support for this rule is evidenced by a statement of the United States at the Diplomatic Conference leading to the adoption of the Additional Protocols that the words 'clearly separated' required a distance 'at least sufficiently large to permit the individual military objectives to be attacked separately'.[84] However, as discussed above, the United States and other NATO powers specifically excluded the use of nuclear weapons, in their statements on signature or ratification of Additional Protocol I, but only with respect to those 'new rules' and not the general rules of distinction which the customary rules also address. Therefore, it can safely be argued that these customary rules also apply to nuclear weapons.

It can be safely concluded then that the rule of distinction is not controversial thus is indeed a cardinal rule of international law. This is specifically supported in Australia in its military manual. Australia's LOAC Manual (2006) which states:

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[81] Ibid.

[82] Ibid.

[83] *Ryuichi Shimoda,* et al. *versus The State*, Tokyo District Court, 7 December 1963, Japanese Annual of International Law, No. 8 (1964), p. 212.

[84] Henckaerts and Doswald-Beck 2005, Chap. 3.

> … LOAC establishes a requirement to distinguish between combatants and civilians, and between military objectives and civilian objects. This requirement imposes obligations on all parties to a conflict to establish and maintain the distinction. An extension of the general rule for the protection given to civilians is that indiscriminate attacks, that is, attacks not directed at military targets but likely to strike at both military and civilian targets without distinction, are forbidden.[85]

The Manual also states that indiscriminate attacks are those, which 'involve use of a weapon that cannot be directed against a specific military objective'. The manual further indicates that acts committed in violation of the provisions are grave breaches of international humanitarian law.[86]

5.3 Low-Yield Battlefield Nuclear Weapons and the Rule of Distinction

The law with respect to whether nuclear weapons are the type of weapons that cannot be directed against a specific military target is not nearly as evident. Although there are treaties on the regulation of nuclear weapons, there is no treaty in existence that outlaws their use. The Convention on Conventional Weapons (CWC) specifically excludes nuclear weapons.[87] The argument of the United Kingdom quoted in the introduction to this piece was that certain uses of nuclear weapons could be in compliance with international humanitarian law, and this was echoed by the written statement of the United States, which said:

> It has been argued that nuclear weapons are unlawful because they cannot be directed at a military objective. This argument ignores the ability of modern delivery system to target specific military objectives with nuclear weapons and the ability of modern weapons designers to tailor the effects of a nuclear weapon to deal with various types of military objectives. Since nuclear weapons can be directed at a military objective, they can be used in a discriminate manner and are not inherently indiscriminate.[88]

Regrettably, the *Nuclear Weapons Advisory Opinion* seems to accept this view and states:

> 95. …as the Court has already indicated, the principles and rules of law applicable in armed conflict – at the heart of which is the overriding consideration of humanity – make the conduct of armed hostilities subject to a number of strict requirements. Thus, methods and means of warfare, which would preclude any distinction between civilian and military

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[85] Australia, Law of Armed Conflict Manual 2006 as quoted in the update on practice at http://www.icrc.org/customary-ihl/eng/docs/home accessed 10 September 2012.

[86] Ibid.

[87] United Nations Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be deemed to be excessively injurious or to have Indiscriminate Effects, Geneva 10 October 1980, 1342 *UKTS* 137.

[88] Written statement of the Government of the United States of America found at http://www.icj-cij.org/docket/files/95/8700.pdf p. 23, accessed 15 September 2012.

> targets, or which would result in unnecessary suffering to combatants, are prohibited. In view of the unique characteristics of nuclear weapons, to which the Court has referred above, the use of such weapons in fact seems scarcely reconcilable with respect for such requirements. Nevertheless, the Court considers that it does not have sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflict in any circumstance.[89]

'Scarcely reconcilable' is certainly a disappointing statement and does not go far enough in clarifying this important issue. In his dissenting opinion, Judge Weeramantry did not have the same difficulty in an unequivocal statement about the rule of distinction and nuclear weapons.

> The principle of discrimination originated in the concern that weapons of war should not be used indiscriminately against military targets and civilians alike. Non-combatants needed the protection of the laws of war. However, the nuclear weapon is such that non-discrimination is built into its very nature. A weapon that can flatten a city and achieve by itself the destruction caused by thousands of individual bombs is not a weapon that discriminates. The radiation it releases over immense areas does not discriminate between combatant and non-combatant, or indeed between combatant and neutral States.[90]

In examining the contentions put to the court by the nuclear powers, the United States and the United Kingdom, reliance was clearly placed on the possibility of using 'clean' low-yield nuclear weapons. But surely the court did then and we certainly do now have the ability to assess the assertion that even these types of nuclear weapons are incapable of complying with both the treaty provisions in Additional Protocol I and the customary humanitarian law rules? In fact, one could argue that the United Kingdom and the United States managed to avoid a blanket statement of prohibition under international humanitarian law by the court because of this argument. Persuading the court that there was a possible use of nuclear weapons that could be imagined prevented an unequivocal statement by the majority. In an excellent analysis of the United States position, it has been argued that the primary defence of the United States was that they had low-yield nuclear weapons 'the effects of which it can control' and argued that it was a plausible scenario that a 'small number of accurate attacks by low-yield weapons against an equally small number of military targets in non-urban areas'.[91] They argue, however, that this argument at the time was disingenuous as the US arsenal was made up predominately of high-yield nuclear weapons.[92] Nevertheless, it is necessary to address the effects of these tactical nuclear weapons in the light of more recent scientific analysis.

It is evident that more reliance was placed on the scientific debate on the nature of nuclear technology in the dissenting opinions than the judgement. Judge Koroma, for example, spent a portion of his dissent recounting the tragic evidence

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89 *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, n. 1 above, para 95.

90 Ibid, Dissenting Opinion of Judge Weeramantry, p. 499.

91 Moxley, Burroughs and Granoff, p. 646.

92 Ibid.

of the effects of the bombing of Hiroshima.[93] However, the court did not have before it specific evidence of the possible effects of low-yield tactical weapons, but that evidence exists.

However, it was Judge Weeramantry that considered in detail the scientific evidence. He agreed with a general statement concerning nuclear weapons that '[a] characteristic of the weapons of mass destruction—the ABC weapons—is that their destructive effect cannot be limited in space and time to military objectives. Consequently their use would imply the extinction of unforeseeable and indeterminable masses of the civilian population'.[94] He relies on a statement from the United States Atomic Energy Commission which states that the difference between nuclear weapons and other bombs is:

> [F]irst, the amount of energy released by an atomic bomb is a thousand or more times as great as that produced by the most powerful TNT bombs; *secondly,* the explosion of the bomb is accompanied by highly penetrating and deleterious invisible rays, in addition to intense heat and light; and, *thirdly,* the substances which remain after the explosion are radio-active, emitting radiations capable of producing harmful consequences in living organisms.[95]

He carefully considers the future impact of the use of nuclear weapons including long-term environmental damage, the possibility of a nuclear winter, and the long-term effects on people of radiation sickness including keloids and cancers, and more immediate effects including anorexia, diarrhoea, cessation of production of new blood cells, haemorrhage, bone marrow damage, damage to the central nervous system, convulsions, vascular damage and cardio- vascular collapse.[96] He concludes that based on the volume of scientific evidence available that the use of nuclear weapons, by the very nature of the weapon could not be compatible with the rules of international humanitarian law including the rules of distinction.[97]

Scientific debate since the release of this opinion in 1996 and specific response to low-yield tactical nuclear weaponry seems to agree with the dissenting judges in the advisory opinion. In an interesting article for Science and Global Security, Nelson responds to the argument concerning the safety to civilians of 'low-yield, earth-penetrating, nuclear weapons'.[98] He takes issue with the assertions that because these weapons are designed to explode deep underground that they will

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[93] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, n. 1 above, Judge Koroma dissent pp. 566–568.

[94] Ibid, Judge Weeramantry dissent quoting Géza Herczegh, *Development of International Humanitarian Law, 1984,* p. 93. 'ABC weapons' refer to atomic, biological and chemical weapons.

[95] Ibid, Judge Weeramantry dissent quoting *Effects of Atomic Weapons,* prepared by the United States Atomic Energy Commission in co-operation with the Department of Defense, 1950, cited in Singh and McWhinney (1989), p. 30.

[96] Ibid, Judge Weeramantry dissent quoting Herbert Abrams, 'Chernobyl and the Short-Term Medical Effects of Nuclear War', in Proceedings of the IPPNW Congress, p. 12.

[97] Ibid, pp. 277–279.

[98] Nelson 2002, p. 1.

produce 'minimal collateral damage' and could be used near heavily populated areas. He argues on the contrary that 'EPWs cannot penetrate deeply enough to contain the nuclear explosion and will necessarily produce an especially intense and deadly radioactive fallout'.[99] The US scientists allegedly argue that these small nuclear weapons are necessary to destroy 'hardened underground command bunkers and storage sites for chemical or biological weapons'.[100]

Importantly, there is also discussion of a 'clean' nuclear weapon that will not cause radioactive fallout. Michael Levi wrote a commentary in Nature in 2004 entitled 'Dreaming of Clean Nukes'.[101] He was responding to a report from the Defense Science Board, which had recommended construction of nuclear weapons that could attack underground facilities and effective weapons with reduced fallouts. Once again Levi argues that the scientific assumptions are 'unsound'. The major argument Levi makes is that these bombs would have to have a 5- to 15-fold increase in their suggested power to actually destroy the underground bunker and therefore containment would be impossible.[102] He interestingly suggests that nuclear weapons development should be subject to the same intense competition and scrutiny and if so the case in favour of these weapons would be hard to make. If they are not contained, then the radiation would be released into the atmosphere.[103]

Tien argues that an explosion of any nuclear weapon emits thermal radiation; producing tens of millions of degrees rather than the few thousands in a conventional explosion. Furthermore, the nuclear radiation causes genetic defects and illness even to future generations and can damage the environment, food and marine ecosystem.[104] Tien uses the example of the nuclear weapons tests in the Marshall Islands that took place from 1946 to 1958, which caused extensive radiation sickness, deaths and birth defects.[105] Even if a nuclear weapon could be targeted at a military target miles away from any civilians, the radioactive fallout and radionuclides are 'indiscriminate, uncontrollable and unpredictable'.[106]

This writer cannot engage in the scientific reasoning, but the mere fact that there is a scientific controversy over radioactive fallout is a cause for serious concern. Surely we do not need to insist on proof beyond a reasonable doubt, but a mere balance of probabilities that these weapons could produce these types of effects is enough. One has to agree with the assertion that the use of these weapons would potentially be precluded because virtually any military objective these weapons may be targeted at could also be addressed by conventional weapons, and thus, their use would be prohibited by the rules of necessity and proportionality

[99] Ibid, p. 1 and 18.

[100] Ibid.

[101] Levi 2004, p. 892.

[102] Ibid, p. 892.

[103] Ibid, p. 892.

[104] Tien 2011, pp. 525–526.

[105] Ibid, pp. 526–527.

[106] Ibid, p. 549.

and the rule against excessive damage in Article 51(5)(b).[107] And with respect to the rule of distinction, the likely effects of 'counter-strike and escalation', which could involve civilians.[108]

There is case law that is also of assistance in determining whether these specific smaller nuclear weapons can violate the fundamental rule of distinction. In *The Prosecurtor versus Martic,* the International Criminal Tribunal for the Former Yugoslavia considered whether the use of Orkan rockets was indiscriminate.[109] They were described as being equipped with 288 bomblets each of which propelled jagged bits of metal and 400 small steel spheres in every direction.[110] The Court held relying on Additional Protocol 51(4)(b) that the attacks using this weapon were indiscriminate. The Court ruled similarly in *The Prosecutor versus Blaskić,* ruling that attacks using a booby-trapped tanker had employed indiscriminate 'means and methods'.[111]

In 2010, the parties to the Non-Proliferation Treaty, including the United States and the United Kingdom, unanimously reaffirmed 'the need for all States at all times to comply with applicable international law, including international humanitarian law'.[112] Therefore, if these weapons as indicated above do not comply with the primary rules, then they cannot be used and by logical conclusion should not be developed.

5.4 The Rule of Distinction: The Temporal Element

One part that is missing from the commentaries to the rule of distinction and the rules and treaty provisions themselves is addressing the temporal element. Surely international humanitarian law has to consider the impact of the use of nuclear weapons on succeeding generations. As Weeramantry stated:

> When incontrovertible scientific evidence speaks of pollution of the environment on a scale that spans hundreds of generations, this Court would fail in its trust if it did not take serious note of the ways in which the distant future is protected by present law.

In his dissent, Judge Shahabudden addressed the temporal issue. He states that the radiation effects over time are devastating. He argued that to classify these effects as being merely, a by-product was not the point as they could be just as extensive,

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[107] Moxley et al. 2010–2011, p. 660.

[108] Ibid, p. 661.

[109] *Prosecutor versus Martic*, Case No. IT-95-11-1, Trial Judgment, ¶ 30 (Mar. 8, 1996), available at http://www.icty.org/case/martic/4.

[110] Ibid.

[111] *See Prosecutor versus Blaskic*, Case No. IT-95-14-T, Trial Judgment, ¶ 787 (Mar. 3, 2000), available at http://www.icty.org/case/blaskic/4.

[112] 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, May 3–28, 2010, *Final Document*, pts. 1, 19, UN Doc. NPT/CONF.2010/50 (Vol. I) (2010).

if not more no more so, than those immediately caused by blast and heat. They would cause 'unspeakable sickness followed by painful death, affect the genetic code, damage the unborn, and can render the earth uninhabitable'.[113]

As up to this point, there has not been use of battlefield nuclear weapons, but there are two other examples of the long-term impact of the use of nuclear technology, which can be analysed. Firstly, there is the extensive testing of nuclear weapons in the atmosphere, and secondly, the continual use of nuclear material-depleted uranium in weaponry in the conflicts in Kosovo, Afghanistan and Iraq.

Testing of nuclear weapons took place most heavily in the 1950s and 1960s. Weeramantry relied on evidence of birth defects caused by nuclear radiation that remained in Pacific Islands from this testing. This included horrific evidence from Mrs. Lijon Eknilang from the Marshall Islands who advised the International Court of Justice of severe genetic abnormalities seen in newborn babies never seem before on that island until the atmospheric testing of nuclear weapons.[114] This was echoed in evidence from Vanuatu.[115] Another potential result from this type of testing is an increase in cancer levels. This is argued in relation to a specific South Australian example of environmental devastation occasioned by the extensive testing of nuclear weapons. The United Kingdom tested nuclear weapons between 1955 and 1963 at the Marilinga site in the Woomera Prohibited Area in South Australia.

The first was Operation Buffalo, a British nuclear weapons testing project in Marilinga part of the Woomera Prohibited Zone. It began 27 September 1956. The operation consisted of the testing of four nuclear devices, codenamed *One Tree*, *Marcoo*, *Kite* and *Breakaway,* respectively. *One Tree* (12.9 kt) and *Breakaway* (10.8 kt) were exploded from towers, *Marcoo* (1.4 kt) was exploded at ground level, and *Kite* (2.9 kt) was released by a bomber from a height of 35,000 feet.[116]

A second series of explosions took place in 1957 in the same location named Operation Antler. These tests were for thermonuclear explosions. There were three tests in September codenamed *Tadje*, *Biak* and *Taranaki*.[117] The McLelland Royal Commission was critical of these tests as personnel had to handle cobalt pellets and thus were late exposed to the active cobalt 60 and an 'unnecessary radiation hazard was created'.[118]

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[113] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, n. 1 above, Judge Shahabudden dissent, p. 382.

[114] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, n. 1 above, Judge Weeramantry dissent, p. 462.

[115] Ibid, p. 463.

[116] http://web.archive.org/web/20080206002959/http://www.seismo.ethz.ch/bsv/nuclear_explosions/great_britain.html and http://nuclearweaponarchive.org/Uk/UKTesting.html, accessed 11 September 2011.

[117] Summary of the tests found at: http://web.archive.org/web/20080206002959/http://www.seismo.ethz.ch/bsv/nuclear_explosions/great_britain.html and http://nuclearweaponarchive.org/Uk/UKTesting.html accessed 11 September 2011.

[118] McClelland Royal Commission 1985, found at: http://www.ret.gov.au/resources/radioactive_waste/Documents/ROYAL%20COMMISSION%20INTO%20BRITISH%20NUCLEAR%20TESTS%20IN%20AUSTRALIA.pdf, para 146.

By the 1980s, Australian servicemen and traditional Aboriginal owners of the land were suffering blindness, sores and illnesses such as cancer. Groups including the Atomic Veterans Association and the Pitjantjatjara Council who pressured the government for action, and in 1985, it agreed to hold a royal commission to investigate the damage that had been.[119] The whole course of Australian nuclear weapons testing came under criticism by the McClelland Royal Commission, which stated that the decision to allow these tests was made without 'the benefit of any scientific knowledge of the hazards involved'.[120] The commission also stated that the measures taken to protect persons against exposure to the harmful effects of radiation 'must be regarded as inadequate'.[121] In 2001, Dr. Roff, a researcher from the University of Dundee, released the results of her research uncovering documentary evidence that troops involved in Operation Buffalo had been ordered to run, walk and crawl across areas contaminated by the nuclear explosions in the days following the blasts.[122] She stated that 'it puts the lie to the British government's claim that they never used humans for guinea pig-type experiments in nuclear weapons trails in Australia'.[123]

Even in 1985 the Royal Commission determined that the area was still unsafe for the aboriginal people to return stating:

> 180. The following hazards must be dealt with before the Maralinga Range can be considered suitable for unrestricted access by Aborigines:
>
> (i) plutonium contamination at Taranaki, TM100, TM10 l and Wewak;
> (ii) pits at Taranaki and TM10 l containing plutonium-contaminated debris~ and
> (iii) uranium and beryllium contamination at Kuli.[124]

And last year, it was reported that 10 years after Prime Minister Howard declared the clean-up of Marilinga to be completed, the Australian government has continued to 'support remediation work' at the former British nuclear weapons test site.[125]

Following similar action by the British government in 1988, the Australian government negotiated compensation for several Australian servicemen suffering from two specific medical conditions related to the exposure to radiation. There were leukaemia and a rare blood disorder multiple myeloma.[126] Furthermore, in 1994, the Australian Government agreed to a large compensation settlement with the Maralinga Aboriginal people of 13.5 million dollars in settlement of all claims in

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119 http://www.foe.org.au/anti-nuclear/issues/oz/britbombs/clean-up accessed 16 September 2012.

120 McClelland Royal Commission, Conclusions para 2, accessed 11 September 2012.

121 Ibid, Conclusions para 53.

122 http://www.abc.net.au/lateline/stories/s295331.htm accessed 11 September 2012.

123 Ibid.

124 Ibid, para 180.

125 P. Dorling, 'Marilinga Sites need more repair work, files show' 12 November 2011, found at http://www.theage.com.au/national/maralinga-sites-need-more-repair-work-files-show-20111111-1nbpp.html#ixzz26hXQ5JId, accessed 16 September 2012.

126 http://www.maralingaclassaction.com.au/web/page/illness accessed 16 September 2012.

relation to the nuclear testing at that site.[127] Sadly, the people still cannot return to their lands and it may be generations before the land is safe. The dissenting opinions of Koroma, Shahbudden and Weeramantry in the *Nuclear Weapons* Advisory Opinion, as stated above, discuss many more examples of long-term effects of nuclear testing, but in all the discussions, it is clear that the lasting impact on both human health and the environment is the lasting radiation caused by these weapons. This according to the scientific evidence discussed above would also be a by-product of the use of low-yield nuclear weapons.

Of course, it can be argued that these sites were locations of major nuclear explosions, and battlefield nuclear weapons will not cause the same kind of physical or environmental destruction. However, our second example illustrates that the debate does not end with the clean-up of former testing sites and extends to even small uses of nuclear products. This is the use of depleted uranium in weaponry. Depleted uranium is nuclear waste. The compound is used in armour piercing munitions (often used against tanks) because of its very high density. It is 1.7 denser than lead, and thus, depleted uranium weapons have increased range and penetrative power. These weapons are called 'kinetic energy penetrators'. The part of the weapons that is made of depleted uranium is a long dart weighing more than four kilograms and is called a penetrator.[128] The material is also used as armour in US M1A1 and M1A2 battle tanks and in small amounts in some types of landmines and in antipersonnel landmine howitzer shells.[129]

Depleted uranium was used on a large scale by the US and the UK in the Gulf War in 1991, in Bosnia, Serbia and Kosovo, and again in the war in Iraq by the USA and the UK in 2003.[130] It is suspected that the USA also used DU in Afghanistan in 2001, although both the US and UK governments have denied using it there.[131] Allegations have been made that the use of this weaponry has caused severe health problems including a sharp increase in the incidence rate of some cancers, such as breast cancer and lymphoma in areas of Iraq following 1991 and 2003. It has also been implicated in a rise of birth defects from areas close to the main Gulf War battlefields.[132] Hulme argues that '[s]ince the United States and the United Kingdom first used depleted uranium weaponry in the 1991 Gulf conflict, a growing body of medical and scientific opinion has raised alarm bells as to the potential health and environmental effects of these weapons'.[133]

A good portion of the report of Prosecutor for the International Criminal Tribunal for Yugoslavia with respect to the intervention by the NATO powers in

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127 http://www.foe.org.au/anti-nuclear/issues/oz/britbombs/clean-up accessed 16 September 2012.

128 http://www.bandepleteduranium.org/en/overview accessed 16 September 2012.

129 Ibid.

130 Hulme 2005, p. 197.

131 http://www.bandepleteduranium.org/en/overview accessed 16 September 2012.

132 Hulme, pp. 197 and 212.

133 Ibid, p. 212.

Kosovo in 1999 concerned the allegation that the bombing campaign had damaged the environment particularly with the use of depleted uranium and the targeting of industrial facilities such as chemical plants and oil installations.[134] The allegation with respect to depleted uranium was that the damage caused would result in future health hazards to the population. Regrettably the determination regarding depleted uranium as a possible future threat to health was not made by the Prosecutor as the NATO powers would not provide information on the use of the substance. The United Nations Environment Program (UNEP) also established a Balkans Task Force to examine the Kosovo campaign. The key conclusion there was that the Kosovo campaign had not caused an environmental catastrophe but notwithstanding that the Task force recommended that the international community should assist with the clean-up efforts as there was urgent humanitarian need.[135] In their recommendations on depleted uranium the task force recommended that NATO confirm how and where DU was used and that the World Health Organization make 'a thorough review of the effects on health of medium- and long-term exposure to depleted uranium'.[136]

It cannot be concluded then that the issue of environmental damage has been determined with respect to the bombing campaign in Kosovo. Academics' writing in this area has had to rely on media reports that about 12,000 shells filled with depleted uranium were used.[137] Ronzitti, in examining this section of the Prosecutor's report, agreed with the finding that depleted uranium as such was not prohibited by international law and it would be up to the international community to ban such weapons by treaty.[138] However, the report lacked any discussion about the principles of unnecessary suffering and distinction given the concern about the long-term effects of these weapons.[139] The International Committee of the Red Cross released a comment on depleted uranium munitions in which they cited Article 36 of Additional Protocol I. This article provides that any state is required to ensure that any new weapon, means or methods of warfare are not of a nature to cause superfluous injury or unnecessary suffering which have indiscriminate effects or which cause widespread, long-term and severe damage to the natural environment. The ICRC urged states that study, develop, acquire or adopt munitions containing depleted uranium to carry out 'legal reviews' and to share the information with other states.[140]

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134 ICTY, Office of the Prosecutor, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia,* found at http://www.icty.org/sid/10052 accessed 11 September 2012.

135 UNEP, *The Kosovo Conflict: Consequences for the Environment & Human Settlements" (*1999) see p. 10 and Recommendations pp. 72–79.

136 Ibid, at p. 76.

137 Egorov 2000, p. 183.

138 Ronzitti 2000, p. 1017.

139 Benvenuti 2001, The ICTY Prosecutor and the Review of the NATO Bombing Campaign against the Federal Republic of Yugoslavia' pp. 511–512.

140 International Committee of the Red Cross, 2011, p. 543.

In January 2001, the European Parliament called for a ban on the use of depleted uranium (DU) while investigations into a possible link between DU and cancer were carried out. MEPs voted for the resolution by 339–202 after an emergency debate in Strasbourg.[141]

However, the use of depleted uranium munitions has continued in the Afghanistan and Iraq conflicts. The report finally released from the World Health Organization was not helpful as it concluded that except in exceptional circumstances DU, exposure was not a public health concern. But it is alleged that key papers by the US Department of Defense on DU's geno-toxicity were excluded from the report.[142]

Nevertheless, the scientific community continues to debate this issue. Between 2000 and 2003, Dr Alexandra Miller from the US Armed Forces Radiobiology Institute issued a series of peer-reviewed papers that demonstrated that internalised DU oxides (dust emitting from the weapon) could result in cancer emerging—at least in mice as in one study, 76 % of mice implanted with DU pellets developed leukaemia.[143]

In 2007, Belgium became the first nation to ban depleted uranium, and there have been three General Assembly resolutions calling on the states involved to provide information on the possible health consequences of the use of such weapons.[144] As yet the General Assembly has limited itself to statements about the potential harmful effects of the use of armaments and ammunitions containing depleted uranium on human health and the environment.[145] Hulme argues it might be another 20 years before the true long-term effects of using depleted uranium weaponry can be truly assessed.[146] This seems to accord with the delay on the emergence of health effects from nuclear testing. However, one has to agree with Hulme that measures need to be taken in advance of finding out definitively about the effects of using this type of weaponry. She suggests:

> In light of the continuing doubts surrounding the health and environmental effects of depleted uranium, therefore, this author suggests the implementation of a cautionary approach. In effect, since other weaponry are relatively, if not fully, as effective as depleted uranium weaponry, it is suggested that these alternative weapons be used exclusively.[147]

As she reports earlier in the article, this seems to be the sensible approach taken by the United Kingdom government who have abandoned the use of depleted uranium.

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141 BBC News, "Europe voted for DU Ban", 17 January 2001.

142 http://www.bandepleteduranium.org/en/overview accessed 16 September 2012.

143 Miller 2005.

144 UN Docs—A/RES/62/30, 31 October 2007, A/RES/63/54, 12 January 2009 and A/RES/65/55, 13 January 2011.

145 UN Doc. A/RES/65/55, Preamble.

146 Hulme 2005, p. 294.

147 Ibid.

This second example unlike nuclear testing also engages the rule of distinction. Hulme argues that the issue with respect to distinction is both at the point of use as well as the post-conflict phase due to the weapon's potential to create problems for human health and the environment. In this case as with tactical nuclear weapons, the key provisions involving the rule of distinction are Articles 51(4)(b) and (c)(b) as depleted uranium is a method of combat that cannot be directed at a specific military objective and a method the effects of which cannot be limited. In the case of depleted uranium weaponry which would generally be targeting at a specific military objective, a tank, the main civilian threat is due to the potential side effects on human health.[148] The United Nations Sub-Commission on the Promotion and Protection of Human Rights has gone so far as to state that depleted uranium weapons fall within the prohibition on indiscriminate warfare.[149] As Hulme argues, at first sight, depleted uranium does not fall foul of the principle of distinction, but it is 'the potentially devastating toxicological and radiological effects of depleted uranium in the environment that is cause for concern'.[150] One will have to follow with interest the continuation of this debate over the next decades as it will resonate most closely with the use of battlefield nuclear weapons.

5.5 Conclusion

It cannot be argued that a total prohibition against the use of nuclear weapons in armed conflict is clearly established in international law. The *Nuclear Weapons* Advisory Opinion in its majority judgment failed to issue an unequivocal statement that these weapons would breach the cardinal principles of international law including the primary principle of the necessity in battle to distinguish between civilians and the military and to only target those persons or objects that participates in the conflict. The opinion, however, did suggest that it was hard to see circumstances when these weapons would comply with the rules of international humanitarian law in spite of the efforts of counsel from the United Kingdom and the United States to persuade them otherwise.

There are two real-life examples discussed here of the effects of nuclear weaponry, the tests in the atmosphere (with the example given of the debate in my home State, South Australia) and the use of depleted uranium in the most recent armed conflicts. Although strongly contested by nuclear powers, it seems likely that both uses of nuclear technology have resulted in long-term detrimental health impacts of persons who have been exposed. Use of tactical weaponry will no doubt result in the same controversies.

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148 Ibid, p. 269.

149 UN Doc. E/CN.4 /Sub.2/i 9 96/L.1i/Add. 3 (29 August 1996).

150 Hulme 2005, p. 271.

However, battlefield nuclear weapons could potentially cause an ever greater crisis, as they will be the first time that nuclear weapons have been used since the Second World War. The possibility of escalation of any conflict in which they are used cannot be ignored. The fact that India and Pakistan have both developed these weapons means that there could be an escalation of that conflict risking millions of lives. Furthermore, the Russian reliance on these weapons is a worrying development. These weapons must be included in future nuclear disarmament talks or there is a real risk of a nuclear catastrophe.

Therefore, on any scale, testing the use of battlefield nuclear weapons against the cardinal rule of distinction, the use of these weapons fails the test. One cannot help but agree with Judge Weeramantry that these weapons by their very nature cannot be used in a manner to distinguish between civilian or combatants or between military or civilian objects. The rule of distinction cannot be limited to the use in the present; surely, the long-term effects of this weapon must be taken into account. The effects according to extensive scientific inquiry cannot be contained within the bomb site. New scientific evidence discussed here has considered the use of low-yield tactical nuclear weapons of a type to penetrate deep into bunkers but still the conclusion remains that the effects of even these types of weapons cannot be contained. The radiation will escape and damage the civilian population either directly or by getting into the food chain. This injury might not be immediate but result in an increased incident of cancer. Furthermore, the health effects mean that the fallout from radiation can damage not only present but future generations as the birth defects from nuclear testing establish without doubt. Even though the majority of the Court in the *Nuclear Weapons* Advisory Opinion was not prepared to rule that in every circumstances the use of nuclear weapons violated the rule against distinction, it seems that the weight of evidence discussed here points unequivocally that any use of nuclear weapons would violate this cardinal principle of international humanitarian law.

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Chapter 6
Test-Bans and the Comprehensive Test Ban Treaty Organization

Gabriella Venturini

Abstract Over the decades, international norms have established prohibitions of nuclear test explosions and a regime of non-proliferation of nuclear weapons. Test bans are currently established by several treaties, either multilateral, regional or bilateral. This chapter focuses mainly on the two treaties with universal vocation: the 1963 Partial Test Ban Treaty and the 1996 Comprehensive Nuclear-Test-Ban Treaty. Neither of them has achieved universality. The former is a result of the balance of powers during the Cold War. It has been in force for 50 years, greatly contributing to the reduction of radioactive substances contaminating the natural and human environment. However, it does not contain a total prohibition of nuclear explosions nor include provisions on control over implementation. The latter stems from the end of bipolarism in the post-Cold War international community. It prohibits all types of nuclear explosions and creates a unique and comprehensive verification system. However, it is still not in force, while a provisional intergovernmental organisation has been founded to build up the verification regime, which is now almost entirely operational. The non-entry into force of the CTBT suggests to explore alternative means of implementation and to consider the role of customary international law in the matter.

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6.1 Introduction

International law regarding nuclear test explosions (hereinafter: NTEs) is rooted in the worldwide movement for nuclear disarmament, which developed after the end of World War II. The atmospheric nuclear tests held by the United States, the Soviet Union and the United Kingdom[1] all the way through 1958 caused radioactive fallout largely exceeding the original estimates, including contamination of the territory of third states as well as accidents involving foreign nationals.[2] Although it is only in recent years that the long-term effects of exposure to fallout from nuclear tests have been assessed, scientists have been looking at the impact of radioactivity on human health and on the environment since the 1950s.[3] The Russell–Einstein Manifesto, issued in London on 9 July 1955,[4] advocated the convening of an international conference of scientists 'to appraise the perils that have arisen as a result of the development of weapons of mass destruction'. The ensuing Pugwash Conference on Science and World Affairs founded a prominent international non-governmental organisation of the same name, striving to bring scientific insight into threats to human security arising from the risk of nuclear war.[5] At the same time, the civil society paid increasing attention to the issue of nuclear tests,

[1] A complete list of nuclear testing worldwide is provided by the CTBTO Preparatory Commission at http://www.CTBTo.org/world-overview/ (accessed: 2 May 2014). See also US Department of Energy 2000, UK Ministry of Defence 2012.

[2] The most known incident occurred in February 1954, when the crew of a Japanese fishing vessel suffered from radiation sickness due to fallout exposure after an US experimental thermonuclear test in the Bikini Atoll. See Divine 1978, pp. 4–9; Hewlett and Holl 1989, pp. 175–177; Wittner 1997, pp. 146–148.

[3] See Badash 1995, pp. 102–108; Hewlett and Holl 1989, pp. 157–159; Greene 2007, pp. 62–66. See also Goldblat 1997, pp. 21–29 on early efforts to ban nuclear weapons.

[4] Available at: http://www.pugwash.org/about/manifesto.htm (accessed: 25 January 2013).

[5] See Badash 1995, p. 113; Wittner 1997, pp. 33–37 on the formation of Pugwash.

expressing fear of cumulative contamination of the natural environment and of possible genetic damage. Political leaders took position as well, advocating either a test ban or a more general prohibition of nuclear weapons.[6]

Test bans are currently established by several treaties, either multilateral, regional or bilateral. This chapter mainly focuses on the two treaties with universal vocation: the Partial Test Ban Treaty of 1963[7] (hereinafter: PTBT) and the Comprehensive Nuclear-Test-Ban Treaty (hereinafter: CTBT).[8] Neither of them has achieved universality. The PTBT is a result of the balance of powers during the Cold War. It has been in force for 50 years, greatly contributing to the reduction of radioactive substances contaminating the natural and human environment. However, it does not contain a total prohibition of nuclear explosions nor include provisions on control over implementation. The CTBT stems from the end of bipolarism in the post-Cold War international community. It prohibits all types of nuclear explosions and creates a unique and comprehensive verification system. In spite of this, after 17 years, it is still not in force, so being defined as an 'unfinished business'.[9] The purpose of the present chapter is to assess the current status of international law regarding NTEs, including the possible development of customary norms related to the matter.

6.2 The PTBT: An Outcome of the Cold War

NTEs mark the fluctuations in relations between the US and the USSR during the Cold War in the 1950s. Their troubled relationship was obviously a serious hindrance to the good faith collaboration, which is necessary to successfully carry on with the demanding task of negotiating an international agreement, especially in politically sensitive matters. The existence of an international forum, the UN Disarmament Commission (UNDC) established by the UN General Assembly in 1952,[10] contributed to facilitate contacts, however, nuclear weapons control talks were always dependent on the attitude of the nuclear powers. Firstly, discussions were held within a group of five states: Canada, France, the United Kingdom, the USA and the USSR. Then, a Ten Nation Committee on Disarmament (TNCD) and its successor Eighteen Nation Committee on Disarmament (ENCD) were created,

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[6] The US Democratic Party presidential candidate in 1952 and 1956, Adlai Stevenson, was notably in favour of a test ban. In 1955, the Bandung Conference, which led to the establishment of the Non-Aligned Movement, demanded a total prohibition of nuclear weapons. See Divine 1978, pp. 58–59, 93–96; Oliver 1998, pp. 4–5; Wittner 1997, pp. 13–14, 98–101.

[7] Treaty Banning Nuclear Weapon Test in the Atmosphere, in Outer Space and under Water, 5 August 1963, 480 *UNTS* 43.

[8] A/RES/50/245, 10 September 1996, adopting the Comprehensive Nuclear-Test-Ban Treaty as contained in document A/50/1027.

[9] Johnson 2009, pp. 216 and 231.

[10] A/RES/502(VI), 11 January 1952, para 1.

on the basis of consent among the nuclear powers plus France.[11] In 1958, the three nuclear powers reached agreement to hold an international conference of scientific experts to examine the technical aspects of monitoring and verifying a possible test ban. The conference, which took place in Geneva in July 1958, put forward a plan and a proposal for an international monitoring system to detect atmospheric and underground tests.[12]

6.2.1 Strategic Interests

In the United States, the Eisenhower administration (1952–1960) was torn by disagreement about whether a test ban would hamper the US nuclear advantage over the USSR. Conflicting opinions came from scientists, White House advisers, the Pentagon, and the nuclear weapons community, which opposed the ban on grounds of national security.[13] The Soviet Union was in favour of an unconditional test ban, and this position gained the support of non-aligned countries. Notably India, which protested against US nuclear testing, proposed to the UNDC in 1954 a standstill agreement to suspend NTEs.[14] Both the USA and the USSR feared nuclear proliferation on the part of the People's Republic of China (hereinafter: China), which was still excluded from participation in the UN bodies.[15] In 1958, the USSR advocated a tripartite (USSR, US and UK) moratorium; subsequently, it announced a unilateral suspension of nuclear testing.[16] The UK, which had been involved in the US-led Manhattan Project, but was excluded from the US nuclear programme after the end of World War II, carried out hundreds of NTEs during 1952–1958 in Australia and the Pacific Region.[17] In 1957, close cooperation with the US was resumed; the UK encouraged the idea of a moratorium, sharing the Commonwealth countries' concerns about atmospheric testing.[18]

At the end of World War II, neither France nor China was in a position to carry on nuclear tests. Both countries, however, had made it plain since the mid-1950s that they would pursue nuclear weapons development. As a consequence, their

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[11] Gotlieb 1965, pp. 8–13; Divine 1978, pp. 114, 225–231; Hewlett and Holl 1989, pp. 537–542; Oliver 1998, pp. 6–9; Walker 2010, pp. 148, 216–217.

[12] Report of the Conference of Experts to Study the Methods of Detecting Violations of a Possible Agreement on the Suspension of Nuclear Tests, Geneva, July 1 to August 21, 1958, 11 Foreign Office, Miscellaneous, London, Stationery Office (1958).

[13] See Burr and Montford 2003, presenting a selection of US government documents (esp.doc. 1 to 8). See also Greene 2007, pp. 68–86.

[14] Bundy 1988, pp. 328–334; Greene 2007, pp. 60–61.

[15] Burr and Richelson 2000/2001, p. 61.

[16] Divine 1978, pp. 198–202.

[17] Id., pp. 120–123.

[18] Bundy 1988, pp. 463–472; Oliver 1998, pp. 6–8; Lewis 1996, pp. 100–102; Greene 2007, p. 70; Walker 2010, pp. 101–107.

national interests were openly in conflict with any test ban proposals.[19] On the other hand, support for halting nuclear weapons tests was increasing among other non-nuclear powers. Eventually, the moratorium was accepted by the US and the UK in 1958, immediately after the end of the Geneva conference of experts. This boosted political negotiations on an agreement to ban NTEs, which actually opened in Geneva on 31 October 1958.

6.2.2 Issues at Stake

Negotiations for the testing ban lasted 6 years, confronting serious divergences among the participating states.[20] Originally, a comprehensive plan including a ban on production, possession and use of nuclear weapons as well as the reduction of conventional forces and armaments was included in the conference's mandate, but this connection was soon dropped.[21] Instead, discussions focused on the threshold for prohibitions to be established, which would not apply to underground testing. The requirements of verification were another issue of controversy during negotiations. The US insisted on a system of on-site inspections to verify the implementation of the test ban, especially to determine the nature of suspicious events, while the USSR maintained that controls must ultimately be in the hands of the territorial state.

Matters were made worse by recurring crisis in East–West relations. The shooting down on 1 May 1960 of a US U-2 aircraft conducting reconnaissance over the territory of the Soviet Union caused a deadlock in negotiations.[22] The Berlin crisis of 1961 affected the negotiations negatively and contributed to the resumption of tests by the USSR and the US in September 1961.[23] In 1962, the Cuban missile crisis brought the two countries close to war.[24] That very critical situation, however, increased the interest of both states, as well as that of the international community, in reaching an agreement on the test ban. Negotiations continued within the ENCD; meanwhile, debates in the General Assembly resulted in several resolutions urging the conclusion of an agreement to prohibit nuclear tests under a

[19] Bundy 1988, pp. 471–486, 525–535; Schubert 1991, pp. 166–170; Segal 1991, pp. 190–194.

[20] The negotiations are aptly recapitulated by Burr and Montford 2003. For more in-depth analysis see Divine 1978; Bundy 1988, pp. 358–461; Oliver 1998; Walker 2010, pp. 65–262.

[21] France, however, maintained the original position and announced that, without a comprehensive agreement on nuclear disarmament, its plans of nuclear testing would continue. In fact, it detonated its first nuclear test on 13 February 1960.

[22] Divine 1978, pp. 311–314; Bundy 1988, pp. 350–351; Walker 2010, pp. 144–149.

[23] Bundy 1988, pp. 356–390.

[24] See Bundy 1988, pp. 453–458; Oliver 1998, p. 135.143; Walker 2010, pp. 246–247, discussing the political aspects of the Cuban crisis.

system of international controls.[25] The fate of negotiations depended upon the attitude of the three nuclear powers, and their leaders played a decisive role.[26] In June 1963, the US president J. F. Kennedy, the Soviet premier N. Khrushchev, and the British prime minister H. MacMillan agreed on a high-level round of negotiations in Moscow, where the text of the PTBT was eventually signed on 5 August.

6.2.3 Basic Obligations and Present Status

The PTBT was concluded as a tripartite agreement among the US, the UK and the USSR, which are also depositary governments. This eased its rapid entry into force on 10 October 1963. The treaty is open to all states for signature or accession: presently, 126 states are parties thereto.[27]

The PTBT's preamble states that the parties' principal aim is 'the speediest possible achievement of an agreement on general and complete disarmament under strict international control'… 'which would put an end to the armaments race and eliminate the incentive to the production and testing of all kinds of weapons, including nuclear weapons'. Therefore, the 1963 treaty was originally conceived as a step in achieving nuclear disarmament.

The PTBT prohibits 'any nuclear weapon test explosion, or any other nuclear explosion' in the atmosphere, in outer space, under water and 'in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted'.[28] Consequently, explosions for peaceful purposes are included in the prohibition, while underground tests are not prohibited unless they cause transboundary fallout.[29] Moreover, states parties undertake to 'refrain from causing, encouraging, or in any way participating' in the carrying out of any nuclear weapon test explosion by other states in the prohibited environments.[30] Taken together, these provisions allowed states with nuclear weapons to carry on with their programmes by testing underground, while they set hurdles to development of nuclear weapons by countries not (yet) having advanced technological capacity. This explains why two important powers such as France and China never acceded

[25] A/Res/1379(XIV), 20 November 1959; A/Res/1577(XV) and A/Res/1578(XV), 20 December 1960; A/Res/1632(XVI), 27 October 1961; A/Res/1649(XVI, 8 November 1961; A/Res/1653(XVI, 24 November 1961; A/Res/1726(XVII), 6 November 1962.

[26] See Gotlieb 1965, p. 109; Bundy 1988, pp. 458–462 considering the impulse given by the three statesmen to negotiations on the test ban.

[27] PTBT Article III para 1. Ratification table at: http://disarmament.un.org/treaties/t/test_ban# (accessed: 2 May 2014).

[28] PTBT Article I para 1.

[29] See Schwelb 1964, pp. 646–647; Goldblat 2002, p. 49.

[30] PTBT Article I para 2.

to the PTBT.[31] The main reason for France not becoming a party was reliance on the doctrine of nuclear deterrence,[32] while China saw the treaty as an instrument in the hands of the superpowers to curb the Chinese nuclear programme.[33]

The PTBT has unlimited duration, however, each state party has the right to withdraw 'if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardised the supreme interests of its country'.[34] A state exercising the right to withdraw must inform all other parties to the treaty 3 months in advance. Any state party may propose amendments to the PTBT, to be considered by a conference of the parties and approved by a majority including the three original parties.[35]

Since the opposition of the Soviet Union hindered agreement on any international mechanism of verification, the national means of control (depending on a state's capability in monitoring technologies and data analysis methods) are the only possible way to verify compliance with the PTBT. This is the main drawback of the treaty, which caused commentators deep disappointment.[36] Nevertheless, given the popular aversion to nuclear testing, public response to the PTBT was very supportive and even enthusiastic by the antinuclear movement.[37] Today, it is generally recognized that the treaty has greatly contributed not only to restrain the development of nuclear weapons, but also to reduce contamination from radioactive emissions in the natural and human environment.

6.3 International Practice after the PTBT

During the 1960s further prohibitions of nuclear testing were established by the 1967 Treaty of Tlatelolco banning nuclear weapons in Latin America,[38] as well as by the 1967 Outer Space Treaty, prohibiting the testing of 'any type of weapons'

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[31] It must be mentioned here that the PTBT was signed in 1963 and ratified in 1964 in the name of the Republic of China by the Taipei government. See Schwelb 1964, pp. 658–660. The authorities on Taiwan maintain that they are still bound by the provisions of the Treaty with regard to the other parties. See http://disarmament.un.org/treaties/a/test_ban/china/sig/moscow (accessed: 25 January 2013).

[32] See Bundy 1988, pp. 472–486; Schubert 1991, pp. 166–174; Labbé 1996, pp. 31–34 on the French strategic nuclear doctrine.

[33] See Bundy 1988, pp. 525–535; Segal 1991, pp. 190–199 on the genesis of the Chinese nuclear policy.

[34] PTBT Article IV. See Schwelb 1964, pp. 660–663.

[35] PTBT Article II. See Schwelb 1964, pp. 649–651.

[36] See Glaser 1964, p. 12, describing the PTBT as a mere statement of intention in the absence of control mechanisms.

[37] Wittner 1997, pp. 425–432.

[38] Treaty for the Prohibition of Nuclear Weapons in Latin America, 14 February 1967, 634 UNTS. 281, Article 1.1(a).

on celestial bodies.[39] At the time the PTBT was concluded, negotiations were already taking place which led to the Non-Proliferation Treaty (hereinafter: NPT) of 1968, which entered into force in 1970.[40] Article II NPT, laying down the obligations of non-nuclear-weapon states party to the treaty, implicitly forbids them to conduct nuclear testing. Since then, the test ban has been increasingly seen as a complementary element of non-proliferation, based on the broader perspective of nuclear disarmament, which Article VI NPT requires parties to pursue through negotiations in good faith. In the view of the International Court of Justice, 'The legal import of that obligation goes beyond that of a mere obligation of conduct; the obligation involved here is an obligation to achieve a precise result—nuclear disarmament in all its aspects—by adopting a particular course of conduct, namely, the pursuit of negotiations on the matter in good faith'.[41]

At the bilateral level, the US and the USSR agreed on a further mutual restraint in prohibiting underground tests having a yield exceeding 150 kilotons under the Treaty on the Limitation of Underground Nuclear Weapon Tests (Threshold Test Ban Treaty: TTBT). Although signed on 3 July 1974, this had to wait until the end of the Cold War and entered into force in 1990.[42]

6.3.1 Nuclear Testing

International practice regarding nuclear testing is fluctuating, and its interpretation was mainly developed on political, rather than legal grounds. After 1963, all US, UK and USSR NTEs went underground, while both France and China conducted a relevant number of atmospheric tests in the following decade.[43] Among the states party to the PTBT India, which became the sixth nation to develop nuclear weapons in 1974, held its nuclear tests underground as did Pakistan about 25 years later. Israel and South Africa, the remaining two countries which completed a nuclear weapons programme, did not, to public knowledge, conduct any nuclear tests,[44] although many believe that a joint nuclear explosion was carried out in 1979.[45] While the

[39] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, A/Res/2222(XXI), Annex, Article IV para 2; the prohibition was later restated by the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies A/Res/34/68, Annex, Article 3 para 4. See Goldblat 2002, pp. 166–169.

[40] See Chap. 4, The Non-Proliferation Regime and the NPT, in this Volume.

[41] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, *ICJ Reports* 1996 p. 264, para 99. See Tavernier 1996, p. 126; Tabassi 2009, p. 331; Arbatov 2011, p. 78.

[42] Text available at: http://www.state.gov/t/isn/5204.htm (accessed: 25 January 2013). See Goldblat 2002, pp. 51–53; Ifft 2009.

[43] *Supra* n. 1.

[44] Ibid.

[45] See Hansen 2006, pp. 55–56; Johnson 2009, pp. 19–20 on nuclear testing between 1964 and 1980.

above-mentioned practice suggests due compliance by states parties to the PTBT with treaty's obligations, it was still inconclusive as regards the emergence of substantive and procedural rules of customary international law about nuclear testing.

A debated issue was the so-called peaceful nuclear explosions (PNEs) carried out through the 1980s by the USSR and the US.[46] PNEs were based on an interpretation of Article I para 1(b) PTBT, which would allow nuclear explosions not resulting in radioactive debris delivered outside the territorial limits of a state in amounts sufficient to establish that a recent test had been carried out in that territory.[47] In 1976, the US and the USSR signed a bilateral treaty (PNE Treaty) giving them the right to conduct underground PNEs at any place under their jurisdiction or control outside the geographical boundaries of test sites specified under the PTBT and to carry out, participate in, or assist in carrying out underground PNEs (not exceeding certain established yields) in the territory of another state at the request of such other state.[48] Like the TTBT, the PNE Treaty entered into force in 1990 at the end of the Cold War.

6.3.2 The Judicial Path

In May 1973, Australia and New Zealand brought applications before the International Court of Justice (hereinafter: ICJ) complaining that the holding of atmospheric tests by France in the South Pacific region giving rise to radioactive fallout infringed their rights under international law, including human rights and the protection of the environment.[49] Eventually, the ICJ found by a majority vote that the disputes no longer existed, since French authorities had publicly declared that no further atmospheric nuclear tests would be carried out in the South Pacific. As a consequence, the Court refrained from rendering substantive decision, missing the opportunity to deal with issues such as the effect of treaties upon third states, the status of customary international law about nuclear testing and the protection of the environment.[50] The importance of the judgments, nevertheless, lies in the legal reasoning of the majority of judges. They held that the undertaking resulting from the French statements could not be interpreted as having been made on an arbitrary

[46] The rationale of the concept of peaceful nuclear explosions was economic, covering deep seismic sounding; creating underground storage cavities; helping to extract gas and oil; extinguishing burning gas or oil wells; creating reservoirs and helping to construct canals. See Nordyke 1998, pp. 1–4; see also http://www.CTBTo.org/nuclear-testing/history-of-nuclear-testing/peaceful-nuclear-explosions/ (accessed: 25 January 2013).

[47] See Nordyke 1998, p. 65.

[48] Treaty on Underground Nuclear Explosions for Peaceful Purposes, Washington and Moscow, 28 May 1976, available at http://m.state.gov/md5182.htm. See Nordyke 1998, pp. 67–68; Goldblat 2002, pp. 53–55.

[49] *Nuclear Tests Cases*, Judgments of 20 December 1974, Australia versus France, *ICJ Reports* 1974, pp. 253–274; New Zealand versus France, *ICJ Reports* 1974, pp. 457–478.

[50] See Singh and McWhinney 1989, pp. 294–297 analysing the articulation of the judgment. See also Sands et al. 2012, pp. 240–242 reviewing the pleadings of the claimant states.

power of reconsideration: consequently, the French Government had assumed a binding obligation 'the precise nature and limits of which must be understood in accordance with the actual terms in which they have been publicly expressed.'[51] Therefore, in the view of the Court, a commitment to unilateral moratorium on atmospheric testing (which the French declarations actually were undertaking) becomes binding when addressed to the international community as a whole.

The Nuclear Tests judgments engendered divergent views among scholars. On the one hand, they were praised as 'a most useful step forward in international jurisprudence' recognizing the importance of unilateral 'accommodations' and reciprocal expectations in the international system.[52] On the other hand, and based upon the dissenting opinions of minority judges, they were criticized as contrary to the customary law and established doctrine on the non-binding effects of unilateral declarations.[53] In fact, at the time the judgments were issued, the ICJ probably could not have dealt with the question in a more convincing way. The reasoning of the majority of judges had the merit of warning governments that unilaterally declaring the intention to perform, or not to perform, a certain act may result in a binding obligation owed to the international community.

In 1995, following the announcement that France would conduct a series of underground NTEs in the South Pacific, New Zealand requested that the 1973–1974 case be reopened. Again, the action was dismissed by a majority vote on the ground that the 1974 judgment dealt exclusively with atmospheric nuclear testing, and it was only in the event of a resumption of atmospheric tests that the basis of the judgment would have been affected.[54]

6.4 The CTBT: A Comprehensive Prohibition?

For three decades after the PTBT took effect, efforts to expand the prohibition of nuclear testing continued within the international community. In 1977, the US, UK, and USSR resumed the so-called trilateral negotiations on a comprehensive test ban, but the bilateral relationship between the two 'superpowers' at that time took precedence.[55] In 1988, six states parties to the PTBT (Mexico, Indonesia, Peru, Sri Lanka, Yugoslavia and Venezuela) presented the three depositary governments a proposal to amend the treaty in order to extend the prohibition of nuclear

[51] *Nuclear Tests Cases*, *supra* n 49, *ICJ Reports* 1974, pp. 271–272, paras 57–59; p. 477, paras 60–62.

[52] See Franck 1975, pp. 615–616.

[53] See Elias 1983, pp. 100–118; Wenqiang 2012, p. 332 on the minority judges' dissenting opinions.

[54] Order of 22 September 1995 in the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the* Nuclear Tests (New Zealand v. France) case (*ICJ Reports* 1995, pp 305–306, paras 62–65). See MacKay 1995, pp. 1883–1885.

[55] *Supra* Sects. 6.3 and 6.3.1. See Johnson 2009, pp. 21–22.

explosions to all environments, so transforming it into a comprehensive test ban. An amendment conference in accordance with Article II PTBT was held in 1991, but it was inconclusive due to the US opposition to negotiating a comprehensive prohibition in the framework of the PTBT.[56] Meanwhile, the development of international environmental law reinforced the goal to put an end to the contamination of human environment by radioactive substances, as expressed by the PTBT's preamble.[57] As a consequence, the customary nature of the prohibition laid down in the PTBT was increasingly recognized.[58]

After the end of the Cold War, the new international situation prompted states to take up again the promotion of a general prohibition pursuing universal reach. Between 1991 and 1992, the USSR and the US adopted legislation both declaring national moratoria on NTEs.[59] In 1994, multilateral negotiations on a comprehensive and universal test ban began in the Conference on Disarmament (hereinafter: CD), the body established in 1978 to succeed the previous disarmament negotiating fora.[60] During negotiations, the UN General Assembly passed a number of resolutions urging the conclusion of the new treaty.[61]

In 1995, the NPT contracting parties agreed on the indefinite extension of the treaty.[62] It is generally recognized that the agreement was founded on the commitment to establish a comprehensive nuclear test ban, as well as to pursue the objective of disarmament as laid down by Article VI NPT.[63] This correlation was strongly supported by the ICJ Nuclear Weapons Opinion, issued 2 months before the successful conclusion of negotiations.[64]

Major problems arising in the negotiations for the comprehensive test ban were the definition of the object of the treaty; the verification regime to be established;

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[56] See http://www.state.gov/t/isn/4797.htm (accessed: 11 February 2013) on the position of the US government. See also Johnson 2009, p. 38.

[57] See Sands et al. 2012, pp. 543–546.

[58] Taking into account the importance of environmental protection for the survival of humankind, one commentator has ventured to affirm that the ban on atmospheric nuclear testing is now a *jus cogens* norm: see Hulsroj 2006, p. 8.

[59] These have been mainly based on the recognized capability to extend the service lives of nuclear warheads without NTEs. See Patrick and Forman 2002, pp. 229–230; Jonas 2007, p. 1013; Medalia 2008, pp. 11–14; Hafemeister 2009, pp. 474–475.

[60] The CD was initiated as the Committee on Disarmament (A/RES/S-10/2, 30 June 1978, para 120) but renamed pursuant to A/RES/37/99 K, 10 December 1982, para II. Originally it had 40 members; presently it counts 65 states, including all those having developed nuclear weapon capacity. See http://www.unog.ch/ (accessed: 3 February 2013).

[61] A/RES/48/70, 16 December 1993; A/RES/49/70, 15 December 1994; A/RES/50/65, 9 January 1996.

[62] 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Decision 3, NPT/CONF.1995/32 (Part I), Annex, at: http://www.un.org/disarmament/WMD/Nuclear/1995-NPT/pdf/NPT_CONF199503.pdf.

[63] See Hoekema 1995, p. 238; den Dekker 2000, p. 673; Aust et al. 2008, pp. 37–38; Johnson 2009, pp. 73–76 examining test ban issues in the 1995 NPT conference.

[64] *Legality of the Threat or Use of Nuclear Weapons*, *supra* n 41 pp. 226–267, paras 99–103.

which countries should ratify the treaty before it could enter into force; and whether a plan for nuclear disarmament should be included in the treaty.[65] Eventually, the CD failed to reach a consensus on the last issue due to India's rejection of the text without a commitment to the total elimination of all nuclear weapons, within an established time framework.[66] Nevertheless, all participating states remarkably agreed on the remaining matters, particularly on the verification regime. Upon the initiative of Australia, the text of the CTBT was transmitted to the UN General Assembly, which adopted the treaty by a majority vote on 10 September 1996.[67]

6.4.1 Object, Purpose and Basic Obligations

The object and purpose of the CTBT are expressed by its preamble. While recognizing 'the *ultimate goal*' of 'general and complete disarmament under strict and effective international control', it affirms that 'the cessation of all nuclear weapon test explosions and all other nuclear explosions, by constraining the development and qualitative improvement of nuclear weapons and ending the development of advanced new types of nuclear weapons, constitutes an *effective measure* of *nuclear disarmament and non-proliferation* in all its aspects' [emphasis added].[68] This wording complicates the concept of complementarity, since many non-nuclear-weapon states (particularly non-aligned countries) see the CTBT as aimed primarily at achieving disarmament, while the nuclear-weapon states (and some non-nuclear-weapon states as well) argue that it is intended to reinforce the non-proliferation regime.[69]

The CTBT bans any NTEs (so-called zero yield), whether for military or for peaceful purposes.[70] It also prohibits encouragement of or participation in the car-

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[65] Negotiations are extensively covered by Hansen 2006, pp. 14–45 and especially by Johnson 2009, pp. 57–108.

[66] See Deshingkar, 1996, pp. 43–48 discussing India's position on the comprehensive test ban. But see Chaudhuri 2012, arguing that non-membership of the CTBT is currently not in India's foreign policy interests.

[67] A/RES/50/245, 10 September 1996, adopted by 158 votes to three (Bhutan, India, and Libya), with five abstentions (Cuba, Lebanon, Mauritius, Syria and Tanzania). See Tavernier 1996, pp. 121–122; Johnson 2009, pp. 137–141. The CTBT includes a Protocol in three parts: Part I detailing the International Monitoring System (IMS); Part II on On-Site Inspections (OSI); and Part III on Confidence-Building Measures (CBMs). Annex 1 to the Protocol specifies the location of the monitoring assets associated with the IMS, and Annex 2 details the parameters for screening events.

[68] CTBT preamble paras 4–5.

[69] See Asada 2002, pp. 87–88; den Dekker 2000, p. 673 discussing the dual purpose of the CTBT. See also Medalia 2008, pp. 51–56, reviewing the divergent opinions about the CTBT's contribution to non-proliferation and/or disarmament.

[70] CTBT Article I para 1. Even third states will benefit from that prohibition, since a Party to the treaty could not test a nuclear weapon without violating its obligation to other Parties. See ILA 2000, p. 758 at n 118.

rying out of any nuclear explosion and obligates states parties to prohibit and prevent any nuclear explosion at any place under their jurisdiction and control.[71]

The prohibition of NTEs under the CTBT does not include the testing of nuclear weapons by way of computer simulations, nor the conducting of sub-critical tests (i.e. not resulting in a nuclear explosion). For this reason, a number of commentators argue that the treaty does not establish a true global prohibition of nuclear testing, failing to prevent vertical non-proliferation.[72]

The CTBT has unlimited duration.[73] No reservations are allowed to the treaty and its annexes and the provisions of the protocol and its annexes may not be subject to reservations 'incompatible with the object and purpose' of the treaty. As a consequence, reservations to the protocol and related annexes are permissible only under customary law as codified by the 1969 Vienna Convention on the Law of Treaties (hereinafter: VCLT).[74] In accordance with a typical clause in disarmament treaties, the right of withdrawal is granted if 'extraordinary events' related to the treaty have jeopardized the 'supreme interests' of a Party. A 6 month official note is required including a statement of the 'extraordinary events' impairing the state's 'supreme interests'.[75]

6.4.2 Implementation and Verification

The CTBT's provisions on implementation and verification were considerably influenced by those of the Chemical Weapons Convention, which the CD had successfully negotiated and adopted 4 years before.[76] A Comprehensive Nuclear-Test-Ban Treaty Organization (hereinafter: CTBTO) is established as an independent body to ensure implementation of the CTBT, notably conducting verification activities as well as providing a forum for consultation and cooperation.[77] Its

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[71] CTBT Article I para 2. The possibility of permitting the conduct of underground nuclear explosions for peaceful purposes may be considered by a CTBT Review Conference recommending to States Parties an appropriate amendment to the treaty (Article VIII para 1). This provision was agreed to accomodate the demand of China, that the conduct of underground nuclear explosions for peaceful purposes may be allowed. See Johnson 2009, pp. 97–102.

[72] Tavernier 1996, pp. 124 and 127; den Dekker 2000, p. 673; Goldblat 2002, pp. 59–60. See also Hoekema 1995, pp. 233–234. But see Aust et al. 2008, emphasizing the positive correlation between the test ban and non-proliferation.

[73] CTBT Article IX para 1.

[74] CTBT Article XV; VCLT Article 19 para (c).

[75] CTBT Article IX paras 2–3.

[76] Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, Geneva, 3 September 1992, 1974 UNTS 45–466. See Tavernier 1996, pp. 129–130; Johnson 2009, pp. 168–163 on the effects of the CWC experiences on CTBT negotiations.

[77] CTBT Article II.

bodies are the Conference of states parties, the Executive Council and the Technical Secretariat, which includes the International Data Center (hereinafter: IDC).

As the principal organ of the CTBTO, the Conference of states parties has a general competence to consider any matters within the scope of the treaty, to oversee its implementation and to review compliance.[78] The Executive Council is composed of 51 members elected by the Conference on the basis of an equitable geographical representation.[79] The Conference and the Executive Council are also entrusted with the task of contributing by diplomatic means to the settlement of disputes concerning the application or interpretation of the Treaty; they are separately empowered (subject to authorization from the General Assembly of the United Nations) to request the International Court of Justice to give an advisory opinion on any legal question arising within the scope of the activities of the organisation.[80] The CBTO's bodies, however, are not entitled to have recourse to the UNSC to secure the parties' implementation of the treaty.

The global verification regime to monitor compliance with the CTBT is one of the most outstanding features of the Treaty.[81] It is detailed in Article IV and further specified by the protocol to the treaty and its annexes. The regime consists of an International Monitoring System (hereinafter: IMS), consultation and clarification procedures, on-site inspections and confidence-building measures.

Once the CTBT takes effect, states parties will have the right to request on-site inspections to determine whether a nuclear explosion has taken place in violation of the treaty and to gather evidence concerning those responsible for the violation.[82] If a member believes that a nuclear explosion has occurred, a consultation and clarification process through the CTBTO's Executive Council and Conference will be available to resolve the matter. The Conference is empowered to take measures of redress and remedy where appropriate, including suspension of a Party from the exercise of its rights under the treaty and recommendation of collective measures 'in conformity with international law'.[83] Nevertheless, it is unlikely that these options ensure adequate enforcement of the comprehensive prohibition of NTEs. To this aim other measures of a political, economic, commercial nature are needed, and the power to decide their appropriateness lies with the UN Security Council.

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[78] CTBT Article II paras 12–26.

[79] CTBT Article II paras 27–41.

[80] CTBT Article VI.

[81] Tavernier 1996, pp. 131–133; Asada 2002, pp. 90–91; Johnson 2009, pp. 145–174.

[82] Under Article IV para 5 CTBT states parties also have the right to use their national technical means of verification to obtain information 'in a manner consistent with generally recognized principles of international law, including that of respect for the sovereignty of States.'

[83] CTBT Article V paras 2–3. The expression 'in conformity with international law' is arguably to be interpreted in the light of customary international law as codified by the International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts (Yearbook of the International Law Commission, 2001, vol. II, Part Two, Articles 51–57).

6.4.3 Entry into Force and Present Status

The terms of Article XIV CTBT, dealing with the treaty's entry into force, are aimed at securing the effective implementation of a truly universal nuclear test ban. This provision, however, is at the origin of an impasse which to this day hinders the CTBT entry into force. Instead of setting a simple numeric threshold, possibly complemented by some incentives for states to be part of the original signatories, the negotiators ultimately agreed on a very demanding requirement: the CTBT will enter into force 180 days after the date of deposit of the instruments of ratification by all states with nuclear power and/or research reactors, being listed in Annex 2 to the treaty.[84] As a matter of fact, Article XIV has turned into a sort of power of veto in the hands of some states, which prevents the treaty's entry into force.

At present time 183 states have signed the CTBT; the most notable exceptions are India, Pakistan and the Democratic Republic of Korea (hereinafter: DPRK). 162 signatories, including the great majority of Annex 2 states, have also ratified the treaty.[85] British and French ratifications occurred on 6 April 1998; Russia became a ratifier on 30 June 2000, so superseding its unilateral moratorium. China, Egypt, Iran, Israel and the United States have signed, but not ratified the treaty so far.

In 1999, the US Senate voted against ratification of the CTBT, which president Clinton had transmitted in 1997 for advice and consent.[86] The Bush administration, openly contrary to the comprehensive ban, did not take any further step and, despite the professed commitment of the Obama administration,[87] the treaty is still waiting for ratification in the US. It is unclear whether the ratification process in China is going on,[88] and it is most unlikely that it will advance in the remaining hold-out states. Since 2003, a conference to facilitate the entry into force of the CTBT has taken place every other year in accordance with the Article XIV, to consider what measures could be undertaken to accelerate the ratification process. Although the number of ratifiers has gradually increased, the conferences have proved unproductive as far as the outstanding hold-out states are concerned.

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[84] See Hansen 2006, pp. 46–58; Aust et al. 2008, pp. 9–12; Johnson 2009, pp. 109–137 reviewing the different positions of states about entry into force requirements during the CTBT negotiations.

[85] See http://www.CTBTo.org/the-treaty/status-of-signature-and-ratification/ (accessed: 2 May 2014).

[86] US Constitution, Article II, Section 2.2. See Patrick and Forman 2002, pp. 232–243; Hewitson 2003, pp. 449–453; Jonas 2007, pp. 1019–1026, discussing the political and substantive reasons which caused the rejection of the treaty.

[87] The present US administration's commitment to CTBT ratification relies on the ability to maintain an effective nuclear stockpile by means of advanced simulation and computing capabilities, without nuclear explosive testing. See Hafemeister 2009; Schneidmiller 2011; Gottemoeller 2012.

[88] See Lewis 2010; Hawkes 2011.

It should also be added that domestic measures to implement a treaty may be taken by ratifier states even in advance of its entry into force. As regards the CTBT, national implementation measures are an indispensable step in fulfilling the obligations established by the treaty.[89] The legislative activity of the CTBT's ratifiers, however, appears rather unsatisfactory, since only a limited number have adopted implementing legislation thus far.[90]

6.5 State Practice After the CTBT

Pending its entry into force, the CTBT's provisions are not legally binding. However, Article 18 VCLT, corresponding to customary international law, states the obligation of signatories and ratifiers not to defeat the object and purpose of a treaty prior to its entry into force, until (signatories) make clear their intention not to become parties and (regarding ratifiers) provided that the entry into force of the treaty is not 'unduly delayed'.[91]

Since a comprehensive prohibition of testing of nuclear weapons by explosions constitutes an effective measure (object) of nuclear disarmament and non-proliferation (dual purpose), the carrying out of NTEs by a signatory or ratifier would arguably defeat the CTBT's object and purpose.[92] After 17 years, however, is the treaty's entry into force being 'unduly delayed' so that ratifiers would become released from that obligation? State practice does not support such a conclusion; far from it, the CTBT's signatories and ratifiers appear to abide fully by the test ban. As a matter of fact, since 1996 none of them have conducted NTEs. Particularly, the United States and China are implementing national moratoria which have been publicly (and repeatedly) announced. A great number of other states have committed themselves not to test nuclear weapons by establishing regional nuclear-weapon free zones to cover a large part of the Northern and almost the entire Southern hemisphere.[93] As a consequence, the test ban has been reinforced by signatories' and ratifiers' subsequent practice.

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[89] Article III CTBT.

[90] A table of national provisions implementing the CTBT is available at: http://www.ctbto.org/member-states/legal-resources (accessed: 2 May 2014).

[91] 'A State is obliged to refrain from acts which would defeat the object and purpose of a treaty when (*a*) it has signed the treaty or has exchanged instruments constituting the treaty subject to ratification, acceptance or approval, until it shall have made its intention clear not to become a Party to the treaty; or (*b*) it has expressed its consent to be bound by the treaty, pending the entry into force of the treaty and provided that such entry into force is not unduly delayed.' .

[92] See Asada 2002, pp. 95–96; den Dekker 2000, pp. 677–678; Hewitson 2003, p. 464; Jonas 2007, p. 1039; Tabassi 2009, pp. 317–318 considering acts which would defeat the CTBT's object and purpose.

[93] Tabassi 2009, p. 313.

6.5.1 Nuclear Testing and the Security Council Response

As far as non-signatory states are concerned, international practice was not encouraging during the first years after conclusion of the CTBT. In mid-May 1998, India conducted two sets of underground NTEs, followed by Pakistan at the end of the same month. Political reactions were harsh at the international level, although only the US imposed unilateral sanctions.[94] The UN Security Council (hereinafter: UNSC) condemned the nuclear tests, expressing 'grave concern' at their 'negative effect' on peace and stability.[95] The UNSC implicitly referred to Chapter VII of the UN Charter stating that 'the proliferation of all weapons of mass destruction constitutes a threat to international peace and security' and demanded that the two countries refrain from further testing.[96]

India and Pakistan responded to the UNSC's appeal to restraint. In 1999, the two countries concluded a bilateral agreement aimed at the resolution of all their controversial issues. The Lahore Memorandum of Understanding[97] included a commitment to 'continue to abide by their respective unilateral moratorium on conducting further nuclear test explosions unless either side, in exercise of its national sovereignty decides that extraordinary events have jeopardized its supreme interests'.[98] It is difficult not to see these 'parallel unilateral' moratoria as a bilateral binding commitment, which continues to this day.

The UNSC took a stronger stance against the underground NTEs carried out by the DPRK (a State which is not even party to the PTBT) in 2006 and 2009, respectively. At the time, the UNSC, acting under Chapter VII of the UN Charter, determined the existence of a threat to international peace and security and adopted economic sanctions. Both resolutions *decided* that the DPRK must suspend all activities related to its ballistic missile programme and abandon all nuclear weapons and existing nuclear programmes, while *demanding* that it refrain from conducting any further nuclear test, retract its announcement of withdrawal from the NPT and return at an early date to the NPT and IAEA safeguards.[99]

In the following years, the DPRK continued pursuing a nuclear deterrent. Nonetheless, in February 2012, the North Korean government announced a suspension of uranium enrichment as well as nuclear and missile testing.[100]

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[94] See CRS 1998, pp. 20–35.

[95] S/RES/1172 (1998), 6 June 1998, para 9.

[96] S/RES/1172, preambular para 2 and para 3. See Tabassi 2009, pp. 322–325.

[97] Lahore Memorandum of Understanding, 21 February 1999, available at http://cns.miis.edu/inventory/pdfs/aptlahore.pdf (accessed: 11 February 2011).

[98] Ibid., para 4. See Hansen 2006, p. 70.

[99] S/RES/1718 (2006), 14 October 2006 paras 1–6; S/RES/1874 (2009), 12 June 2009 paras 2–6, 8. See Tabassi 2009, pp. 328–330. The DPRK withdrew from the NPT in 2003: see ILA 2004, pp. 492–494.

[100] See Chronology of U.S.-North Korean Nuclear and Missile Diplomacy, at: http://www.armscontrol.org/factsheets/dprkchron (accessed: 2 May 2014).

The pledge was apparently prompted by the need of food aid the United States agreed to distribute in return.[101] The moratorium, however, was breached by the DPRK after 1 year by a rocket launch on 12 December 2012 and by a new underground NTE carried out on 12 February 2013.

The UNSC has unanimously condemned both the use of ballistic missile technology[102] and the underground nuclear test[103], and it has significantly expanded the scope of economic sanctions against the DPRK. In addition, Res. 2094 (2103) *decides* that the DPRK '*shall not conduct* any further launches that use ballistic missile technology, *nuclear tests* or any other provocation' [emphasis added].[104] The mandatory language of the resolution imposes an unconditional obligation on the DPRK not to test nuclear weapons. It is difficult to imagine that a lawful act attributable to a state may qualify as a threat to peace. As a consequence, in the view of the UNSC, an international norm exists, which prohibits all kinds of NTEs.

6.5.2 Current Perspectives

It is widely recognized that the US ratification of the CTBT would create a virtuous circle pushing China, then India and Pakistan, and possibly Israel, to ratify as well.[105] Presently, however (especially considering the recent attitude of the DPRK) the time the treaty will take effect is highly unpredictable. As a consequence, several options have been envisaged to overcome the current impasse.

Provisional application offers the opportunity to implement a treaty before it is ratified and enters into force, under a separate agreement mostly concluded in simplified form; for this reason, it has often been resorted to in arms control treaties.[106] Article 25 VCLT provides that a treaty, or a part of a treaty, is applied provisionally pending its entry into force if the treaty itself so provides or the negotiating States have in some other manner so agreed. Since the CTBT is silent on provisional application, a separate agreement should be concluded regarding its provisional application. A protocol of provisional application of the CTBT would enable ratifiers and signatories to provisionally put into effect the whole treaty, including the entire verification system. Provisional application, however, is deemed to represent a last resort, and it would probably not bring more benefits than the obligation not to defeat the CTBT's object and purpose, which is already binding upon signatories

[101] See Bajoria 2012 and Ong Suan Ee 2012.

[102] S/RES/2087 (2013), 22 January 2013.

[103] S/RES/2094 (2013), 7 March 2013.

[104] S/RES/2094 (2013), para 2.

[105] Aust et al. 2008, p. 49; Johnson 2009, pp. 222–226; Lewis 2010.

[106] See Michie 2005, pp. 351–355 discussing the role of provisional application in the context of arms control treaties. Currently, only a part of the CTBT (concerning the most part of the verification system) is being provisionally applied (see *infra* Sect. 6.6.2).

and ratifiers.[107] Moreover, recourse to provisional application may seem rather inappropriate 17 years after the adoption of the treaty.

Alternatively, an instrument modelled on the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, could be adopted.[108] Such an agreement would *de facto* amend CTBT Article XIV, to put into effect the treaty immediately.[109] Regarding the UNCLOS, however, 'political and economic changes, including in particular a growing reliance on market principles',[110] have prompted reconsideration and substantive changes in Part XI. These included provisions on funding and institutional arrangements, decision-making mechanisms, and future amendments of the UNCLOS itself, which were agreed upon during 4 years of informal consultations.[111] It seems highly unlikely that the CTBT's signatories and ratifiers, not to mention non-signatory states, are inclined to undertake such a complex process, at the present time.

Eventually, the UNSC could adopt a 'legislative' resolution prohibiting all NTEs as a threat to the international peace and security under the UN Charter.[112] Yet, in order to be effective, this would require not only the needed majority in the Council (including the positive votes the permanent members), but also a considerable amount of support from the international community. It is highly doubtful that nuclear-weapon states, not to mention non-NPT nuclear weapons possessors, would back such a resolution.

6.5.3 The Role of Customary International Law

The traditional view does not consider custom as a useful tool for the development of international law of arms limitations and disarmament, while 'the supremacy of treaties and their modifications by written amendment-like procedures is universally accepted in practice'.[113] At present time, however, the role of custom should be reappraised. Does a customary prohibition of NTEs exist in contemporary international law? The answer is affirmative as far as atmospheric, underwater, outer space, and celestial bodies testing is concerned. This is mainly due to the importance of environmental protection in contemporary international law.[114]

As regards underground testing, state practice is largely consistent at the current time, since after 1996 none of the CTBT's signatories or ratifiers has conducted underground NTEs, and two non-signatory states (India and Pakistan) are

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[107] Johnson 2009, pp. 227–230; Aust et al. 2008, p. 46.

[108] A/RES/48/263, 17 August 1994, Annex.

[109] Pedrazzi 2007, pp. 87–88.

[110] See A/RES/48/263, preambular para 6.

[111] See Oxman 1994; Anderson 1995 analyzing the key features of the 1994 Agreement.

[112] Szaz 2002, pp. 904–905.

[113] Dahlitz 1991, pp. 169 and 177.

[114] *Supra* Sect. 6.4 and n 57.

implementing national moratoria under a bilateral agreement.[115] Arguably, the 'persistent objector' doctrine[116] could not apply to the DPRK, given the condemnation and sanctioning of its testing activities by the UNSC. On the contrary, the establishment of region-wide nuclear weapons free zones contributes to demonstrating the broad international support for comprehensive prohibitions including nuclear testing.

The existence of *opinio juris*, i.e. the acceptance that abstention from carrying out NTEs is juridically mandatory, is more difficult to establish. Indeed, the various UNSC resolutions, as well as those of the General Assembly calling to halt nuclear testing, always insist on ratification and entry into force of the CTBT instead of addressing issues of customary international law. The prevailing opinion points out that unilateral moratoria are no substitute for a treaty ban, since they are voluntary and may be unilaterally revoked.[117] However, some commentators have argued that a prolonged moratorium could lead to a customary prohibition during a sufficiently extended period of time.[118] In other words, unilateral moratoria could provide evidence of the increasing consciousness of states that a duty to abstain from all kind of NTEs is owed to the international community as a whole. Recognised principles of international environmental law, such as the prevention principle, the principle of sustainable development, the principle of common but differentiated responsibilities, and the precautionary principle, further concur to the emergence of a general prohibition of NTEs. Among them, the precautionary principle is especially relevant as far as underground explosions are concerned.[119]

A more detailed analysis of the formation and evidence of customary international law is beyond the scope of the present contribution. As a matter of fact, general rules do not help very much in disarmament and non-proliferation matters, since they do not provide for implementation measures or instruments of verification. Indeed, to make customary law effective, treaty cooperation among states is essential. As a consequence, an operational structure of control is indispensable to secure the benefits of the global prohibition of NTEs.

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115 *Supra* Sect. 6.5.1 and n 97.

116 The 'persistent objector' doctrine postulates that if a state constantly and openly objects to a rule when this is in the process of emerging, it will not be bound by it. See ILA 2000, pp. 738–740.

117 Asada 2002, pp. 93–94. See also Sixty-sixth General Assembly, Observance of International Day against Nuclear Tests (AM), *Experts warn of nuclear testing risks despite moratorium, as General Assembly marks International Day,* GA/11272 OBV/1134, 6 September 2012: at: http://www.un.org/News/Press/docs/2012/ga11272.doc.htm (accessed: 25 February 2013).

118 See Tabassi 2009, pp. 334–335; Wenqiang 2012, pp. 335–336. See also ILA 2000, pp. 747–749, analysing the elements of a customary norm of abstention, and Michie 2005, p. 373, discussing the effects of the provisional arrangements for the CTBT on the emergence of a norm prohibiting all NTEs.

119 See Tabassi 2009, pp. 341–342, p. 347. In its order of 22 September 1995 (*supra* n 54) the ICJ made reference to 'the obligations of States to respect and protect the natural environment' in connection with nuclear testing (*ICJ Reports* 1995, p 306, para 64). The separate opinions of the minority judges also elaborate at length about the relevance of international environmental law for nuclear testing issues. See MacKay 1995, 1884.

6.6 The CTBTO PrepCom

Pending entry into force of the CTBT, the international organisation established by Article II of the treaty is already, although provisionally, operational. This was made possible through the adoption by the signatory states, on 19 November 1996, of a resolution approving the 'Text on the Establishment of a Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization' (hereinafter: CTBTO PrepCom), as annexed to the resolution.[120] The following day, the CTBTO PrepCom convened its first meeting to deliberate over the Rules of Procedure, Financial Regulations, and other matters pertaining to the future operation of the organization.

The word 'Text' reminds of the arrangement adopted in 1993 to establish the Preparatory Commission for the Organisation for the Prohibition of Chemical Weapons.[121] It suggests that the signatory states were not willing to give the document the status of an international agreement. Nevertheless, the twenty-two paragraphs of the Text establish the structure, competence, funding, decision-making and treaty-making powers, privileges, and immunities of an international organisation.[122] Moreover, while giving the PrepCom responsibility for the operationalisation of the CTBT's verification regime, the Text makes reference to Article IV CTBT, which is itself a sort of 'separate treaty' including sixty-eight paragraphs.[123] In other words, the Text together with Article IV do regulate the CTBTO PrepCom in extreme detail. Therefore, from a legal point of view, the 1996 Resolution may be equated with an agreement in simplified form, which entered into force upon signature, not requiring ratification.[124]

6.6.1 The Verification Regime

Since 1996, the CTBTO PrepCom has been working as an independent international organisation based in Vienna and consisting of two organs: a plenary body (the PrepCom itself) composed of all states signatories of the CTBT, and the Provisional Technical Secretariat, headed by an Executive Secretary with a staff of about 250

[120] Resolution establishing the Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization, CTBT/MSS/RES/1 17 October 1996, at: http://www.CTBTo.org/fileadmin/content/reference/legal_resources/prepcom_resolution.pdf (accessed: 25 February 2013).

[121] Paris Resolution Establishing the Preparatory Commission for the Organisation for the Prohibition of Chemical Weapons, 13–15 January 1993, Legal Series PC-OPCW 1, 1994, at: http://www.opcw.org/index.php?eID=dam_frontend_push&docID=840 (accessed: 25 February 2013).

[122] Resolution establishing the Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization (*supra* n 120), Annex, paras 4, 6–8, 12, 22. See den Dekker 2000, p. 674; Asada 2002, pp. 104–108; Aust 2004; Michie 2005, p. 368; Hansen 2006, pp. 56–58, describing the PrepCom's institutional and operational features.

[123] Tavernier 1996, p. 122.

[124] Pedrazzi 2007, p. 86.

people from more than 70 signatory states. The organisation's annual budget is around US$ 120.000.000 or € 82.000.000.[125] In 2000, it concluded a relationship agreement with the United Nations.[126] When the CTBT enters into force, the permanent CTBTO will be the present organisation's universal successor.

Even more important is that the largest part of the CTBT's verification system is already operational. The IMS includes more than three hundred facilities and laboratories operating in approximately ninety countries around the world. These are based on agreements between the CTBTO PrepCom and each member state that hosts an IMS facility for the purpose of testing and provisionally operating the IDC stations.[127] Local institutions manage the IMS facilities and laboratories under contracts with the organisation.[128] The Global Communications Infrastructure, ensuring global coverage through a network of satellites, transmits the data recorded at the IMS stations to the IDC in Vienna. At the IDC, the data are processed, analysed, and eventually submitted to states for evaluation. As a matter of fact, the verification system is almost fully operational, even before the CTBT enters into force. For example, when the DPRK conducted NTEs, states received information about the location, magnitude, time, and depth of the tests within a few hours, and before the actual testing had been announced by the North Korean government.[129]

The IMS support is not limited to verification of nuclear testing. It also contributes to the mitigation of disasters by providing data for early warning and by measuring radioactivity in the atmosphere after nuclear accidents. In March 2011, the IDC data were available within the first hour of the Fukushima accident. Therefore, the verification system furthers considerably the protection of human health and the natural environment.[130]

6.6.2 Future Perspectives

Pending the CTBT's entry into force, the CTBTO PrepCom remains operative on the basis of the 1996 resolution, construed as an agreement in simplified form. It is, however, questionable whether the present situation can reasonably persist for

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[125] http://www.ctbto.org/the-organization/the-provisional-technical-secretariat-pts/budget/ (accessed: 2 May 2014).

[126] A/RES/54/280, 30 June 2000.

[127] See Aust et al. 2008, p. 7.

[128] See 4 CTBTO Newsletter, July 2004, on the legal aspects of the IMS facility agreements, at: http://www.ctbto.org/fileadmin/content/reference/outreach/spectrum_issues_singles/ctbto_spectrum_4/p1.pdf (accessed: 25 February 2013).

[129] Medalia 2013, pp. 11–17.

[130] See Johnson 2009, pp. 215–266 describing the civil and scientific applications of the verification system. The environmental benefits of the IMS have been recognized by the Article XIV Conference of 2011: see Final Declaration and Measures to Promote the Entry Into Force of the Comprehensive Nuclear-Test-Ban Treaty, para 7, at: http://www.ctbto.org/fileadmin/user_upload/Art_14_2011/23-09-11/Final_Declaration.pdf.

an indefinite time, given the stalemate in bringing the CTBT into force.[131] Other possibilities include the handing over of the IMS to a UNSC subsidiary body or to the International Agency for the Atomic Energy (hereinafter: IAEA). Both options are politically undesirable, since they would indicate that CTBT will never enter into force. From a legal point of view, the Security Council has the power to establish subsidiary bodies as needed for the performance of its functions.[132] In the field of non-proliferation, a Committee on the implementation of Resolution 1540 composed of the UNSC current members has been established in 2004.[133] Yet it is difficult to envisage how the IMS could be efficiently run by a like body, which would more probably disturb the functioning of the present system. A partnership between the CTBTO and the IAEA appears more persuasive, since the two organisations already started to share monitoring data and analysis reports.[134] An institutional arrangement between the two organisations could preserve the PrepCom's autonomy, while supporting its operation through reciprocal collaborative commitments.

6.7 Concluding Remarks

International law concerning nuclear test explosions has developed slowly during the past 50 years, and it is highly fragmented at present time. Underground explosions were exempt from prohibitions established by the 1963 PTBT, while the comprehensive ban under the CTBT does not include the testing of nuclear weapons by way of computer simulations, nor the conduct of subcritical tests. It is, however, generally recognized that a comprehensive nuclear tests ban is complementary to non-proliferation, as well as instrumental in the advancement of disarmament goals.

While signatory states remain committed to pursue the CTBT's entry into force under Article XIV of the treaty, it is worth reflecting on whether different options could be considered. On the one hand, new agreements could be concluded. A protocol of provisional application of the CTBT would enable ratifiers and signatories to provisionally put into operation the treaty, including the entire verification system. Alternatively, an instrument like the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea could be adopted, *de facto* amending CTBT Article XIV to put into effect the treaty immediately. Ultimately, the UNSC could legislate on an *erga omnes* ban. All options have drawbacks, and none seems credible at the present time.

On the other hand, the non-entry into force of the CTBT prompts consideration as to whether substantive and/or procedural rules of customary international law

131 'Indeed, it would be highly questionable to maintain an expensive and fully functional international monitoring system for provisional application of a treaty.' See ILA 2004, p. 495.

132 UN Charter, Article 29.

133 S/RES/1540(2004) para 4. The Committee's mandate is presently extended to 2021.

134 See http://www.ctbto.org/press-centre/press-releases/2011/ctbto-to-share-data-with-iaea-and-who/ (accessed: 25 February 2013).

have emerged, or are emerging, in relation to nuclear test explosions. International practice proves that after 1996 only one state (the DPRK) has conducted NTEs. The establishment of region-wide nuclear weapons free zones demonstrates the broad international support for comprehensive prohibitions including NTEs. The unilateral moratoria currently implemented by two signatories (the US and China) and two non-signatory states (India and Pakistan) provide evidence of the progressive emergence of a customary norm prohibiting all kind of NTEs. Such a general prohibition is consistent with the recognised principles of international environmental law, particularly the prevention principle, the principle of sustainable development, the principle of common but differentiated responsibilities, and the precautionary principle.

Certainly, treaty cooperation is required to make customary law effective, and an operational structure of control and verification is necessary to secure the benefits of the global prohibition of NTEs. The CBTO PrepCom, established as an independent international organisation aimed at developing the International Monitoring System and the International Data Centre pending the CTBT's entry into force, is operative on the basis of the 1996 resolution corresponding to an agreement in simplified form. Besides its primary function, the verification system further contributes to the protection of human health and the natural environment by providing data for early warning and by measuring radioactivity in the atmosphere after nuclear accidents.

Be it as it may, neither the present provisional organisation, nor the permanent CTBTO could ensure adequate enforcement of the comprehensive prohibition of NTEs. To this aim other measures: economic, commercial and political are needed, and the power to decide their suitability lies with the UN Security Council.

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Chapter 7
The Sovereign Right to Peaceful Use of Nuclear Energy and International Environmental Law

Anguel Anastassov

Abstract The sovereign right of States to peaceful use of nuclear energy is analysed in this chapter on the basis of current non-proliferation law and international environmental law. The exercise of this right depends on the implementation of certain obligations under international law. The high bar of the legality of peaceful nuclear energy is explained by the dual-use nature of the materials and technologies associated with nuclear energy and the transboundary nature of environmental protection. The notion of sovereignty as independence and superiority does not serve the challenges of peaceful nuclear energy and the modern understanding of the environment as an area of common concern. Against this background, a cooperative approach is suggested in order to successfully resolve the prevention and mitigation of nuclear accidents. The principles of international environmental law pose stringent requirements for the legal use of nuclear energy, which offer additional arguments for responsible behaviours of both States and non-States' actors in cooperation with international organisations and in particular with the IAEA. The subject of sovereignty is closely linked with the responsibility and liability of States in case of nuclear environmental damage. The present nuclear liability regime should be strengthened by adopting an international legal instrument covering both civil and international liabilities.

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Contents

7.1 Introduction

The peaceful use of nuclear energy has traditionally been linked with the production of electricity from nuclear reactors. In addition, peaceful nuclear energy has extensively been used in other areas such as agriculture, industry, medicine, biology and hydrology. The use of nuclear energy for electricity has been divided in a number of fields, for instance, mining and processing of nuclear raw materials; production of enriched uranium; fabrication of nuclear fuel; design, construction and operation of nuclear reactors; and full reprocessing.

Another alternative to the peaceful use of nuclear energy might be the development of renewable energy sources. A number of technological and financial difficulties, however, make the use of energy-generation alternatives not feasible for a

great part of the world at least in the near future. At the same time, peaceful nuclear energy has been steadily developing. As of 17 November 2013, a total of 435 nuclear reactors were operating, 1 in long-term shutdown and 71 in construction in 30 countries.[1]

The question of whether States have an absolute right to peaceful nuclear energy has been high on the international legal agenda for a number of years. The sovereign right to peaceful nuclear energy is conditional, and it is subject to certain limitations by non-proliferation law.[2] In addition, the sovereign right to peaceful nuclear energy should be exercised in compliance with the recognised principles of international environmental law.

The beginning of international cooperation and law-making in the area of environmental nuclear law dates back to 1928 when the International Committee on Radiological Protection was set up, followed by the establishment of the United Nations Scientific Committee on the Effects of Atomic Radiation (1955), the International Atomic Energy Agency (1957), and the Nuclear Energy Agency (NEA) of the Organization for the Economic Co-operation and Development (OECD) (1958). A number of multilateral legal instruments were developed in the area of non-proliferation of nuclear weapons as well in the physical and radiation protection and liability for nuclear damage.

International cooperation and law-making in environmental nuclear law are often strengthened in cases responding to major incidents. The 1986 Chernobyl accident, for instance, revealed certain gaps in international nuclear law, and under the auspices of the IAEA, two conventions were adopted: the Convention on Early Notification of a Nuclear Accident[3] (Notification Convention) and the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency[4] (Assistance Convention). The Convention on Nuclear Safety[5] focuses on emergency preparedness. A number of practical arrangements and tools were developed in order to efficiently implement the conventions referred to above, such as the Inter-Agency Committee on Response to Nuclear Accidents, the IAEA's Incident and Emergency Centre and the Working Group on the NEA's Committee on Radiation Protection and Public Health. The accident at Fukushima Daiichi which occurred after Japan was struck by a devastating earthquake on 11 March 2011 triggered a number of international high-level examples of international cooperation in the area of nuclear safety.[6]

The emphasis of the present study is on the difficulties of the concept of sovereignty as an independent authority to resolve the environmental challenges of

[1] The figures are based on the IAEA's Power Reactor Information System (PRIS) online database, available at http://www.iaea.org/pris/ All on-line documents in this chapter were accessed on 17 November 2013.

[2] See Joyner and Roscini 2012.

[3] IAEA Doc. INFCIRC/335, 18 November 1986.

[4] IAEA Doc. INFCIRC/336, 18 November 1986.

[5] Convention on Nuclear Safety, IAEA Doc. INFCIRC/449, 5 July 1994.

[6] Kus 2011, p. 16.

today, especially in the area of peaceful nuclear energy. The position of the author is that the traditional anthropocentric approach of international nuclear law is gradually moving to increased importance of environmental law for nuclear activities.[7] The analysis of the present chapter is mainly focused on legal rules and standards for a safe and ecologically sound construction and the operation of a nuclear installation[8] and also in the event of a nuclear accident. An important question is the analysis of whether States continue to serve as the main sovereigns in the safety of peaceful nuclear energy or there are prospects for shifting the nuclear responsibility towards wider use of the cooperative approach, without decreasing the role of individual States. The limitations of the sovereign rights of States in peaceful nuclear energy are performed through both reciprocal obligations of States and increasing influence of other actors of global governance[9]—international organisations, business associations, non-governmental organisations and individuals.

7.2 Concepts of 'Sovereignty' and 'Rights' and Nuclear Non-proliferation

Traditionally, sovereignty has been defined in the eighteenth and nineteenth centuries as 'supreme authority, which is independent of any other earthly authority'.[10]

Due to the emerging trend of internationalisation of the major areas of the state practice, the international courts and tribunals since the beginning of twentieth century have followed the concept that the sovereignty is limited subject to international law. It was pointed out, for instance in the *Island of Palmas* Arbitration,[11] that the right of sovereignty 'has a corollary duty: the obligation to protect within the territory the right of other States, in particular, their right to integrity and

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[7] Emmerechts 2010, p. 121.

[8] 'Nuclear installation' means 'any land-based civil nuclear power plant under jurisdiction of the respective Contracting Party including such storage, handling and treatment facilities for radioactive materials as are on the same site and are directly related to the operation of the nuclear power plant. Such a plant ceases to be a nuclear installation when all nuclear fuel elements have been removed permanently from the reactor core and have been stored safely in accordance with approved procedures, and a decommissioning programme has been agreed to by the regulatory body'. See Article 2 of the Convention on Nuclear Safety.

[9] Generally, global governance is defined as a constantly evolving system of formal and informal institutions, mechanisms, relationships and arrangements among States, their constituent markets and private organizations, groups and individuals, which through collective interests in the global sphere are articulated, rights and obligations established and differences mediated. Quoted in International Law Association. The Hague Conference (2010). Report of the Seventy-Fourth Conference. The Hague, 2010, p. 634.

[10] Oppenheim 1905, p. 101.

[11] *Island of Palmas* case (USA vs. the Netherlands) (1928). The arbitration involved a dispute between the United States and the Netherlands over the sovereignty of the Island of Palmas. Reprinted in 2 UN Reports of International Arbitral Awards, 829.

inviolability in peace and in war …'.[12] The International Court of Justice held in the *Corfu Channel* case[13] that 'between independent States, respect for territorial sovereignty is an essential foundation of international relations'.[14] In addition, Judge Alvarez stated that due to the social interdependency, sovereignty can not be regarded as an absolute right and States are bound by international law, including rules to which they have not consented.[15]

Generally, sovereignty could be described as the competence and independence of States in respect of their territory and natural resources, for instance a freedom from external interference. Sovereignty is used also as a reference to various types of rights, for instance the 'sovereign rights' a coastal State has over the resources of the continental shelf. What is to be highlighted, however, is that the exercise of sovereign rights is in the sense that they are 'owned' by the State and should not be confused with *territorial* sovereignty.[16] Modern international law does not provide any strong evidence of change in the territorial sovereignty which is applicable between States. The United Nations Charter prohibits the threat or use of force against territorial integrity of any State.[17] In addition, the intervention of the United Nations in matters which are essentially within the domestic jurisdiction of the States has been prohibited by this legal instrument.[18] The dogma of State sovereignty was generally recognised as lying at the root of international legal reasoning during the Second World War.[19] The challenges towards the exercise of an absolute State sovereignty in the peaceful nuclear energy and the shift to cooperative understanding of sovereignty could be analysed in several key areas: ensuring the non-proliferation of nuclear weapons, transboundary nuclear damage and the increased role of nuclear intergovernmental and non-territorial forms of political authority. State sovereignty certainly includes a freedom of choice of energy sources and States could use nuclear energy for peaceful purposes in their development. The exercising of the sovereign right to peaceful nuclear energy depends, however, on certain qualifications referred to in the Treaty on the Non-Proliferation of Nuclear Weapons,[20] which serve as guarantees against proliferation of nuclear weapons.[21] Article IV recognises the 'inalienable

[12] Ibid., p. 839.

[13] The *Corfu Channel* case related to a conflict between the United Kingdom and Albania concerning explosions of mines in Albania's territorial waters in the Corfu Channel and the subsequent claim of the United Kingdom on the right of free passage of its warships through the channel. *Corfu Channel* case, Judgment of April 9,1949: ICJ Reports 1949, p. 4.

[14] Ibid., p. 35.

[15] Ibid., Judge Alvarez stated the following: 'Aujourd'hui, en raison de l'interdépendance sociale, ainsi que de la prédominance de l'intérêt général, les Etats sont liés par bien des préceptes sans que leur volonté intervienne', Opinion individuelle de M. Alejandro Alvarez, at 43.

[16] Crawford 2012, pp. 216–217.

[17] Charter of the United Nations, Article 2(4).

[18] Ibid., Article 2(7).

[19] Nijman 2004, p. 114.

[20] Treaty on the Non-Proliferation of Nuclear Weapons—NPT—(1 July 1968), 729 *UNTS* 161.

[21] See Zarate 2010.

right' of States Parties to peaceful nuclear energy and refers to 'without discrimination' and 'in conformity with Articles I and II of this Treaty'.[22] In addition, Article III requires each non-nuclear-weapon State Party to conclude a comprehensive safeguard agreement with the IAEA 'with a view to preventing the diversion of nuclear energy from peaceful purposes to nuclear weapons and other nuclear explosive devices'. The careful reading of paragraph seven of the NPT's preamble reveals that the qualification 'without discrimination' refers not to nuclear technology in general, but rather to *the benefits* of peaceful applications of such technologies.[23] The second qualification requires that 'research, production and use' of peaceful nuclear energy is 'in conformity with the Articles I and II of the NPT'. Article I prohibits nuclear-weapon States Parties from transferring nuclear weapons and other nuclear explosive devices, or control over such weapons or devices, to 'any recipient whatsoever' and also forbids them from 'assist[ing], encourage[ing], or induc[ing]' any non-nuclear-weapon State 'to manufacture or otherwise to acquire' nuclear explosive devices. Article II prohibits non-nuclear-weapon States Parties from receiving nuclear weapons or other nuclear explosive devices and from receiving or seeking 'any assistance in the manufacture of nuclear weapons or other nuclear explosive devices'. The third legal qualification recognises the sovereign right of the non-nuclear-weapon State Parties to peaceful nuclear energy, but requires them to place all of their nuclear activities under IAEA nuclear verification measures. Basically, such activities are centrifuge enrichment of uranium for power reactors, which can be switched without practical difficulties to produce weapons-grade uranium; chemical separation of nuclear-usable plutonium from spent reactor fuel; and the fabrication of weapons-usable plutonium and highly enriched uranium reactor fuels.[24]

7.3 Permanent Sovereignty Over Natural Resources and the Duty to Respect Environmental Norms

Unlike State sovereignty, permanent sovereignty over natural resources, including peaceful nuclear energy resources, has always been conceived as being limited and subject to international law.[25] This aspect is particularly relevant to the technological and economic activities performed by foreign entities on the territory of the States. This principle emerged during the then process of decolonisation, and it is rooted in the economic development of underdeveloped countries and the promotion of human rights and self-determination of people.[26]

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[22] Article IV(1) NPT: 'Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty'.

[23] Joyner 2011, p. 68.

[24] Sokolski and Perkovich 2010, p. 213.

[25] Perrez 2000, p. 71.

[26] Schrijver 1988, p. 87.

The principle of State sovereignty over national resources has been reflected in a number of United Nations' resolutions.[27] The resolutions initially addressed the need to balance the sovereign rights of States over their natural resources while ensuring the legal certainty of foreign companies' investments. The UNGA Resolution 1803 of 1962 confirmed the permanent sovereignty of the States over their national resources as an international legal right which should be exercised in the interest of their national development. This principle encompasses the right of the States to possess, use and freely dispose of their natural wealth and resources.[28]

The control over natural resources on certain territory falls to the respective State and its national legislation. The State may choose to grant other States or private entities access to its natural resources, mostly by bilateral investment treaties. In addition, in exercising the sovereignty, the State has a right to take back full control over its natural resources by nationalising, expropriating and requisitioning property, leading to a transfer of ownership. These acts are justified only in situations based 'on grounds or reasons of public utility, security or the national interest'.[29] An important aspect of the sovereignty of a State is the right to conduct hazardous activity on its own territory. This right is subject to certain legal limitations based on the duty not to cause damage to the environment of other States or areas beyond the limits of national jurisdiction.[30]

As international environmental law developed, the principle of permanent sovereignty has undertaken certain evolution. In this respect, the sovereignty of States experienced a confrontation with newly evolving environmental principles.[31] The 1972 Stockholm Declaration of the United Nations Conference on the Human Environment[32] has been widely quoted as one of the first international instruments on environmental protection.[33] Principle 21 of the Stockholm Declaration contains two interrelated parts. Firstly, States possess a sovereign right to exploit their own resources pursuant to their own environmental policies and in accordance with the United Nations Charter and the principles of international law. Secondly, States

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[27] For instance, UNGA Res. 626 (VII), 1952; Res. 837 (IX), 1954; Res. 1515(XV), 1960.

[28] International Covenant on Civil and Political Rights, Article 1(2); International Covenant on Economic, Social and Cultural Rights, Article 1(2).

[29] UN Resolution 1803 (XVII), Article 4.

[30] Handl 1978, p. 47. Prof. Handl even concludes that when the risk of harm by an activity in frontier areas reaches a certain level, the activity in question violates international law. The author lists the conditions for a such conclusion as follows: (a) the activity involves a major risk of transnational harm; (b) this risk is a function, at least to a significant degree, of the location in which the activity takes place; and (c) the activity amounts to an inefficient use between the risk-creating and risk-exposed states of the internationally shared resources concerned.

[31] Schrijver 2008, p. 240.

[32] Declaration of the United Nations Conference on the Human Environment (1972 Stockholm Declaration), http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503.

[33] Although the Stockholm Declaration does not define the environment as such, Principle 2 of this act refers to the natural resources of the earth, including air, water, land, flora and fauna and especially representative samples of natural ecosystems.

are required to ensure that activities within their jurisdiction or control do not cause environmental damage to other States or areas beyond the limits of national jurisdiction. Principle 21 of the Stockholm Declaration is repeated in Principle 2 of the Rio Declaration of the 1992 United Nations Conference on Environment and Development with an additional emphasis on the pursuing States' own environmental and development policies.[34]

In accordance with the obligations referred to above, a State, which exercises its sovereign right to conduct such hazardous activities as peaceful nuclear activities, should ensure that these activities do not cause environmental damage to other States or areas beyond the limits of national jurisdiction. The main functions of the procedural obligations, which will be discussed below, are aimed at ensuring the particular conduct of the State to prevent a nuclear accident and its degrading environmental consequences.

7.4 Principles of the International Environmental Law and Peaceful Use of Nuclear Energy

In general, environmental law has emerged and is being developed as a response to a growing concern by the international community over the environment. The environmental law follows certain principles and norms which might not always be in compliance with the law of other specialised areas. There are authors that take the view that NPT for instance cannot be interpreted as prevailing over the obligations of international environmental law.[35] Another point of view which in my opinion has stronger justification is that the interrelationship between two legal principles and norms might not be necessarily in conflict. A norm may assist in the interpretation of another norm for example as an application, clarification, updating or modification of the latter.[36] Several principles of international environmental law are especially pertinent[37] to the peaceful use of nuclear energy. The simple fact, however, that the main legal instruments in the peaceful use of nuclear energy and the principles of modern environmental law have been drafted in different points of time has its implications on their compatibility. The trend in the development of international environmental law from the law protecting the basic interests of neighbouring States towards the law of the protection of the environment as a common heritage of humankind could well be illustrated by the development of ecological aspects of peaceful nuclear energy. There is no universal legal instrument

[34] Rio Declaration on Environment and Development, http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

[35] Hofstötter 2010, p. 8.

[36] Report of the International Law Commission, Fifty-Eighth Session, 1 May–9 June and 3 July–11 August 2006, A/61/10, p. 407.

[37] Nanda 2006, p. 64.

comprising all rules and principles of international environmental law. Any effort to identify these should be based on the great number of treaties, binding acts of international organisations, State practice and soft law. One trend in international environmental law should be pointed out, namely avoiding enforcement measures and implementing facilitative, cooperative approach instead.[38]

The review of a number of the general principles of international environmental law illustrates certain limits of the sovereign independent States to efficiently manage peaceful nuclear activities and the need for implementing a cooperative approach on a bilateral, regional and global basis. It may be pointed out, however, that there is no necessarily inherent tension between sovereignty and environmental protection. So, States could exercise their sovereign rights, individually or collectively in the interest of the protection of the environment.[39]

7.4.1 General Obligation to Cooperate as Principle of International Environmental Law

The general obligation of States to cooperate illustrates the transition of the focus of modern international law from independence to cooperation and partnership. Development of the international environmental policy is guided by the general principles of international law which influence the growth of new concrete rules of international law.[40] Hence, the general obligation to cooperate could be first traced in public international law and then discuss more specifically the existence of such obligation in the international environmental policy.

The normative basis for the States' general obligation to cooperate is contained in the UN Charter. This key legal instrument made clear that political, social and economic cooperation is a fundamental necessity to enable economic development and to promote and guarantee international peace and security.[41] There is a close link between sovereignty and respect of international law. The UN General Assembly Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations states that sovereign equality includes the State's 'duty to comply fully and in good faith with its international obligations'.[42] The UN General Assembly clarified on many other occasions that the promotion of international peace requires the removal of various threats to peace and in particular the nuclear threat, the development of confidence-building measures, promotion and exercise

[38] See MEA: Working Group on Compliance and Enforcement, 30, *Environmental Policy and Law 2000,* p. 60.

[39] Elliott 2013, p. 374.

[40] Hey 1992, pp. 303–304.

[41] UN Charter, Articles 1(3), 11, 13.

[42] UN GA Res. 2625 (XXV), 24 October 1970.

of human rights, the enhancement of the quality of life and the protection of the environment.[43]

In conclusion, the general obligation of the States to cooperate is well accepted by the international community and the legitimate interests of the others are respected in State practice.

The general obligation to cooperate is further elaborated in international environmental law. International environmental law constitutes 'those substantive, procedural and institutional rules of international law that have as their primary objective the protection of the environment'.[44] The body of international environmental law applicable to peaceful nuclear activities perfectly illustrates the shift in the concept of sovereignty from independence to cooperation. The term 'cooperation' is used in this chapter in a broad sense of coordination of activities of States, taking into consideration their legitimate rights and interests. Cooperation may be performed through various forms, including information exchange, consultations, membership and participation in intergovernmental organisations and joint bodies. The obligation to cooperate is confirmed in virtually all international environmental treaties, whether they are of bilateral, regional or global application.[45]

The obligation to cooperate has been confirmed by a number of decisions and awards of international courts and tribunals. In the *MOX* (Provisional Measures) case, for instance, Ireland claimed that the United Kingdom had failed to comply with Articles 123 and 197 of UNCLOS,[46] by not replying to communications and requests for information and by refusing to prepare a supplementary environmental statement.[47] In its Order, the ITLOS recommended to establish further arrangements to address the Tribunal's concern that 'co-operation and consultation may not always have been as timely or effective as it could have been'.[48] In accordance with this principle, the Installation State must provide to other States adequate information on the proposed peaceful nuclear activities in order to prevent and mitigate any environmental damage which might be caused by a nuclear accident. Certainly, the other States and in particular neighbouring States have reciprocal obligations to cooperate in due course. This obligation will be further analysed in this chapter by discussing some specific commitments which States of origin[49] must comply with, such as ensuring the necessary information (information exchange, consultation and notification), provision of emergency information and transboundary enforcement of environmental standards and international responsibility of States in cases of nuclear environmental damage. A number of general principles of international

[43] For instance, UN GA Res. 40/3, 24 October 1985.

[44] Sands et al. 2012, p. 13.

[45] Ibid., p. 204.

[46] United Nations Convention on the Law of the Sea (30 April 1982) 1833 *UNTS* 31363.

[47] *The MOX Plant* case (*Ireland vs. United Kingdom*), Application, 25 October 2001.

[48] Ibid., Provisional Measures Order, 3 December 2001.

[49] There are cases in which a State of origin is actually an Installation State.

environmental law have been condensed into an international obligation to cooperate in order to deal with international environmental problems.[50] Such principles are as follows: the principle of sustainable development; the precautionary principle; Polluter Pays Principle; the principle of common concern or common heritage of mankind; the principle of intergenerational equity; and the principle of common but differentiated responsibilities. All these principles involve a duty to cooperate in dealing effectively with the environmental challenges of the peaceful nuclear activities.

7.4.2 Sustainable Development

The concept of sustainable development has a long record in international environmental law, but it is widely accepted that the term 'sustainable development' was defined by the 1987 Brundtland Report as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. The main ideas contained in the concept of sustainable development are the 'needs' of the world and the 'limitations' to meet present and future needs.[51]

The principle of sustainable development encompasses the following basic elements:

(a) intergenerational equity, i.e. the need to preserve natural resources for the benefit of present and future generations;
(b) sustainable use, i.e. exploiting natural resources 'prudently', 'rationally' or 'wisely';
(c) equitable use of natural resources which implies that use by one State must take account of the needs of the other States; and
(d) integration of environmental and economic objectives in the States' practice.[52]

Sustainable development modifies considerably the concept of exclusive sovereign rights over natural resources by emphasising 'that nations have primary but not exclusive control over resource decisions with extraterritorial impacts and that nations owe duties to the international community'.[53]

The peaceful use of nuclear energy is a powerful economic instrument for sustainable development. The benefits of this development in economic and social areas justify the responsibility and liability in the case of possible nuclear environmental damage.

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[50] Perrez 2000, pp. 283–284.

[51] Report on the World Commission on Environment and Development, *Our Common Future, 1987 (the Brundtland Report).*

[52] Penchev (Пенчев) 1994, pp. 77–82; Perrez 2000, pp. 285–286. Sands et al. 2012, p. 207.

[53] Tarlock 1997, p. 65.

7.4.3 Precautionary Principle

The precautionary principle offers guidance in the development and application of international environmental law where there is scientific uncertainty.[54] The principle's effect has been highlighted in the Rio Declaration which provides that 'where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation'.[55] In addition, the principle implies that the States possess an obligation to cooperate even before it is clear scientifically that cooperation is necessary in order to protect the international environment. The precautionary principle is incorporated into the Cartagena Protocol on Biosafety to the Convention on Biological Diversity.[56] Certainly, excessive precaution may lead to false fear and paralysed actions.

The precautionary principle has been included in some international acts and used in State practice. It was considered as a precautionary approach and not as a precautionary principle in certain individual opinions on the *Southern Bluefin Tuna* cases.[57] As a relatively new principle, it has not been recognised yet as general principle of international law. The Installation State has a general obligation to undertake certain precautionary measures in order to prevent environmental damage which might be caused by peaceful nuclear activities.

7.4.4 Polluter Pays Principle

The Polluter Pays Principle generally requires that the costs of damage are borne by those who cause it. It has not been accepted, however, as a principle of customary international law. The concept of this principle corresponds to the principle of absolute liability of a State for nuclear environmental damage. In my view, the principle is not entirely within the scope of analysis of the sovereign rights of the States and the respective limitations on these rights evaluated through the general principles of international environmental law. It should be pointed out, however, that the limited and exclusive liability of the operators envisaged in the nuclear liability regimes arguably is not strictly in line with the Polluter Pays Principle. The nuclear liability conventions, for instance, limit the liability of the operator in terms of time and amount of compensation.

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[54] Sands et al. 2012, at 218.

[55] Rio Declaration, Principle 15—the Precautionary Approach—(above, n 34).

[56] Convention on Biological Diversity (5 June 1992), http://www.cbd.int/convention/text/default.shtml; Cartagena Protocol on Biosafety (29 January 2000), http://bch.cbd.int/protocol/.

[57] New Zealand versus Japan, Australia versus Japan. Request for Provisional Measures, International Tribunal for the Law of the Sea, 27 August 1999. Quoted in Zeidan 2012, p. 141.

7.4.5 *Principle of 'Common Heritage of Mankind' or 'Common Concern'*

The principle envisages that certain issues or resources are of concern to all States, and hence, no State has the right to make autonomous decisions on these issues or resources.[58] A number of international conventions have referred to the principle; for instance, outer space, the moon and other celestial bodies have been declared to be the 'province of all mankind'[59]; waterfowl has been described as 'an international resource'[60]; the natural and cultural heritage has been declared to be 'part of the world heritage of mankind as a whole'[61]; plant genetic resources have been described as 'a heritage of mankind';[62] and the earth's climate and biodiversity have been defined as 'a common concern of humankind'.[63] The implementation of the principle of common heritage of mankind undermines the traditional concept of the independent sovereign rights of the State, and therefore, the States have to cooperate in order to take into consideration the legitimate interests of the other States and the international community as a whole. An emission of pollutants into the air as a result of a nuclear accident, for instance, may easily cross the countries' boundaries and influence the climate change. Hence, the natural resources of our planet have to be seen today, either as shared or being of common concern.[64] Internationally shared resources are regulated by the general principle of cooperation which is recognised as the main principle of international water law.[65]

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[58] Sands 1994, p. 293.

[59] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including Moon and Other Celestial Bodies (27 January 1967), Article 1.

[60] Convention on Wetlands of International Importance Especially as Waterfowl Habitat—Ramsar Convention—(2 February 1971), Preamble.

[61] UNESCO Convention on the Protection of the World Cultural and Natural Heritage—World Heritage Convention—(16 November 1972), Preamble.

[62] 1983 FAO Plant Genetic Undertaking, Article 1.

[63] United Nations Framework Convention on Climate Change (5 June 1992), http://www.wmo.int/pages/themes/climate/international_unfccc.php, Preamble; Convention on Biological Diversity (1992), Preamble.

[64] Perrez 2000, p. 298.

[65] In accordance with the Articles 8 and 11–14 of the Convention on the Law of the Non-Navigational Uses of International Watercourses (21 May 1997), http://www.globalnature.org/Watercourses-Convention, the States Parties are required to cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith; to exchange information, to provide timely notification and to consult with each other.

7.4.6 Principle of Intergenerational Equity

The principle of intergenerational equity suggests that each generation must use the natural and cultural heritage in a manner which allows it to be passed on to future generations in no worse condition than they were received.[66] This principle serves as a basis for exercising intergenerational rights. Some international agreements have already obligated States not to perform certain activities which would likely breach intergenerational rights. These include the London Dumping Convention,[67] the Antarctic Treaty[68] and the Montreal Protocol on Substances That Deplete the Ozone Layer.[69] The intergenerational equity could be achieved by various potentially useful legal instruments, *inter alia*, by access to information, public participation and long-term environmental impact assessments. The present nuclear liability regimes may not be in line with the principle of intergenerational equity. For instance, the temporal limits of 30 years for claims and ten years for other claims may prejudicially affect the rights of future generations given the environmental effects of nuclear radiation.[70]

7.4.7 Principle of Common But Differentiated Responsibilities

This principle acknowledges that although the protection of the environment is a common responsibility of all States, some countries have—due to different contributions to global environmental degradation—to bear a greater share of the burden of environmental protection.[71] The principle of common but differentiated responsibilities is a logical consequence of the application of a number of other principles of international law, such as the principle of equity and fairness and the principle of partnership.[72] This principle reflects the common concern and responsibility of two or more States with regard to protection of natural resources. The differentiated responsibility translates into differentiated environmental standards on the basis of special needs and historic contributions which in practical terms

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66 Weiss 2010, pp. 110–112.

67 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (13 November 1972) and Protocol Thereto (7 November 1996), http://www.imo.org/OurWork/Environment/SpecialProgrammesAndInitiatives/Pages/London-Convention-and-Protocol.aspx, http://www.admiraltylawguide.com/conven/protodumping1996.html.

68 Antarctic Treaty (1 December 1959).

69 Montreal Protocol on Substances that Deplete the Ozone Layer (16 September 1987, as either adjusted and/or amended in London 1990, Copenhagen 1992, Vienna 1995, Montreal 1997 and Beijing 1999) http://ozone.unep.org/pdfs/Montreal-Protocol2000.pdf.

70 Bhattacharjee 2012, p. 284.

71 Perrez 2000, p. 295.

72 Ibid.

may result in different legal obligations.[73] The Climate Change Convention, for instance, requires the developed country Parties 'to take the lead in combating climate change and the adverse effects thereof'.[74] This principle implies international cooperation and partnership to protect the regional and global ecosystems. Developed and developing countries possess different abilities to deal with the various ecological problems which might arise in the course of peaceful nuclear activities. The principles described above are still evolving, and their practical application depends on the specific circumstances of the particular peaceful nuclear activity.

7.5 Cooperative Approach in the Regulation of the Safe Use of Peaceful Nuclear Energy and the Role of the IAEA

Peaceful nuclear option cannot be effectively exercised by one State alone. The cooperation with other States on the bilateral, regional and global level is indispensable. The shift in the understanding of sovereignty from independence to cooperation is a part of the wider issue of resolving the environmental concerns of the modern contemporary world, and it actually covers all the main areas of the State's activity.[75] A specific way of implementing a cooperative approach in the regulation of the safe use of peaceful nuclear energy is by the functioning of international organisations. The role of the international nuclear organisations, and in particular the IAEA[76] as a recognised leader in the global regulation of peaceful nuclear energy, is a debate on the legal relevance of the practice of international organisations. Actually, the *raison d'être* of creating any intergovernmental organisation is to achieve objectives which separate States no matter how influential they are would not be able to accomplish. In this respect, the views and practice of these subjects are distinguishable from the respective views and practice of the Member States.[77] The Member States and international organisations enter into various kinds of relationships, including the legal consequences of Member States

[73] Sands 2012, pp. 234–235.

[74] Article 3(1) United Nations Framework Convention on Climate Change.

[75] Perrez 2000, pp. 4–5.

[76] The present study does not include the EURATOM which has supranational powers to bind its Member States. The European Union provides a binding legal framework on nuclear safety mainly through Directive 2009/71. The nuclear safety standards established on the basis of IAEA's safety standards and the provisions of the Convention on Nuclear Safety are enforceable before the European Court of Justice and national courts of the EU Member States. The Nuclear Energy Agency as a specialised body of the Organisation for Economic Cooperation and Development serves as a forum for exchange of experience of developed countries of North America, Europe and the Asia Pacific on nuclear safety, radioactive waste and radiological protection.

[77] This comment has been widely accepted as one of the elements of the definition of an international organisation. See e.g., Higgins 1994, p. 46; Schermers and Blokker 1995, pp. 29–30.

of the non-fulfilment of their obligations. Article 61 of the Draft Articles on the Responsibility of International Organisations[78] of the International Law Commission contains a satisfactory decision in the case of circumvention of international obligations of a State member of an international organisation. The Commission requires an international responsibility of the Member State under certain conditions.[79]

The relevance of the practice of intergovernmental organisations in the promotion of the cooperative approach has been recognised by the ICJ and other international courts. In its Advisory Opinion in the *Nuclear Weapons* case, the ICJ extensively referred to the resolutions issued by the World Health Organisation (WHO) as evidence of the practice of the WHO. The ICJ stated that the object of the constituent instruments of international organisations is 'to create new subjects of law endowed with a certain autonomy, to which the parties entrust the tasks of realising common goals'.[80]

The IAEA was established mainly to encourage and foster the development and practical application of atomic energy for peaceful purposes, including the production of electric power, with due consideration for the needs of the under-developed areas of the world.[81] The IAEA is required to establish 'standards' for protecting health and minimising danger to life and property.[82] With reference to nuclear non-proliferation, the Agency uses a verification system based on the provisions of the IAEA Statute and safeguards agreements modelled on INFCIRC/153 (corrected). While the general model of verification leaves certain activities outside the IAEA's supervision,[83] the Model Additional Protocol extends the responsibilities of the IAEA to gather information, including providing for the right of the Agency to conduct environmental sampling at locations outside the declared sites.[84] In accordance with Article III of its Statute, the IAEA is authorised to establish standards of safety for protection of people and the environment. The IAEA Safety Standards Series cover nuclear safety, radiation safety, transport safety and waste safety. The Standards take into account the work of the United Nations Committee on the Effects of Atomic Radiation (UNSCEAR) and the Recommendations of the International Commission on Radiological Protection (ICRP). The publication categories in the series are Safety Fundamentals, Safety Requirements and Safety Guides. Two international conventions were adopted under the auspices of the

[78] Draft Articles on the Responsibility of International Organizations (DARIO), UN Doc A/66/10, para 87, *Yearbook of the International Law Commission, 2011*, Vol. II, Part Two, http://untreaty.un.org/ilc/reports/2011/All%20languages/A_66_10_E.pdf.

[79] Murray 2012, pp. 291–347.

[80] *Legality of the Use by a State of Nuclear Weapons in Armed Conflict,* Advisory Opinion (1996), ICJ Rep. 66, para 19.

[81] IAEA Statute, Article III(1–4).

[82] IAEA Statute, Article III.6.

[83] Myjer and Herbach 2012, p. 127.

[84] INFCIRC/540 (corrected), Articles 4, 5 and 9.

IAEA in order to supplement the Agency's nuclear safety standards and to make them legally binding on the Contracting Parties. These are the 1994 Convention on Nuclear Safety (CNS)[85] and the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.[86] The implementation of the obligations undertaken by the Contracting Parties is proved by providing annual reports and participation in periodic meetings.

The legal nuclear regime needs to be strengthened given the fact that the possibility for an inspection of nuclear installations is not among the means to verify compliance. The responsibility for the safety of nuclear installations and for the prevention and mitigation of environmental damage caused by these installations to other States and commons remains the responsibility of the Installation State.[87] The main objective of the nuclear liability conventions, however, is to provide adequate compensation to victims of the nuclear damage caused by nuclear activities.[88] Against this background, the scope of these conventions could be extended to cover cases of failure of the operator or the Installation State to take measures for the prevention and mitigation of nuclear damage. The IAEA strengthens linkages between safety conventions, safety standards and codes of conduct in order to apply them in a synergistic manner. The Agency's Programme related to safety of nuclear installations focuses on improving the safety during site evaluation, design, construction and operation through the availability of set safety standards and their application; supporting Members States in developing the appropriate safety infrastructure; and assisting adherence to and implementation of the CNS and the Code of Conduct on the Safety of Research Reactors.[89]

The IAEA Safety Standards Series covers nuclear safety, radiation safety, transport safety and waste safety.[90] The Standards take into account the work of the UNSCEAR and the Recommendations of the ICRP. The publication categories in the series are Safety Fundamentals, Safety Requirements and Safety Guides. The Safety Fundamentals establish the safety objectives and principles of protection and safety and provide the basis for the safety requirements. The Safety Requirements determine the needs and conditions that must be met to ensure the protection of people and the environment. The Safety Guides provide recommendations and guidance

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[85] Convention on Nuclear Safety (5 July 1994), INFCIRC/449, http://www.iaea.org/Publications/Documents/Infcircs/Others/inf449.shtml.

[86] Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (29 September 1997), IAEA Document GOV/INF/821-GC(41)/INF/12, http://www-ns.iaea.org/conventions/waste-jointconvention.asp.

[87] Nuclear Safety Convention, Preamble, Paragraph (iii).

[88] See Vienna Convention on Civil Liability for Nuclear Damage (INFCIRC/500, 20 March 1996) Conventions, Preamble; Paris Convention on Third Party Liability in the Field of Nuclear Energy, 26 July 1960, Preamble.

[89] The Agency's Programme and Budget 2012–2013, IAEA document GC (55)/5, August 2011, p. 119.

[90] The IAEA Department of Nuclear Safety and Security was established in 1996 with the specific responsibility in the preparation and review of the Agency's safety standards.

on how to comply with the safety requirements. Safety Fundamentals and Safety Requirements are expressed in 'must' and 'shall' statements and therefore contain legally binding norms, whereas Safety Guides use 'should' forms providing guidance on how to comply with the Safety Fundamentals and Safety Requirements. The Member States of the IAEA are obligated to accept the non-proliferation safeguards through bilateral agreements with the Agency and to allow ad hoc, routine and special inspections for the purposes of verification of non-proliferation.[91] Safeguard agreements, however, do not provide the IAEA power over the safety standards vis-à-vis Member States.[92] Certainly, Member States can voluntarily place their nuclear facilities or materials under the IAEA safety standards.[93] Subject to an agreement between the IAEA and the Installation State, the IAEA has the right to inspect a nuclear installation.[94] The IAEA Safety Standards are legally binding on the Secretariat of the Organisation only. Before approving a Technical Cooperation project for instance, the Board of Governors gives due consideration to the adequacy of the proposed health and safety standards for handling and storing materials and for operating facilities.[95] The IAEA has responsibilities to require the observance of any health and safety measures prescribed by the Agency, and if these are not complied with, further assistance may be suspended and terminated, and membership of the Agency withdrawn.[96]

An effective legal framework for safety, including an independent regulatory body as well as protection of people and the environment against radiation risks, should be among the established safety principles. It is worth mentioning that although the CNS, which is the basic legally binding instrument in the nuclear safety field, does not require compliance with the IAEA's safety standards, in fact these standards are considered as the international benchmark against which the States should measure their compliance with the CNS.[97] In our view, the time has come to strengthen the existing legal regime and to replace the current concept of environmental protection against nuclear accidents, which relies on the responsibility of the individual States and operators, with mandatory uniform IAEA safety

[91] Under para 28 of the INFCIRC/153 (Corrected), the objective of safeguards is 'the timely detection of diversion of significant quantities of nuclear material from peaceful nuclear activities to the manufacture of nuclear weapons or of other explosive devices or for purposes unknown, and deterrence of such diversion by the risk of early detection'.

[92] Boyle 1989, p. 263.

[93] IAEA Statute, Article III.6.

[94] See IAEA Statute, Articles III(3), XI, XII.

[95] IAEA Statute, Article XI.E.3. An equivalent obligation is included in the Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency, INFCIRC/267, A.1(h).

[96] IAEA Statute, Article XII.A.7; Vienna Convention on the Law of Treaties, 1969, Article 60.

[97] Findlay 2011, p. 103.

standards established at the highest technological level. The separate issue of the long-term storage of spent nuclear fuel deserves special attention and an adequate solution based on stringent rules under international supervision.

7.6 Obligations of States to Ensure the Ecologically Sound Construction and Operation of a Nuclear Installation

The sovereign right of the States to peaceful nuclear energy is balanced with a number of obligations to ensure the safe management of nuclear activity. Given the possible negative activities in the case of accidents, the analysis is focused on the State's obligations to use a cooperative approach in ensuring the safe construction and operation of a nuclear installation. The strict implementation of these obligations provides precautionary protection of man and the environment through preventing the risk of nuclear accidents.

7.6.1 Establishment of Legislative and Regulatory Regime

A necessary legal and administrative framework should be established by the Installation State. A number of legal multilateral instruments determine the rules and conditions for the State's peaceful nuclear activities though such activities are conducted mainly by private companies. In accordance with the Aarhus Convention, each Party takes legislative, regulatory and other measures, as well as respective enforcement measures to establish a consistent framework to implement the provisions on the access to information, public participation in decision-making and access to justice in environmental matters.[98] The United Nations Convention on the Law of the Sea obliges States to adopt laws, regulations, measures, rules, standards and recommended practices and procedures to prevent, reduce and control environmental damage from land-based sources.[99] The 2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities explicitly require that States concerned should take the necessary legislative, administrative or other action, including the establishment of suitable monitoring mechanisms.[100] A similar obligation is envisaged in the Convention

[98] UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention), Article 3(1).

[99] Article 207 UNCLOS.

[100] Prevention of Transboundary Harm from Hazardous Activities. Report of the International Law Commission to the General Assembly, Article 5. UN General Assembly Official Records, Fifty-Sixth Session, Supplement 10 (A/56/10).

on Environmental Impact Assessment in a Transboundary Context.[101] Certain specialised national institutions should be set up by Installation States aimed at determining the rules and procedures to conduct nuclear activities for peaceful purposes in accordance with their legal obligations. An appropriate regulatory regime should be established prior to the authorisation of a nuclear activity with the assistance of the IAEA.

The transfer of nuclear technology is an important part of the topic under discussion. One level of analysis is to consider the export of nuclear technology as distinct from the general category of the export of hazardous materials where harmful effects rarely extend beyond the territorial borders of the importing State. Certainly, there are no particular dangers from the normal functioning of a nuclear installation. The potential radiation leakage, however, presents a unique danger to human health and the environment. The transfer of nuclear technology is primarily government to government even though private actors may be involved at certain segments of the cycle. A particular reason for careful consideration of the exporter–importer relationship regarding nuclear technology is arguably the economic reluctance of the receiving State to add safety features in the design and construction of a nuclear installation. In addition, what is of a special interest for the purposes of this analysis is that a receiving State may argue that the insistence on the stronger safety regulation and assessment by the exporting State would threaten to impinge upon the sovereignty of the receiving State.[102]

Certain multilateral regimes such as the Nuclear Suppliers Group (NSG) and the Zanger Committee are specialised in the transfer of nuclear technology, and their activities practically limit the sovereign actions of the participating States on the basis of non-proliferation objectives. The potential of export and other technology controls is, however, rather limited. The export of the centrifuge rotors, for instance, is subject to control. Unformed material, however, is not controlled, and technically, it is not difficult to produce centrifuge rotors from any raw items.[103]

7.6.2 Prior Authorisation

The authorisation for conducting activities in the area of peaceful nuclear energy is under the control of the individual States. The use of nuclear energy for civilian purposes as a typical example of activities not prohibited by international law which

[101] Convention on Environmental Impact Assessment in a Transboundary Context—Espoo Convention—(25 February 1991), http://www.unece.org/env/eia/eia.html, Article 2, para 2.

[102] D'Amato and Engel 2010. The publication refers to a case in which the US Nuclear Regulatory Commission (NRC) partially grounded its plurality decision to grant a license to Westinghouse Corporation for the export of a nuclear power plant to the Philippines on a Philippine government communication that it would regard even a detailed health and safety review of the new reactor as an intrusion upon its sovereignty.

[103] Kemp 2012, p. 65.

involve a risk of 'significant' transboundary harm through their physical consequences is subject to prior authorisation.[104] Such authorisation is required for pre-existing hazardous activities within the scope referred to above.[105] In case of non-conforming with the requirements of the authorisation, the State of origin can take necessary actions as appropriate, including the termination of the authorisation.[106] The specific requirements for the authorisation are left for the competent State authorities in accordance with the applicable national law.[107] The States provide the respective regulatory bodies authorisation to grant licences and to 'regulate the sitting, design, construction, commissioning, operation or decommissioning of nuclear installations'.[108] Specifically, the national regulatory body issues licences to regulate nuclear facilities, e.g. commercial nuclear power reactors, research reactors, uranium enrichment facilities, fuel fabrication facilities, spent nuclear fuel storage facilities and high-level radioactive waste disposal activities.[109] A reactor operating licence, for instance, contains technical specifications that must define mandatory requirements and actions to be taken to ensure the protection of public health and safety and protection of the environment.[110]

7.6.3 Designation of a Liable Person

Designation of a liable person for the operation of a nuclear installation and eventual compensation for resulting nuclear damage is an important part of the obligations of the State to ensure the safety of nuclear installations and the protection of people and the environment. The liable person is the operator authorised by the Installation State to operate a nuclear installation or to carry out a nuclear activity.[111] The Installation State may provide by legislation that a carrier of nuclear material or a person handling radioactive waste be designated as a liable operator.[112] There are cases in which more than one operator is engaged, and they all are jointly and severally liable if the damage attributable to each operator is not separable.[113]

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[104] Prevention of Transboundary Harm from Hazardous Activities. Report of the International Law Commission to the General Assembly, Article 1.

[105] Ibid., Article 6(2).

[106] Ibid., Article 6(3).

[107] Articles 2(ii)–(iii) and 7(ii) Convention on Nuclear Safety.

[108] Convention on Nuclear Safety, Article 2(ii) (INFCIRC/449, 5 July 1994).

[109] The Nuclear Regulatory Process, Nuclear Energy Institute, Washington, March 2007, p. 9.

[110] Ibid., p. 9.

[111] Vienna Convention on Civil Liability for Nuclear Damage (21 May 1963, amended on 12 September 1997, INFCIRC/556, Article I(c), Article 2; Convention on the Liability of Operators of Nuclear Ships, 25 May 1962, Article I(4), 57 (1) *American Journal of International Law (January 1963)* 268.

[112] Vienna Convention on Civil Liability for Nuclear Damage, Article II.2.

[113] Vienna Convention on Civil Liability for Nuclear Damage, Article II.3.a.

7.6.4 Transboundary Environmental Impact Assessment (EIA)

The transboundary EIA has not been codified yet in a single body of public international law. A number of international agreements, however, provide for general obligations on EIA. Some examples include the agreements governing the Antarctic,[114] transboundary watercourses[115] and the energy area.[116] The basic legal instrument in this area is the Espoo Convention,[117] the only multilateral legal instrument that contains detailed provisions on EIA applied to various hazardous activities, including nuclear ones. The Parties to the Espoo Convention adopted the Protocol on Strategic Environmental Assessment, which expanded the transboundary EIA obligation to include government plans and programmes.[118]

The rational of the Espoo Convention has been used in the negotiations on the North American Agreement on Transboundary Environmental Impact Assessment[119] which has not been finalised because of the conflicting views of Canada, Mexico and the United States on the Agreement's application to state and local governmental bodies.[120] Another multilateral legal instrument that provides a basis for transboundary EIA is the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention).[121] The cross-border EIA in the region has been dealt with by the Protocol on Environmental Impact Assessment in a Transboundary Context to the Framework Convention.[122]

Article 2(1) of the Espoo Convention obliges contracting Parties to take all appropriate measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities. With reference to Article 2(3), the Party of origin shall ensure that an international EIA is undertaken prior to a decision to authorise or to undertake a proposed activity listed in Annex I to the Convention. Point 2(b) of Annex I lists nuclear power stations and other

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[114] Convention on the Regulation of Antarctic Mineral Resources Activities, Articles 2(1)(a) and 4.

[115] Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Articles 3(1)(h) and 9(2)(j).

[116] Energy Charter Treaty, Article 19.

[117] See above (n 101).

[118] Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (21 Mai 2003), http://www.unece.org/fileadmin/DAM/env/eia/documents/legaltexts/protocolenglish.pdf. The Protocol entered into force on 11 July 2010 and has 25 Parties as per 15 October 2012.

[119] Proposed North American Transboundary Environmental Impact Assessment Agreement, http://www.cec.org/Page.asp?PageID=122&ContentID=1906&SiteNodeID=366.

[120] Craik 2008, p. 93, pp. 113–14.

[121] Framework Convention for the Protection of the Marine Environment of the Caspian Sea (4 November 2003), http://www.tehranconvention.org/spip.php?article4&artsuite=0#sommaire_1

[122] Protocol on Environmental Impact Assessment in a Transboundary Context to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea—'Tehran Convention'—(22 July 2011), http://www.tehranconvention.org/IMG/doc/4_Note_on_Environmental_Impact_Assessment_Protocol_25_July.doc.

nuclear reactors except for certain research installations. The convention refers to the EIA as a 'procedure for evaluating the likely impact of a proposed activity on the environment'.[123] A transboundary impact has been defined as 'any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party'.[124] Given the notion of impact envisaged by the Espoo Convention, it could be assumed that projected nuclear plants might trigger the requirement to undertake an EIA. The Espoo Convention defines a number of legal, administrative and other measures required to be undertaken by the Convention parties for proposed activities that can cause adverse impacts on the environment, especially in a transboundary context. The overall procedure envisages public participation in decision-making and in the development of EIA documentation.

In accordance with Article 3, the party of origin has to notify potentially affected parties of the proposed activities. Parties potentially affected have a right to respond to the proposed activity, and they are obliged to inform the public of those areas likely to be affected by the proposed activity. Pursuant to Article 4(2), the EIA documentation shall be disseminated by the concerned parties to the public of the affected party in the areas likely to be affected, which are provided a possibility to submit comments to the competent authority of the party of origin. The Espoo Convention envisages conducting consultations between the party of origin and the party potentially affected on possible alternative activities and mutual assistance in reducing any significant transboundary impact (Articles 4 and 5). This legal instrument finally foresees the option of a post-project analysis aiming at surveillance of the activity in question and the determination of any adverse transboundary impact. The Espoo Convention requires that the public which is likely to be affected participates in any relevant EIA procedures,[125] but there are no legal guarantees that the party of origin provides equal opportunities to both its own citizens and the public of the party affected. In addition, the Espoo Convention, as well as the other transboundary EIA legal instruments, does not require concerned parties to be compensated by the Party of origin. A strategic environmental assessment for specified plans and programmes which are likely to cause significant environmental effects is envisaged by the Protocol on Strategic Environmental Assessment.[126] A number of innovative provisions are included in the Protocol such as requirements for transparency and public participation in strategic decision-making, provisions of transboundary consultations and post-decision monitoring.

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[123] Espoo Convention, Article 1(vi).

[124] Espoo Convention, Article 1(viii).

[125] Espoo Convention, Article 2(6).

[126] Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (21 May 2003), https://www.google.de/?gws_rd=cr&ei=Ly95Uq3xMqTD4wT0soCAAQ#q=Protocol+on+Strategic+Environmental+Assessment+to+the+Convention+on+Environmental+Impact+Assessment+in+a+Transboundary+Context+, entered into force on 11 July 2010.

The approach taken by the 1991 Antarctic Environmental Protocol[127] differs from the 1991 Espoo Convention. Annex I to the Protocol envisages a five-stage procedure for the conduct of the EIA as follows: (1) preliminary stage in which the proposed activity is considered in accordance with appropriate national procedures; (2) Initial Environmental Evaluation containing sufficient information whether a proposed activity may have minor or transitory impact and should include a description of the proposed activity, including its purpose, location, duration and intensity, and consideration of any alternatives and impacts; (3) Comprehensive Environmental Evaluation is prepared in case there is a likelihood of more than a minor or transitory impact; (4) the draft Evaluation is made available publicly circulated to all parties and forwarded to the Protocol's Committee on Environmental Protection; and (5) a final Evaluation which addresses comments received is circulated to all parties and made available publicly.

The 1992 Biodiversity Convention[128] requires EIA on processes and activities that are likely to have 'significant adverse impacts on the conservation and sustainable use of biological diversity'.[129] The Installation State is obliged to carry out an EIA of the proposed peaceful nuclear activity. Site selection is an important element of an EIA, which includes certain standards for the protection of people and the environment.[130] In accordance with Requirement 9 of the IAEA Basic Safety Series, the registrants and licensees take the responsibility to make an assessment of potential radiological environmental impacts in planned exposure situations.[131] A Radiological Environmental Impact Assessment (REIA) for activities and facilities as an IAEA Safety Guide is under preparation.[132]

The obligation to conduct an environmental impact assessment has been addressed by a number of international cases. The ICJ decision on the environmental dispute between Argentina and Uruguay,[133] for instance, is based on the analysis of an obligation contained in Article 41 of the 1975 Statute of the River Uruguay, a treaty between Argentina and Uruguay. The ICJ observed that there is 'a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource'.[134] This requirement is analogical to the obligation in accordance with Article 2 of the Espoo Convention. The potential impact of the ICJ decision is

[127] Protocol on Environmental Protection to the Antarctic Treaty (4 October 1991), http://www.ats.aq/documents/recatt/Att006_e.pdf.

[128] Convention on Biological Diversity (5 June 1992), http://www.cbd.int/doc/legal/cbd-en.pdf.

[129] Articles 7(c) and 14 on Biodiversity Convention.

[130] See IAEA, Safety Standards Series No. NS-r-3, 2003.

[131] IAEA. Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards. Interim Edition. Vienna, 2011, p. 23.

[132] See Diego 2012.

[133] *Pulp Mills on the River Uruguay (Argentina vs. Uruguay),* Judgment, ICJ Reports 2010, p. 14.

[134] Ibid., para 204.

determined by the fact that the obligation to conduct an environmental impact assessment which so far was only binding upon contracting parties to the Espoo Convention will be binding upon any State planning to be engaged in nuclear activities that might have a significant adverse environmental impact on other States.[135] The ICJ has not used the Espoo Convention to make the Judgment in question, but rather customary international law. Nevertheless, the basic elements of the EIA in customary international law closely follow the main elements of the Espoo Convention. There is an obligation to prepare an EIA in situations where significant transboundary harm is likely; the likelihood of harm can be assumed for the kind of activities listed in Appendix I of Espoo; the provisions of notification and cooperation; and post-project analysis.[136]

7.6.5 Prior Notification

The Installation State should provide prior notification to the States likely to be affected before conducting nuclear activity on the basis of an assessment of the possible transboundary harm caused by that activity, including any environmental impact assessment. The assessment should include the available technical and all other relevant information on the risk assessment of the activity in question.[137] An international transboundary movement of radioactive waste should take place only with prior notification and consent of the sending, receiving and transit States in accordance with their respective laws.[138]

7.6.6 Participatory and Procedural Rights in Environmental Matters

Nuclear activities are the most hazardous activities and should be conducted under certain strict rules which States should follow in the area of information exchange, consultation, access to information, public participation in decision-making, access to justice in environmental matters, early notification and assistance in the event of a nuclear accident.

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[135] Cletienne 2010, p. 64.

[136] Boyle 2011, p. 9.

[137] Prevention of Transboundary Harm from Hazardous Activities. Report of the International Law Commission to the General Assembly. Articles 7 and 8.

[138] See IAEA, General Conference Resolution GC(XXXIV)/RES/530 on Code of Practice on the International Transboundary Movement of Radioactive Waste, Principle 5, 21 September 1990, 30 ILM 556 (1991).

7.6.6.1 Information Exchange

The right of human beings to acquire information is one of the basic rights in international law.[139] Examples of certain specific matters that are subject to information exchange include the following: pollution from land-based sources[140]; transboundary air pollution[141]; and protection of nuclear material.[142]

The provision of environmental information gradually became an important subject matter of international environmental law. In accordance with Principle 10 of the Rio Declaration, environmental matters are best dealt with the participation of all citizens concerned. Though the Rio Declaration is not a legally binding instrument, it is an important part of the modern environmental governance. The interrelationship between access to information and public participation has been confirmed by the practice of the European Court of Human Rights, Inter-American Commission on Human Rights and the African Commission on Human and People' Rights.

7.6.6.2 Consultation and Prior Informed Consent

The Installation State is under obligation to consult the States likely to be affected by a nuclear activity and to reach adequate solutions on the respective measures to prevent potential environmental damage caused by these activities.[143] The obligation of States to consult with each other on activities that may have a significant transboundary environmental effect has been recognised by the current practice of the international courts and tribunals. The breach of such obligation may violate the principle of international cooperation under international law, and this concept has been reflected in cases such as the *MOX* case of the ITLOS[144] and the *Pulp Mills* of the ICJ,[145] for instance.

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139 Zeidan 2012, p. 209.

140 2009 Black Sea LBSA Protocol, Articles 4(2)(e), 11(2), 13 and 19(1).

141 2006 Central Asia Framework Convention, Article 8(3)(b).

142 1980 Convention on the Physical Protection of Nuclear Material, Article 5.

143 Report of the International Law Commission on the work of its Fifty-Third Session. Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries. YILC, 2001, Vol. II, Part. Two, Article 9, at p. 160.

144 International Tribunal for the Law of the Sea, Year 2001. *The MOX Plant* case (*Ireland vs. United Kingdom*), 3 December 2001.

145 *Pulp Mills on the River Uruguay (Argentina vs. Uruguay),* Judgment, ICJ Reports 2010, p. 14.

The principle of 'prior informed consent' has been adopted in a number of international legal instruments, including the 1996 Mediterranean Hazardous Wastes Protocol[146] and the 2010 Nagoya Protocol to the Biodiversity Convention.[147]

7.6.6.3 Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters

The Aarhus Convention[148] considers environmental rights in relation with human rights, establishes sustainable development that can be achieved only through the involvement of all stakeholders and links environmental protection and government accountability transparency and responsiveness. The Aarhus Convention provides wider scope for public participation in comparison with the Espoo Convention. Three basic rights have been ensured by the Convention: the right of everyone to receive environmental information that is held by public authorities ('access to environmental information'); the right to participate in environmental decision-making ('public participation in environmental decision-making'); and the right to review procedures to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general ('access to justice'). In practical terms however, the eventual victims of a nuclear accident may possess the resources and the knowledge to institute a suit in the State of the nuclear installation.[149] Nuclear power stations and other nuclear reactors except for certain research installations are included in the list of activities in Annex I, similarly as with the Espoo Convention. The Aarhus Convention envisages certain provisions which are applicable to these specific activities. The public concerned should be informed of the proposed activity, the nature of possible decisions, the public authority responsible for making the decision, the envisaged procedure as well as the fact that the activity is subject to a national or transboundary EIA procedure. The participatory rights established by the Aarhus Convention have been further developed by the 2003 Protocol on Pollutant Release and

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[146] Mediterranean Hazardous Wastes Protocol (1 October 1996), http://www.unep.ch/regionalseas/main/med/medhaz.html. Article 6.3 of the Protocol, for instance, requires 'prior written consent' of the State(s) of import and transit in the case of the transboundary movement of hazardous wastes.

[147] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity (5 September 1992), http://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf. Article 13.1(a) of the Protocol, for instance, requires the national focal points on access and benefit-sharing to make available information on procedures for obtaining prior informed consent.

[148] Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (25 June 1998), http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf.

[149] Bhattacharje 2012, p. 285.

Transfer Registers.[150] The objective of the Protocol is to enhance public access to information through the establishment and maintenance of national pollutant release and transfer registers which in turn could contribute to the prevention and reduction of environmental pollution.

The applicable IAEA conventions concerning nuclear activities make a reference to environmental assessments but without mentioning public participation. Each Party to the 1994 Nuclear Safety Convention[151] (NSC) should ensure that its own population, and competent authorities of the States in the vicinity of the nuclear installations as far as it is likely to be affected of radiological emergency, is provided with appropriate information for emergency planning and response.

Parties to the 1997 Convention on the Safety on Spent Fuel Management and the Safety of Radioactive Waste Management[152] have agreed to put in place a system of prior notification and consent in case of any shipment of spent fuel or of a radioactive waste from a State of origin to a State of destination.

7.6.7 Early Notification and Assistance in the Event of a Nuclear Accident

The early availability of information related to a nuclear accident is critical to allow other States to take the necessary actions to minimise nuclear environmental damage. Principle 18 of the Rio Declaration pointed out that 'states shall immediately notify other states of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those states'. Guidelines on Reportable Events, Integrated Planning and Information Exchange in a Transboundary Release of Radioactive Materials were issued by the IAEA in 1985.[153]

They recommended that in the event of a potential or actual release of radioactive material which might cross or has crossed an international boundary and which could be of radiological safety significance, there should be a timely exchange of adequate information between the competent authorities of the State of origin and the authorities in neighbouring States.[154] Following the Chernobyl nuclear accident, a number of States maintained the view that the former Soviet Union was under a legal obligation to provide information immediately after the

[150] Protocol on Pollutant Release and Transfer Registers (21 May 2003), http://www.unece.org/fileadmin/DAM/env/pp/prtr/Protocol%20texts/PRTR_Protocol_e.pdf.

[151] See above (n 85).

[152] See above (n 86).

[153] IAEA document INFCIRG/321.

[154] INFCIRC/321, paras 3.1 and 4.1.1.

accident.[155] Subsequently, two international conventions were agreed upon on short notice, namely the Convention on Early Notification of a Nuclear Accident[156] (1986 Notification Convention) and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.[157] The former applies in case of any 'accident involving facilities or activities of a state Party or of persons or legal entities under its jurisdiction or control'.[158] In the event of such an accident, States Parties are required to notify, directly or through the IAEA, those States that are or may be physically affected, with details of the accident, its nature, the time of its occurrence and its exact location.[159] States should respond 'promptly' to requests for further information or consultations by an affected State.[160] The validity of the Convention's provisions was confirmed by the notifications made by Japan in relation to the radiation leak at the Fukushima nuclear power station.[161] All incidents and emergency above a certain level are reported in the IAEA's Incident and Emergency Centre. The Convention could be the subject of certain criticism since some of the important recommendations of the IAEA Guidelines referred to above were not included in its text. For instance, the setting in advance of protective measures such as sheltering and evacuation by competent national authorities[162] has not been a part of the Convention. Another missing requirement in the Convention is related to the obligation of States providing or receiving information to make it available to the public.[163] A number of industrial accidents, in particular the 1986 Chernobyl accident, focused the attention of the international community to the need to consider the ecolabelling, of corporate environmental auditing and accounting as issues addressed by law at an international level.[164]

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[155] The Group of Seven issued a Statement in which it was pointed out the following: 'Each country …is responsible for prompt provision of detailed and complete information on nuclear emergencies and accidents, in particular those with potential transboundary consequences. Each of our countries accepts that responsibility'. Group of Seven, Statement on the Implications of the Chernobyl Nuclear Accident, 5 May 1996, 25 ILM 1005 (1986).

[156] Convention on Early Notification of a Nuclear Accident (18 November 1986), IAEA document INFCIRC 335.

[157] Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (18 November 1986), IAEA document INFCIRC 336/Add 1.

[158] Article 1(1) Notification Convention.

[159] Article 2 Notification Convention.

[160] Article 6 Notification Convention.

[161] See Japanese Ministry of Foreign Affairs, 'The Release of Low-Level Contaminated Water into the Ocean from the Fukushima Daiichi Nuclear Power Plant', 9 April 2011, available at www.mofa.go.jp/j_info/visit/incidents/llc_water.html.

[162] IAEA document INFCIRC/321, para 3.5.

[163] The IAEA Information Guidelines declared that 'dissemination of information to the public is an important responsibility of the appropriate authorities in each state'. See IAEA document INFCIRC 321, para 4.5.1.

[164] Boyle 2011, p. 624.

7.7 Environmental Nuclear Damage and Liability of States

There are generally no agreed criteria to calculate the pure environmental damage under international law and in particular under the nuclear liability conventions. One of the reasons for this could be sought in difficulties to differentiate environmental nuclear damage[165] from other damage caused to people and property, the costs of preventive measures, the reinstatement of the environment, as well as any economic loss if this is permitted under the general law of civil liability of the competent court. Certainly, some models implemented in national legal systems may be used; however, the economic value of the environment should be taken into consideration, as well as the long-term impact on the nuclear environmental damage. The environmental damage caused by a nuclear accident is an essential element of the absolute liability of the operator of a nuclear installation and the Installation State. It should be pointed out that the nuclear environmental damage that spreads beyond the borders of the State could incur State liability. The reparable nuclear environmental damage should cover all the harm or injury caused as a result of the impaired environment. In classical international law, concepts such as the international legal personality and State's sovereignty have been intimately linked.[166] Since the principle of individual and State responsibility for injurious consequences is discussed elsewhere in this book, we will focus our analysis only on some specific aspects of the principle of State responsibility and liability for environmental nuclear damage. A number of issues, such as State liability for nuclear environmental damage caused to the global commons and civil nuclear liability, are not included in this analysis.

7.7.1 Liability Regime for Environmental Nuclear Damage

The United Nations Charter does not explicitly refer to the principle above. Article 74 of the Charter underlines, however, that the policy of the UN members must be based on the general principle of good neighbourliness and should take into account 'the interests and well-being of the rest of the world, in social, economic and commercial matters'. So, the scope of discretionary action of the States arising from the principle of their sovereignty over national resources is determined by another principle of good neighbourliness and such adage as *sic utere tuo ut alienum non laedas* (you should use your property in such a way as not to cause injury to your neighbour's).

In accordance with the above principle, the peaceful use of nuclear energy should not cause damage to the environment of other States or areas beyond the

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[165] See Horbach 1999.

[166] Oppenheim wrote in 1905 that 'States solely and exclusively are the subjects of international law'. *International Law,* p. 18.

limits of national jurisdiction. In cases involving transboundary nuclear damage, neighbouring States, above all, have a direct interest in promoting the prevention and mitigation of the possible negative effects. The State has legal authority to perform or permit peaceful nuclear activities in accordance with the applicable norms and standards. Therefore, the State's role in construction and operation of nuclear installations, *inter alia*, justifies the State's participation in the nuclear liability regime. The 1997 Resolution on 'Responsibility and Liability under International Law for Environmental Damage' adopted by the Institute of International Law combines the principles of State responsibility and liability on the one hand, and civil liability, on the other hand, in one instrument applicable for transboundary nuclear damage.

The damage that may arise in the course of peaceful nuclear activities could be the result of violation of primary obligations aimed at managing nuclear activities which by definition are hazardous activities not prohibited by international law. These obligations are mainly of a procedural nature, and they ensure the prevention and mitigation of environmental damage caused by peaceful nuclear accidents.[167] In the case of violation of these obligations, the Installation State is obliged to discontinue the illegal activities[168] and to repair the material and moral damage caused by such unlawful activity.[169]

The nuclear liability conventions include the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy[170] supplemented by Brussels Supplementary Convention[171] of 1963, revised by an Additional Protocol of 1964 and a Protocol of 1982 and expanded by the 2004 Brussels Protocol to Amend the Brussels Supplementary Convention on Nuclear Third Party Liability under the auspices of OECD[172]; the 1963 Vienna Convention on Civil Liability for Nuclear

[167] Some assessments have been published on the global risk of exposure to radioactivity due to atmospheric dispersion of gases and particles following severe nuclear accidents (the most severe ones on the International Nuclear Event Scale, INES 7). It was computed that in a such major reactor accident of any nuclear power plan worldwide, more than 90 % of emitted Cs-137 would be transported beyond 50 km and about 50 % beyond 1000 km distance before being deposited. This corroborated that such accidents have large-scale and transboundary effects. See Lelieveld et al. 2012, p. 4245.

[168] Article 30(a) of the 2001 ILC Articles on State Responsibility.

[169] Article 31 of the 2001 ILC Articles on State Responsibility.

[170] Paris Convention on Third Party Liability in the Field of Nuclear Energy (29 July 1960, last amended on 12 February 2004), http://www.oecd-nea.org/law/Unofficial%20consolidated%20Paris%20Convention.pdf.

[171] Brussels Convention Supplementary to the Paris Convention of 29 July 1960, as amended by the additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982—Brussels Supplementary Convention—(31 January 1963), http://www.oecd-nea.org/law/brussels-supplementary-convention.html.

[172] Protocol to Amend the Brussels Supplementary Convention on Nuclear Third Party Liability (12 February 2004), http://www.oecd-nea.org/law/brussels-supplementary-convention-protocol.html.

Damage[173]; and the free-standing 1997 Convention on Supplementary Compensation for Nuclear Damage.[174]

The liability for damage caused by nuclear reactor ships is covered by the 1962 Brussels Convention on Nuclear Ships and the international transport of nuclear material by the 1971 Brussels Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material. After the Chernobyl accident, the Paris Convention and Vienna Convention were linked by the 1988 Joint Protocol Relating to the Application of the Vienna Convention and Paris Convention.

The scope of the nuclear damage in accordance with the nuclear liability conventions is limited to personal and property loss, environmental damage, economic loss and costs of preventive and reinstatement measures. These conventions limit the liability of the operator in terms of time and amount of compensation, and the highest degree is the absolute liability. The later is in place for damage caused by a peaceful nuclear activity on the basis of proof provided by the victims of the relationship between the damage suffered and that activity without the necessity to prove the fault or negligence on the part of the liable person.

In cases where the ecological nuclear damage cannot be compensated by the operator in accordance with existing nuclear liability conventions, the liability should be attributed to the Installation State. Actually, States accept full liability for damage caused by hazardous activities, including nuclear activities[175] in accordance with the 1972 Convention on International Liability for Damage Cause by Space Objects.

7.7.2 State Responsibility for Breach of Environmental Nuclear Obligations

A failure of the State to fulfil its international legal obligations in a peaceful nuclear activity may entail a State responsibility for damage caused to other States. The principle of State responsibility was developed in environmental and nuclear cases, including the Trail Smelter arbitration between the United States and Canada in 1941, the Lac Lanoux arbitration between France and Spain in 1957, the *Corfu Channel* case (*United Kingdom of the Great Britain and Northern Ireland vs Albania*) in 1949, the *Gabčikovo-Nagymaros Project* (*Hungary/Slovakia*) case in 1997, the *MOX Plant* case (*Ireland vs United Kingdom*) in 2001 and the *Pulp Mills* case (*Argentina vs Uruguay*) in 2010. The

[173] Vienna Convention on Civil Liability for Nuclear Damage—Vienna Convention—(21 May 1963, amended on 12 September 1997), INFCIRC/556, http://www-pub.iaea.org/MTCD/publications/PDF/Pub1279_web.pdf.

[174] Convention on Supplementary Compensation for Nuclear Damage (12 September 1997), http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc567.shtml.

[175] See Anastassov 1988.

ICJ judgement of the 1996 Advisory Opinion on the 'Legality of the Threat or Use of Nuclear Weapons' stated that there is a general obligation in international law upon States to ensure that activities performed within their territories or under their jurisdiction or control do not cause transboundary damage to the environment.

The international judicial decisions refer to a breach of international obligation which constitute an internationally wrongful act, namely commission or omission that is attributable to the State. The standard to determine the breach of such an obligation is based on obligations relating to conduct or results. For instance, the Nuclear Safety Convention envisages a number of procedural obligations aimed at performing certain conduct by the Contracting Parties in order to comply with safety standards. In the *Corfu Channel* case,[176] the ICJ took the view that a State commits an internationally wrongful act when it allows its territory to be used in such a way as to cause harm or injury to the territory, persons or property of another State.

International law permits for certain circumstances to exclude a wrongful act committed by the State, and these have been described by the International Law Commission in its 2001 Articles on State responsibility[177] as follows: consent of a State, self-defence, countermeasures, force majeure and fortuitous events, distress and necessity.

7.7.3 The Absolute Liability of a State for Environmental Nuclear Damage

The peaceful use of nuclear energy is a highly risky business which implies certain difficulties in proving the fault or negligence on the part of an operator, particularly in the event of delayed damage years after the possible accident. This justifies the liability of a State which allows peaceful nuclear activities on its territory or under its jurisdiction or control.

The absolute State liability for nuclear environmental damage has been acknowledged mainly by certain legal instruments related to outer space. This principle was included in Article VII of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the moon and other celestial bodies.

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176 *Corfu Channel Case,* Judgment of 9 April 1949: ICJ Reports 1949, p. 4.

177 Articles on Responsibility of States for Internationally Wrongful Acts—ARSIWA—(2001) UN Doc. A/56/10, *Yearbook of the International Law Commission, 2001*, Vol. II, Part Two, http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf; Draft Articles on the Responsibility of International Organizations (DARIO), UN Doc A/66/10, para 87, *Yearbook of the International Law Commission, 2011*, Vol. II, Part Two, http://untreaty.un.org/ilc/reports/2011/All%20languages/A_66_10_E.pdf.

The principle of absolute liability is in line with the Polluter Pays Principle. The latter, however, is restricted only to the economic part of the nuclear environmental damage, whereas the principle of absolute liability of a State is a legal concept which covers compensation for the environmental nuclear damage.

7.7.4 Legal Consequences of Responsibility and Liability for Nuclear Environmental Damage

In accordance with the 2001 Articles on State Responsibility for Wrongful Acts, the responsible State is obliged to cease the illegal act, to provide assurances and guarantees of the non-repetition of such an illegal act and to repair the damage caused by it. The reparation of the nuclear environmental damage may take various forms, i.e. restitution, compensation and satisfaction. The assessment of compensation should be determined according to the civil law rules. The ICJ supported the requests for compensation, for instance in the case concerning the Gabčikovo-Nagymaros Project[178] by declaring that Slovakia and Hungary suffered nuclear damage, and hence, they both were entitled to compensation. The 1986 Chernobyl accident caused damage to many countries, but no State brought claims for compensation before the international courts. The victims of the accident were compensated in accordance with their national laws and with reference to the nuclear liability conventions.

In conclusion, the principle of prevention of nuclear accidents, which is linked with the precautionary principle, should be one of the key objectives of the nuclear liability regime. The numerous nuclear liability conventions have created a complicated nuclear liability regime which has been proved in cases of major accidents like Chernobyl and Fukushima as not adequate.[179] Therefore, a newly drafted international legal instrument should cover both civil and international liabilities.[180]

7.8 The Role of Non-state Actors in the Environmental Governance of Peaceful Nuclear Energy

States and international organisations are important but not the only actors in global environmental governance. Activities of subnational agents such as municipalities, business institutions and non-governmental organisations (NGOs) at local, national, regional and global levels are crucial for sound environmental management.

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178 *Gabčikovo-Nagymaros Project (Hungary/Slovakia),* Judgment, ICJ Reports 1997, p. 7.

179 Van Dyke 2006, p. 33.

180 Zeidan 2012, p. 508.

A number of international legal acts and 'soft law' instruments refer to the term 'NGO', although there is no commonly agreed definition. The term 'NGO' has been referred to in Article 71 of the UN Charter. The Economic and Social Council of the United Nations defined in 1950 an NGO as any international organisation which is not created by an intergovernmental agreement.[181] The European Convention on the Recognition of the Legal Personality of International Non-Governmental Organizations[182] provides certain elements of a definition of an NGO, including the requirement of a non-profit aim, which has to be of 'international utility'. In 1999, the Organization of American States (OAS) adopted new Guidelines for Participation by Civil Society Organizations in OAS activities.[183]

Certain environmental NGOs have kept high profile, and their authority competes with the official governmental structures. Having said that, however, the legitimacy of these organisations could be questioned on some grounds and in particular on the basis of the fact that arguably, the NGOs are accountable, above all, to their funders. As yet, those funders do not necessarily represent the public interest.[184] Certainly, from another perspective, international accountability should be based on the recognised rights of the NGOs in accordance with international law. The environmental NGOs which are in the range of tens of thousands have established networks for exchange of information and coordination of policies and strategies. There are certain formal and informal requirements for NSAs' accreditation and participation in the intergovernmental organisations, in particular the United Nations and IAEA. The treaty-making capacity is based, above all, on the provisions of Article 3 of the Vienna Convention of the Law of the Treaties which indicates that international agreements are concluded between States and other subjects of international law. Similarly, the International Law Commission confirmed in its 1962 Report that a treaty could be concluded between 'two or more States or other subjects of international law'.[185] NSAs' regulatory role is deriving legitimacy mainly from their scientific credibility and not from the fact that they are established by States.[186] NGOs have been the initiators of updating some treaty regimes due to the nature and intensity of environmental degradation. On the basis of new scientific evidence of an expanding ozone hole over the Antarctica, Friends of the Earth, Environmental Defence Fund and other influential NGOs managed to convince state officials to revise the Montreal Protocol on

[181] E/RES/288(X). Review of consultative arrangements with non-governmental organizations, 27 February 1950.

[182] European Convention on the Recognition of the Legal Personality of International Non-governmental Organisations (24 April 1986), http://conventions.coe.int/Treaty/en/Treaties/Html/124.htm.

[183] CP/RES. 759 (1217/99), Guidelines for Participation by Civil Society Organizations in OAS Activities. 15 December 1999.

[184] Wapner 2000, p. 94.

[185] Report of the International Law Commission. Fourteenth Session, 24 April–29 June 1962. UN doc. A/CN.4/148, 16 YBILC (1962-11), at 161.

[186] Elliot 2013, p. 373.

Substances that Deplete the Ozone Layer. The Aarhus Convention provides that civil society can bring States for non-compliance before a Compliance Committee and even an NGO of one State can bring another State to this body. The issue of public participation in international decision-making processes as part of the process within the Aarhus Convention has proved the need to shift the emphasis from participation in decision-making to partnership in implementation of international environmental principles.[187]

The NSAs, including a business community and NGOs, play a decisive role in various stages of construction and operation of a nuclear installation. The World Association of Nuclear Operators (WANO), for instance, was established soon after the Chernobyl accident and links 115 operators in 34 countries. Information and event reports are issued and submitted by each operating organisation to its regional centre and then distributed to all WANO members through an international exchange system. In case a particular trend or concern becomes evident, a special operating event report (SOER) may be circulated and this has the force of a recommendation arising from peer review. The World Institute for Nuclear Security (WINS) was set up in 2008 as an independent not-for-profit foundation aiming at countering theft of nuclear materials and terrorism. The Institute facilitates cooperation between organisations responsible for security at nuclear facilities, both private and government owned.

Leaders of many nuclear industry' companies announced in April 2010 their intention to achieve greater international standardisation in reactor design. Acknowledging the sovereignty of national regulators and the role of international standard-setting organisations, the nuclear industry has confirmed its commitment to work in a cooperative manner with these nuclear authorities. Another example of a fully private initiative in the area of peaceful nuclear energy is the setting up of a code of conduct to ensure best practice in the export of nuclear power plants. Under the leadership of the Carnegie Endowment for International Peace, nine companies including all current exporters of nuclear reactors have signed up to the Nuclear Power Plant Exporters' Principles of Conduct. The six principles agreed upon which conform with the guidelines of the IAEA and Nuclear Suppliers Group and incorporate recommended best practices in safety, security, environmental protection and spent fuel management, non-proliferation, business ethics and internationally recognised systems for compensation.

One can notice a trend in increasing the role of NSAs and using more flexible and informal modes of cooperation to deal efficiently with challenges of nuclear environmental governance. Along with the evident advantages, the informalisation bears a high price, namely the informal arrangements are more easily abandoned than formal ones and sanctions for non-compliance are outside the agenda of the international community.[188]

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[187] Ivanova 2003, p. 17.

[188] Daase 2013, p. 76.

7.9 Conclusions

The modern understanding of State sovereignty has overcome a traditional approach for independence and autonomy. The sovereign right of States to peaceful nuclear energy is beyond any doubt. This right is exercised, however, through a general obligation to cooperate which is firmly established by international environmental law. The obligation to cooperate is especially evident in the case of potential environmental nuclear damage. Therefore, this general obligation is concretised by an assessment of possible impacts and risks—both in non-proliferation of nuclear weapons and protection of the environment and by performing a number of concrete obligations by the States concerned. An important part of the discussed subject is the role of the States in various institutional frameworks and above all in the IAEA. The intergovernmental organisations participate actively in the present international relations, and the States' individual powers are strengthened by cooperating with these organisations. An essential part of the concept of sovereignty is the cooperation between States and non-States' actors to prevent and mitigate environmental damage caused by an eventual nuclear accident. The present nuclear liability regime should be strengthened by adopting an international legal instrument covering both civil and international liabilities.

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Chapter 8
Indigenous Peoples in the Nuclear Age: Uranium Mining on Indigenous' Lands

Katja Göcke

Abstract A major part of the global uranium reserves are located on indigenous peoples' lands. Most indigenous peoples have strongly opposed uranium exploration and exploitation on their ancestral lands, given that many of the uranium mining projects carried out on their lands since the mid-twentieth century during the first uranium boom have led to devastating environmental and health effects. As the share of nuclear energy in global power generation and the demand for uranium had been in decline since the mid-1980s, the pressure on indigenous peoples to accept uranium mining on their lands has been lower in recent years. This began to change, however, with the reconsideration of the allegedly CO2-free nuclear energy as energy source due to increased concerns about global warming in the early 2000s. With the growth in demand, the prices for uranium have increased, and more and more mining companies have approached States—and indigenous peoples directly—for uranium mining permits on indigenous lands. This chapter looks at the potential impact of uranium mining on indigenous communities, examines national and international legal frameworks governing uranium mining on indigenous lands, and develops substantial and procedural rights of indigenous peoples under international law.

Contents

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8.1 Introduction

According to one of the Navajo creation stories, the Navajo people—or *Diné*, meaning 'the people', as they call themselves—when entering the world were asked by the gods to choose between two yellow powders: the yellow dust of corn pollen and the yellow dust from the rocks. The *Diné* chose corn pollen and were warned by the gods to leave the other yellow powder in the ground forever. If it were ever dug up, great evil would come.[1]

Sadly, with the beginning of the Nuclear Age in the mid-twentieth century, this prophecy has become a reality—not only for the Navajo Nation but for many indigenous peoples worldwide. Due to the fact that approximately 70 % of the world's uranium deposits are located on indigenous peoples' land,[2] these peoples have been particularly affected by the uranium mining industry.

As a consequence of the beginning of the Nuclear Age in the 1940s and the rise in uranium production from virtually zero in 1945 to almost 50,000 tonnes in the 1950s,[3] a great number of mining projects have been carried out on indigenous lands without the affected communities' consent or even knowledge. But even in case the respective government did recognise the right of indigenous peoples to their ancestral lands, indigenous peoples have often not been able to resist uranium mining on their lands. Corporations have regularly exploited the desperate financial and social situation of indigenous peoples. For centuries, indigenous peoples have been disadvantaged, neglected and marginalised, and, as a result, are among the world's poorest and most disadvantaged groups. They often have the highest unemployment rate, the shortest life expectancy, and the lowest income, health, housing and educational standards within their respective home States.[4] Hence when mining companies began to approach indigenous peoples in the 1940s and 1950s to negotiate with them over the extraction of uranium on their lands, many indigenous peoples agreed for bare sustenance.[5] The indigenous peoples' poverty and desperate need to generate income put them in a poor bargaining position. The

[1] See for example Eichstaedt 1994, p. 47; LaDuke 2009.

[2] According to Native American environmentalist Winona LaDuke; see for example Honor the Earth 2012; LaDuke 2010.

[3] World Nuclear Association 2012.

[4] See for example UN Department of Economic and Social Affairs 2009.

[5] Churchill and LaDuke 1992, p. 246.

weak position of indigenous peoples has not only led to extremely low royalty rates for the affected indigenous communities but also to the disregard of safety regulations by the mining companies. Since the unemployment rate within indigenous communities was—and remains[6]—extremely high, there is a guaranteed labour force, and for a long time corporations aimed at cutting costs by lax enforcement of worker safety regulations. In addition, mining companies tried to save costs by not maintaining the facilities properly, not storing and disposing of toxic nuclear wastes adequately, and by not cleaning up after the exhaustion of the mines.[7] Indigenous peoples were not aware of the dangers associated with uranium mining due to lack of information and misinformation by official bodies. Instead, governments generally turned a blind eye to the mining companies' behaviour since they were interested in cheap and compatible resource extraction for the economic benefit of the country. Furthermore, during the Cold War and the arms race, uranium mining was also regarded as a matter of national importance, and the governments were not interested in taking steps that could have negatively impacted mining operations.[8] The governments' seeming indifference towards indigenous peoples' safety and concerns is an indication of prevalent racism against indigenous peoples: a minority was endangered for the 'greater good' of the rest of the country.[9]

Ultimately, large-scale uranium extraction and subsequent nuclear waste dumping on their ancestral lands has left many indigenous peoples with contaminated soils, water and vegetation, thousands of abandoned mines, and continuing health problems. The probably best-known example is the Church Rock uranium mill tailings spill of June 1979—the worst nuclear accident in the history of the United States. Due to disregard of safety standards the dam of the disposal pond at a uranium mine in Church Rock (New Mexico) on the Navajo Reservation broke and released more than 100 million gallons of radioactive water into the Rio Puerco—the Navajo's single water source for irrigation and livestock.[10] There are other tragic examples of the consequences of uranium mining on indigenous lands, for example the several uranium mining projects elsewhere on the reservation of the Navajo Nation, which left the Navajo with highly toxic radioactive wastes on their lands, over 500 abandoned mines, a contaminated environment, a significant drop of the water table and thousands of sick former mine workers and families,[11] the Elliot Lake Uranium Mines in Ontario (Canada), which contaminated several lakes and the entire Serpent River system with 165 million tonnes of radioactive

[6] For example, the current unemployment rate on Indian reservations in the United States amounts to 50 % (US Congress—Senate 2010), and to 23 % on reserves in Canada (Statistics Canada 2009).

[7] See Churchill and LaDuke 1992, p. 247; Johansen 1997.

[8] Segal 2012, pp. 363–366.

[9] Ibid., p. 365.

[10] See Johansen 1997.

[11] See Segal 2012; Churchill and LaDuke 1992, pp. 248–249; Johansen 1997.

mining effluvia and thus deprived the local Anishinaabeg of their means of subsistence,[12] or the Rum Jungle Uranium Mine in the Northern Territory (Australia) whose acid mine drainage destroyed all plant and animal life for a 10 km stretch of the Finnis River.[13] The social and environmental costs of these accidents have exceeded the short-run benefits many times over.

The mid-1980s saw a decline of the share of nuclear energy in global power generation due to growing public opposition as a result of the accidents at Three Mile Island and Chernobyl.[14] With the nuclear industry in decline the pressure on indigenous communities to accept uranium mining on their lands diminished. Yet since about 2001 there have been talks about a potential uranium renaissance.

Whereas prices for uranium hovered around USD 10 per pound for decades, they skyrocketed in 2004 and peaked at USD 136 in June 2007 before levelling off at around USD 50 per pound.[15] Drivers for this development are natural and geopolitical supply disruptions, as well as increased concerns about global warming caused by the use of fossil fuels. Several States, *inter alia* China, India, Russia, the United States and several Eastern European countries, have announced their plans to build new plants and to dramatically increase their nuclear capacity. Hence it is expected that the project demand for uranium will rise significantly in the years to come.[16]

Therefore, the question if, and under what conditions, uranium mining on indigenous lands is acceptable has taken centre stage once again. Several mining companies have vowed to do better this time and follow high environmental and social standards. In order to win the support of the local indigenous communities, public relations campaigns are launched and promises are made to create well-paid jobs and generate huge cash flows through fair revenue sharing. What is ultimately promised to indigenous peoples is prosperity, development and self-reliance through uranium mining on their lands.

In the following, this chapter will provide an overview of indigenous peoples' attitude towards uranium mining on their ancestral lands today. Subsequently, it will look at national laws and regulations and analyse whether and under what conditions they allow for uranium mining on indigenous lands. For reasons of brevity, the chapter will limit the comparison of national legal frameworks to Canada, the United States of America and Australia as three of the world's top ten producers of uranium.[17] Next, the chapter will examine the international legal framework, and new developments under international law will be outlined. The chapter will conclude with a short appraisal.

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[12] See McNamara 2009; Dowie 2009a, b.

[13] See Parliament of Australia—Senate Committee 1997.

[14] World Nuclear Association 2011.

[15] Cameco Corp. 2012.

[16] Xemplar Energy Corp. 2007; Dowie 2009a, b; World Nuclear Association 2011.

[17] See World Nuclear Association 2012.

8.2 Indigenous Peoples' Attitude Towards Uranium Mining

In order to be able to analyse indigenous peoples' attitude towards uranium mining, one fundamental issue must first be addressed: the definition of the term 'indigenous peoples'. The question 'Who is indigenous?' is difficult to answer. There is no universal or generally accepted definition of the term. Such a definition seems almost impossible considering the diversity of indigenous peoples. Their traditional habitats range from Arctic permafrost zones to deserts and tropical rainforests. Indigenous peoples have adapted to these diverse living conditions, and therefore their cultures, societies and ways of life differ significantly. In addition, indigenous peoples disapprove of a general definition. They claim that the question of who is indigenous is best answered by the indigenous communities themselves. Since several international rights and corresponding duties of States are directly linked to the status of indigeneity, indigenous peoples fear that a definition would be abused by governments to arbitrarily exclude certain groups.[18] The right to self-definition has been stressed in several international legal instruments concerning the rights of indigenous peoples.[19] Such instruments only list certain objective criteria which are generally but not necessarily fulfilled by an indigenous people.[20] Yet, there is one objective criterion, which has repeatedly been mentioned to be essential in order for a group to be regarded as indigenous: the special and spiritual connection to its ancestral lands.[21] This connection, which is also reflected etymologically in the original Latin word *indigena*—a fusion of the words *indu* (in, within) and the root of *gignere* (to beget)[22]—lies at the core of the concept of indigeneity.

All indigenous peoples have in common that over the millennia they have developed a deeply felt spiritual relationship to their lands, which forms the basis of their identity. Since indigenous peoples define themselves as peoples through their common genealogical descent from their ancestral lands and its continuous collective use by the group, indigenous cultures cannot be preserved once the ties to their traditional lands and resources are permanently severed.[23] Uranium mining on their ancestral land poses the danger of such a permanent severance.

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[18] Simpson 1997, pp. 22–23.

[19] See for example Cobo 1986, para 369; Article 1(2) of ILO Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries (adopted 27 June 1989, entered into force 5 September 1991) 1650 UNTS 383; International Law Association 2012, pp. 2–3. Regarding the United Nations Declaration on the Rights of Indigenous Peoples (UNGA Res 61/295 (13 September 2007)), see also Cole 2009, pp. 201–205.

[20] See for example Cobo 1986, paras 379–380; Daes 1996; World Bank 2005, para 4; International Law Association 2012, pp. 2–3; see also Kingsbury 1998, pp. 453–455.

[21] See for example International Law Association 2012, p. 2; African Commission on Human and Peoples' Rights 2005, p. 89.

[22] Barnhart (ed), 2003, p. 521.

[23] See for example Dannenmaier 2008, pp. 84–88.

The problem with uranium extraction is that it produces large amounts of radioactive wastes, in particular waste rock and tailings but also waste water and radon.[24] Waste rock is the material mined in order to get to the ore. Typically, the uranium content of the ore is as low as 0.1–0.2 %. Therefore, well over 99 % of the ore mined has to be disposed of. Once mined, the ore is milled, i.e., it is grinded and chemicals are added in order to extract its uranium content. By-product of this process is a huge amount of mill tailings in form of toxic sludge and waste water. Since long-lived decay products such as thorium-230 and radium-226 are not removed, the sludge contains 85 % of the initial radioactivity of the ore plus 5–10 % of the uranium initially present in the ore as due to technical limitations not all the uranium content can be extracted. In addition, in its decay process, radium-226 continuously releases the radioactive and carcinogenic noble gas radon.[25] Since the half-lives of the principal radioactive components of mill tailings are several thousand years,[26] these radioactive wastes can make whole areas unusable and uninhabitable for millennia if not properly stored and managed. Consequently, indigenous peoples would be deprived of their physical and cultural means of survival and eventually cease to exist as separate peoples.

In addition, indigenous peoples also refer to moral issues associated with uranium mining. In particular, they point out that no government or organisation can guarantee that uranium mined on its territory will only be used for peaceful purposes, and they allude to the fact that there is still no satisfactory answer to the question how to permanently store the highly radioactive wastes from nuclear power plants safely.[27]

Because of these moral issues and the immanent risk indigenous peoples have for a very long time almost unanimously rejected uranium mining on their lands. This attitude, which has decisively been fuelled by negative experiences of the past, is reflected in several statements and declarations issued by indigenous peoples.

The first international meeting to exchange information on experiences with uranium mining—the World Uranium Hearing—was held in Salzburg (Austria) from 13 to 19 September 1992. During this meeting 80 indigenous persons representing 25 indigenous nations and 30 non-indigenous participants from all continents gave testimony. In its outcome document, the Declaration of Salzburg which was accepted by the United Nations Working Group on Indigenous Populations,[28] the World Uranium Hearing called upon governments, corporations, organisations, communities and individuals to ensure that '[r]adioactive minerals are no longer exploited'.[29] In the accompanying Statement of the Indigenous Participants at the

[24] Frost 1998.

[25] Ibid.; Diehl 2011.

[26] Diehl 2011.

[27] See for example CBS News 2011; Bernauer 2012.

[28] UN Doc. E/CN.4/Sub.2/AC.4/1994/7 (6 June 1994), pp. 3–7.

[29] Ibid., para 12(a).

World Uranium Hearing, the indigenous representatives demanded that exploitation of indigenous land and peoples by uranium mining be stopped and called upon the whole world 'to use sustainable, renewable and enhancing energy alternatives'.[30] This demand was reaffirmed at the Indigenous World Uranium Summit held in Window Rock, Arizona, from 30 November to 2 December 2006. In their Declaration of 2 December 2006, the more than 300 participants from 14 countries and various indigenous nations reiterated the position of indigenous peoples that 'uranium and other radioactive minerals must remain in their natural location'.[31]

At a regional level, the Inuit Circumpolar Conference,[32] a non-governmental organisation representing the Inuit living in Alaska (USA), Canada, Greenland (Denmark) and Chukotka (Russia), issued a declaration in 1983, which declared the Arctic a nuclear-free zone and demanded that exploration and exploitation of uranium in their homeland be prohibited.[33] Furthermore, several indigenous peoples, for example the Navajo,[34] Hualapai,[35] Havasupai, Kaibab-Paiute and Hopi Nations,[36] have explicitly banned uranium mining on their territories.

Yet, there is also a recent trend in the opposite direction. For example, in 2007, Nunavut Tunngavik Inc., the representative organisation of the Inuit of Nunavut (Canada), adopted a policy that supports 'sustainable' uranium mining on Inuit lands,[37] in 2010 the Government of Greenland—a *de facto* Inuit-governed autonomous territory within the Danish Realm—relaxed its zero-tolerance on uranium mining and allowed mining companies to explore uranium deposits in Greenland,[38] and in March 2012 the Nunatsiavut government, a regional Inuit government within the Province of Newfoundland and Labrador (Canada), lifted its three-year moratorium on uranium mining on Labrador Inuit lands.[39] These institutions argue that indigenous peoples are nowadays in a much stronger position to negotiate fair terms and conditions and to supervise the exploration projects. Hence, it was very unlikely that disasters of the past would repeat themselves.[40] They further stress that the money generated from uranium mining

[30] www.nuclear-free.com/english/indig.htm.

[31] Declaration of the Indigenous World Uranium Summit (Window Rock, Navajo Nation, USA; 2 December 2006). www.miningwatch.ca/sites/www.miningwatch.ca/files/IWUS_Declaration_0.pdf.

[32] Now the Inuit Circumpolar Council.

[33] ICC Resolution on a Nuclear Weapon Free Zone, Point 4 (adopted 1983). www.arcticnwfz.ca/documents/I%20N%20U%20I%20T%20CIRCUMPOLAR%20RES%20ON%20nwfz%201983.pdf.

[34] Diné Natural Resources Protection Act (2005) enacted by the Navajo Nation Council. www.navajocourts.org/Resolutions/CAP-18-05.pdf.

[35] Hualapai Department of Natural Resources.

[36] Southwest Research and Information Center 2008.

[37] Nunavut Tunngavik Inc. 2007.

[38] Vestergaard and Bourgouin 2012.

[39] Paladin Energy 2012.

[40] See for example Nunavut Tunngavik Inc. 2007.

could not only be used to tackle the immense social and financial problems indigenous communities are faced with but also to preserve and strengthen indigenous culture and identity.[41] The proposal to allow uranium mining on their ancestral lands is, however, often met with fierce opposition by large sections of the local indigenous population, whom these organisations are meant to represent.[42]

8.3 National Laws and Regulations

Since most indigenous peoples and communities oppose uranium mining, it needs to be examined whether and to what extent indigenous peoples can prevent uranium mining on their ancestral lands under the legal regimes of their respective home States. For reasons of brevity, the comparison is limited to Canada, the United States of American and Australia, which are all among the world's top ten producers of uranium.[43]

8.3.1 United States of America

In the United States, indigenous peoples' land rights are virtually synonymous with the reservation or tribal trust land system. As a general rule, Indian tribes hold legally protected Fifth Amendment[44] rights only to those areas of land, which have been 'reserved' for the respective tribe, either by treaty or by presidential decree. Although the legal title to a reservation is generally vested in the government,[45] the indigenous groups as the beneficial owners hold quasi-property rights to the land.[46] Like other property owners in the US, the tribes as trustees may

[41] See for example Rogers 2011, quoting the president of Nunavut Tunngavik Inc., Cathy Towtongie.

[42] See for example CBS News 2011.

[43] See World Nuclear Association 2012.

[44] According to the Fifth Amendment '[n]o person shall […] be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation'.

[45] There is, however, a distinction between 'reservations' and 'tribal trust lands'. Whereas initially, the term 'reservation' was synonymous with 'tribal trust land', this has changed in the course of the allotment policy of the late nineteenth and early twentieth centuries. Under the General Allotment Act 1887 (Dawes Act) of 8 February 1887 (24 Stat. 388; now codified as 25 U.S.C. 331) reservations were to be divided into allotments for individual Indians. After a trust period of 25 years these allotments were to become freely alienable. Land exceeding the amount needed for allotment was to be opened up for settlement by non-Indians. Nowadays, some reservations are predominantly owned by private individuals while others are still entirely or predominantly held in trust by the federal government for the tribes; see Nash and Burke 2006, p. 125; Utter 2001, pp. 207–208.

[46] See *United States versus Sioux Nation* (1980) US Supreme Court, 448 U.S. 371, p. 408; Newton et al. (eds) 2005, pp. 1026–1030 with further references.

exclude third parties from using their lands. Therefore, mining on Indian tribal trust land may only take place with the tribes' express consent.[47] Yet, like all other property, tribal trust land may be expropriated for a public purpose and against adequate compensation—even if such an expropriation is in violation of a treaty concluded between the government and the Indian tribe.[48] In the past, there have been several such expropriations of reservations for the public purpose of carrying out mining projects on these lands. The best-known example is the taking of the Black Hills after the discovery of gold in the area in 1877. Although for political reasons it is unlikely that such expropriations would be carried out today, the federal government refuses to return lands expropriated under such circumstances in the past. For example, the claim of the Lakota for the return of the Black Hills—which also have large deposits of uranium—was turned down by the Supreme Court in 1980. Instead, it awarded monetary compensation to the Lakota and did not return the land as such.[49]

Furthermore, it should be noted that nowadays tribal trust lands cover only an area of approximately 180,000 km^2, i.e. 2.3 % of the total area of the contiguous states of the US.[50] This means that Indian tribes do not hold any legally secure rights to more than 97 % of their original land base, and therefore cannot effectively prevent mining on their ancestral lands. The US legal system recognises the legal institution of 'original Indian title', i.e. inherent rights of an indigenous people to its ancestral lands based on 'actual, exclusive and continuous use and occupancy [of the land] for a long time',[51] which have not been extinguished by treaty or other acts of the federal government.[52] However, this original Indian title is not regarded as constituting 'full proprietary ownership' or at least 'a 'recognised' right to unrestricted possession, occupation and use'[53] but it is merely seen as 'permissive occupation'.[54] Therefore, 'the taking by the United States of unrecognised Indian title is not compensable under the Fifth Amendment'.[55] Consequently, the federal government is neither obliged to ask for permission nor to pay compensation for exploiting resources on these indigenous peoples' ancestral lands.[56]

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[47] Newton et al. (eds) 2005, pp. 1086–1088 and pp. 1124–1126 with further references; see also Mitchell 1997, Appendix D-1; Utter 2001, pp. 218–221.

[48] *Lone Wolf versus Hitchcock* (1903) US Supreme Court, 187 U.S. 553, p. 566.

[49] *United States versus Sioux Nation* (1980) US Supreme Court, 448 U.S. 371.

[50] An additional 180,000 km^2 are held by the Alaska Natives in form of Alaska Native Corporation Lands; see Utter 2001, p. 217.

[51] *Sac & Fox Tribe of Indians of Oklahoma versus United States* (1967) United States Court of Claims, 383 F.2d 991, para 47.

[52] *United States versus Santa Fe Pacific Railroad* (1941) US Supreme Court, 314 U.S. p. 339, p. 347.

[53] *Tee-Hit-Ton Indians versus United States* (1955) US Supreme Court, 348 U.S. p. 272, p. 277.

[54] Ibid., p. 279.

[55] Ibid., p. 285.

[56] Kelly Jr. 1975, pp. 671–672 and pp. 675–678.

8.3.2 Canada

The legal situation is different in Canada. Like in the US, there are reservations (or reserves as they are called in Canada) held in trust by the federal government for indigenous groups, who—in turn—have quasi-property rights to these lands.[57] Hence, resource exploitation on these lands can only take place with the consent of the tribes.[58] Yet, unlike in the US, indigenous land rights are not synonymous with the reserve system. In fact, Indian reserves in Canada cover an area of only about 27,000 km^2.[59] Instead, in Canada, it is the aboriginal title doctrine, which is the basis of indigenous land rights.

In *Calder versus Attorney-General of British Columbia*, which is generally regarded as the starting point of the modern aboriginal title doctrine, the Canadian Supreme Court stated that at the time of colonisation the indigenous peoples of British Columbia held inherent aboriginal rights to their lands, irrespective of the recognition of these rights by the Crown, and that these rights had not been automatically extinguished with the acquisition of British sovereignty.[60] In case these rights had not subsequently been extinguished by treaty between the Crown and indigenous groups or by clear and plain federal legislation,[61] they continued to exist until the present day.[62] According to the Canadian Supreme Court decision in *Delgamuukw versus British Columbia*, the Crown has a duty to consult the aboriginal title holders before projects may be carried out on their lands as soon as the existence of an aboriginal title has been established. This duty will vary with the circumstances and might in some cases amount to a right to veto.[63] But even

[57] *Wewaykum Indian Band versus Canada* (2002) Supreme Court of Canada, 4 S.C.R. 245, paras 74 and 86.

[58] See Section 53 Indian Act and Regulations Providing for the Disposition of Surrendered Minerals Underlying Lands in Indian Reserves (C.R.C., c. 956).

[59] Dow and Gardiner-Garden 1998; Indian and Northern Affairs Canada 1992, 177.

[60] *Calder versus Attorney-General of British Columbia* (1973) Supreme Court of Canada S.C.R. p. 313, 328, 375 and 390.

[61] *Guerin versus The Queen* (1984) Supreme Court of Canada, 2 S.C.R. p. 335, 349 and 352 (Wilson J) and pp. 376-378 (Dickson J); see also Slattery 1987, p. 731 and pp. 748–749.

[62] Since during the nineteenth and early twentieth centuries, cession treaties had been concluded over the whole area of Ontario and the Prairie Provinces, potential aboriginal titles and rights can only exist in the northern territories, British Columbia, Quebec, Newfoundland and Labrador, and the Maritime Provinces. Regarding the areas in the Northwest Territories claimed by the Dene and Métis, which are covered by Numbered Treaties No 8 (June 1899) and No 11 (June 1921) (printed in Reiter 1996, Ch. 7 pp. 42–59 and pp. 68–71) the Canadian federal government has concluded a CLC agreement based on the fact that these treaties have never been implemented; see also Isaac 2004, p. 94.

[63] *Delgamuukw versus British Columbia* (1997) Supreme Court of Canada, 3 S.C.R. 1010, para 168.

before the existence of an aboriginal title has been established, the government has a legal duty to consult with the indigenous groups, who might hold aboriginal rights and titles to an area, and, if appropriate, accommodate their interests before projects potentially affecting these rights might commence.[64] This means, that if an indigenous group has a strong claim to an area and the potentially adverse effects upon the right or title claimed are serious, 'deep consultation, aimed at finding a satisfactory interim solution, may be required'.[65] Since uranium mining projects generally carry the risk of permanent, non-compensable damages, it is unlikely that such a project will be approved against the will of an indigenous group with a strong *prima facie* claim to the land.

Based on the premise that aboriginal title and rights have potentially continued to exist in many parts of Canada, the Canadian federal government adopted the Comprehensive Land Claims (CLC) Policy in 1986 as a means to settle all open land claims. Under this policy, 23 agreements have been concluded so far between the federal government and indigenous groups, and about 611,600 km^2 land—that is 6.1 % of the total area of Canada—has been transferred to indigenous groups in form of fee simple title.[66] On these lands, indigenous peoples can effectively prevent mining by third parties. Yet, in return for the conveyance of fee simple title to parts of their traditional land base, the indigenous peoples' potential aboriginal rights and title to all of their traditional lands were extinguished or rendered permanently unenforceable in courts. Hence, on these parts of their traditional land base, mining can generally be carried out without their consent.

What needs to be stressed with regard to Canada is that since enactment of the Constitution Act, 1982, all existing aboriginal and treaty rights, including rights

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[64] *Haida Nation versus British Columbia (Minister of Forests)* (2004) Supreme Court of Canada, 3 S.C.R. 511, para 10; see also *Taku River Tlingit First Nation versus British Columbia (Project Assessment Director)* (2004) Supreme Court of Canada, 3 S.C.R. 550, para 21.

[65] *Haida Nation versus British Columbia (Minister of Forests)* (2004) Supreme Court of Canada, 3 S.C.R. 511, paras 39-47 (44); *Taku River Tlingit First Nation versus British Columbia (Project Assessment Director)* (2004) Supreme Court of Canada, 3 S.C.R. 550, paras 29–32.

[66] James Bay and Northern Quebec Agreement 1975 (Quebec); Northeastern Quebec Agreement 1978 (Quebec); Inuvialuit Final Agreement 1984 (Northwest Territories); Gwich'in Comprehensive Land Claim Agreement 1992 (Yukon, Northwest Territories); eleven Yukon First Nations Final Agreements under the Council for Yukon Indians Umbrella Final Agreement 1993 (Yukon); Sahtu Dene and Métis Comprehensive Land Claim Agreement 1993 (Northwest Territories); Nunavut Land Claims Agreement 1993 (Nunavut); Nisga'a Final Agreement 1998 (British Columbia); Tlicho Land Claims and Self-Government Agreement 2003 (Northwest Territories); Labrador Inuit Land Claims Agreement 2005 (Newfoundland and Labrador); Nunavik Inuit Land Claims Agreement 2006 (Quebec, Nunavut, Newfoundland and Labrador); Tsawwassen First Nation Final Agreement 2007 (British Columbia) and the Maa-Nulth First Nations Final Agreement 2009 (British Columbia). For an overview of the several CLC Agreements, see for example Indian and Northern Affairs Canada 2011.

acquired by way of a CLC agreement, are constitutionally protected and therefore can only be extinguished with the consent of the indigenous people concerned.[67]

8.3.3 Australia

In Australia, the possibility for indigenous groups to stop uranium mining on their ancestral lands based on an inherent right to the respective area is very limited. Like in Canada, the existence of aboriginal (or native) title and rights has been recognised since the 1992 decision *Mabo versus Queensland (No 2)* in which the High Court of Australia held that aboriginal title to land has survived as a 'burden on the radical title of the Crown'.[68] Yet the rights conveyed by such an aboriginal title under the common law of Australia are rather weak.

Unlike in Canada, where aboriginal title is regarded as an exclusive title to the land itself, an aboriginal title in Australia gives indigenous peoples only the right to pursue certain activities, which themselves constitute traditional aboriginal rights—for example the right to hunt, fish, gather or perform cultural activities.[69] Consequently, a native title right does not enable its holders to veto mining on their traditional lands. According to the Native Title Act (NTA), which had been enacted in response to the *Mabo* decision, native title holders only have a right to negotiate before the government may grant a right to mine on native lands to a third party.[70] Under the right to negotiate, native title holders are to be notified of the proposed mining grant, and the government as well as the grantee must enter into negotiations in good faith with the affected native title holders with the intention of reaching an agreement.[71] If no agreement is reached within a six-month period, each of the negotiation parties may apply to the National Native Title Tribunal, which then determines whether the proposed grant may be issued.[72] In making the determination, the National Native Title Tribunal must take the effect

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[67] Section 35 of the Constitution Act, 1982 (Schedule B to the Canada Act 1982 (UK) (1982, c. 11)) reads as follows:

(1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognised and affirmed.
(2) In this Act, 'Aboriginal Peoples of Canada' includes the Indian, Inuit and Métis peoples of Canada.
(3) For greater certainty, in subsection (1) 'treaty rights' includes rights that now exist by way of land claims agreements or may be so acquired.
(4) Notwithstanding any other provision of this Act, the aboriginal and treaty rights referred to in subsection (1) are guaranteed equally to male and female persons.

[68] *Mabo versus Queensland (No 2)* (1992) High Court of Australia, 175 C.L.R. 1, para 62.

[69] *Western Australia versus Ward* (2002) High Court of Australia, 213 C.L.R. 1, paras 94–95.

[70] Sections 25–44 NTA; see also Stephenson 2002, pp. 57 and 73; Triggs 1999, pp. 405–409.

[71] Sections 29–31 NTA.

[72] Sections 35 and 38 NTA.

of the grant on native title rights and interests into account as well as its economic significance to Australia, the state or the territory and public interests.[73] A determination by the National Native Title Tribunal can be overridden by the Commonwealth minister in the national interest or in the interest of the respective state or territory.[74] If an existing mining lease is merely extended or renewed, even the right to negotiate is *a priori* not applicable.[75] Hence, even if an indigenous group can prove its native title to a certain area, it cannot effectively prevent uranium mining if the government is determined to carry out such projects.

Native title rights are, however, not the only rights to land held by the indigenous peoples in Australia. The federal or state governments have also conveyed a considerable amount of land to indigenous groups in form of reservations or collective freehold title. The total amount of such derived land rights adds up to 1.2 million km^2, i.e. 16 % of Australia. Approximately half of the land conveyed to indigenous groups is situated in the Northern Territory, 30 % in Western Australia and 17 % in South Australia.[76] In New South Wales, Victoria, Queensland and Tasmania, which are home to about one-third of Australia's indigenous population, hardly any land has been transferred to indigenous groups by the government.[77] In Western Australia indigenous groups hold land rights derived from the government still almost exclusively in form of reservations. Unlike in Canada and the US, however, the indigenous peoples' rights to these reservations do not amount to quasi-property rights and indigenous peoples cannot veto mining on reservation lands.[78] In the Northern Territory, indigenous groups hold most of the land conveyed to them by the government in form of freehold title under the Aboriginal Land Rights (Northern Territory) Act 1976 (Cth).[79] According to Section 40 of this Act, exploration and exploitation on aboriginal land may not commence without the indigenous owners' express consent. In South Australia, indigenous peoples hold the lands conveyed to them by the government also almost exclusively in form of freehold title. Yet, the rights of the indigenous peoples to these lands differ depending on the legislation applicable to the respective area. Whereas under the Aboriginal Lands Trust Act 1966 (SA) exploration and exploitation on aboriginal lands require only the consent of the governor,[80] mining activities on aboriginal lands to which the Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981 (SA) and the Maralinga Tjarutja Land Rights Act 1984 (SA) are applicable shall

[73] Sections 39 NTA.

[74] Sections 42 NTA. Regarding the negotiation process, see also Stephenson 2002, pp. 57–59.

[75] Sections 26 and 26D NTA. Regarding the negotiation process, see also Nettheim 1999, p. 573; Triggs 1999, p. 406.

[76] McRae et al. 2009, pp. 208–209; Pollack 2001, pp. 29–30.

[77] Australian Bureau of Statistics 2009; McRae et al. 2009, p. 209.

[78] Section 24 (1)(f) and (7)(a) Mining Act 1978 (WA) (1978 No 107). See Tehan 1993, p. 38 and pp. 41–43.

[79] 1976 No 91.

[80] Section 16(9) Aboriginal Lands Trust Act 1966 (SA) (1966 No 87).

only be carried out with the consent of the indigenous owners. However, in case the indigenous owners withhold their permission, the mining application can be referred to an arbitrator for final determination.[81]

Taken all of this together, the indigenous peoples of Australia have little legal means to prevent uranium mining on their lands.

8.4 The International Legal Framework

Since the possibility for indigenous peoples to prevent uranium mining on their ancestral lands differ significantly in the US, Canada and Australia, it needs to be determined whether there is in fact an international legal rule that obliges States to obtain an indigenous people's consent before uranium mining on its lands may commence, and hence whether the respective States act in accordance with their obligations towards indigenous peoples under international law. Whether, and to what extent, indigenous peoples have to be involved in decisions regarding mining projects on their lands is generally discussed under the heading of 'the right to free, prior and informed consent (FPIC)'. If, under what circumstances, and to what extent such a right exists is controversially discussed among legal scholars. The universal and regional legal instruments and documents pertaining to the right of indigenous peoples to FPIC do—at first glance—not create a uniform picture on the content and extent of this right.

When addressing indigenous peoples' rights under international law, the first reference is generally to the International Labour Organization Convention No. 169 concerning Indigenous and Tribal Peoples in Independent Countries (ILO Convention 169) of 1989. Besides International Labour Organization Convention No. 107 concerning the Protection and Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries (ILO Convention 107),[82] which is nowadays regarded as outdated due to its assimilationist approach, ILO Convention 169 today remains the only binding international instrument which focuses exclusively on the rights of indigenous peoples.[83] To date, ILO Convention 169 has only been ratified by 22 States,[84] yet its relevance goes beyond the limited number of ratifications. This is evidenced by the fact that

[81] Section 20 Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981 (SA) (1981 No 20); Section 21 Maralinga Tjarutja Land Rights Act 1984 (SA) (1984 No 3).

[82] Adopted 26 June 1957, entered into force 2 June 1959, 328 UNTS 247.

[83] Convention concerning Indigenous and Tribal Peoples in Independent Countries (27 June 1989), http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C169. Although ILO Convention 107 remains binding on those 17 States which have ratified it, it was declared closed for ratification after the adoption of ILO Convention No 169. In case a State has ratified both ILO Convention 107 and ILO Convention 169, ILO Convention 107 is completely replaced by the latter.

[84] The list of Member States is available under www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11300:0::NO:11300:P11300_INSTRUMENT_ID:312314:NO.

national and international organisations and courts consult the convention on a regular basis where rights of indigenous peoples are concerned—even if the State in question has not ratified it. This is a strong indicator that at least the central provisions of the ILO Convention 169 may, arguably, be considered as customary international law.[85]

ILO Convention 169 contains four provisions pertaining to the concept of FPIC: Articles 2, 6, 7 and 15. Article 2(1) ILO Convention 169 lays down the general principle that States have a duty to protect indigenous peoples' rights 'with the participation of the peoples concerned'. Articles 6 and 7 ILO Convention 169 lay down general principles regarding the participatory rights of indigenous peoples, which are applicable to all subsequent provisions of the Convention.[86] According to Article 6(1) lit. a, governments shall '*consult* the peoples concerned […] whenever consideration is being given to legislative or administrative measures which may affect them directly'[87] and according to Article 6(2), these consultations 'shall be undertaken, in good faith, […] *with the objective of achieving* agreement or consent to the proposed measures'.[88] Article 7 ILO Convention 169 lays down the duty of States to cooperate with indigenous peoples and the indigenous peoples' 'right to decide their own priorities for the process of development'. With regard to the potentially particularly adverse consequences of the exploitation of natural resources on indigenous peoples' land, ILO Convention 169 endorses these rights and duties by stipulating that 'governments shall establish or maintain procedures through which they shall *consult* these peoples […] before undertaking or permitting any programmes for the exploration or exploitation of such resources'.[89] Hence, whereas under ILO Convention 169, States are obliged to involve indigenous peoples in all decision affecting them, this duty is merely a duty to consult and does not amount to a right of indigenous peoples to veto mining projects on their land.

More far-reaching is the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) adopted by General Assembly Resolution 61/295 in 2007. Although this Declaration is not *per se* legally binding on States,[90] the fact that it is one of the most-discussed texts in the history of the United Nations[91] and has been supported by a broad majority of States[92] indicates that many of its

[85] Anaya 2004a, p. 40; Anaya 2004b, p. 61.

[86] Baluarte 2004, p. 10.

[87] Emphasis added by author.

[88] Emphasis added by author.

[89] Emphasis added by author.

[90] See Articles 10 and 11 Charter of the United Nations.

[91] Barelli 2009, pp. 969–970.

[92] In the General Assembly 143 States voted in favour of UNDRIP with four States (Australia, Canada, New Zealand and the USA) voting against and 11 abstaining. 34 States did not participate in the vote. All four States opposing UNDRIP have since then changed their vote in favour of the Declaration; see UN News Centre 2010.

provisions constitute customary international law.[93] According to its Article 19, 'States shall consult and cooperate in good faith with the indigenous peoples concerned […] *in order to obtain their free, prior and informed consent* before adopting and implementing legislative or administrative measures that may affect them'.[94] Regarding projects affecting their lands, territories or other resources, Article 32(1) UNDRIP recognises the indigenous peoples' right 'to determine and develop priorities and strategies for [their] development or use' and obliges States '*to obtain their free and informed consent prior* to the approval of any project […], particularly in connection with the development, utilization or exploitation of mineral'.[95] Whether 'to obtain consent' imposes an absolute obligation not to proceed with a project before the indigenous peoples concerned have given their approval or whether it suffices if the States have made sincere attempts to find a mutually acceptable solution is not clear from the wording. However, regarding uranium mining on indigenous lands, another provision of UNDRIP has to be taken into consideration: Article 29(2). According to Article 29(2) UNDRIP, 'States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent'. Here, the wording is unambiguous. An actual consent is required before hazardous materials may be stored or disposed of on indigenous lands—hence, indigenous peoples have a right to veto such activities on their lands. As explained above, uranium mining unavoidably generates large amounts of radioactive waste which is typically stored on lands near the mines. Hence, the storage and disposal of hazardous waste on indigenous lands are inevitable by-products of uranium mining on indigenous lands. Therefore, under the UNDRIP, uranium mining on indigenous lands must not be carried out without the express informed consent of the indigenous communities concerned.

That indigenous peoples shall have the right to veto at least those projects with potentially far-reaching adverse consequences on their lands—a risk that is inherent to all uranium mining projects—is also mirrored in several other international legal documents. For example, the United Nations Development Group (UNDG) Guidelines on Indigenous Peoples' Issues define the right to FPIC generally merely as 'absence of coercion, intimidation or manipulation, that consent has been sought sufficiently in advance of any authorization or commencement of activities, that respect is shown for time requirements of indigenous consultation/consensus processes and that full and understandable information on the likely impact is provided'.[96] Accordingly, as a general rule, an actual consent is not required as long as there have been meaningful consultations in good faith. Yet, at the same time, the Guidelines stipulate that '[t]his process may include the option

[93] Barelli 2009, pp. 966–967; Charters 2007, p. 123.

[94] Emphasis added by author.

[95] Emphasis added by author.

[96] UNDG 2008, p. 13.

of withholding consent'.[97] Hence, they provide for a gradation of the requirements in regard to FPIC. The graver the consequences of a project, commensurately, greater the level of participation required on behalf of the indigenous groups concerned. In case of uranium mining on indigenous lands, this can only mean that without the express consent of the indigenous groups concerned, the project may not be carried out.

This gradation of requirements in regard to the right to FPIC depending on the potential adverse impact of a project can also be found in decisions and concluding observations of the UN human rights treaty bodies. For example, the UN Human Rights Committee in its decision *Ángela Poma Poma versus Peru* stipulated that measures 'which substantially compromise or interfere with the culturally significant economic activities of a minority or indigenous community […] require[s] not mere consultation but the free, prior and informed consent of the members of the community',[98] whereas in other cases, 'broad consultations' may be sufficient.[99] Likewise, the Committee on the Elimination of Racial Discrimination has in some of its decisions required that the consent of indigenous peoples has to be obtained,[100] whereas in other decisions, it merely required that the consent be sought[101]—depending on the impact of the respective project.[102]

On the regional level, such considerations also exist. The Asian Development Bank in its Safeguard Policy Statement of 2009 limits the right of indigenous peoples to FPIC to 'commercial development of natural resources within customary lands under use that would impact the livelihoods or on cultural, ceremonial, or spiritual uses of the lands that define the identity and community of Indigenous Peoples'.[103] The Inter-American Development Bank also generally requires merely consultations

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[97] Ibid, p. 28.

[98] *Ángela Poma Poma versus Peru* (2009) UN Human Rights Committee, Comm No 1457/2006, UN Doc. CCPR/C/95/D/1457/2006, para 7.6.

[99] *Apirana Mahuika et al. vs. New Zealand* (2000) UN Human Rights Committee, Comm No 547/1993, UN Doc. CCPR/C/70/D/547/1993, para 9.8.

[100] Concluding Observations on Ecuador (2003), UN Doc. CERD/C/62/CO/2, para 16; see also Concluding Observations on Australia (2000), UN Doc. CERD/C/304/Add.101, para 9; Concluding Observations on the United States of America (2001), UN Doc. CERD/C/59/Misc.17/Rev.3, para 21; Concluding Observations on Ecuador (2008), UN Doc. CERD/C/ECU/CO/19, para 16; Concluding Observations on the Philippines (2009), UN Doc. CERD/C/PHL/CO/20, para 24; see also CERD Early Warning Urgent Action Letters to Belize, Brazil, Botswana, India, Indonesia, Canada, Niger, Panama, Papua New Guinea, Peru, the Philippines and the USA (73th–80th meeting, 2008–2012), in which the CERD repeatedly demanded compliance with the principle of FPIC. www2.ohchr.org/english/bodies/cerd/early-warning.htm.

[101] See for example Concluding Observations on Russia (2008), UN Doc. CERD/C/RUS/CO/19, para 24, in which Russia requested '[t]o seek the free informed consent of indigenous communities and give primary consideration to their special needs prior to granting licences to private companies for economic activities on territories traditionally occupied or used by those communities'; see also Concluding Observations on Chile (2009), UN Doc. CERD/C/CHL/CO/15-18, para 16.

[102] See also International Law Association 2012, pp. 4–6.

[103] Asian Development Bank 2009, para 33.

'*with a view* to reaching agreement or obtaining consent'.[104] Yet, projects with 'particularly significant potentially adverse impacts' will only be approved if the project proponent can prove that consent of the affected indigenous peoples has been obtained.[105] The proposed American Declaration on the Rights of Indigenous Peoples (ADRIP) drafted by the Organization of American States does also not contain a general right to FPIC. Draft Article XXII(2) ADRIP merely obliges States to 'consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions *in order to obtain their free, prior and informed consent* before adopting and implementing legislative or administrative measures that may affect them'.[106] However, like the UNDRIP, the ADRIP envisages certain situations in which a project may not proceed without the express consent by the indigenous groups concerned. According to draft Article XVIII(6), 'States shall prohibit and punish, with the full and effective participation of indigenous peoples [and their consent], the introduction, abandonment, dispersion, transit, use, or deposit of any harmful substance, including […] nuclear, radioactive, chemical, and biological materials […] that can directly or indirectly affect indigenous communities, lands '[territories] and resources'. Hence, under the proposed ADRIP in its current version, uranium mining on indigenous land would only be permissible with the express consent of the indigenous groups concerned.

The Inter-American Court of Human Rights (IACtHR) has also tried to reconcile, on the one hand, the demands of indigenous peoples to have the right to say 'no' to projects on their lands that might affect them, and, on the other hand, the concerns of States to be unduly restricted in their autonomy of actions and decision-making, in particular their right to economic development. In its decision *Saramaka People versus Suriname*, the IACtHR stipulated that the right of indigenous peoples to effective participation was generally to be understood as a right to 'consultations […] in good faith, through culturally appropriate procedures and with the objective of reaching an agreement' but not as a duty on behalf of the States to refrain from approving projects the indigenous peoples concerned have not consented to.[107] However, the Court stated that the situation was different regarding 'large-scale development or investment projects that would have a major impact' within the respective indigenous peoples' territory. Regarding such projects, States were obliged 'not only to consult with the [indigenous peoples concerned], but also to obtain their free, prior, and informed consent, according to their customs and traditions'.[108] In its *Endorois* decision, the African Commission on Human and Peoples' Rights (ACommHPR) fully shared the IACtHR's view.[109]

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[104] Inter-American Development Bank 2006a, p. 6; emphasis added by author.

[105] Inter-American Development Bank 2006b, p. 39; see also ibid. p. 43.

[106] Emphasis added by author.

[107] *Saramaka People versus Suriname* (2007) IACtHR, Series C No 172, para 133.

[108] Ibid., para 134.

[109] *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on Behalf of Endorois Welfare Council versus Kenya* (2010) ACommHPR, Comm No 276 / 2003, para 291.

This balancing of interests has also been endorsed by two UN institutions established to protect and promote indigenous peoples' rights: the UN Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous Peoples and the Expert Mechanism on the Rights of Indigenous Peoples. In his observations on the situation of indigenous peoples in Ecuador on the occasion of the constitutional amendment process in 2008, UN Special Rapporteur James Anaya stated:

> States have a firm obligation to undertake consultations with indigenous peoples before adopting measures that may directly affect their interests, and those consultations should be aimed at reaching a consensus concerning those measures […]. But what happens if consensus is not reached after a good faith procedure in which the indigenous party had participated fully and adequately? In general terms, in virtue of the principle of indigenous peoples' self-determination, as well as for practical reasons, the State should not proceed with a project that affects directly an indigenous community without their consent. However, this does not imply an absolute veto power. [Only] [i]n those situations in which the [proposed] measure may have substantial impacts that may endanger the basic physical or cultural well-being of the indigenous community concerned, [does the State have] the duty not to adopt a measure without the community concerned, as affirmed by the Inter-American Court of Human Rights in the *Saramaka versus Suriname* case.[110]

He confirmed this statement in his report to the Human Rights Council of 2009, in which he explained that 'the strength or importance of the objective of achieving consent varies according to the circumstances and the indigenous interests involved' and that '[a] significant, direct impact on indigenous peoples' lives or territories establishes a strong presumption that the proposed measure should not go forward without indigenous peoples' consent'.[111] Likewise, the Expert Mechanism on the Rights of Indigenous Peoples has referred to the particular significance of the principle of FPIC with regard to projects or measures that have a substantial impact on indigenous communities like, for example, large-scale natural resource extraction on their traditional territories.[112]

In summary, the right of indigenous peoples to FPIC is widely recognised under international law. Yet, not every project on indigenous peoples' land requires the affected communities' express consent. In most cases, good faith negotiations aimed at reaching a consensus suffice. In all cases, however, in which the proposed project has significant potential adverse impact on indigenous lands and—consequently—on the communities attached to these lands, the indigenous peoples' right to FPIC amounts to a right to veto the project and the corresponding duty of States not to approve it. A reoccurring example of projects with significant adverse influences are large-scale resource extractions. Uranium mining projects have to

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[110] See *Observaciones del Relator Especial sobre la situación de derechos humanos y libertades fundamentales de los indígenas acerca del proceso de revisión constitucional en el Ecuador*, paras 39–40, printed in Anaya 2008, paras 39–40 (translation by Rodríguez-Piñero 2011, pp. 473–474; footnotes omitted).

[111] Anaya 2009, para 47; see also ibid., paras 48–49.

[112] UN Expert Mechanism on the Rights of Indigenous Peoples 2010, para 34.

be subsumed hereunder. All uranium mining projects have in common that they pose a great potential danger to the environment, which can never be completely eliminated. Uranium mining inevitably produces large amounts of radioactive, carcinogenic wastes with a half-live of thousands of years. These wastes are typically stored near the mine sites. In case these hazardous wastes are released in the water, air or on the land—either by negligence or due to an unpredictable natural disasters—whole areas can become uninhabitable and resources, on which indigenous communities have physically and culturally depended for millennia, rendered permanently unusable. Since this poses an imminent risk of a permanent severance of the spiritual connection of an indigenous people to its ancestral lands and thus a threat to the survival of the indigenous people's culture *per se*, uranium mining may never be carried out on an indigenous people's ancestral land without its express prior and informed consent. That the inevitable generation of hazardous waste during the mining process and its storage on indigenous lands is only permissible with the consent of the indigenous communities concerned, today should be regarded as a principle of customary international law, which has—for reasons of clarification—also been included in the UNDRIP and the proposed ADRIP. That 'indigenous lands' cover all lands to which indigenous peoples still have a special spiritual connection and not only those lands which have been assigned to indigenous groups by the State is generally recognized.[113]

Consequently, the national legal systems of the US and Australia, which deny indigenous peoples the right to veto uranium mining projects on their ancestral lands or restrict this right to lands, which have been assigned to them by the State, are not in accordance with the States' obligations under international law. The Canadian legal system, on the other hand, needs to be commended. It not only recognises the potential existence of a constitutionally protected aboriginal title in all parts of Canada where this title has not been clearly and plainly extinguished by treaty or legislation in the past, but also allows for gradations of indigenous peoples' participatory rights depending on the severity of the potential consequences of a proposed project—even if the existence of an aboriginal title has not yet been definitely established. Therefore, with regard to uranium mining, the Canadian system seems to be in accordance with minimum requirements under international law. However, it remains to be seen how the obligations of the Crown (State) towards indigenous peoples will be applied and interpreted in practice if highly

[113] See for example Articles 13(1) and 14(1) ILO Convention 169 and ILO Committee of Experts, 'Observations on Peru' (adopted 2002, published 2003 (91st session)), para 7; see also Feiring 2009, p. 94; Articles 25 and 26 UNDRIP; Article XXIV(1); *Mayagna (Sumo) Awas Tingni Community versus Nicaragua* (2001) IACtHR, Series C No 79, paras 149 and 151; *Moiwana Community versus Suriname* (2005) IACtHR, Series C No 124, paras 130–135; *Sawhoyamaxa Indigenous Community versus Paraguay* (2006) IACtHR, Series C No 146, para 128; *Saramaka People versus Suriname* (2007) IACtHR, Series C No 172, paras 93 and 96; *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on Behalf of Endorois Welfare Council versus Kenya* (2010) ACommHPR, Comm No 276 / 2003, paras 190 and 196–209; Cobo 1986, paras 511–520.

profitable uranium mining on lands, to which indigenous peoples hold a potential aboriginal title, is at stake in case the indigenous peoples concerned withhold their consent.[114]

8.5 Conclusions and Recommendations

Due to the many negative experiences of the past as well as the inevitable risks associated with uranium mining, exploitation of uranium on indigenous lands is a very sensitive issue. The rejection of uranium exploration and exploitation on its lands is an expression of an indigenous people's right to self-determination,[115] which has to be respected by the respective home States—not only for moral reasons but also as a legal obligation under international law.

This does not mean, however, that all uranium deposits on indigenous lands have to remain unexploited forever. Instead, it merely means that it should be up to indigenous peoples to decide on their path of development. With the recent dramatic increase in prices for uranium, several indigenous peoples might reconsider their position on uranium mining on their lands. The recent developments in northern Canada and Greenland indicate the likelihood of such a development. The revenues generated by uranium mining could be used to tackle the terrible social problems with which many indigenous communities are faced. Furthermore, their own source of income would invariably mean less financial dependency on the federal government and thus a greater degree of autonomy of the indigenous peoples concerned. In addition, the opening of mines generally leads to the creation of new jobs, the improvement of the regional infrastructure and improvements in the local economy. Yet, it has to be ensured that this time the affected indigenous communities adequately participate in the benefits. This includes adequate extraction royalty rates for the affected indigenous communities, the benefit of jobs for the local indigenous population in conjunction with the promotion of skills and training opportunities, and fair and decent wages and working conditions. Furthermore, indigenous peoples should have a greater say in the way uranium mining is carried out on their lands. Indigenous peoples' representatives should sit on boards

[114] Currently, the province of Saskatchewan is the only political unit within Canada with active uranium mines. Since the entire area of Saskatchewan is covered by colonial cession treaties, it is generally assumed that indigenous peoples cannot claim any aboriginal rights and titles within this province.

[115] Regarding the inherent right of all peoples to self-determination, see Articles 1(2) and 55 Charter of the United Nations; Article 1(1) and (2) International Covenant on Civil and Political Rights (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171; Article 1(1) and (2) International Covenant on Economic, Social and Cultural Rights (adopted 16 December 1966, entered into force 3 January 1976) 993 UNTS 3. That the right of peoples to self-determination extends to indigenous peoples is made clear in para 17 of the preamble of UNDRIP and in Article 3 UNDRIP.

established to supervise the compliance with safety standards, and the mining contracts should contain clauses stipulating that uranium mining companies will be held accountable for all potential environmental damages resulting from mining activities.

Whereas the indigenous peoples—and not the State—should lead the negotiations, be parties to the mining contracts and have the final say, the government should be involved in the negotiations since only States are equipped with the necessary financial and human resources to be on a level playing field with the financially strong mining companies and thus can ensure balanced and fair contracts.

Furthermore, the decision-making process within the affected indigenous communities must be in accordance with democratic standards. The decision, whether uranium mining should be permissible on an indigenous people's ancestral lands, has potentially far-reaching consequences for the entire community as a whole, and therefore such a decision should not be made by a small group of people, for example the tribal councils. Instead, uranium mining on indigenous lands should only be carried out following a majority vote in a referendum. Before such a referendum takes place, the indigenous communities should be adequately informed on the potential benefits and risks of uranium mining on their lands, and advised by independent experts.

Ultimately, it must be solely up to the indigenous peoples concerned whether they are willing to take the risk of uranium mining on their lands, or whether they prefer to leave uranium in the ground and forego the financial benefits associated with uranium exploitation. In any case, the previous situation, in which the mining companies and the society at large enjoyed the benefits of uranium mining, whereas the indigenous peoples bore the risks without receiving adequate consideration, must not repeat itself.

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Chapter 9
European Union Initiatives: Strategy Against Proliferation of Weapons of Mass Destruction

Jana Hertwig

Abstract The proliferation of weapons of mass destruction (WMD) has been at the centre of international political security matters for a long time. On 12 December 2003, the European Council of the European Union (EU) adopted the *Strategy against Proliferation of Weapons of Mass Destruction* (EU's WMD Strategy) with the ultimate objective 'to prevent, deter, halt and, where possible, eliminate proliferation programmes of concern worldwide'. This was the first public high-level document on non-proliferation of weapons of mass destruction. This Strategy was prepared within the EU's Common Foreign and Security Policy (CFSP) and is a part of the European Security Strategy (ESS), which constitutes the base document for all five new key threats. The Strategy includes mutual measures which European Union Member States should take to eliminate or reduce the risks of proliferation. This chapter refers to the Strategy, as well as to its implementation, since 2004. By means of selected case studies, the analysis aims to explore whether, and if so how, the EU has reacted during the past years in tackling the increasing proliferation risk. In this regard, this chapter focuses mainly on two of the EU's aims stated in its WMD Strategy: the promotion of a stable international and regional environment as well as a close cooperation with key partners.

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Contents

9.1 Introduction

On 12 December 2003, the European Council of the European Union (EU) adopted the *Strategy against Proliferation of Weapons of Mass Destruction*[1] (EU's WMD Strategy) with the ultimate objective 'to prevent, deter, halt and, where possible, eliminate proliferation programmes of concern worldwide' (para 2(5) of the EU's WMD Strategy). This was the first time the EU has formulated a WMD non-proliferation policy and acted in unity on WMD issues. Prior to 2003, the EU dealt namely with a range of security issues—including non-proliferation and disarmament—and in 1995, the EU adopted a Joint Action, before the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) review conference, in support of the indefinite extension of the NPT; however, the EU was not a major player on the issue.[2] Additionally, since EU membership comprises nuclear weapons states (France and Great Britain) and non-nuclear weapons states, and NATO members and non-NATO members alike, 'the EU has been challenged to find a balanced and realistic approach towards the delicate issues of non-proliferation and disarmament at a difficult time marked by disagreement over Iraq'.[3] In this regard, it must be mentioned that the EU is confronted by the nuclear issue all the time. As Clara Portela pointed out, before the EU can take an initiative in a nuclear proliferation issue, it must first achieve internal consensus. The EU is therefore 'far from being a unitary actor in the field of nuclear non-proliferation'.[4]

The EU's WMD Strategy is based on a multilayered approach, which mainly includes effective multilateralism, a stable regional and international environment,

[1] EU Doc. 15708/03, 10 December 2003.

[2] Giannella 2012.

[3] Oezbek 2010, p. 70.

[4] Portela 2003, p. 3.

and close cooperation with key partners. The Strategy also includes mutual measures, which EU Member States should take to eliminate or reduce the risks of WMD proliferation. In order to prevent the spread of WMD, the EU may act on the basis of a preventative approach outlined in the Strategy. In this regard, the EU addresses, in particular, multilateral non-proliferation instruments, national implementation, export controls especially in third countries, safe dismantlement of WMD, national capabilities to prevent illicit trafficking, and re-directing scientists previously working on WMD programmes towards peaceful activities. Furthermore, the EU addresses regional security arrangements, regional arms control and disarmament processes.[5]

The EU's WMD Strategy has been developed within the Common Foreign and Security Policy (CFSP) of the EU. The Strategy constitutes a general guideline pursuant to Article 25 lit. a), 26(1) of the Treaty on European Union (TEU).[6] The Strategy was adopted in parallel with the *European Security Strategy*[7] (ESS), which constitutes the base document for all five new key threats: terrorism; proliferation of weapons of mass destruction; regional conflicts; state failure; and organized crime. After a detailed threat description, the ESS summarizes: 'Taking these different elements together—terrorism committed to maximum violence, the availability of weapons of mass destruction, organised crime, the weakening of the state system and the privatisation of force—we could be confronted with a very radical threat indeed' (p. 5 of the ESS).

9.2 History: Substantial Working and Institutional Reforms Within the EU

The work on the EU's WMD Strategy has mainly been triggered by the effects of the 11 September 2001 terrorist attacks on the United States (US) as well as the US-led invasion of Iraq in March 2003.[8] The Council adopted an updated *Road Map*[9] following the attacks in the US. The road map included all of the measures and initiatives to be implemented under the *Action Plan,*[10] decided on by the European Council on 21 September 2001. The EU also aimed the adjustment of EU policies on non-proliferation and disarmament (Action 12 of the updated Road Map).

The 2003 war on Iraq, however, has become the determining factor to work on the EU's WMD Strategy because the conflict has caused a deep crisis within Europe.

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[5] http://eeas.europa.eu/non-proliferation-and-disarmament/wmd/index_en.htm.

[6] Treaty on European Union—TEU –, Official Journal (OJ) of the EU: 2010/C 83/01, 30 March 2010, p. 1.

[7] EU Doc. 15895/03, 8 December 2003.

[8] See generally on the EU's WMD non-proliferation policy framework: van Ham 2011, pp. 2–5.

[9] European Union Action Following the Attacks in the United States—Update of the 'Road Map', EU Doc. 13880/01, 15 November 2001.

[10] EU Doc. SN 140/01, 21 September 2001.

The conflict has split the EU into some EU Member States supporting the US-led war to dismantle Iraq from assumed WMD (predominantly the UK accompanied by Spain, Portugal and Italy) and others openly disagreeing (mainly Germany and France).[11] Within the EU, it was discussed whether the unilateral action of the US is compatible with international law, especially with the UN Security Council resolutions and the right to self-defence recognized and affirmed in Article 51 of the UN Charter ('Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security'). Legitimacy and usefulness of the use of force in the struggle against proliferation and terrorism were judged differently.[12]

The different opinions of the European leaders on the US-led invasion of Iraq and their inability to agree on a common position mark the lowest point in the relation between EU Member States. As Andreas Goldthau reasons: 'Europe was deeply divided and did not manage to formulate and implement a common foreign policy'.[13] Moreover, Peter van Ham stressed: 'Member states realized that this row on foreign and security matters was damaging the cohesion of the EU and undermining confidence in the EU's aspiration to become a significant global actor. Clearly, the EU needed such a high-profile wake-up call, akin to Europe's awakening a decade earlier during the wars in the Balkans'.[14] The European leaders recognized that a strategy was needed which defines the values and interests of the EU, its instruments, and its foreign policy priorities.[15] As Annalisa Giannella, the former Director for Non-Proliferation and Disarmament of the European External Action Service added: 'The Iraq crisis obliged European leaders to reflect on the reasons for their division and on how to minimise the risks of new divisions in the future'.[16]

Subsequently, several EU Member States declared their wish to develop a common EU policy on the question of the spread of WMD. The European Council stated in its meeting in Brussels on 20 and 21 March 2003: 'We will also intensify work for a comprehensive, coherent and effective multilateral policy of the international community to prevent the proliferation of weapons of mass destruction.'[17] At its meeting in Luxembourg on 14 April 2003, the Council of the EU held a policy debate on the issue of WMD proliferation. The Council's discussion was based on a document from the Secretariat and the Commission and contributions by EU

[11] van Ham 2011, p. 3.

[12] See general Ambos and Arnold 2004 including legal policy articles about the situation before, during, and after the Iraq war; the legitimacy of the Iraq war under international law; as well as the role of the UN Security Council and the International Court of Justice; furthermore: McGoldrick 2004, pp. 47 ff; Yoo 2003; Paulus 2004.

[13] Goldthau 2008, p. 41.

[14] van Ham 2011, p. 3.

[15] Ibid.

[16] Giannella 2012.

[17] EU Doc. 8410/03, 5 May 2005, no. 69, para 5.

Member States,[18] and instructed the Secretary General/High Representative to continue work on a long-term strategy.[19] Subsequently, an intensive working process within the EU started. In its course, three significant documents were accepted: *Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction,*[20] *Declaration of the European Council,*[21] and *European Security Strategy: A Secure Europe in a Better World*. These three documents served as essential elements for the EU's WMD Strategy. As Peter van Ham argues: 'The Basic Principles and the ESS can be considered the logical next steps in the EU's evolution as a mature strategic actor in world affairs. (…) By agreeing on these strategic documents, a first and important effort was made to base the CFSP on a solid foundation of shared threat perceptions, strategic priorities, and preferred policy options'.[22] As to the Basic Principles, Clara Portela adds: 'The Strategy offers some potential for the EU to make a relevant contribution to the non-proliferation regime, especially since it has framed some answers as to how [to] deal with non-cooperative states'.[23] And Asle Toje summarizes: 'The 2003 European Security Strategy is a good strategic concept'.[24]

The ESS constitutes the basic document for the EU's WMD Strategy. Both the ESS and the EU's WMD Strategy are closely linked: the threat of WMD proliferation is examined as just one of the major security threats facing the EU.[25] As the ESS states: 'Proliferation of Weapons of Mass Destruction is potentially the *greatest threat* to our security. (…) The most frightening scenario is one in which terrorist groups acquire weapons of mass destruction. In this event, a small group would be able to inflict damage on a scale previously possible only for States and armies'.[26] (Emphasis added). In connection with the policy implications for Europe, the ESS emphasizes the good progress which the EU has made towards a coherent foreign policy and effective crisis management. The ESS argues that the EU has instruments in place that can be used effectively, as the EU has demonstrated in the Balkans and beyond. However, the ESS points out that the EU must act in a more specific way to counter the five new key threats, including the proliferation of WMD: '(…) But if we are to make a contribution that matches our potential, we need to be more active, more coherent and more capable. And we need to work with others'.[27]

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[18] EU Doc. 8316/1/03 REV 1, 8 April 2003, no. 3.

[19] EU Doc. 8220/03 (Presse 105), 14 April 2003, p. 19.

[20] EU Doc. 10352/03, 10 June 2003; EU Doc. 10369/03 (Presse 166), 16 June 2003, p. 9.

[21] EU Doc. 11638/03, 1 October 2003, Annex II, pp. 37–39.

[22] van Ham 2011, p. 3.

[23] Portela 2003, p. II.

[24] Toje 2005, p. 131.

[25] House of Lords 2005, p. 10, para 15.

[26] EU Doc. 15895/03, 8 December 2003, pp. 5–6.

[27] Id., p. 13.

After an intensive working process and discussions with EU Member States, in December 2003, the European Council finally adopted the EU's WMD Strategy alongside the ESS. This was the first time that the EU has produced a public high-level document on non-proliferation of WMD. In this regard (and beside the ESS, which refers to all five key threats), the EU's WMD Strategy was a *sui generis* case until new strategies (terrorism,[28] small arms[29]) were adopted in 2005.

The EU has at last succeeded to develop and accept a strategy within just eight months, which serves as an important part of the ESS. Besides, within the scope of this working process, the EU addressed institutional reforms within its Common Foreign Affairs and Security Policy. On 10 October 2003, the former High Representative for the Common Foreign and Security Policy, Javier Solana, decided to appoint a Personal Representative for Non-proliferation of Weapons of Mass Destruction. This was the first time that the EU has established an office to address WMD issues. Solana decided in favour of Annalisa Giannella who has been a standing official. She started her career as a European official in 1972 and has a wide range of experience in all areas of European policies. The mandate included a provision to coordinate, help implement and further develop the EU's WMD Strategy, and give sharper focus to these issues in dialogue with third countries.[30] Besides, Giannella was supposed to improve Europe's image within the Common Foreign Affairs and Security Policy.[31] This office was badly needed in the struggle against the risks of proliferation of WMD.

Since the entry into force of TEU on 1 December 2009, the European External Action Service (EEAS), the EU's diplomatic corps, has been tasked with WMD non-proliferation issues.[32] The EEAS supports Catherine Ashton—who has been appointed to succeed Solana, the former High Representative for CFSP—in conducting the CFSP. As Lina Grip in her 2011 study on the Lisbon Treaty and implementation of EU non-proliferation policy points out, WMD non-proliferation issues mainly fall under the EEAS Managing Director for Global and Multilateral Issues, and in particular, under two of its directorates: the Directorate for Non-Proliferation and Disarmament as well as the Directorate for Conflict Prevention and Security Policy. In this regard, Annalisa Giannella has become the Director of EEAS's Directorate for Non-Proliferation and Disarmament.[33] In November 2012, as a result of EEAS reform, Catherine Ashton nominated Jacek Bylica as the new EEAS Special Envoy for Non-proliferation and Disarmament.

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[28] EU Doc. 14469/4/05 REV 4, 30 November 2005.

[29] EU Doc. 5319/06, 13 January 2006.

[30] EU, Non-proliferation, Disarmament and Arms Controls, http://www.consilium.europa.eu.

[31] Meier and Neuneck 2006, p. 198.

[32] http://eeas.europa.eu/non-proliferation-and-disarmament/wmd/index_en.htm.

[33] Grip 2011a, b, p. 6.

Bylica, who has been a member of the Polish diplomatic corps since 1988, headed the NATO WMD Non-Proliferation Center in Brussels over the last four years.[34] This post is a new position, but can compare with the former position of Giannella as Personal Representative for Non-proliferation of Weapons of Mass Destruction. In this regard, Oliver Meier stresses that '[i]t is to be hoped that the newly appointed EU Special Envoy for Non-proliferation and Disarmament, Jacek Bylica, will be able to provide such a focus [reintegrate the human rights and economic dimensions into the EU's approach to Iran]'.[35] Furthermore, for the purposes of contributing to the enhanced implementation of the EU's WMD Strategy, the Council decided in July 2010 to create a European network of independent non-proliferation think tanks (EU Non-Proliferation Consortium).[36] The aim of the network is to promote academic guidance and advice to the EEAS: It works through expert meetings and international conferences, through the website and through publications.[37]

Since 2003, the EU has significantly strengthened its institutional framework on WMD proliferation issues.[38] In this regard, the EU has biannually published progress reports and has presented updated lists of priorities. Furthermore, the EU has updated its WMD-related priorities on a regular basis. In addition, the EU's policy output has increased measurably, 'with an intensification of bilateral consultations with key partners on WMD matters and a flurry of joint statements and joint declarations on the one hand and very concrete proposals—such as the Council's call to set up a code of conduct for outer space activities—on the other'.[39]

9.3 The EU's WMD Strategy Framework

The EU's WMD Strategy is based on three main parts: addressing the statement of the threat situation (9.3.1), the objectives to be pursued (9.3.2) and the instruments to be used (9.3.3).

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[34] Polish Ministry of Foreign Affairs, Press Office, Jacek Bylica Becomes EU Special Envoy for Non-proliferation and Disarmament, Warsaw, 12 November 2012, http://www.mfa.gov.pl/en/news/jacek_bylica_becomes_eu_special_envoy_for_non_proliferation_and_disarmament.

[35] Meier 2013, p. 19.

[36] Council Decision 2010/430/CFSP, Establishing a European Network of Independent Non-proliferation Think Tanks in Support of the Implementation of the EU Strategy against Proliferation of Weapons of Mass Destruction, 26 July 2010, OJ L 202, 4 August 2010, p. 5.

[37] http://www.nonproliferation.eu/.

[38] van Ham 2011, p. 4.

[39] Ibid.

9.3.1 Growing Threat and New Critical Dimension

The EU's WMD Strategy identifies the proliferation of weapons of mass destruction as a 'growing threat' to international peace and security. The EU argues in para 1(1) and para 4 of the EU's WMD Strategy: 'Proliferation is driven by a small number of countries and non-state actors, but presents a real threat through the spread of technologies and information and because proliferating countries may help one another. These developments take place outside the current control regime'. In addition, the risk that terrorists will acquire such weapons adds a 'new critical dimension' to this threat (para 1(3)). The EU's WMD Strategy underlines: 'In particular, the possibility of WMD being used by terrorists presents a direct and growing threat to our societies in this respect'. (para 10(3)).

9.3.2 Objectives

In order to prevent the spread of WMD, the EU is aimed at three objectives: effective multilateralism, stable environment and close cooperation.

Effective Multilateralism: Effective multilateralism is the 'cornerstone' of the EU's WMD Strategy (para A)): 'The EU must seek an effective multilateralist response to this threat'. (Chap. 2). The EU's WMD Strategy states it is important that all States are bound by the same rules. The EU therefore supports the multilateral treaties and conventions (such as the Non-Proliferation Treaty as well as the Chemical and Biological Weapons Conventions) as well as contributes to their effectiveness: '(…) we will pursue the universalisation of the NPT, the IAEA Safeguard agreements and protocols additional to them, the CWC, the BTWC, the HCOC, and the early entry into force of the CTBT. The EU policy is to work towards the bans on biological and chemical weapons being declared universally binding rules of international law. The EU policy is to pursue an international agreement on the prohibition of the production of fissile material for nuclear weapons or other nuclear explosive devices'. (para 16(3–5)). Furthermore, the EU will support additional international verification instruments and the use of non-routine inspections under international control. The EU will therefore enhance its political, financial and technical support for agencies in charge of verification (para 18).

Stable Environment: Promoting stable international and regional environment is a 'condition' for combatting WMD proliferation (para B)). The EU will support regional security arrangements, regional arms control and disarmament processes. The EU's WMD Strategy underlines: 'The more secure countries feel, the more likely they are to abandon programmes: disarmament measures can lead to a virtuous circle just as weapons programmes can lead to an arms race'. (para 20(4)).

Close Cooperation: Close cooperation with key partners is 'crucial' for successful measures against the proliferation of WMD (para C)). The EU's WMD

Strategy therefore identifies the US as well as the Russian Federation, Japan and Canada as key partners. Cooperation with these states may ensure a successful outcome of the global fight against proliferation (paras 25, 26).

9.3.3 Wide Range of Instruments: Diplomatic Efforts and Use of Force

Finally, the EU refers to the wide range of instruments available including multilateral treaties and verification mechanisms, export controls, cooperative threat reduction programmes, political and economic levers, interdiction of illegal procurement activities and, as a last resort, coercive measures in accordance with the Charter of the United Nations (UN) (para 29(2)). Besides, the EU 'must act with resolve, using all instruments and policies at its disposal' with the objective to 'prevent, deter, halt and, where possible, eliminate proliferation programmes of concern worldwide'. (para 2(5)).

The possible application of coercive measures provided for in Chap. 7 of the UN Charter, especially the use of force, is a rarity, because the EU has never before, in an internal document, specifically referred to such measures. Therefore, should political and diplomatic preventative measures (multilateral treaties and export control regimes), resorting to the competent international organizations as well as political dialogue and diplomatic pressure fail: '(…) coercive measures under Chap. 7 of the UN Charter and international law (sanctions, selective or global, interceptions of shipments and, as appropriate, the use of force) could be envisioned. The UN Security Council should play a central role' (para 15(2, 3)).

European leaders were firmly resolved to struggle against the proliferation of WMD. They have convincingly demonstrated their readiness to take coercive measures and, as appropriate, the use of force. However, the EU's WMD Strategy does not explicitly state under which conditions subsequent to the UN Charter and international law, the EU may act. Particularly, the use of force has not been clearly defined. The EU's WMD Strategy only refers to Chap. 7 of the UN Charter and international law. Besides, the EU has not explicitly addressed the question which role is left to the UN Security Council. As Article 25 and Chap. 7 of the UN Charter demonstrates, the UN Security Council has powers to decide in a manner binding for all UN members, which restrictive measures have to be taken in order to maintain or restore international peace and security. Though the EU's WMD Strategy gives the UN Security Council a 'central role', the Strategy does not describe the conditions in detail.

Nonetheless, in the meantime, the EU has further specified under which conditions, subsequent to the UN Charter and international law, the EU may impose restrictive measures by which they 'may target governments of third countries, or non-state entities and individuals (such as terrorist groups and terrorists). They may comprise arms embargos, other specific or general trade restrictions

(import and export bans), financial restrictions, restrictions on admission (visa or travel bans), or other measures, as appropriate'.[40] In June 2004, the Council of the EU adopted the *Basic Principles on the Use of Restrictive Measures (Sanctions)*.[41] The Council will, if necessary, 'impose autonomous EU sanctions in support of efforts to fight terrorism and the proliferation of weapons of mass destruction'. The Council added: 'We will do this in accordance with our common foreign and security policy, as set out in Article 11 TEU, and in full conformity with our obligations under international law' (para 3 of the Basic Principles).

Moreover, the Council adopted *Guidelines on Implementation and Evaluation of Restrictive Measures (Sanctions) in the Framework of the EU Common Foreign and Security Policy*[42] where standard wording and common definitions that may be used in the legal instruments implementing restrictive measures are given. The Guidelines includes in para 9(1) the provision that the introduction and implementation of restrictive measures 'must always be in accordance with international law'. Furthermore, the Guidelines states in para 9(2, 3): 'They [restrictive measures] must respect human rights and fundamental freedoms, in particular due process and the right to an effective remedy. The measures imposed must always be proportionate to their objective'. These measures may not have an economic motivation (para 5), and the EU has to implement UN restrictive measures as quickly as possible (para 33).

The Basic Principles and the Guidelines show that the EU has specified under which conditions subsequent to the UN Charter and international law the EU may impose restrictive measures. However, they only apply to such measures not involving the use of armed force, including interruption of economic relations, of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations (see Article 41 of the UN Charter). The Basic Principles and the Guidelines do not address the use of force. In this regard it may require a thorough explanation.

Furthermore, with regard to the adoption of additional restrictive measures by the EU, the EU has demonstrated under which legal conditions subsequent to the UN Charter and international law the EU may impose such measures. Contrary to Pierre-Emmanuel Dupont's opinion, it is not to be questioned that such practice can be reconciled with the requirement of performance in good faith of treaty provisions (e.g. UN Charter). Dupont has expressed the opinion that (in the case of Iran) the adoption of additional measures by the EU 'is likely to have a negative impact on the coherence of the collective security system'.[43] As he argues:

> Such practice of additional, *motu proprio* 'sanctions' not mandated nor authorized by the Security Council, already witnessed in the EC practice of sanctions targeting the former

[40] EU External Action, Sanctions or Restrictive Measures, http://eeas.europa.eu/cfsp/sanctions/index_en.htm.

[41] EU Doc. 10198/1/04, REV 1, 7 June 2004.

[42] EU Doc. 15114/05, 2 December 2005.

[43] Dupont 2012, p. 336.

> Yugoslavia in the 1990s, may be seen as one of the characteristic manifestations of a general trend. This general trend is to distort (…) the established rules and principles of international law (the law applicable to countermeasures, in the case considered), often under motives which hardly conceal underlying political (or geopolitical) considerations and interests.[44]

Article 29 TEU and Article 215 of the Treaty on the Functioning of the European Union (TFEU) provides the legal basis for the adoption of (additional) restrictive measures. Whereas Article 29 TEU constitutes the right of the Council to 'adopt decisions which shall define the approach of the Union to a particular matter of a geographical or thematic nature', Article 215 TFEU includes the provision that the Council shall adopt the necessary measures for the interruption or reduction, in part or completely, of economic and financial relations with one or more third countries (para 1). Where a decision so provides, the Council may adopt restrictive measures (para 2). As the analysis has already shown, the 2004 Basic Principles on the Use of Restrictive Measures as well as the 2005 Guidelines on Implementation and Evaluation of Restrictive Measures reflect the provisions of Article 29 TEU and Article 215 TFEU in more detail (e.g. commitment to full conformity with international law; respecting human rights and fundamental freedoms; proportionality; without economic motivation).

9.4 Case Studies: Implementation of the EU's WMD Strategy (Since 2004)

To implement the EU's WMD Strategy, the EU has decided to focus in particular on specific measures. The EU's WMD Strategy therefore includes, in para 30, a *Living Action Plan* whose implementation will be subjected to regular revision and updating every six months. In line with the regular updated *List of Priorities,*[45] which is divided into priorities that do not require EU funding and priorities that are in need of such funding, the Living Action Plan is the basis for a coherent implementation of the EU's WMD Strategy. It consolidates all preceding documents: *List of Concrete Measures,*[46] *Action Plan for the Implementation of the Basic Principles for an EU WMD Strategy*[47] and *European Council's Declaration on Non-proliferation.*[48] Additionally, in December 2008, the Council adopted *New Lines for Action by the European Union in Combating the Proliferation of*

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[44] Ibid.

[45] EU Doc. 15246/04, 3 December 2004, Annex I (Priorities which do not Require EU Funding) and Annex II (Priorities Requiring EU Funding) to Annex B.

[46] EU Doc. 7705/02 (Presse 91), 15 April 2002, pp. II–VI.

[47] EU Doc. 10354/03, 10 June 2003, pp. 2 ff.

[48] EU Doc. 11638/03, 1 October 2003, Annex II, para 5.

Weapons of Mass Destruction and their Delivery Systems.[49] The New Lines do not replace the EU's WMD Strategy. They are intended to increase the effectiveness and impact of the EU's approach to non-proliferation by achieving greater coordination within the EU and making it even more operational.[50]

The Living Action Plan contains a wide range of measures. It mainly addresses rendering multilateralism more effective through supporting the multilateral non-proliferation treaties and conventions,[51] including the legal effect that a more global membership increases the legitimacy of multilateral instruments and opens the way for the EU to support national implementation measures.[52] Furthermore, the Living Action Plan covers promoting a stable international and regional environment, cooperating closely with the US and other key partners as well as developing the necessary structures within the EU. The comprehensive analysis of the specific measures, however, would lead too far.[53] The analysis therefore concentrates upon essential features or selected examples. These include three case studies: prolonging the Programme on Disarmament and Non-proliferation in the Russian Federation beyond June 2004 (9.4.1.), introducing the Non-proliferation Clause in agreements with third countries (9.4.2.) as well as close cooperation with the US answering the nuclear conflict with Iran (9.4.3.).

9.4.1 Prolonging the Programme on Disarmament and Non-Proliferation in the Russian Federation Beyond June 2004

In order to promote a stable international and regional environment, the EU *inter alia* aims to reinforce Union cooperative threat reduction programmes with other countries targeted at support for disarmament, control and security of sensitive materials, facilities and expertise. In this regard, since 1999, the EU has been involved in several initiatives aimed at supporting the Russian Federation's efforts towards disarmament and non-proliferation of WMD. These mainly include the protection of nuclear materials as well as the destruction of chemical weapons.[54]

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[49] EU Doc. 17172/08, 17 December 2008.

[50] http://eeas.europa.eu/non-proliferation-and-disarmament/wmd/index_en.htm.

[51] In this regard Grip's 2011a, b analysis has shown a clear increase in states' participation in all instruments from 2004 until mid-2011. See Lina Grip, Assessing Selected European Union External Assistance and Cooperation Projects on WMD Non-Proliferation, in: EU Non-Proliferation Consortium (ed.), EU Non-Proliferation Paper No. 6, December 2011, pp. 3 ff.

[52] Id., p. 4.

[53] See in more detail: Hertwig 2010, pp. 179–372.

[54] See Hart and Miller 1998.

The situation in Russia is most critical. According to the Nuclear Threat Initiative (NTI),

> [t]he collapse of the Soviet Union in December 1991 left the Russian Federation in possession of the vast majority of the USSR's weapons of mass destruction (WMD) complex. (…) Russia maintains a nuclear arsenal of approximately 12,000 warheads (…) [p]ursued a covert biological weapons program during the Soviet era while a state party to the BTWC (…) [s]cheduled to complete destruction of its chemical weapons stockpile by December 2015.[55]

After the collapse of the Soviet Union, Russia inherited a massive nuclear weapons production complex and large stocks of weapons-grade fissile material.[56] According to present estimates by the International Panel on Fissile Materials, Russia has approximately 737 metric tons of weapons-grade-equivalent highly enriched uranium (HEU) and approximately 128 metric tons of military-use plutonium.[57] Due to Russia's insufficient safety standards, there is a great risk that vulnerable fissile material, which can be used to produce nuclear weapons, could be stolen or diverted to terrorist groups and non-state actors.[58]

Furthermore, Russia has the largest chemical weapons stockpile of any state (officially declared 40,000 metric tons). Financial and other difficulties, such as great expense of 6 billion US Dollar as well as reasonable building destruction sites, have delayed the timely destruction of Russia's chemical weapons stockpile. Similar to any other state party to the Chemical Weapons Convention (CWC), Russia must destroy all chemical weapons stockpiles within 10 years of the Convention entering into force. Although Russia did not meet the 2007 and 2012 deadlines, it has since declared to complete destruction by December 2015.[59] Due to the enormous chemical weapons status, it is as yet uncertain whether Russia will succeed.

The EU's legal and institutional framework for threat reduction activities started in 1994 with the Partnership and Cooperation Agreement[60] between the EU and Russia *inter alia* with the objective 'to provide an appropriate framework for the political dialogue between the Parties allowing the development of close relations between them in this field'. It became more specific with the Common Strategy[61] on Russia in June 1999. Only the Council Joint Action

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55 http://www.nti.org/country-profiles/russia/.

56 Ibid.

57 International Panel on Fissile Materials, Global Fissile Material Report 2011, January 2012, http://www.fissilematerials.org, pp. 8–9, 17–18.

58 See for an overview: Andreis and Calogero 1995.

59 Nuclear Threat Initiative, Russia, http://www.nti.org/country-profiles/russia/.

60 Agreement on Partnership and Cooperation Establishing a Partnership Between the European Communities and their Member States, of One Part, and the Russian Federation, of the Other Part, OJ L327, 28 November 1997, p. 3.

61 Common Strategy of the EU of 4 June 1999 on Russia, 1999/414/CFSP, OJ L 157, 24 June 1999, p. 1.

1999/878/CFSP,[62] however, 'gave the EU as a whole a clear guidance in the specific field of threat reduction'.[63] Under Article 1 of the Council Joint Action 1999/878/CFSP, the EU has established a European Union Cooperation Programme for Non-proliferation and Disarmament in the Russian Federation (the Programme). In the first phase, the Programme financially contributed to a chemical weapons destruction plant situated in Gorny (Russia's first destruction site) as well as to a set of studies and experimental studies on plutonium transport, storage and disposition. Furthermore, in the second phase, the Programme supported *inter alia* an infrastructure building related to the destruction of nerve gases stored at the Shchuch'ye site (another destruction site in Russia).[64]

Before the EU, in 2002, joined the G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction and promised to commit US$1 billion, with the Programme, the EU had already supported the Russian Federation in her pursuit of a safe and environmentally sound dismantlement or reconversion of infrastructure, equipment and scientific capabilities linked to WMD. In 2002, the G8 heads of state established the Global Partnership originally conceived as a 10-year, US$20 billion initiative 'to prevent terrorists, or those that harbour them, from acquiring or developing nuclear, chemical, radiological and biological weapons; missiles; and related materials, equipment and technology'.[65] Under this initiative, the G8 leaders agreed to support specific cooperation projects, initially in Russia, to address non-proliferation, disarmament, counter-terrorism and nuclear safety issues (such as the destruction of chemical weapons, the dismantlement of decommissioned nuclear submarines, the disposition of fissile materials and the employment of former weapons scientists). In 2011, the G8 leaders agreed to extend the Global Partnership and to complete the priority projects in Russia as well as enunciated several areas of focus for its future work.[66]

Furthermore, in 2004 and 2007, the EU agreed on two more Joint Actions with which the EU supported a project for the implementation of physical protection measures at the Bochvar Institute in Moscow of the Russian Federal Agency for

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[62] OJ L 331, 23 December 1999, p. 11.

[63] Höhl et al. 2003, p. 16.

[64] Council Decision of 25 June 2001 Implementing Joint Action 1999/878/CFSP with a View to Contributing to the European Union Cooperation Programme for Non-proliferation and Disarmament in the Russian Federation (2001/493/CFSP), L 180, 3 July 2001, p. 2.

[65] Statement by G8 Leaders, The G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction, Kananaskis Summit, 2002, http://www.auswaertiges-amt.de/cae/servlet/contentblob/388532/publicationFile/4167/GP-Kananaskis-Gipfel-2002.pdf.

[66] http://www.state.gov/t/isn/gp2012/. The extension was needed to address the areas covered during the 2010 summit (securing nuclear and radiological materials, biosecurity, engagement of weapons scientists in the field of nonproliferation, and implementation of the Security Council Resolution 1540), http://www.nti.org/treaties-and-regimes/global-partnership-against-spread-weapons-and-materials-mass-destruction-10-plus-10-over-10-program/ See in more detail: Hakan Akbulut, The G8 Global Partnership: From Kananaskis to Deauville and Beyond, in: Austrian Institute for International Affairs (ed.), Working Paper 67, March 2013, p. 14.

Atomic Energy[67] as well as the construction of the Shchuch'ye chemical weapon destruction facility.[68] The EU has thereby continued its engagement because the EU already had, in 2001, supported the completion of the necessary infrastructure for the destruction facility at Shchuch'ye.

The EU has also continued to support the Russian Federation's efforts towards WMD disarmament and non-proliferation after the Programme ended on 24 June 2004. For example, the EU has since financed the provision of equipment required to ensure the operation of a third chemical weapons destruction facility, the destruction site in Kambarka.[69] With this continued assistance, the EU has complied with the Living Action Plan to EU's WMD Strategy, as para 30(B)(1) of the Plan asks for prolonging the Programme on disarmament and non-proliferation in the Russian Federation beyond June 2004. Furthermore, the EU has substantially enforced its Cooperation Programme for Non-proliferation and Disarmament in the Russian Federation through increased financial assistance since 2004[70] and has succeeded to the destruction process of chemical weapons. In 2011, the Organization for the Prohibition of Chemical Weapons (OPCW) verified the destruction of 4,425.194 MTs of Category 1 chemical weapons.[71] In March 2012, Russian officials announced that Russia had destroyed over 60 % of its stockpile—over 24,000 of declared 40,000 metric tonnes.[72] However, as Lina Grip underlines, two barriers prevent a full internal impact assessment of the combined efforts on EU WMD non-proliferation activities involving third countries: firstly, the absence of a good methodology to assess effectiveness and efficiency in the output of WMD non-proliferation policies; and secondly, the institutional division in the EU that separates CBRN risk mitigation projects funded by the IFS from other WMD non-proliferation programmes.[73] Additionally, Sergey Oznobistchev and Alexander Saveliev *inter alia* criticized the lack of an approved and final plan for the destruction of Russia's chemical weapons as well as an incomplete definition of general methodology and specific measures for the destruction of the reacting stock.[74]

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[67] Council Joint Action 2004/796/CFSP of 22 November 2004 for the Support of the Physical Protection of a Nuclear Site in the Russian Federation, OJ L 349, 25 November 2004, p. 57.

[68] Council Joint Action 2007/178/CFSP of 19 March 2007 in Support of Chemical Weapons Destruction in the Russian Federation in the Framework of the EU Strategy against Proliferation of Weapons of Mass Destruction, OJ L 81, 22 March 2007, p. 30.

[69] Council Decision 2003/874/CFSP of 8 December 2003 Implementing Joint Action 2003/472/CFSP with a View to Contributing to the European Union Cooperation Programme for Non-proliferation and Disarmament in the Russian Federation, OJ L 326, 13 December 2003, p. 49.

[70] See in detail: Hertwig 2010, p. 279.

[71] OPCW, Report on the Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction in 2011, Doc. C/17-4, 27 November 2012, p. 6.

[72] Nuclear Threat Initiative, Russia, http://www.nti.org/country-profiles/russia/.

[73] Grip 2011a, b, p. 2.

[74] Oznobistchev and Saveliev 2005, p. 24, http://www.un.org/disarmament/education/wmdcommission/files/No33.pdf.

With regard to the biological weapons concern, it is absolutely essential to integrate the disarmament and non-proliferation of Russia's biological weapons into the EU's Cooperation Programme. The potential threat is most critical as well. The Soviet Union had developed a large offensive biological weapons program (including 50 institutes and employing 60,000 people), lasting until the USSR's dissolution in 1991. As the Nuclear Threat Initiative states:

> Even though the full extent of the Soviet biological weapons program is unknown, facilities suitable for offensive biological weapon production likely remain in Russia. Russia continues to engage in dual-use biological research activities (…). Some nonproliferation experts also worry scientists formerly associated with the Soviet biological warfare program may assist foreign nations with clandestine BW programs.[75]

As already promised in 1999[76] and 2003,[77] the EU should decide which biological disarmament and non-proliferation projects shall be funded under the Programme.

9.4.2 Introducing the Non-Proliferation Clause in Agreements with Third Countries

With the adoption of the Action Plan for the Implementation of the Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction in June 2003, the EU has already aimed to integrate the WMD non-proliferation concerns into its political, diplomatic, and economic activities and programmes. As the Action Plan stated: 'The EU will consider the introduction of an effective stick and carrot policy linked to nonproliferation commitments in its relations with third countries. This will be done in particular in the context of co-operation agreements or assistance programmes. (…)'.[78] However, the Living Action Plan of the EU's WMD Strategy, with which the EU focuses in particular on specific implementing measures, addresses 'mainstreaming non-proliferation policies into the EU's wider relations with third countries' in para 30(B)(2). For this reason, the EU intended to promote a stable international and regional environment as well. In November 2003, the Council adopted a *non-proliferation clause,*[79] which should be included in all agreements with third countries. As the

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[75] http://www.nti.org/country-profiles/russia/. See in detail for worried Non-proliferation experts: Miller and Broad (8 December 1998); and Cordesman and Seitz 2008, p. 14.

[76] Article 2(2) of the Council Joint Action 1999/878/CFSP: "Other projects to be funded under the Programme (in the *biological*, chemical and nuclear fields) in the future shall be determined by the Council, on a recommendation of a Member State and/or the Commission." (Emphasis added).

[77] Article 2(2) of the Council Joint Action 2003/472/CFSP: "The new projects to be adopted under the programme shall be in the chemical, nuclear or *biological* field or relate to export controls." (Emphasis added).

[78] EU Doc. 10453/03, para B)(8).

[79] EU Doc. 14997/03, 19 November 2003, Attachment to Annex.

EU emphasized: 'Leverage is the clause's primary objective – to encourage partner countries make concrete headway with regards to the fundamental texts of the international non-proliferation regime (…).'[80] With regard to the EU's WMD Strategy the clause was '[t]he only coercive policy used by the EU to promote non-proliferation'.[81]

The first section of the clause addresses the already existing obligations. It sets out the general obligations of each party under the non-proliferation clause to 'co-operate and to contribute to countering the proliferation of weapons of mass destruction and their means of delivery through full compliance with and national implementation of their existing obligations under international disarmament and non-proliferation treaties and agreements and other relevant international obligations. The parties agree that this provision constitutes an essential element of this agreement'. Additionally, the second section of the clause is subject to a more dynamic process, with which the parties are engaged in becoming members of international instruments they have not signed yet and in offering opportunities for cooperation in the field of export control:

> The parties furthermore agree to cooperate and to contribute to countering the proliferation of weapons of mass destruction and their means of delivery by: – taking steps to sign, ratify, or accede to, as appropriate, and fully implement all other relevant international instruments; – the establishment of an effective system of national export controls, controlling the export as well as transit WMD related of goods, including a WMD end-use control on dual use technologies and containing effective sanctions for breaches of export controls.

However, this part of the clause 'might be considered as essential elements on a case by case basis'. Furthermore, the clause offers a consultation process with which 'the Parties agree to establish a regular political dialogue that will accompany and consolidate these elements'.

Including obligations under international disarmament and non-proliferation instruments in all agreements with third countries is to be appreciated positively, because the EU may insist offensively on compliance with these legal instruments. The EU thereby tied in effective multilateralism with the second strategic objectives of its WMD Strategy, by a multilateral treaty regime, in which it is stated: 'The EU is committed to the multilateral treaty system, which provides the legal and normative basis for all non-proliferation efforts' (para 16).

Over the first few years after adopting the non-proliferation clause, it has been criticized that the EU did not explain which international disarmament and non-proliferation treaties and agreements are included by the non-proliferation clause.[82] In 2009, however, the EU agreed on the *Note on the Implementation of*

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[80] Note on the Implementation of the WMD Clause, EU Doc. 5503/09, 19 January 2009, p. 4.

[81] van Ham 2011, p. 4.

[82] To this effect: Kienzle 2006, p. 2. See also: Potter 2007, pp. 61 ff; Hertwig 2010, p. 287.

the WMD Clause,[83] in which the application of the clause is specifically explained. As the note now sets out:

> (…) in general terms the clause here [first section of the clause] refers, *inter alia,* to the Non-proliferation Treaty (including IAEA Comprehensive Safeguards Agreement and Additional Protocols), the Chemical Weapons Convention, the Biological and Toxic Weapons Convention, and the relevant UNSC Resolutions, in particular UNSCR 1540 (2004) and the UNSC resolutions on nuclear crises (p. 5 of the note).

Pursuant to the second section of the clause, the note underlines other relevant international instruments including the Non-Proliferation Treaty; the Chemical Weapon Convention; the Biological and Toxin Weapons Convention; the Comprehensive Nuclear Test Ban Treaty; the IAEA Comprehensive Safeguards Agreement and Additional Protocols; the Convention on the Physical Protection of Nuclear Material; the Nuclear Terrorism Convention; and the Hague Code of Conduct against Ballistic Missile Proliferation (p. 5 of the note).

The first section of the clause, the commitment to full compliance with already existing regulations, constitutes an essential element of the respective agreement. In cases of noncompliance of one of the contracting Party, the EU referred to Article 96[84] of the Agreement of Cotonou,[85] with which intensive consultations between the parties would take place. Article 96(2) lit. a(4)(1) relates to the appropriate measures which may be taken if the consultations do not lead to a solution acceptable to both Parties, if consultation is refused, or in cases of special urgency. In this regard, the term 'cases of special urgency' shall refer to exceptional cases of particularly serious and flagrant violation of one of the essential elements referred to in para 2 of Article 9 that requires an immediate reaction (Article 96(2) lit. b(1)). The appropriate measures 'are measures taken in accordance with international law, and proportional to the violation. In the selection of these measures, priority must be given to those which least disrupt the application of this agreement. It is understood that suspension would be a measure of last resort' (Article 96(2) para c(1)).[86]

However, they have not yet signed the second section of the non-proliferation clause, which sets out the obligation of the parties to become members of international instruments and is subject to restrictions. In this regard, the clause sets out: 'The parties furthermore agree to cooperate and to contribute (…) by (…)

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[83] EU Doc. 5503/09, 19 January 2009.

[84] "Essential Elements: Consultation Procedure and Appropriate Measures as Regards Human Rights, Democratic Principles and the Rule of Law".

[85] Partnership Agreement between the Members of the African, Caribbean and Pacific Group of States of the One Part, and the European Community and its Member States, of the Other Part, Signed in Cotonou on 23 June 2000, OJ L 317, 15 December 2000, p. 3.

[86] In this regard the critique by Grip 2009, p. 19, is incomprehensible, because it stresses the lack of criteria, in most agreements to date, for judging whether or not a partner of the EU has fallen below international standards for various aspects of non-proliferation. However, the EU Non-proliferation Clause foresees that in case a third State does not fulfill its obligations in relation with the non-proliferation provisions, the EU can, as a last resort, suspend the Agreement.

taking steps to sign, ratify, or accede to, *as appropriate*, and fully implement all other relevant international instruments' (Emphasis added). The clause, as well as the Note on the Implementation of the WMD Clause, does not explain the circumstances of the term 'as appropriate'. Against this background, the clause is too unspecified. Furthermore, pursuant to export controls, the second section of the clause only addresses the establishment of an effective system of national export controls:

> The parties furthermore agree to cooperate and to contribute to countering the proliferation of weapons of mass destruction and their means of delivery by (…) the establishment of an effective system of national export controls, controlling the export as well as transit WMD related of goods, including a WMD end-use control on dual use technologies and containing effective sanctions for breaches of export controls.

The clause, however, does not refer to the field of international export controls (such as the Missile Technology Control Regime for items relevant to missile systems; the Australia Group for dual-use items relevant to chemical and biological weapons; and the Nuclear Suppliers Group for items in the nuclear sector). In this regard, the clause is not consistent with para 19 of the EU's WMD Strategy, which sets out the obligation: 'The EU is committed to strengthening export control policies and practices within its borders *and beyond*, in co-ordination with partners. The EU will work towards improving the existing export control mechanisms. It will advocate adherence to effective export control criteria by countries outside the existing regimes and arrangements' (Emphasis added).

Furthermore, however, both aspects of the EU's WMD Strategy—taking steps to address all other relevant international instruments as well as the establishment of an effective system of national export controls—do not constitute essential elements of this agreement. The footnote of the clause only points out: 'These two elements might be considered as essential elements on a *case by case* basis' (Emphasis added). Not including both of these aspects in the respective third country agreement creates the risk that some basic concerns of the EU's WMD Strategy—building-up a multilateral treaty regime, strengthening export control policies and practices—will not reach the agenda of the third countries. In addition, it is unexplained which conditions of both aspects of the clause could constitute essential elements: Applicable criteria are missing. As well, Peter van Ham argues that only offering the fulfilments of states' existing commitments 'offers little incentive to third states to further develop their national non-proliferation policies'.[87] In case of the agreement with Syria, Benjamin Kienzle adds:

> Conditionality in the Agreement with Syria applies, however, principally to Syria's '…*existing* obligations under international disarmament and non-proliferation treaties and agreements.' Since Syria has not ratified many fundamental non-proliferation agreements

[87] van Ham, Speaking Notes, p. 4, http://www.nonproliferation.eu/documents/kickoff/van_ham.pdf.

> [NPT AP, CWC, BTWC, CTBT, HCC], it is questionable if conditionality is in this case really an effective non-proliferation tool. In fact, the more ambitious elements of the non-proliferation clause, the ratification of non-proliferation treaties to which Syria is not party and the setting up of sophisticated export and transit regulations, do not form 'essential elements' of the Agreement[88] (Emphasis added).

Nevertheless, against these critical comments, the adoption of the Non-Proliferation Clause marks a milestone in implementing the EU's WMD Strategy. In this respect, one has to agree with the EU's appraisal that the clause '(…) makes the EU more credible internationally as it allows for efficiently combining a diplomatic instrument and political [instrument]'.[89] And as Benjamin Kienzle stresses as well: '[T]he inclusion of a non-proliferation clause in a major agreement with one of the most problematic states [Syria] worldwide in the field of nonproliferation, constitutes a major leap forward'.[90] Linked to combatting WMD proliferation, the clause signalizes Europe's achievement because, with it, the EU has become visible for the first time in integrating WMD Non-proliferation concerns into its political, diplomatic and economic activities and programmes. Peter van Ham stressed: 'In principle, the WMD clause aimed to incorporate strategic thinking into EU policy, with the ultimate goal of turning *Zivilmacht* Europe into a full-fledged strategic actor, willing and capable of using its economic and financial clout to further its interests around the globe'.[91] Furthermore, referring the clause to all parties, the EU and its Member States as well as the third country produce a positive effect because it ensures contracted balance and gives the third country equal rights.

Since 2004, the clause has been inserted in all new or renewed mixed agreements (including a combination of economic and political elements) as well as agreements under Article 24 TEU negotiated with third countries. Successful negotiations have been completed thus far with almost 100 states worldwide.[92] More specifically, the clause has been inserted *inter alia* in the Partnership and Cooperation Agreement with Tajikistan[93] and the Agreement Amending the Partnership Agreement with the Members of the African, Caribbean and Pacific

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88 Kienzle 2006, pp. 12–13.

89 See p. 4 of the Note on the Implementation of the WMD Clause.

90 Kienzle 2006, p. 13.

91 van Ham 2011, p. 4.

92 Six-monthly Progress Report on the Implementation of the EU Strategy against the Proliferation of Weapons of Mass Destruction (2010/II), EU Doc. 17080/10, 16 December 2010, p. 47; Six-monthly Progress Report on the Implementation of the EU Strategy against the Proliferation of Weapons of Mass Destruction (2012/I), OJ C 237, 7 August 2012, p. 6. As to the background and negotiations of the agreements see in detail: Lina Grip, The EU Non-proliferation Clause: a Preliminary Assessment, SIPRI Background Paper November 2009, pp. 6 ff.

93 Article 4 of the Partnership and Cooperation Agreement Establishing a Partnership between the European Communities and Their Member States, for the one Part, and the Republic of Tajikistan, of the other Part, Luxembourg, 11 October 2004, L 350, 29 December 2009, p. 3.

Group of States (78 ACP States)[94] as well as the Stabilisation and Association Agreement with Albania,[95] Montenegro[96] and Serbia.[97] Although not legally binding, the clause has also been inserted in the Action Plans for the countries covered by the European Neighborhood Policy. Action Plans have been completed with Armenia, Azerbaijan, Egypt, Georgia, Israel, Jordan, Lebanon, Moldova, Morocco, Occupied Palestinian Territory, Tunisia and Ukraine. Furthermore, negotiations with Algeria, Belarus, Libya and Syria are still ongoing.[98] The inclusion of the Non-Proliferation Clause in relation to the Mediterranean third countries has been the 'major success' of the EU's non-proliferation efforts in that region. As Benjamin Kienzle further pointed out: 'In principle, a major advantage of the national Action Plans and, indeed of the ENP in general, is, however, that the EU is able to focus its cooperation on individual partner countries and their specific conditions and needs in a flexible way'.[99]

With the integration of the Non-Proliferation Clause into agreements with over 100 countries, the EU has contributed to promoting a stable international and regional environment. Combatting WMD proliferation has been inserted in the contractual relations with third states, even if the European Neighborhood Action Plans are not legally binding. The EU should continue its commitment and, as already stated in November 2003,[100] conclude parallel instruments containing the Non-Proliferation Clause and establishing a link with the agreement. Primarily, the EU should conclude parallel instruments concerning India, Pakistan and Iran with whom negotiations are ongoing. However, as Lina Grip underlines, the EU must develop a clear and explicit strategy that covers how to deal with the

[94] Article 11b of the Partnership Agreement between the Members of the African, Caribbean and Pacific Group of States of the one Part, and the European Community and its Member States, of the other Part, signed in Cotonou on 23 June 2000; Agreement Amending for the Second Time the Partnership Agreement between the Members of the African, Caribbean and Pacific Group of States, of the one Part, and the European Community and Its Member States, of the other Part, Signed in Cotonou on 23 June 2000, as First Amended in Luxembourg on 25 June 2005, L 287, 04/11/2010, p. 3. Date of Entry into Force: Pending.

[95] Article 8 of the Stabilisation and Association Agreement between the European Communities and Their Member States, of the one Part, and the Republic of Albania, of the other Part, Luxembourg, 12 June 2006, L 107, 28 April 2009, p. 166.

[96] Articles 3, 10(3) of the Stabilisation and Association Agreement Between the European Communities and Their Member States of the one Part, and the Republic of Montenegro, of the other Part, 15 October 2007, OJ L 108, 29 April 2010, p. 3.

[97] Article 3 of the Stabilisation and Association Agreement between the European Communities and Their Member States, of the one Part, and the Republic of Serbia, of the other Part, 29 April 2008, http://www.europa.rs/upload/documents/key_documents/2008/SAA.pdf The agreement is not yet in force, but the ratification process is close to completion. See European Commission, Serbia 2012 Progress Report, EU Doc. SWD (2012) 333 Final, 10 October 2012, pp. 4–5.

[98] See the Progress Reports on Implementation of the European Neighbourhood Policy, 20 March 2013, http://ec.europa.eu/world/enp/documents_en.htm.

[99] Kienzle 2006, p. 12.

[100] EU Doc. 14997/03, 19 November 2003, Annex, p. 3 lit. c.

Non-proliferation Clause in situations where it becomes an obstacle to promoting other interests. India, especially, declared it will not accept any attempt by the EU to influence its national policies by means of the Clause.[101] In this regard, Peter van Ham stresses that the clause 'has only been moderately—one could even say: marginally—effective'.[102] He underlines that the clause has indeed been inserted in several agreements, but this has been met with resistance from most third countries (e.g. India) during negotiations. 'Clearly, the EU has abandoned its security principles in the interests of trade with one of the world's rising powers'.[103]

9.4.3 Cooperating Closely with the United States: Joint Efforts to Solve the Conflict Over Iran's Controversial Nuclear Programme

The Living Action Plan of the EU's WMD Strategy, with which the EU focuses in particular on specific implementing measures, addresses in para 30(C) the close cooperation with the US and other key partners. As the European Security Strategy has already shown, the US shall be the most important partner in addressing the new threats: 'The transatlantic relationship is irreplaceable. Acting together, the European Union and the United States can be a formidable force for good in the world' (p. 13 of the ESS). The EU's WMD Strategy, however, does not use this term. Anyhow, the classification of the US as the most important partner results from its explicit and initial naming before other key partners: 'Co-operation with the US and other key partners such as the Russian Federation, Japan and Canada is necessary to ensure a successful outcome of the global fight against proliferation' (Chap. 2 para C)26) of the EU's WMD Strategy). In addition, in 2003, the EU had already presented the details of the close cooperation with the United States. In this regard, the Living Action Plan adds the obligation to ensure 'adequate follow up to the EU-US declaration on non-proliferation issued at the June 2003 summit' (para 30(C)(1)). In respect to other key partners (such as the Russian Federation, Japan and Canada), the EU has pointed out, however, to ensure coordination and, where appropriate, establish joint initiatives (para 30(C)(2)).

In respect of the June 2003 *Joint Statement on the Proliferation of Weapons of Mass Destruction,*[104] the EU and the US agreed on Cooperation '(…) to strengthen the international system of treaties and regimes against the spread of WMD.

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101 Grip 2009, p. 19.

102 van Ham, Speaking Notes, p. 4, http://www.nonproliferation.eu/documents/kickoff/van_ham.pdf.

103 Ibid.

104 Joint Statement on Proliferation of Weapons of Mass Destruction, Office of the Press Secretary, The White House, Washington, DC, 25 June 2003, http://2001-2009.state.gov/p/eur/rls/rm/2003/21944.htm.

This implies the development of new regimes, as appropriate, and reinforcement of existing regimes. We will pursue the goal of universal membership of relevant multilateral treaties and agreements'. In respect of specific proliferation challenges, the EU declared they would cooperate actively, in particular: 'We express our continuing serious concern at Iran's nuclear program, in particular as regards the pursuit of a full nuclear fuel cycle, as announced by President Khatami. We are troubled by the information in the IAEA's report detailing Iran's failures to meet its safeguards obligations, and we fully support ongoing investigation by the IAEA to answer the unresolved questions and concerns identified in that report. Iran must cooperate fully with the IAEA, remedy all failures and answer all questions. It must also sign and implement an Additional Protocol, without delay or conditions, as a significant first step towards addressing those concerns'.

For the first time in their relations, the EU and the US agreed successfully on a Joint Statement on WMD proliferation concerns, which was regularly confirmed in the following annual summits with renewed and extended declarations. In respect to the discrepancies within the scope of the 2003 Iraq conflict, the aimed cooperation in the fight against the proliferation was an absolutely necessary extension of the relations with the US. The Joint Statement implied a breakthrough in security–political relations.

However, the EU and the US have formulated the Joint Statement generally, not only quantitatively but also qualitatively. They did not agree on concrete steps as to how exactly their cooperation should be formed in the fight against the proliferation. An action plan with detailed measures and a schedule would have been helpful to effectively address the close cooperation. In the meantime, though, the EU and the US have succeeded in such an action plan.[105] However, this plan does not include a detailed schedule nor a list of priorities for a coherent implementation of the Joint Statement.

Furthermore, the 2003 Joint Statement has not considered the specific role of the UN Security Council nor general criteria for using military measures to fight against the WMD proliferation. The parties have only pointed out: 'We recognize that, if necessary, other measures in accordance with international law may be needed to combat proliferation. (…) We need to tackle it [proliferation] individually and collectively—working together and with other partners, including through relevant international institutions, in particular those of the United Nations system'. With the renewed and extended 2005 Joint Statement,[106] the parties have namely referred to the important role of the UN Security Council: 'We are fully committed to strengthen and support the important role of the United Nations in assisting member states in combating both challenges'. Additionally, the 2009 Joint Declaration on Non-proliferation and Disarmament has also included the role

[105] EU-U.S. Joint Programme of Work on the Nonproliferation of Weapons of Mass Destruction, Washington, 20 June 2005, EU Doc. 10312/05 (Presse 164).

[106] EU-U.S. Declaration on Enhancing Cooperation in the Field of Non Proliferation and the Fight against Terrorism, Washington, 20 June 2005, EU Doc. 10306/05 (Presse 160).

of the Council: 'We welcome the outcome of the UN Security Council Summit on nuclear non-proliferation recognize the role of the Council in addressing threats to international peace and security arising from non-compliance with non-proliferation obligations'.[107] However, the parties did not explain which specific role the UN Security Council will play and which criteria for using military measures will apply. They only pointed out: 'We reaffirm our commitment to cooperate in our efforts to combat global terrorism in full respect of human rights, fundamental freedoms and the rule of law'.

For these reasons, the EU and the US have also not explained how the aimed close cooperation shall be developed to solve the conflict over Iran's controversial nuclear programme. Since 2003, substantial questions about the scope and purpose of the Iranian nuclear program have remained unanswered. To date, it has been controversially discussed if Iran aims to become a nuclear weapons state or a *de facto* nuclear power, or if it is merely producing nuclear energy for peaceful purposes. In this regard, Elisa Oezbek underlines: 'Whereas the former option is forbidden and the latter is permitted under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the second option lies in a grey zone'.[108] Iran has been a non-nuclear-weapon State party to the NPT since 1970 and as such has committed 'not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices' (Article II of the NPT). Furthermore, Article IV of the NPT presents 'the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty'. NPT States Parties have the right to develop, research, produce and use nuclear energy, but only for peaceful purposes and in conformity with Article I and II of the NPT. Although at first glance a rather technical subject, the peaceful use of nuclear energy is becoming an increasingly contested issue within the NPT context based on the growing interest of a number of countries (e.g. Iran) in establishing domestic nuclear energy programmes.[109] In this regard, however, Iran had repeatedly, and over an extended period, failed to meet its NPT safeguards obligations, which *inter alia* includes declaring its uranium enrichment program.

In fact, the EU and the US have thus far reacted differently. Since 2003, the EU has been involved in the negotiations with Iran and has presented several proposals, 'which would help Iran to develop a modern civil nuclear power programme,

[107] EU-U.S. Declaration on Non-proliferation and Disarmament, Washington, 3 November 2009, EU Doc. 15352/09 (Presse 316), Annex 3, p. 13.

[108] Oezbek 2010, p. 69.

[109] Franceschini 2012, p. 1.

whilst meeting international concerns about its peaceful nature.'[110] Talks are aimed to negotiate a long-term agreement with Iran 'which would include "objective guarantees" concerning the peaceful nature of its nuclear programme'.[111] These proposals include broad cooperation in the technological and economic field as well as in the political and security field. The negotiations are intended to enable Iran to rebuild trust amongst the international community in the exclusively peaceful nature of its nuclear programme.[112] Contrary to the 2003 Iraq conflict, 'the Europeans speak with one voice and have defined a common approach based on incentives and negotiations'.[113]

Besides, the EU has significantly strengthened its commitment by upgrading its negotiations format: at first with the foreign ministers of Germany, France and the United Kingdom ('E3'); later, in 2004, with the participation of the former High Representative for CFSP and the assistance by its Personal Representative for Non-proliferation of Weapons of Mass Destruction ('E3/EU'); as well as, since 2006, under the inclusion of the other three permanent UN Security Council members China, Russia and the United States ('E3/EU+3'). Since 2009, however, Catherine Ashton, the High Representative for Foreign Affairs and Security Policy, has lead, on behalf of the 'E3/EU+3', the talks with Iran on its nuclear programme. The membership of Germany, France and the United Kingdom in the European negotiations team surrendered, from their role in the UN Security Council and in the Board of Governors of the International Atomic Energy Agency (IAEA), their know-how in the field of the nuclear energy and their influence in the EU.[114]

Based on a preventative approach and in line with the EU's WMD Strategy, the EU has assumed leadership in negotiations with Iran. As Oliver Meier argued: 'Efforts to find a diplomatic solution (…) are the most ambitious and high-profile action taken by the (…) EU to date in the field of non-proliferation. Over 10 years of engagement, the EU has played an important role in preventing a military escalation of the conflict'.[115] However, since Catherine Ashton took over from Javier Solana as High Representative in November 2009, the effectiveness of the EU's approach towards Iran has been increasingly criticized. Oliver Meier argued: 'Ashton introduced a different style to the talks with Iran, being more sober and reserved compared to the outgoing and at times temperamental Solana'.[116] Moreover, Peter van Hamm added: 'After a good start in 2003, the EU's approach

[110] European External Action Service, Iran's Nuclear Programme, http://eeas.europa.eu/iran/nuclear_en.htm.

[111] EU Doc. 9898/05, 8 June 2005, p. 14. Background: Bailes 2006, pp. 131–132.

[112] Federal Foreign Office, The Conflict Surrounding Iran's Nuclear Programme, http://www.auswaertiges-amt.de/EN/Aussenpolitik/RegionaleSchwerpunkte/NaherUndMittlererOsten/Iran/Iranisches-Nuklearprogramm_node.html.

[113] Goldthau 2008, p. 41.

[114] Schwegmann 2005, p. 3; *quod vide* Linden 2006, pp. 47 ff.

[115] Meier 2013, p. 1.

[116] Id., p. 15.

towards Iran has lost steam and some of its shine. (…) With Ashton at the helm of CFSP, the EU's Iran policy has lost the profile acquired by the personal determination of Solana. More often than not, the EU has waited for the IAEA and the UN Security Council to officially assess Iran's actions and formulate policy options'.[117]

In the beginning, the EU worked unsuccessfully to convince the US of the advantages of its negotiation efforts.[118] In June 2008, however, the EU succeeded after a US senior administration official participated at the talks with Iran. Thus, since 1979, high-level US-Iranian negotiations have taken place.[119] Since then, the US has indeed assisted the 'E3/EU' in the official rhetoric,[120] but the US did not intend to join the talks directly.[121] In fact, since 2004, the US has pressed for sanctions.[122] For example, following France and the United Kingdom, if the US would have declared that it would not use nuclear weapons against Iran, this would have been strengthen the negotiations efforts of the 'E3/EU', because Iran feels threatened not by French and British, but by US (and Israeli) nuclear weapons.[123] Some US governmental officials, however, have been worried about the European efforts, which have been described as well-intentioned, but at the same time as simply naïve, because they misjudge the true intention of Iran.[124]

The EU and the US have only cooperated closely when the EU has also considered sanctions. In this regard, close cooperation took place in 2006 when the UN Security Council was asked to debate the sanctions against Iran.[125] As Oliver Meier also stressed: 'Differences between EU and US approaches towards the

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117 van Ham 2011, p. 13.

118 Dissenting opinion but mistakable: Zakharchenko 2007, p. 34: "Iran is at the moment not a show case for the differences between the U.S. and EU approach. (…) The Iranian case, however, shows a divide between the hard and the soft line, which is one that characterizes the differences between the EU and U.S. (…)", as well as p. 37: "On the whole, several main findings can be pointed out; that the EU and U.S. approaches are more in line of convergence than divergence; that they cannot be fully described as the 'soft' versus 'hard' approach and that EU-U.S. cooperation in dealing with terrorism and proliferation of WMD is becoming the new unifying factor in the transatlantic relationship which also raises the significance of Europe in the U.S. foreign policy."

119 Frankfurter Allgemeine Zeitung, 17 July 2008, p. 1.

120 See for example: EU-U.S. Declaration on Enhancing Cooperation in the Field of Non Proliferation and the Fight against Terrorism, Washington, 20 June 2005, EU Doc. 10306/05 (Presse 160): '(…) we reconfirm our full support for the ongoing European efforts to secure Iran's agreement to provide objective guarantees that its nuclear program is intended for exclusively peaceful purposes. (…)'.

121 Thränert 2005, pp. 13–14.

122 Rudolf 2004, pp. 6–7, http://www.swp-berlin.org.

123 On this note: Perthes 2005, p. 19.

124 Rudolf 2005, p. 2.

125 The IAEA Board of Governors '[r]equests the Director General to report to the Security Council of the United Nations that these steps are required of Iran by the Board and to report to the Security Council all IAEA reports and resolutions, as adopted, relating to this issue (…)", IAEA, Doc. GOV/2006/14, 4 February 2006; detailed: Klemm 2007, p. 8.

Iranian nuclear crisis were further reduced after the transfer of the nuclear file to the UN Security Council'.[126] Since then, the EU's efforts have been integrated into a policy of dual-track approach, based on dialogue and a modest measure of coercion: 'On the one hand, Iran is being offered comprehensive cooperation should it cooperate with the international community on the question of its nuclear programme. On the other hand, should Iran not cooperate, sanctions are aimed at persuading Iran to yield to the demands of the international community on the nuclear question'.[127]

It was only after Barack Obama's November 2008 presidency election that the US was brought closer to the European dual-track policy.[128] Obama had promised to talk to Iran at the highest level and without preconditions. As Oliver Meier stated, Obama used more conciliatory rhetoric towards Iran and tried to directly approach Iran's Supreme Leader, Ayatollah Khamenei, through two personal letters.[129] Obama's willingness—says Michael R. Gordon and Jeff Zeleny in an article published in *The New York Times*—to conduct talks with Iran, differs significantly from the Bush administration's approach.[130] With Obama's election and the resulting change in US policy towards Iran, 'the EU believed that playing "the US-Obama trump card" would lead to the desired political breakthrough in negotiations with Tehran. However, diplomatic solutions offered to Iran failed to secure progress. Over the years the Iranian government appeared unmoved by the economic and political benefits of cooperation with the EU−3+3 (…)'.[131]

Although Obama's election has caused minimal change to European and US policies, mutual accident in Iran is marked, up to now, by contractual incentives of the EU and enforcement of sanctions of the US. The Living Action Plan of EU's WMD Strategy, which adds the EU's obligation to ensure 'adequate follow up to the EU-US declaration on non-proliferation issued at the June 2003 summit', has not been sufficiently implemented. The EU intends, however, the close cooperation with the US respectively para 30(C) of the Living Action Plan. This has been shown through the European willingness to ask, in 2006, the UN Security Council to debate the sanctions against Iran as well as the European efforts to convince the US of the advantages of its diplomatic way.

However, the November 2013 *Joint Plan of Action*[132] between the 'E3/EU+3' and Iran could reach a turning point for the long-lasting negotiations with Iran

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126 Meier 2013, p. 9.

127 Federal Foreign Office, The Conflict Surrounding Iran's Nuclear Programme, http://www.auswaertiges-amt.de/EN/Aussenpolitik/RegionaleSchwerpunkte/NaherUndMittlererOsten/Iran/Iranisches-Nuklearprogramm_node.html.

128 Meier 2013, p. 11; Crail 2009.

129 Meier 2013, p. 11.

130 Gordon and Zeleny 2007.

131 Oezbek 2010, pp. 71–72.

132 Joint Plan of Action, Geneva, 24 November 2013, http://eeas.europa.eu/statements/docs/2013/131124_03_en.pdf.

and, potentially, for the European and US joint efforts to solve the conflict over Iran's controversial nuclear programme. The 'E3/EU+3' and Iran have agreed on a joint plan of action which sets out an approach towards reaching a long-term comprehensive solution. They agreed that the process leading to this comprehensive solution will include a first step on initial reciprocal measures to be taken for both sides for duration of six months. Iran announced *inter alia* that it will not enrich uranium over 5 % for the duration of the next six months, that it will not make any further advances of its activities at the Natanz Plant or the Arak reactor and that it will continue its safeguarded practices and enhanced monitoring. In return, the 'E3/EU+3' would undertake *inter alia* no new nuclear-related UN Security Council sanctions and no new EU nuclear-related sanctions. They would also undertake to suspend sanctions on Iran's petrochemical exports, gold and auto industry. Furthermore, a Joint Commission of 'E3/EU+3' and Iran will be established to monitor the implementation of the near-term measures and address issues that may arise, with the IAEA responsible for verification of nuclear-related measures. As the EU High Representative Catherine Ashton and Iran Foreign Minister Zarif declared, '[t]oday's agreement is a significant step towards developing our relationship in a more constructive way'.[133] However, the upcoming months will show how the parties are serious about reaching a long-term comprehensive solution and how the European and US joint efforts are work effectively.

9.5 Conclusion and Perspective

The EU's WMD Strategy marks a milestone in addressing the WMD proliferation risk because the EU, in this regard, has never before formulated an independent WMD non-proliferation policy.[134] The EU could set the course for tackling the WMD proliferation and put a clear sign here, as it has made clear that the WMD proliferation risk must be concerned, at first, with all five new key threats. The EU refers to the wide range of instruments available including multilateral treaties and verification mechanisms, export controls, cooperative threat reduction programmes, political and economic levers, interdiction of illegal procurement activities and, as a last resort, coercive measures in accordance with the UN Charter. The possible application of coercive measures provided for in Chap. 7 of the UN Charter, especially the use of force, is a rarity, because the EU has never before, in

[133] Joint Statement by EU High Representative Catherine Ashton and Iran Foreign Minister Zarif, Geneva, 24 November 2013, http://www.auswaertiges-amt.de/cae/servlet/contentblob/660506/publicationFile/186774/131124_Joint%20Statement%20EU-Iran.pdf.

[134] Neuneck 2004a, b has also characterized the elaboration of the EU's WMD Strategy as an important process: although to be criticized for using poor language and many formula compromises, the EU disposes of a basis to what it can be measured in future according.;; see furthermore Portela's conclusion: '(…) today we find that the EU is establishing itself as an actor in the field of nonproliferation of weapons of mass destruction (…)'.

an internal document, specifically referred to such measures. The EU has succeeded to develop and accept, at last, a strategy within just one 8-month period. This was the first time that the EU has produced a public high-level document on non-proliferation of WMD. In this regard (and in addition to the European Security Strategy which refers to all five key threats), the EU's WMD Strategy was a case *sui generis* until new strategies on terrorism and small arms were adopted in 2005.

Besides, as this analysis shows, the EU has significantly strengthened the institutional and procedural framework on WMD proliferation issues within its Common Foreign and Security Policy. In 2003, a Personal Representative for Non-proliferation of Weapons of Mass Destruction (Annalisa Giannella) was appointed. This was the first time that the EU has established an office to address WMD issues. However, since the entry into force of the TEU on 1 December 2009, the European External Action Service, with Catherine Ashton as the High Representative for Foreign Affairs and Security Policy, has been taken over by WMD non-proliferation issues. WMD non-proliferation issues mainly fall under the EEAS Managing Director for Global and Multilateral Issues and in particular under the Directorate for Non-Proliferation and Disarmament as well as the Directorate for Conflict Prevention and Security Policy. In this regard, Annalisa Giannella has become the Director of EEAS's Directorate for Non-Proliferation and Disarmament. Additionally, in November 2012, as a result of EEAS reform, Catherine Ashton nominated Jacek Bylica as the new EEAS Special Envoy for Non-proliferation and Disarmament. The post is a new position, which is comparable to the former position of Annalisa Giannella. Furthermore, the EU has biannually published progress reports and presented updated lists of priorities as well as created a European network of independent non-proliferation think tanks (EU Non-Proliferation Consortium) to promote academic guidance and advice to the EEAS.

Since 2004, the EU has taken vital actions to implement its WMD Strategy. The EU has promoted a stable international and regional environment, while strengthening its security and political engagement activities, by prolonging the Programme on disarmament and non-proliferation in the Russian Federation beyond June 2004 as well as introducing the Non-proliferation Clause in agreements with third countries. In this regard, the EU has substantially enforced its Cooperation Programme for Non-proliferation and Disarmament in the Russian Federation by increased and uninterrupted financial assistance since 2004 and has succeeded to Russia's destruction process of chemical weapons. With regard to the biological weapons concern, however, it is absolutely essential to integrate the disarmament and non-proliferation of Russia's biological weapons into the EU's Cooperation Programme. In respect of mainstreaming non-proliferation policies into the EU's wider relations with third countries, the non-proliferation clause has been inserted into agreements with almost 100 states worldwide. However, the second section of this clause, which sets out the obligation of the parties taking steps to address all other relevant international instruments as well as establishment of an effective system of national export controls, do not constitute essential elements of this agreement. In this regard, it is mostly criticized that, in cases of noncompliance of one of the contracting parties, the mechanism

of Article 96 of the Agreement of Cotonou does not apply (e.g. intensive consultations; suspension). In respect to ensuring adequate follow-up to the EU-US declaration on non-proliferation issued at the June 2003 summit, there has been an absence of close cooperation between the EU and the US to solve the conflict with Iran's nuclear program. Although the EU and the US have reacted differently so far, the EU intends to collaborate with the US in the Iran case.

In summary it can be argued that the EU has a very important role to play within the political realm of international security. The Union is making a significant contribution towards preventing the spread of WMD as well as confronting the threat of terrorism. The EU will therefore have a major influence and impact on other states while simultaneously delivering on the changes and implementation of its ESS. However, against the background of the ongoing discussions about updating the ESS,[135] reviewing the EU's WMD Strategy as well would not have been a tangible effect, because such a review may not necessarily lead to a more ambitious paper.[136] Rather, in order to implement the EU's WMD Strategy, it is suggested that the EU considers a revised and updated version of the 2008 List of Priorities[137] taking into account experiences gained from the last years of implementation and relevant international developments since then. Additionally, the EU should explicitly state under which conditions subsequent to the UN Charter and international law the EU may use force and which role is thereby left to the UN Security Council.

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[135] See Jankowski 2012, Swieboda 2009; Kempin and Overhaus 2012.

[136] See Meier 2008; dissenting opinion, e.g.: Lundin 2012, pp. 1, 13: 'European Union (EU) institutions and member states need to develop a single paradigm to better work together in support of the International Atomic Energy Agency (IAEA). This should be possible even if the Lisbon and Euratom treaties are not merged. In light of this, it is time to review the European Security Strategy and the EU Strategy against the proliferation of weapons of mass destruction (…) The EU Security Strategy and the WMD Strategy (…) did not fully take into account the full spectrum of problems and opportunities within WMD non-proliferation.'

[137] EU Doc. 10747/08, 17 June 2008.

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