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Nuclear Disarmament and Arms Control

Nuclear disarmament and arms control law encompasses a variety of multilateral, regional and bilateral agreements. The multilateral counter-proliferation regime can be considered a fairly successful effort. It aims to prevent the proliferation of nuclear weapons beyond recognised nuclear-weapon States (China, France, Russian Federation, the United Kingdom and the United States) and is supplemented by a verification regime under the auspices of the International Atomic Energy Agency (IAEA) and by two informal arrangements. It does not apply to States that are not parties to the NPT, such as India, Israel, the Democratic People's Republic of Korea (North Korea) and Pakistan. A further problem is the involvement of non-State actors in the proliferation of nuclear weapons materiel and technologies. Therefore, the proliferation of nuclear weapons can often be prevented only if the UN Security Council is able to agree on binding resolutions, including on (non-military) enforcement measures. In addition to the non-proliferation regime, States have agreed, at a multilateral level, on the prohibition of the testing and/or emplacement of nuclear weapons in certain areas and, at a regional level, on nuclear weapon-free zones. The most ambitious step some States have taken so far is the adoption of the Treaty on the Prohibition of Nuclear Weapons in 2017.

K.1 BILATERAL TREATIES BETWEEN THE UNITED STATES AND THE RUSSIAN FEDERATION/FORMER USSR

The former USSR/the Russian Federation and the United States have, since 1969, agreed on a number of bilateral treaties and other measures to limit and reduce their strategic and intermediate nuclear arsenals, delivery and strategic defence systems. From the outset, those agreements served a twofold purpose: (1) the establishment of a binding regime of mutual control in order to prevent

the outbreak of (nuclear) war; and (2) the preservation of the multilateral non-proliferation regime through the taking of credible steps towards nuclear disarmament. As far as strategic offensive arms¹ are concerned, it suffices to mention:

- the SALT I process, which resulted in the adoption of the ABM Treaty² and of the SALT I Interim Agreement³ on 26 May 1972;
- the SALT II Agreements of 1979,⁴ which were not ratified by the US Senate;
- the START I Agreement of 1992;⁵
- the START II Agreement of 1993,⁶ which did not enter into force;
- the START III process of 1997, which ended without results because its success had been linked to the entry into force of the START II Agreement;
- the 2002 SORT,⁷ which remained in force until 31 December 2012; and
- New START of 2010.⁸

The SALT I Interim Agreement and its Protocol expired on 3 October 1977. The ABM Treaty was denounced by the United States as of June 2002. The reduction obligations under START I were fulfilled in December 2001 (i.e.

¹ The term 'strategic offensive arms' applies to nuclear warheads deployed by strategic nuclear delivery vehicles (SNDVs). SNDVs are inter-continental ballistic missiles (ICBMs) with a range exceeding 5,500 kilometres, strategic bombers, warships (including strategic submarines) and cruise missiles, including air- and sea-launched cruise missiles (ALCMs, SLCMs).

² Treaty on the Limitation of Anti-Ballistic Missile Systems (Russia–United States of America), signed 26 May 1972, entered into force 3 October 1972, 944 UNTS 13.

³ Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with Respect to the Limitation of Strategic Offensive Arms (SALT I Interim Agreement), signed 26 May 1972, entered into force 3 October 1972, 944 UNTS 3.

⁴ Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT II), done 18 June 1979, never entered into force, 18 (1979) ILM 1138.

⁵ Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms, signed 31 July 1991, entered into force 5 December 1994, 16 (1991) *United Nations Disarmament Yearbook*, 450.

⁶ Treaty on Further Reduction and Limitation of Strategic Offensive Arms (Russia–United States of America), signed 3 January 1993, entered into force 14 April 2000, reprinted in *SIPRI Yearbook 1993: Armaments, Disarmament and International Security* (Oxford University Press, 1993) 576.

⁷ Treaty between the Russian Federation and the United States of America on Strategic Offensive Reductions, done 24 May 2002, entered into force 1 June 2003, 2350 UNTS 415.

⁸ Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, signed 8 April 2010, entered into force 5 February 2011, 50 (2011) ILM 342.

four years prior to the agreed date of expiration). Accordingly, the only agreement on the reduction and limitation of strategic offensive arms is New START.⁹ New START would have expired on 5 February 2021 but, in January 2021, the parties agreed on an extension of its duration for an additional five years. The only agreement between the two States on nuclear weapons deployed by ground-launched ballistic and cruise missiles with ranges of between 500 and 5,500 kilometres (i.e. by intermediate- or short-range missiles) is the Intermediate-Range Nuclear Forces (INF) Treaty, from which the United States withdrew as of 2 August 2019.

The agreement on an extension of the duration of New START is to be considered an important accomplishment. However, this does not necessarily imply that the current bilateral regime on the reduction and limitation of strategic offensive nuclear arms will survive or even improve. The non-nuclear-weapon States' continuing compliance with the NPT is, therefore, far from being a given. Moreover, the lack of a binding legal regime on intermediate- and short-range missiles has certainly adversely affected security in Europe. Apart from these considerations, however, it may be doubted whether bilateral approaches to nuclear disarmament and arms control are nowadays suitable methods of enhancing nuclear security. In the twentieth century, the bilateral agreements between Russia and the United States were necessary steps in the right direction. The United States and the USSR/Russian Federation were the States with the biggest nuclear arsenals, and the nuclear arsenals of China, France and the United Kingdom were not important enough to be included in a nuclear disarmament regime. However, in the twenty-first century, the number of recognised and non-recognised nuclear-weapon States has risen from five to nine, with the nuclear capabilities of China, India and Pakistan having reached a considerable level. If those States remain outside of a binding regime on strategic and non-strategic nuclear weapons, the States that do not possess nuclear weapons and that are parties to the treaty may legitimately wonder whether their promise not to engage in nuclear activities for other than peaceful purposes continues to be beneficial for them.

K.2 MULTILATERAL TREATIES AND ARRANGEMENTS

The first category of multilateral and potentially universal treaties deals with the prohibition of nuclear weapon tests, either in a comprehensive manner or

⁹ For a summary of the obligations under NEW START, see U.S. Department of State, 'New START Treaty Aggregate Numbers of Strategic Offensive Arms: Fact Sheet' (1 April 2021), www.state.gov/new-start-treaty-aggregate-numbers-of-strategic-offensive-arms/.

in given areas.¹⁰ Under the treaties of the second category, it is prohibited to emplace nuclear weapons in a given area or space. Multilateral treaties of the latter category apply to the seabed¹¹ and to outer space, including the moon and other celestial bodies.¹² The third category includes regional treaties on nuclear weapon-free zones¹³ that are binding only on the States that are parties to them and that have no impact on the activities of nuclear-weapon States in the regions covered by such agreements. Also worthwhile mentioning in this context is the Open Skies Treaty.¹⁴ The fourth category addresses the problem of nuclear terrorism.¹⁵

K.2.1 *The Nuclear Non-Proliferation Treaty and Related Instruments*

The fifth category deals with the non-proliferation of nuclear weapons, with the NPT¹⁶ forming the cornerstone of the international non-proliferation regime. The NPT imposes complementary obligations on nuclear-weapon

¹⁰ Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (PTBT), opened for signature at London, Moscow and Washington 8 August 1963, entered into force 10 October 1963, 125 parties; Comprehensive Nuclear-Test-Ban Treaty (CTBT), adopted 10 September 1996, opened for signature at New York 24 September 1996, 170 parties; Antarctic Treaty, signed at Washington 1 December 1959, entered into force 23 June 1961, 54 parties. Article V of the Antarctic Treaty prohibits 'any nuclear explosions in Antarctica'.

¹¹ Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, opened for signature at London, Moscow and Washington 11 February 1971, entered into force 18 May 1972, 94 parties.

¹² Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, opened for signature at London, Moscow and Washington 27 January 1967, entered into force 10 October 1967, 110 parties; Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, opened for signature at New York 18 December 1979, entered into force 11 July 1984, 18 parties.

¹³ Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco), opened for signature at Mexico City 14 February 1967, entered into force for each State individually, 33 parties; South Pacific Nuclear-Free Zone Treaty (Treaty of Rarotonga), opened for signature at Rarotonga 6 August 1985, entered into force 11 December 1986, 13 parties; Treaty on the Southeast Asia Nuclear Weapon-Free Zone (Bangkok Treaty), opened for signature at Bangkok 15 December 1995, entered into force 27 March 1997, 10 parties; African Nuclear Weapon-Free Zone Treaty (Pelindaba Treaty) opened for signature at Cairo 11 April 1996, entered into force 15 July 2009, 41 parties; Treaty on a Nuclear Weapon-Free Zone in Central Asia (CANWFZ), opened for signature at Semipalatinsk 8 September 2006, entered into force 21 March 2009, 5 parties.

¹⁴ Treaty on Open Skies, opened for signature at Helsinki 24 March 1992, entered into force 1 January 2002, 34 parties.

¹⁵ International Convention for the Suppression of Acts of Nuclear Terrorism, opened for signature at New York 14 September, entered into force 7 July 2007, 117 parties.

¹⁶ Treaty on the Non-Proliferation of Nuclear Weapons (NPT), opened for signature at London, Moscow and Washington 1 July 1968, entered into force 5 March, 191 parties. Pursuant to

States (Article 1) and non-nuclear-weapon States (Article II). The obligations in Article I are as follows:

Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.

The complementary obligations in Article II are in the following terms:

Each non-nuclear-weapon State Party to the Treaty undertakes 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.

While all States continue to enjoy the right ‘to develop research, production and use of nuclear energy for peaceful purposes’ (Article IV), non-nuclear-weapon States are obliged to conclude safeguards agreements with the IAEA ‘with a view to preventing diversion of nuclear energy from peaceful purposes to nuclear weapons or other nuclear explosive devices’ (Article III).

Verification of the parties’ compliance with their obligations under the NPT could be considerably facilitated by the proposed Fissile Material Cut-Off Treaty, which would impose restrictions on nuclear-weapon States with regard to the production of highly-enriched uranium and plutonium.¹⁷ However, the UN Conference on Disarmament has not yet arrived at a sufficient consensus.

To a certain extent, the NPT and the IAEA safeguards agreements are supplemented by two informal arrangements – the Zangger Committee¹⁸ and the Nuclear Suppliers Group (NSG).¹⁹ The former is an informal group of 39 States that have agreed to implement safeguards and guidelines for the export of source or special fissionable material and of equipment or material

Article X(2), the Review and Extension Conference decided, on 11 May 1995, that the NPT would continue to be in force indefinitely.

¹⁷ For an overview, see UN Institute for Disarmament Research, ‘A Fissile Material Cut-off Treaty: Understanding the Critical Issues’, UNIDIR/2010/4, <https://unidir.org/files/publications/pdfs/a-fissile-material-cut-off-treaty-understanding-the-critical-issues-139.pdf>.

¹⁸ For an overview, see www.zanggercommittee.org.

¹⁹ For an overview, see www.nuclearsuppliersgroup.org.

especially designed or prepared for the processing, use or production of special fissionable material. The NSG is an informal group of 48 nuclear supplier States that seek to contribute to the non-proliferation of nuclear weapons through the national implementation of guidelines for nuclear exports.

K.2.2 *The Treaty on the Prohibition of Nuclear Weapons*

The sixth category of multilateral treaties – dealing with the prohibition of nuclear weapons and aiming at the total elimination of such weapons – is the Treaty on the Prohibition of Nuclear Weapons (TPNW).²⁰ The TPNW entered into force on 22 January 2021, ninety days after the fiftieth State ratified, accepted, approved or acceded to the Treaty.²¹ At the time of writing, the TPNW had been ratified by fifty-two States and signed by eighty-six States (which do not include China, France, India, Israel, Pakistan, the Russian Federation, the United Kingdom, the United States or any other NATO member States).

According to the preamble, the signatory States have been guided not only by the wish to prevent the ‘catastrophic humanitarian consequences’ resulting from an intentional or accidental use of nuclear weapons²² but also by ‘the ethical imperatives for nuclear disarmament’²³ and by legal considerations under both *jus ad bellum*²⁴ and *jus in bello*.²⁵ The references to *jus in bello* indicate that, according to the States already parties and, in due course, future member States, ‘any use of nuclear weapons’²⁶ would be contrary to the basic principles of international humanitarian law,²⁷ including the Martens Clause.²⁸ However, the exact content of those principles to which the Treaty negotiators were referring remains unclear. The prohibition of indiscriminate attacks, including the prohibition of excessive collateral damage (principle of

²⁰ UN Doc. A/CONF.29/2017/8 of 7 July 2017.

²¹ TPNW, Article 15.

²² *Ibid.*, preambular paras. 2, 3, 4, 6.

²³ *Ibid.*, preambular para. 5. Those ‘ethical imperatives’ are complemented by concerns about the ‘world’s human and economic resources’ being diverted for armaments (preambular paras. 12, 14), about the preservation of indigenous peoples (preambular para. 7) and about the ‘equal participation of both women and men’ (preambular para. 22).

²⁴ *Ibid.*, preambular paras. 12, 13.

²⁵ *Ibid.*, preambular paras. 8, 9, 10.

²⁶ *Ibid.*, preambular para. 10.

²⁷ *Ibid.*, preambular para. 9: no unlimited right in the choice of methods or means of warfare; principle of distinction; prohibition of indiscriminate attacks; proportionality; precautions in attack; prohibition of superfluous injury and unnecessary suffering; protection of the natural environment. Interestingly, the preamble refers to the ‘rule of distinction’.

²⁸ *Ibid.*, preambular para. 11.

proportionality), and the obligation to take precautions in attack are but specifications of the principle (not rule!) of distinction. The overall object of the TPNW is, on the one hand, to preserve the NPT,²⁹ the CTBT,³⁰ the regional agreements on nuclear weapon-free zones³¹ and the peaceful uses of nuclear energy³² and, on the other hand, to arrive at 'general and complete disarmament'³³ through the adoption of a 'legally binding prohibition of nuclear weapons . . . , including the irreversible, verifiable and transparent elimination of nuclear weapons'.³⁴ The underlying reason for the adoption of the treaty is discontent with the steps that have so far been taken by nuclear weapon States to fulfil the promise given under the NPT – namely, 'to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament'.³⁵ The signatory States are disappointed with the 'slow pace of nuclear disarmament',³⁶ and they indirectly accuse nuclear weapon States of not complying with the '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'.³⁷

Accordingly, the legitimacy of the considerations that guided the signatory States cannot, in principle, be doubted, although they seem to provide evidence of a certain educationally and morally pretentious attitude on the part of the signatory States. However, the legal assessments contained in the preamble will not necessarily be shared by other States. Firstly, the promise made under the NPT is part of the preamble, not of the operative provisions of the NPT. Secondly, it is rather difficult, if not impossible, to prove the existence of a legal obligation to enter into a comprehensive agreement on nuclear disarmament. Thirdly, the illegality of 'any use of nuclear weapons' under the law of armed conflict can hardly be based on a consensus of States to that effect.

The TPNW applies to nuclear weapons and to other nuclear explosive devices. That distinction is rather artificial, if the definition of nuclear weapons adopted in the present book is taken into consideration. Accordingly, a 'nuclear explosive device' will regularly qualify as a 'nuclear weapon'. Obviously, the distinction has been adopted with a view to bringing within

²⁹ *Ibid.*, preambular para. 18

³⁰ *Ibid.*, preambular para. 19.

³¹ *Ibid.*, preambular para. 20.

³² *Ibid.*, preambular para. 21.

³³ *Ibid.*, preambular para. 16.

³⁴ *Ibid.*, preambular para. 15.

³⁵ NPT, preambular para. 8.

³⁶ TPNW, preambular para. 14.

³⁷ *Ibid.*, preambular para. 17.

the scope of the TPNW the entire spectrum of nuclear weapons, including those designed for tactical purposes.

The material obligations established by the TPNW are far-reaching and quite ambitious. Reservations are not permitted.³⁸ While it would go too far to characterise those obligations as unreasonable, they are likely to be acceptable to only a comparatively small number of States. Nevertheless, the likelihood of the Treaty attracting those States whose interests are specially affected is rather low. Accordingly, it may well be doubted whether it will ever crystallise into customary international law. More worrying is the prospect that TPNW will add to the fragmentation of international law, thereby weakening the existing legal (and non-legal) regime of nuclear disarmament and arms control.

The substantive obligations are set forth in Article 1 in the following, arms control terms:

1. Each State Party undertakes never under any circumstances to:
 - (a) Develop, test, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices;
 - (b) Transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly or indirectly;
 - (c) Receive the transfer of or control over nuclear weapons or other nuclear explosive devices directly or indirectly;
 - (d) Use or threaten to use nuclear weapons or other nuclear explosive devices;
 - (e) Assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Treaty;
 - (f) Seek or receive any assistance, in any way, from anyone to engage in any activity prohibited to a State Party under this Treaty;
 - (g) Allow any stationing, installation or deployment of any nuclear weapons or other nuclear explosive devices in its territory or at any place under its jurisdiction or control.

Much of the language here is of a sort previously used in the Chemical Weapons Convention, the Biological Weapons Convention and in other arms control treaties. Certain points should, however, be made. Lit. (a), (b), (c) and (d) will not pose insurmountable problems for non-nuclear-weapon States, because they are in part reflective of such States' obligations under the NPT and general international law. This certainly holds true for the prohibition in Lit. (a) to '[d]evelop, test, produce, manufacture, otherwise acquire,

³⁸ TPNW, Article 16.

possess or stockpile nuclear weapons or other nuclear explosive devices'. Read in conjunction with lit. (g), the prohibition of stockpiling does not include the presence of nuclear weapons and other explosive devices on the territory of a party if they are under the control of another State. The prohibitions of transferring or receiving the transfer of nuclear weapons or other nuclear explosive devices or of control over such weapons under lit. (b) and (c) differs from the NPT obligations insofar as they are not limited to inter-State relations, but apply to 'any recipient' and to any direct or indirect transfer or reception of such transfer. The prohibition of the use, or threat of use, of nuclear weapons and nuclear explosive devices may be understood as being reflective of the prohibition of the use of force under Article 2(4) of the UN Charter and under customary international law. It is important, however, to bear in mind that the prohibition of the threat of the use of such weapons is limited to the threatening of an illegal use. At first glance, the obligations under lit. (e) and (f) seem to be redundant and duplicative of those under lit. (b) and (c). There are, however, considerable differences. Firstly, the prohibitions under lit. (e) and (f) apply to the involvement only of individuals, not of States. Secondly, lit. (b) and (c) are limited to the physical transfer of weapons prohibited under the Treaty or of control over such weapons. Lit. (e) and (f) apply to 'any activity' prohibited under the Treaty – in particular, to the development of nuclear weapons and nuclear explosive devices. Against the background of the role the notorious Dr Khan³⁹ played in the transfer of the expertise required for the development and production of nuclear weapons, these prohibitions seem to be reasonable and necessary, if the obligations under the treaty are to be taken seriously. Finally, the obligation under lit. (g) is the most problematic for those non-nuclear-weapon States that have chosen to profit from the nuclear umbrella of a nuclear weapon State. For instance, NATO member States could not become parties to the TPNW without severely shattering NATO's nuclear deterrence policy, which requires nuclear weapons to be stationed, installed or deployed in the territory of NATO member States that are non-nuclear-weapon States.

According to Article 2, a party must, within thirty days of the TPNW's entry into force for that State, submit a declaration to the Secretary-General of the United Nations. The declaration must disclose whether the State owned, possessed or controlled nuclear weapons or nuclear explosive devices and

³⁹ For a brief assessment, see Carnegie Endowment for International Peace, 'The A.Q. Khan Network and Its Fourth Customer' (23 January 2012), https://carnegieendowment.org/2012/01/23/a.q.-khan-network-and-its-fourth-customer-event-3505</int_u>.

eliminated its nuclear weapons programme and all nuclear weapons-related facilities prior to entry into force of the Treaty for that State (para. 1, lit. (a)); whether it owns, possesses or controls any such weapons or devices (para. 1, lit. (b)); and whether there are any such weapons or devices in its territory or in any place under its jurisdiction or control that are owned, possessed or controlled by another State (para. 1, lit. (c)). Such declarations are transmitted by the Secretary-General of the United Nations to the States that are already parties to the Treaty (para. 2).

Article 3 applies to those parties to which paragraphs 1 and 2 of Article 4 do not apply – that is, to those States that, after 7 July 2017, did not or ceased to own, possess or control nuclear weapons or other nuclear explosive devices. In other words, the provision applies to recognised non-nuclear-weapon States (or former nuclear weapon States). Article 3 is closely linked to the objective of preambular paragraph 18 to preserve and strengthen the verification regime of the NPT. Accordingly, non-nuclear-weapon States are obliged, ‘at a minimum’, to adhere to their existing IAEA safeguards obligations (para. 1) and to conclude with the IAEA comprehensive safeguards agreements, if they have not yet done so (para. 2). Such a non-nuclear-weapon State is obliged to start negotiations to that effect within 180 days from the entry into force of the TPNW and to ensure that the comprehensive safeguards agreement enters into force ‘no later than 18 months from the entry into force of this Treaty for that State’.

Paragraphs 1–3 of Article 4 apply to parties that, after 7 July 2017, eliminated their nuclear weapon programmes, ‘including the elimination or irreversible conversion of all nuclear-weapons-related facilities’ (para. 1). It also applies to parties that continue to own, possess or control nuclear weapons and other nuclear explosive devices (para. 2). It is unclear whether those parties that have eliminated their nuclear weapon programmes but not yet irreversibly converted their nuclear-weapons facilities belong to either of these two categories. This is a deficiency of the Treaty. Arguably, such States are under at least an implicit obligation to convert their nuclear weapons-related facilities to purposes that do not involve nuclear weapons. Still, the wording seems to suggest that the obligations under Article 4(1) come into operation only if the conversion has been completed.

States to which Article 4(1) applies are obliged to co-operate with the international authority designated pursuant to Article 4(6) ‘for the purpose of verifying the irreversible elimination’ of their former nuclear weapon programmes and, within 180 days from the entry into force of the TPNW, to enter into negotiations with the IAEA aimed at the conclusion of a safeguards agreement ‘sufficient to provide credible assurance of the non-diversion of

declared nuclear material from peaceful nuclear activities and of the absence of undeclared nuclear material or activities in that State Party as a whole'. Such an agreement shall enter into force no later than eighteen months from the TPNW's entry into force for the State concerned. The safeguard agreement must be maintained 'at a minimum'. At first glance, the obligation seems to be clear. However, the actions required of the authority under Article 4(1) do not include verification of the 'elimination or irreversible conversion of all nuclear-weapons-related facilities' and the reporting thereof to other States parties to the Treaty. Moreover, it begs the question why parties that have eliminated their nuclear weapon programmes are excluded from the obligation under Article 3(2) to enter into comprehensive safeguards agreements with the IAEA. One possible explanation could be the intent to give such States an incentive to become parties by subjecting them to less strict obligations. In the light of the obligations of nuclear-weapon States under paragraphs 2 and 3, however, the missing reference to an irreversible conversion of all nuclear weapon-related facilities would rather seem to be due to a drafting error or to the unfounded belief that those States that have eliminated their nuclear weapon programmes will necessarily also irreversibly convert their nuclear weapons-related facilities. The fact that, according to Article 4(6), the authority's competence includes verification of the elimination or irreversible conversion may, therefore, be taken account of in determining the obligations and authorities under Article 4(1). Still, this would not entirely solve the problem, if the provision of Article 4(1) is considered a *lex specialis* that prevails over Article 4(6).

According to Article 4(2), a party that, after 7 July 2017, has not eliminated its nuclear weapon programmes and that continues to own, possess or control nuclear weapons or other nuclear explosive devices is obliged to 'immediately remove them from operational status, and destroy them as soon as possible but not later than a deadline to be determined by the first meeting of States Parties, in accordance with a legally binding, time-bound plan for the verified and irreversible elimination of that State's nuclear weapon programme, including the elimination or irreversible conversion of all nuclear-weapons-related facilities'. No later than sixty days after the entry into force of the TPNW for that State, the plan must be submitted to the other parties or to the competent international authority designated pursuant to Article 2(6), and the latter, after negotiations with the State in question, 'shall submit it to the subsequent meeting of States Parties or review conference, whichever comes first, for approval in accordance with its rules of procedure'. Accordingly, the authority has no power to verify compliance with the said obligations, but is limited to a procedural role. A State to which Article 4(2) applies is, according to

paragraph 3, also obliged to conclude a safeguards agreement with the IAEA with the same content and within the same timeframe as provided for in paragraph 1.

Article 4(4) applies to States to which paragraphs 1 to 3 do not apply – that is, to non-nuclear-weapon States that have on their territories or in places under their jurisdiction or control nuclear weapons or nuclear explosive devices that are owned, possessed or controlled by another State. Such territorial States are required to ‘ensure the prompt removal of such weapons, as soon as possible but not later than a deadline to be determined by the first meeting of the States Parties’. That obligation is not entirely coherent. On the one hand, it requires such States to ensure ‘prompt’ removal, which is to be understood as an obligation to take the necessary steps without undue delay. On the other hand, the obligation is to be complied with ‘as soon as possible’ but not later than the deadline to be determined. Moreover, the parties may determine the deadline without consulting the State that owns, possesses or controls the nuclear weapons. The potential for such an obligation to result in a dilemma for the States bound by paragraph 4 is obvious. The deployment of nuclear weapons on their territory may be the subject of a (bilateral or multilateral) treaty which may not be terminated easily or only after a given period of time.

All former and current nuclear weapon States, and States to which paragraph 4 applies, are obliged to ‘submit a report to each meeting of States Parties and each review conference on the progress made towards the implementation’ of their obligations under Article 4(1)–(4), ‘until such time as they are fulfilled’.

The powers of the competent international authority or authorities to be designated by the parties in accordance with Article 4(6) are limited to the negotiation and verification of the obligations under paragraphs 1, 2 and 3. As stated above, it is not entirely settled whether they include verification of the elimination or irreversible conversion of all nuclear-weapons-related facilities by States to which paragraph 1 applies. Where such a designation has not been made for former or current nuclear weapon States falling under paragraphs 1 or 2, the UN Secretary-General is obliged to ‘convene an extraordinary meeting of States Parties to take any decisions that may be required’.

The obligation of each party under Article 5(1) to ‘adopt the necessary measures to implement its obligations under this Treaty’ would, as such, not be difficult to fulfil, because it would be subject to the States’ discretion to determine which measures of national implementation are ‘necessary’. However, according to Article 5(2), the States are also obliged to ‘take all appropriate legal, administrative and other measures, including the

imposition of penal sanctions, to prevent and suppress any activity prohibited . . . under this Treaty undertaken by persons or on territory under [their] jurisdiction or control'. While that obligation is designed to effectively enforce the obligations under Article 1(e) and (f), and while it is based on well-established jurisdictional concepts, it deeply impacts on parties' sovereignty. This may prevent signatory and other States from eventually becoming parties, because the prohibition of reservations also applies to Article 5.

Article 6 on victim assistance and environmental remediation may have similar deterring effects. The far-reaching obligations under paragraph 1 to provide assistance to victims (i.e. those persons who are affected by the use or testing of nuclear weapons) applies with regard to individuals under a party's jurisdiction. Accordingly, it applies to that State's nationals and to those who are on its territory. The reference to 'applicable international humanitarian law and human rights law' seems to identify the legal bases of the obligation. Of course, international humanitarian law would be applicable in times of international or non-international armed conflict only. However, it would oblige States to provide assistance to all victims of armed conflict, not merely to those under their jurisdiction. The reference to human rights law may be correct, but some States – in particular, those in regions without an advanced regional human rights regime – may take the position that they are obliged to provide medical care, but not to provide 'age- and gender-sensitive assistance' or 'rehabilitation and psychological support', nor to provide for 'social and economic inclusion'. The obligation under paragraph 2 to take the necessary and appropriate measures towards the environmental remediation of areas contaminated as a result of activities related to the testing or use of nuclear weapons is limited to the State that has jurisdiction or control over such areas. This begs the question of why the State that has caused the said contamination is not included. The obligation placed by Article 7(6) on a State that has used or tested nuclear weapons is limited to the provision of 'adequate' assistance to the affected State, but it does not include an independent requirement for that State to render assistance to victims or to decontaminate the affected areas. Moreover, the question of whether, in a given case, the assistance is 'adequate' may be a source of considerable dispute.

Article 7 on international co-operation and assistance goes well beyond the known co-operation clauses in other treaties. Whereas the obligation under paragraph 1 to 'cooperate with other States Parties to facilitate the implementation' of the TPNW may be considered of minor practical relevance, Article 7's provisions on international assistance may be considered as quite progressive. According to paragraph 2, each party has a right to seek and receive assistance from other parties, unless that is not feasible. The obligations under paragraphs

3 and 4 of providing technical, material and financial assistance to parties affected by nuclear weapons use or testing, and to victims of such use or testing is limited to States that are 'in a position to do so'. The right to provide assistance through the international organisations and institutions enumerated in paragraph 5 is declaratory and dependent on the consent of the organisation or institution. As already stated, the obligation of States having used or tested nuclear weapons under paragraph 6 is limited to the provision of assistance to the affected State.

As seen, the TPNW is poorly drafted, at least insofar as parts of the preamble and Article 4 are concerned. Compliance with the treaty will not be overly difficult for those parties that are not present or former nuclear weapon States and if they are not affected by the use or testing of nuclear weapons. Such non-nuclear-weapon States may merely show some hesitancy with regard to the obligation under Article 3 (2) to conclude with the IAEA a comprehensive safeguards agreement. It is highly questionable, however, whether present or former nuclear-weapon States will ever be willing to become parties. While they might, in theory, be prepared to accept the obligations under Article 4(1)–(3), it is rather doubtful whether they would also accept the obligations under Article 7 on international co-operation and assistance. As long as nuclear deterrence is considered necessary not only by nuclear-weapon States but also by those States that have chosen to be protected by a nuclear umbrella, the prospects of the TPNW acquiring universal adherence as envisaged in Article 12 are rather low.

K.3 UNSC RESOLUTIONS ENFORCING THE NON-PROLIFERATION REGIME

K.3.1 *Resolution 1540*

UN Security Council Resolution 1540 (2004)⁴⁰ imposes on member States of the UN, in an abstract and general manner, a number of far-reaching obligations with regard to the prevention and suppression of the proliferation of weapons of mass destruction, including nuclear weapons and their delivery systems, by non-State actors.⁴¹ Resolution 1540 also established the so-called 1540 Committee, which monitors its implementation.⁴²

⁴⁰ UN Doc. S/RES/1540 of 28 April 2004.

⁴¹ *Ibid.*, operative paras. 1–3.

⁴² *Ibid.*, operative para. 4.

More than 150 States are taking part in the Proliferation Security Initiative (PSI) that was announced by President G. W. Bush on 31 May 2003 and which is designed to increase their practical capabilities in preventing and suppressing proliferation activities by non-State actors and, when permissible under international law, by State actors.

Resolution 1540 should be seen as a milestone, because it subjects the UN member States to clear obligations which, if properly implemented, would prove an effective tool in the prevention and suppression of the proliferation by non-State actors of weapons of mass destruction, including their delivery systems. Of course, proper monitoring of its implementation is dependent upon the political will of the five permanent Council members to extend the mandate of the 1540 Committee.

K.3.2 *Specific Resolutions*

Apart from the power to establish general and abstract obligations incumbent on UN member States, the UN Security Council is in most instances likely to be limited in its ability to respond to nuclear threats by States. It may, however, consider using its powers under Chapter VII of the Charter. In this regard, the Council has so far adopted enforcement measures against two States: the Democratic People's Republic of Korea (North Korea) and Iran.

Democratic People's Republic of Korea (North Korea): After North Korea announced its withdrawal from the NPT, the UN Security Council urged it to reconsider that step.⁴³ After the test launch of ballistic missiles, the Council imposed the first sanctions and set up a Sanctions Committee.⁴⁴ The North Korean nuclear test of 25 May 2009 led to expanded sanctions and to the establishment of a Panel of Experts that was to assist the Sanctions Committee.⁴⁵ The mandate of the Panel of Experts was last extended in March 2020.⁴⁶ Further North Korean nuclear tests, including the launch of ballistic missiles, were condemned by the Council, which imposed additional sanctions.⁴⁷ However, despite the continuing preparedness of the permanent Council members to remain seized of the North Korean issue, the possibility

⁴³ S/RES/825 of 11 May 1993.

⁴⁴ S/RES/1695 of 15 July 2006; S/RES/1718 of 14 October 2006.

⁴⁵ S/RES/1874 of 12 June 2009.

⁴⁶ S/RES/2515 of 30 March 2020.

⁴⁷ S/RES/2087 of 22 January 2013; S/RES/2094 of 7 March 2013; S/RES/2270 of 24 March 2016; S/RES/2321 of 30 November 2016; S/RES/2356 of 2 June 2017; S/RES/2371 of 5 August 2017; S/RES/2371 of 5 August 2017; S/RES/2375 of 11 September 2017; S/RES/2397 of 22 December 2017.

cannot be excluded that permanent Council members will fail to take the necessary steps to fully implement the Council's resolutions.

Iran: In 2006, the Security Council called upon Iran 'to take the steps required by the IAEA Board of Governors in its resolution GOV/2006/14, which are essential to build confidence in the exclusively peaceful purpose of its nuclear programme' and demanded that 'Iran shall suspend all enrichment-related and reprocessing activities, including research and development, to be verified by the IAEA'.⁴⁸ In the following years, the Security Council established a Sanctions Committee and imposed a variety of sanctions on Iran's trade and individuals.⁴⁹ After the United States' withdrawal from the Joint Comprehensive Plan of Action⁵⁰ which aims at ensuring the exclusively peaceful nature of Iran's nuclear programme, the Security Council failed to adopt any further resolutions on Iran's nuclear programme, and it remains to be seen whether any future draft resolution will obtain the required votes.

K.4 FINAL OBSERVATIONS

The current non-proliferation regime is considerably advanced, and it has proven successful for the last decades. However, withdrawal from the NPT in accordance with its Article X(1) is always a feasible option if a member State 'decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country'. While the Security Council may oblige a withdrawing State to continue to comply with its obligations under the NPT, as in the case of North Korea, and take non-military enforcement measures against that State if it does not act accordingly, this will not necessarily contribute to a strengthening of the international non-proliferation regime. This negative assessment also holds true for Security Council action against member States of the NPT.

Ratification of the TPNW by a representative number of States, including those whose interests are specially affected, could contribute to nuclear security and, eventually, to the total elimination of nuclear weapons and other nuclear explosive devices. As seen, there is little prospect of such a development. Accordingly, stabilisation in the area of nuclear security could be best accomplished if (1) the United States and the Russian Federation were to preserve New START and return to the INF arrangements;

⁴⁸ S/RES/1696 of 31 July 2006.

⁴⁹ S/RES/1737 of 23 December 2006; S/RES/1747 of 24 March 2007; S/RES/1929 of 9 June 2010.

⁵⁰ Agreed upon by Iran and the P5 + 1 (i.e. the five permanent members of the Security Council plus Germany and the European Union), Vienna 14 July 2015.

(2) other nuclear weapon States could be brought under the existing nuclear disarmament and arms control regime; (3) non-recognised nuclear weapon States were to acquire recognition under the NPT; and (4) the non-proliferation regime under the NPT and Resolution 1540 were effectively implemented insofar as recognised non-nuclear-weapon States are concerned.