

The effects of nuclear weapons under international law

Some legal considerations from disarmament, humanitarian and environmental perspectives

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On 8-9 December 2014, states meeting in Vienna to discuss the humanitarian impact of nuclear weapons will have the opportunity to voice their views on the legality of nuclear weapons under existing international law.

The legality of nuclear weapons is a controversial and politically sensitive issue. The questions at the core of the legal debate are whether (and if so, under what circumstances) it is legal to use nuclear weapons, and, connected to this, whether it is legal to threaten the use of nuclear weapons and to engage in other activities involving nuclear weapons, such as the development, testing, manufacture, possession, emplacement, deployment and transfer of nuclear weapons.

This paper provides a brief overview of some relevant legal rules and principles, with a focus on nuclear disarmament, and rules for the protection of the human person and of the environment. A number of existing instruments already severely restrict activities involving nuclear weapons, and all states remain under a legal obligation to eliminate nuclear weapons.¹ In light of the potentially catastrophic humanitarian and environmental consequences of a nuclear weapon detonation, nuclear weapons appear difficult to reconcile with key principles of environmental law as they have evolved in recent decades. There are also strong indications that nuclear weapons could not be used in compliance with international legal rules for the protection of the human person.

The horrific suffering and the vast scale of devastation they can cause, as well as the difficulty of containing their effects in space and time mean that nuclear weapons threaten sustainable development and are contrary to principles of humanity and other values that provide the foundation of the international legal order. Other weapons of mass destruction (WMD) have been outlawed because they are considered repugnant to the conscience of humankind. No treaty prohibits nuclear weapons unequivocally and comprehensively. Safeguarding the human health and human rights of present and future generations is the concern of all states. To this end, a treaty banning nuclear weapons is urgently needed.

Nuclear weapons under public international law

Activities involving nuclear weapons are governed by international law. States have placed explicit legal constraints on such activities by way of unilateral undertakings² and by concluding bilateral agreements and treaties of regional and global scope. Nuclear weapons threaten the common goods of humankind and shared values of the international community, such as human health, human rights and human dignity, the environment and peace. For this reason, international legal norms protecting and promoting these values constrain activities involving nuclear weapons, even if the relevant instruments do not specifically mention nuclear weapons.

The legality of nuclear weapons under customary international law remains contested. Whereas treaties generally only bind the parties to them, the rules of customary international law are binding on all states. The precise content of a customary norm is difficult to determine, however, especially when states hold starkly differing opinions on a subject.³

The interpretation and application of legal norms and of the law-making process itself is inspired by another source of international law, 'general principles of law recognized by civilized nations'.⁴ These principles can be said to 'reveal the values which inspire the whole legal order and which, ultimately, provide its foundations', and they disclose the legitimate ends to seek: 'the common good (of all human beings, and not of an abstract collectivity), the realization of justice (at both national and international levels), the necessary primacy of law over force, the preservation of peace'.⁵

Indications for the existence of a customary rule or of a general principle can, among other places, be found in formal texts of states or intergovernmental organisations, as well as in international jurisprudence. The Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, rendered by the International Court of Justice (ICJ) in 1996 is an important reference point.⁶ Certain aspects of the Opinion are highly controversial, though, and it is an open question to what extent it reflects the state of the law today.

The legal obligation to eliminate nuclear weapons

From the start, the danger posed by nuclear weapons stood at the centre of the United Nations (UN). The very first resolution of the UN General Assembly, adopted by consensus in 1946, identified the goal of eliminating atomic weapons and all other major WMD from national armaments.⁷ This stated goal of a nuclear weapons-free world remains the ultimate purpose of all nuclear disarmament efforts and it is with this objective in mind that international instruments pertaining to nuclear weapons must be interpreted.

Over the last decades, many proposals have been put forth to attain the objective of a nuclear weapons-free world, including UN General Assembly resolutions calling for a prohibition on nuclear weapons under international law. Yet, whereas biological and chemical weapons have been formally outlawed by international treaties in 1972 and 1993 respectively, after decades of negotiations and declarations that address various aspects of nuclear weapons regulation, there is still no comprehensive prohibition of nuclear weapons under international treaty law.

Towards a nuclear weapon-free world

States intent on strengthening a world at peace have concluded regional agreements to 'keep their territories forever free from nuclear weapons', forming large nuclear weapon-free zones (NWFZs).

- × The Treaty of Tlatelolco (1967) prohibits nuclear weapons in Latin America and the Caribbean;
- × The Treaty of Rarotonga (1985) in the South Pacific;
- × The Treaty of Bangkok (1995) in Southeast Asia;
- × The Treaty of Pelindaba (1996) in Africa; and
- × The Treaty of Semipalatinsk (2006) in Central Asia.

NWFZ treaties require the absence of nuclear weapons within the zone, including the production, testing, receipt, stationing, storage or use of nuclear weapons.⁸ However, NWFZs need to be reconciled with the freedom of the high seas and the right of innocent passage. In this connection, controversies have arisen around how the geo-

graphic scope of certain zones might affect rights of nuclear-armed states. In some cases even visits by nuclear-armed vessels to ports and airfields in the zone are not excluded, which raises the question as to when transit becomes stationing.⁹

By ratifying protocols attached to a NWFZ treaty, nuclear-armed states agree not to test any nuclear weapons within the zone and not to use or threaten to use nuclear weapons against states parties to a NWFZ treaty. Such 'negative security assurances' have, however, not been provided by all nuclear-armed states in relation to all NWFZs, and in some cases, are subject to reservations.

Other treaties aim to ensure that spaces beyond national jurisdictions are used exclusively for peaceful purposes. These include:

- × The Antarctic Treaty (1959), which prohibits any measure of a military nature, including the testing of any type of weapon, any nuclear explosions and the disposal of radioactive waste in Antarctica;
- × The Outer Space Treaty (1967), which prohibits the placing in orbit around the earth of any objects carrying nuclear weapons or other WMD, or to install such weapons on celestial bodies or station them in outer space and
- × The Seabed Treaty (1971), which prohibits the placing of nuclear weapons or other WMD on the international seabed.

It is thanks to states initiating and participating in such multilateral agreements and states unilaterally excluding nuclear weapons from areas under their jurisdiction (as in the case of Mongolia and Austria) that large parts of our world are already nuclear weapon-free.¹⁰ Instruments excluding nuclear weapons from certain spaces underline that, ultimately, only the absence of these weapons can effectively prevent their disastrous health and environmental effects. Whilst these instruments make an important contribution to the stigmatisation of nuclear weapons, and to nuclear disarmament, non-proliferation, regional security and environmental protection, they are limited in their territorial scope, and states of the nuclear weapon-free world remain vulnerable to the direct and indirect effects of nuclear weapons in the hands of nuclear-armed states.

An emerging customary prohibition on nuclear weapon testing?

The testing of nuclear weapons has been increasingly curtailed over the last decades by way of international treaties and other acts deploying legal effects. On the one hand, these measures reveal concern about further proliferation of nuclear weapons and their qualitative development. On the other hand, restrictions on testing aim to prevent further contamination of the environment and the negative immediate and long-term health impacts of nuclear explosions. Particularly atmospheric tests have had severe environmental and health consequences.

- × The Partial Test Ban Treaty (1963) prohibits all nuclear explosions, whether peaceful or military, in the atmosphere, in outer space and underwater (but not underground).¹¹
- × The NPT implicitly prohibits 'non-nuclear weapon States Parties' from testing nuclear weapons, and NWFZ treaties also contain prohibitions on nuclear testing.
- × The Comprehensive Test Ban Treaty (1996) bans all nuclear test explosions and other nuclear explosions.

The CTBT is global in its scope and, due to its comprehensive nature, its provisions supplant nuclear testing related obligations that states may have assumed under earlier instruments (e.g. the PTBT). However, due to the non-accession of China, the Democratic People's Republic of Korea (DPRK), Egypt, India, Iran, Israel, Pakistan and the United States of America (USA), the CTBT has still not entered into force. Pending its entry into force, there is no comprehensive treaty prohibition on nuclear weapon testing. Strictly speaking, therefore, signatories and contracting states are bound by its terms only to the extent that they may not defy the treaty's object and purpose. Whilst a nuclear weapon test by a signatory or contracting state would likely be seen as a violation of that rule, this view is debatable.

In practice, a de facto moratorium on nuclear weapon tests has been observed since the late 1990s.¹² It was challenged only by tests carried out by the DPRK in 2006, 2009 and 2013. These tests met with strong condemnation from the rest of the international community, indicating that nuclear weapon testing is seen as unacceptable. Furthermore, only the DPRK, India, Pakistan (and recently independent South Sudan) are not bound by any treaty obligation to refrain from nuclear weapon testing. Finally, nuclear tests appear to be increasingly incompatible with legal principles for the protection of the environment and the human person.¹³ Whilst recognizing that there is debate on this point, the norm embodied in the CTBT arguably reflects an emerging norm of customary law against all nuclear weapon testing.¹⁴

Nuclear non-proliferation: not an end in itself

Recognizing 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', states came together in 1968 to adopt the NPT, an instrument of global purview 'to safeguard the security of peoples'.¹⁵

Under the NPT, 'nuclear-weapon States Parties' are prohibited from transferring nuclear weapons or control over such weapons to any recipient and from assisting any non-nuclear-weapon state in manufacturing or acquiring such weapons (Art. I). 'Non-nuclear-weapon States Parties' in turn commit not to receive any transfer of nuclear weapons or control over them and not to produce or acquire nuclear weapons (Art. II). Consequently, states that were already nuclear weapon-free at the time accepted a binding obligation not to acquire nuclear weapons, whereas the possession of nuclear weapons by 'nuclear-weapon States Parties' is not forbidden by the NPT, nor does Art. I prohibit these states from assisting each other in the manufacture or acquisition of nuclear weapons.¹⁶

This scenario was not supposed to represent the end-state, however. Nuclear disarmament, i.e. the ultimate elimination of nuclear weapons, not merely their control or non-proliferation, is a core element and one of the principal objectives of the NPT.¹⁷ In the treaty's preamble, states express their intention to undertake effective measures towards nuclear disarmament, to cease the manufacture of nuclear weapons and, ultimately, to eliminate nuclear weapons from national arsenals.

Under Article VI of the treaty every state party is obliged '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'. That this represents a positive legally binding nuclear disarmament obligation is accepted by most states parties today. The question is exactly what this obligation entails and when a state can be said to be in violation of it.

In the view of some states, and according to the ICJ, the obligation in Article VI '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'.¹⁸ This interpretation has been criticised as going beyond the wording of the provision.

Others hold that Article VI expresses an obligation of conduct to pursue negotiations in good faith. From this standpoint, the continued existence of nuclear weapons or slow progress in disarmament negotiations does not necessarily imply that all states parties to the NPT are in violation of Article VI. Plans by nuclear armed states to modernize their nuclear arsenals, however, seem to run counter their Article VI obligation, under either interpretation. Whatever the scope of the provision, the apparent failure of all states parties to achieve one of the key objectives of the NPT several decades after its entry into force calls into question the effectiveness of the treaty as a disarmament instrument.

Considering the near-universal membership of the NPT and that Article VI echoes the more general objective of nuclear disarmament towards which all UN member states must strive, the obligation to 'proactively, diligently, sincerely and consistently pursue negotiations' to this end is, arguably, an obligation under customary law, binding on all states.¹⁹

The effects of nuclear weapons and the protection of the environment

"The environment ... represents the living space, the quality of life and the very health of human beings, including generations unborn."²⁰

Any activity involving nuclear weapons may incidentally result in radiological contamination of the environment or the release of hazardous chemicals into the atmosphere, the hydrosphere, the lithosphere and the biosphere, spread through ecological cycles, and disrupt entire ecosystems. Environmental harm from the effects of nuclear weapons can be long-term and irreparable with obvious negative implications for the conditions of human life, human health and human rights of present and future generations.

The difficulty of containing the effects of nuclear weapons in space challenges the long-standing requirement under customary international law to prevent transboundary harm to the environment, persons, and property, arising from hazardous activities.²¹ All activities in the nuclear field are 'ultra-hazardous'. In keeping with the principle of prevention, a fundamental tenet of international environmental law (IEL), nuclear-armed states are duty-bound to prevent, minimize and control the risk of causing significant transboundary harm. As the detonation of a nuclear weapon would cause harm that would most likely not be contained to national borders and that will in many cases be irreversible, prevention must be the preferred policy.²²

Due to their persistent effects in time, nuclear weapons are also difficult to reconcile with the notion of sustainability, another concept firmly rooted in IEL.²³ Sustainability implies, for instance, that adequate food and safe water must be accessible not only for present but also for future generations.²⁴ If warfare is recognised as ‘inherently destructive of sustainable development’, then so must be the detonation of a nuclear weapon, whether by accident or intentionally.²⁵

Protecting the environment in times of armed conflict

It is widely recognized that IEL treaties continue to operate in times of armed conflict and that IEL ‘indicates important environmental factors’ that are to be taken into account in the context of the implementation of the law applicable in armed conflict.²⁶ How, precisely, IEL and IHL apply in parallel is not entirely settled, though, and the protection IEL treaties confer in such situations may vary.²⁷

Regarding the use of a nuclear weapon, the ICJ found that states must abide by the ‘general obligation to protect the natural environment against widespread, long-term and severe environmental damage’ and ‘the prohibition of methods and means of warfare which are intended, or may be expected, to cause such damage’.²⁸ Although the extent of damage resulting from a nuclear explosion depends on a number of factors, it is arguable, in view of the difficulty of containing ionising radiation in space and time, that any use of a nuclear weapon would cause widespread, long-term and severe damage to the environment.²⁹

Furthermore, it is widely accepted today that attacks that may be expected to cause excessive environmental damage are prohibited as a matter of customary international law,³⁰ and that in the use of a nuclear weapon as a means of warfare ‘all feasible precautions must be taken to avoid, and in any event to minimise, incidental damage to the environment’.³¹ The latter is an assessment of the environmental harm expected from such use and a thorough investigation into alternative, less harmful means that may be available. As all nuclear-armed states possess highly destructive conventional weapons that can hit targets over long distances, the use of a nuclear weapon may never be justified from the perspective of environmental precautions under IHL.³²

The protection afforded by these and other manifestations of IHL rules against the effects of nuclear weapons are, however, limited, and the inadequacy of IHL to protect the environment has been well studied. To ensure that basic protection of the environment is maintained by international law, even in times of armed conflict, IHL should be interpreted in a manner consistent with legal obligations under IEL. The 1972 World Heritage Convention, for instance, requires states parties ‘not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage ... situated on the territory of other States Parties to this Convention.’³³ It is difficult to see how the use of a nuclear weapon could comply with this obligation, considering that its effects are unlikely to be contained to the user state’s own national borders.³⁴

It should in any case be borne in mind that the extensive development of IEL in recent decades was not matched by a similar develop-

ment in IHL, and that, consequently, what was not explicitly prohibited under IHL in the 1970s may well be incompatible with states’ environmental obligations today.³⁵

The effects of nuclear weapons and rules for the protection of human health, human dignity and human rights

“when a weapon has the potential to kill between one million and one billion people, ..., human life becomes reduced to a level of worthlessness that totally belies human dignity as understood in any culture. Such a deliberate action by an [sic.] State is, in any circumstances whatsoever, incompatible with a recognition by it of that respect for basic human dignity on which world peace depends, and respect for which is assumed on the part of all Member States of the United Nations.”³⁶

Whether directly or by way of a degraded environment, nuclear weapon-related activities can threaten the livelihoods and even the existence of individual human beings and entire communities, gravely affecting the enjoyment of a range of human rights, including the right to health and to a healthy environment, the right to food, the prohibition of inhumane treatment, and of course, the right to life inherent in every human being.³⁷ The effects of nuclear weapons arguably undermine the very notion of human dignity on which human rights are based.

States are under an obligation to respect, protect and fulfil human rights. Not only do they need to refrain from activities that would violate international human rights law (IHRL), they also need to take positive preventive measures. Accordingly, states’ obligation to respect the right to health, involves, inter alia, a duty to refrain ‘from using or testing nuclear ... weapons if such testing results in the release of substances harmful to human health’.³⁸ Also with a view to protecting human health, states parties to the International Health Regulations (2005) have assumed a duty to take preventive measures to protect ‘all people of the world from the international spread of disease’ irrespective of its origin. Many activities involving nuclear weapons pose a ‘public health risk’, and the detonation of a nuclear weapon would likely amount to a ‘public health emergency of international concern’ under these regulations. Each state is, further, under a duty to reduce the risk of disasters by taking necessary preventive measures, and states have a duty to cooperate in disaster risk reduction.⁴⁰

For the Human Rights Committee ‘[i]t is evident that the designing, testing, manufacture, possession and deployment of nuclear weapons are among the greatest threats to the right to life’, which confront humankind, a threat that ‘is compounded by the danger that the actual use of such weapons may be brought about’ in the event of war or through human or mechanical error or failure. With a view to the highly uncontrollable effects of nuclear weapons, it is difficult to see how the use of a nuclear weapon could comply with the strict IHRL standards on the use of force.⁴¹ In the Committee’s (albeit controversial) opinion, ‘the production, testing, possession, deployment and use of nuclear weapons should be prohibited’.⁴²

It is now almost universally accepted that IHRL continues to apply during an armed conflict, and even ‘in time of public emergency

which threatens the life of the nation', the right to life cannot be derogated from.⁴³ Many of the complex legal issues raised by the parallel application of IHRL and IHL are not yet settled. It is an open question to what extent it would fall to the relevant rules of IHL to determine whether the use of a nuclear weapon as a means or method of warfare amounted to an 'arbitrary' deprivation of life in violation of IHRL.⁴⁴

Protection under international humanitarian law

Use of a nuclear weapon as a means or method of warfare during an armed conflict would need to 'be compatible with the requirements of ... the principles and rules of international humanitarian law',⁴⁵ including the following:

- × The parties to a conflict must at all times distinguish between civilians and combatants and between civilian objects and military objectives, and direct attacks only be against the latter;⁴⁶
- × Indiscriminate attacks and disproportionate attacks are prohibited;⁴⁷
- × In the conduct of military operations, constant care must be taken to spare civilians, and each party to the conflict must take all feasible precautions in the choice of means and methods of warfare with a view to avoiding, and in any event to minimizing, incidental loss of civilian harm;⁴⁸
- × The use of weapons which are by nature indiscriminate is prohibited;⁴⁹
- × The use of means and methods of warfare which are of a nature to cause superfluous injury or unnecessary suffering is prohibited;⁵⁰
- × The use of poison or poisoned weapons is prohibited.⁵¹

These rules, widely considered to be of customary nature, are reflected in 1977 Additional Protocol I to the Geneva Conventions.⁵² They would seem to prohibit nuclear weapon use in most foreseeable scenarios,⁵³ and declarations made by states to the effect that the Protocol's 'new' rules do not apply to nuclear weapons certainly suggest that the concerned states do not believe nuclear weapons could be used in compliance with all the provisions of the Protocol.⁵⁴

Disagreement also persists about whether the use of a nuclear weapon would violate customary IHL in all circumstances. Whereas some hold that a nuclear weapon could never be used in compliance with IHL, and consequently, that nuclear weapons are inherently indiscriminate and/or cause superfluous injury or unnecessary suffering, others contend that the legality of nuclear weapon use needs to be assessed on a case-by-case basis under the rules of IHL, taking into account the circumstances of a particular attack. Arguing that the humanitarian effects of nuclear weapons differ greatly in different scenarios, they reject the argument that nuclear weapons are illegal per se.

The ICJ concluded in 1996 (by seven votes to seven, and the President's casting vote) that 'the threat or use of nuclear weapons would generally be contrary to ... the principles and rules of humanitarian law'. However, the Court could not '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'.

The meaning and implications of this phrase have been hotly debated ever since. For one, it opens up the disturbing possibility that use of a nuclear weapon that violates IHL may nonetheless be lawful in such a situation.⁵⁵ A detailed discussion of the complex legal questions raised under jus ad bellum are beyond the scope of this paper. Suffice it to recall that 'The extent to which the use of nuclear weapons could be lawful under the [UN] Charter is extremely limited', and that a threat or use of force by means of a nuclear weapon that fails to meet all the requirements of Article 51 of the UN Charter (self-defence) is unlawful.⁵⁶

It can also be recalled that when determining the full extent of the laws of armed conflict, the Martens Clause provides authority for looking beyond treaty law and custom to consider principles of humanity and the dictates of the public conscience'.⁵⁷ Ultimately, though, the ability to recognize massive human suffering and to feel bound by the need to combat it must not depend on whatever chains of reasoning we can produce to support it. We need to be able to say that we know that it is wrong, without having to translate this into 'the idiom of legal reason'.⁵⁸

Urgently needed: A treaty banning nuclear weapons

In sum, the use of a nuclear weapon would be exceptionally difficult to reconcile with international legal rules on the protection of the human person and the environment. These norms, together with a range of existing instruments whose ultimate objective is nuclear disarmament, place important restrictions on any activity involving nuclear weapons. Yet, the ICJ's conclusion from 1996 still holds: There is in neither customary nor conventional international law any specific authorization of the threat or use of nuclear weapons, nor is there any comprehensive and universal prohibition of the threat or use of nuclear weapons as such.⁵⁹

An explicit prohibition of all activities involving nuclear weapons in all circumstances is, thus, urgently needed. At present, the regulation of nuclear weapons under international law is fragmentary with many instruments covering only certain geographic areas or a limited range of activities. Whether existing regulations are effective in addressing the risk of catastrophic humanitarian and environmental consequences is doubtful, with the CTBT still not having entered into force, and the NPT having achieved very limited progress on its disarmament objective. Moreover, significant controversies and uncertainties remain on important legal questions.

This piecemeal approach to regulation has significant limitations. The very nature of the threat posed by nuclear weapons warrants a holistic approach. A treaty of global scope, comprehensively prohibiting nuclear weapons can:

- × correct a legal deficit, and explicitly outlaw nuclear weapons, on par with other WMD;
- × complement existing non-proliferation instruments and strengthen nuclear disarmament instruments by formalising the categorical rejection of nuclear weapons;
- × strengthen and promote national measures aimed at eliminating nuclear weapons, including disinvestment from nuclear weapons;
- × reaffirm the existing obligation under customary international law

- to pursue nuclear disarmament negotiations in good faith, and contribute to the emergence of a customary norm against nuclear testing and, in time, of a customary ban on nuclear weapons;
- × contribute to the progressive development of international law, clarify longstanding legal debates, promote the harmonization of disarmament law with rules and principles of other fields of international law, and thereby help counter the further fragmentation of international law.⁶⁰

Although nuclear weapons appear incompatible with international legal norms for the protection of the human person and the environment it is unlikely that a global customary ban on nuclear weapons will emerge from within existing nuclear weapons treaty frameworks.⁶¹ Most existing instruments on nuclear weapons are somewhat dated and reflect a perspective on international relations characterised by a quid pro quo structure of strictly reciprocal obligations, where narrowly defined national security interests are given a prominent place.⁶² Today's globalised world is in many ways more vulnerable to the effects of nuclear weapons. The situation demands an approach that centres on the needs and aspirations of the international community as a whole, and, ultimately, of all humankind.

Nuclear weapons negate human dignity and other concepts fundamental to the modern international legal order. The trend in international law is clearly towards recognising that human health, human rights, environmental protection and peace are interdependent and indivisible. A comprehensive, unambiguous treaty prohibition of nuclear weapons would help to protect the rights of present and future generations to an environment adequate for their health and well-being. These are the concern of all states, and all states have a legal interest in protecting the rights involved.

END NOTES

- 1 See the section 'The legal obligation to eliminate nuclear weapons' below.
- 2 For example, France's promise to cease atmospheric nuclear weapon tests in the 1970s.
- 3 A rule of customary international law may be said to exist where there is 'a general practice' ('state practice') that is 'accepted as law' ('*opinio juris*'). See the ongoing work of the International Law Commission (ILC) on the formation and evidence of customary international law/Identification of customary international law. (http://legal.un.org/ilc/guide/1_13.htm.)
- 4 Statute of the ICJ, Art. 38(1)(c). These are sometimes taken to refer to general principles common to the various systems of internal law, but also to general principles of international law.
- 5 A. A. Cançado Trindade, *International Law for Humankind: Towards a New Jus Gentium*, The Hague Academy of International Law, vol. 6, Martinus Nijhoff Publishers, Leiden and Boston, 2010, pp. 56-59.
- 6 ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 8 July 1996.
- 7 UN GA Resolution 1(I), 24 January 1946.
- 8 Nuclear weapons may not be stationed on the territory of a party to a NWFZ treaty, nor may that state possess or control nuclear weapons outside of the zone. The NPT, in contrast, does not prohibit the stationing of nuclear weapons on Non-nuclear-weapon States Parties' territory, provided the latter do not acquire control over the weapons.
- 9 Negative security assurances implicitly signal acceptance of the possession of nuclear weapons by some states. (Article 36, *Banning Nuclear Weapons*, February 2013, <http://bit.ly/1vasRqk>.) For a comparative analysis of legal obligations arising under NWFZ treaties, see Article 36, *Nuclear Weapon Free Zones and Banning Nuclear Weapons*, April 2014, <http://bit.ly/R7M4Uy>.
- 10 Over 100 states worldwide are parties to a NWFZ treaty, representing over 50 per cent of the earth's surface.
- 11 China, the DPRK and France, among other states, are not parties to the PTBT.
- 12 The Soviet Union conducted its last test in 1990 and proposed a moratorium agreed to by the US and the UK (which last tested in 1991). France and China resumed tests only months after the NPT was extended indefinitely in 1995 and conducted their last tests in 1996. India and Pakistan tested nuclear weapons in 1998 and then announced unilateral moratoria.
- 13 The ICJ referred to 'the obligations of States to respect and protect the natural environment' in relation to nuclear weapons testing. (ICJ, *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*, Order of 22 September 1995, §64.) Atmospheric nuclear testing in the 1950s was one of the first environmental issues to be confronted by the international community. (ILC, *First report on the protection of the atmosphere*, A/CN.4/667, 14 February 2014.)
- 14 The ICJ failed to give a definitive ruling on the legality of nuclear testing in ICJ, *Nuclear Tests (New Zealand v. France)*, Judgment, 20 December 1974. Whilst a legal norm against the atmospheric testing of nuclear weapons has probably come into existence, it is more difficult to establish the required *opinio juris* in support of a complete test ban. See D. MacKay, 'The testing of nuclear weapons under international law', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*, Cambridge University Press, 2014.
- 15 NPT, Preamble. Note that the concern is with the security of peoples, not states.
- 16 On the interpretation of 'manufacturing' in relation to assistance to 'Non-nuclear-weapon States Parties', see G. Nystuen and T. Graff Hugo, 'The Nuclear Non-Proliferation Treaty', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.
- 17 'The Conference notes the reaffirmation by the nuclear-weapon States of their unequivocal undertaking to accomplish, in accordance with the principle of irreversibility, the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI of the Treaty.' (Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document, 2010, §79.)
- 18 ICJ, *Nuclear Weapons Advisory Opinion*, §99.
- 19 D. Joyner, 'The legal meaning and implications of Article VI of the Non-Proliferation Treaty', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*. See also, D. Rietiker, 'Some Thoughts on Article VI NPT and its Customary Nature', *Arms Control Law*, 10 June 2014, <http://bit.ly/15LXJji>. India, Pakistan, Israel and the DPRK are not parties to the NPT.
- 20 ICJ, *Nuclear Weapons Advisory Opinion*, §29.
- 21 'States have, ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national'. (Rio Declaration on Environment and Development (1992), Principle 2.)
- 22 See the ILC Draft Articles on Prevention of Transboundary Harm from Hazardous Activities (2001) and the Commentary thereto, §§2-4. The 'no harm' and prevention principles also entail well-established procedural obligations, including the duty to notify and the duty to conduct an environmental impact assessment. If a state con-

taminates its own territory with nuclear weapon-related activities, obligations to prevent and repair environmental harm may be invoked under treaties protecting natural sites, habitats, species, genetic resources or biodiversity. For a recent discussion, see M. Kunz and J. E. Viñuales, 'Environmental approaches to nuclear weapons', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.

23 ICJ, *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 25 September 1997, §140.

24 Committee on Economic, Social and Cultural Rights (CESCR), General Comment 12, E/C.12/1999/5, 12 May 1999, §7; General Comment 15, E/C.12/2002/11, 20 January 2003, §11.

25 Rio Declaration on Environment and Development (1992), Principle 24.

26 ICJ, *Nuclear Weapons Advisory Opinion*, §33.

27 For a recent discussion, see ILC, Preliminary report on the protection of the environment in relation to armed conflicts, Submitted by Marie G. Jacobsson, Special Rapporteur, A/CN.4/674, 30 May 2014, §§ 1-7.

28 ICJ, *Nuclear Weapons Advisory Opinion*, §31.

29 E. V. Koppe, 'Use of nuclear weapons and protection of the environment during international armed conflict', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.

30 ICRC, Customary IHL Study, Rule 43; ICJ, *Nuclear Weapons Advisory Opinion*, §30.

31 ICRC, Customary IHL Study, Rule 44.

32 E. V. Koppe, 'Use of nuclear weapons and protection of the environment during international armed conflict', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*. The same argument about precautions applies in relation to the humanitarian consequences. See S. Maslen, 'The use of nuclear weapons under rules governing the conduct of hostilities', in *Ibid*.

33 Convention Concerning the Protection of the World Cultural and Natural Heritage (1972), Art. 6.3.

34 For a discussion of the Convention, see B. Sjöstedt, 'The Role of Multilateral Environmental Agreements in Armed Conflict...', *Nordic Journal of International Law*, 82 (2013) 129-153.

35 In 1996, the ICJ rejected the argument made by some states that 'any use of nuclear weapons would be unlawful' by reference to IEL in force at the time. The Court acknowledged that 'the use of nuclear weapons could constitute a catastrophe for the environment', but found that environmental law did 'not specifically prohibit the use of nuclear weapons', require 'total restraint during military conflict' or 'deprive a state of its right of self-defence'. ICJ, *Nuclear Weapons Advisory Opinion*, §§30, 33.

36 ICJ, *Nuclear Weapons Advisory Opinion*, Dissenting Opinion of Judge Weeramantry.

37 Under human rights treaties, states generally owe human rights duties to persons subject to their jurisdiction, which is primarily territorial. Nuclear weapon-related activities that cause harm abroad raise difficult jurisdictional challenges to the realisation of human rights. Considering that all UN member states are under an obligation to respect and promote human rights, that all states have a legal interest in the protection of rights derived 'from the principles and rules concerning the basic rights of the human person', and with a view to human dignity, universality and non-discrimination upon which IHRL is based, it is questionable whether similar jurisdictional limitations attach to human rights arising under customary law. (See UN Charter, Art. 1(3); ICJ, *Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain)*, Judgment, 5 February 1970, §34.)

38 CESCR, General Comment 14, E/C.12/2000/4, 11 August 2000, §34.

39 International Health Regulations (2005), Arts. 1-3.

40 ILC, Draft Articles on the Protection of Persons in the Event of Disasters, A/CN.4/L.831, 15 May 2014, Arts. 10-11. Note that the draft articles 'do not apply to situations to which the rules of international humanitarian law are applicable.' (Art. 21)

41 Nuclear weapons are especially difficult to reconcile with the requirement that, in the event recourse to lethal force is unavoidable, weapons are chosen with a view to minimize damage and injury, and respect and preserve human life.

42 Human Rights Committee (CCPR), General Comment 14, 9 November 1984, §§4, 6. In the view of the Human Rights Committee, every effort states make to avert the danger of nuclear war 'would constitute the most important condition and guarantee for the safeguarding of the right to life'. (General Comment 6, 30 April 1982, §§1-2.)

43 CCPR, General Comment 6, 30 April 1982, §1. Under the European Convention on Human Rights (1950), the right to life cannot be derogated from 'except in respect of deaths resulting from lawful acts of war'. (Art. 15(2))

44 In light of the object and purpose of IHRL, this question should arguably not be determined exclusively with reference to the rules of IHL. See, e.g., T. Wright, 'Do Nuclear Weapons Violate the Right to Life under International Law', *Australian Journal of Peace Studies*, 3 (2008) 99-119; L. Doswald-Beck, 'Human rights law and nuclear weapon', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.

45 ICJ, *Nuclear Weapons Advisory Opinion*, Dispositif, §2(D).

46 ICRC, Customary IHL Study, 2005, Rules 1 and 7.

47 ICRC, Customary IHL Study, 2005, Rules 11 and 14.

48 ICRC, Customary IHL Study, 2005, Rules 15 and 17.

49 ICRC, Customary IHL Study, 2005, Rule 71.

50 ICRC, Customary IHL Study, 2005, Rule 70.

51 ICRC, Customary IHL Study, 2005, Rule 72.

52 The ICJ has further made it clear that 'the fundamental principles' of IHL constitute 'intransgressible principles' of international customary law, which is understood to mean that they have attained the status of peremptory norms of customary law (*jus cogens*), and, thus, cannot be displaced by treaty-based rules. ICJ, *Nuclear Weapons Advisory Opinion*, §79.

53 G. Nystuen, *Legal Aspects of Nuclear Weapons: A 'bird's-eye view' of international law and nuclear weapons*, ILPI/UNIDIR Vienna Conference Series Paper No. 6, p. 2. For a detailed assessment, see S. Maslen, 'The use of nuclear weapons under rules governing the conduct of hostilities', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.

54 The UK has declared as recently as 2002, that 'It continues to be the understanding of the United Kingdom that the rules introduced by the Protocol apply exclusively to conventional weapons without prejudice to any other rules of international law applicable to other types of weapons. In particular, the rules so introduced do not have any effect on and do not regulate or prohibit the use of nuclear weapons.' (United Kingdom, Declaration of 2 July 2002.) Such a declaration amounts to a reservation whose compatibility with the humanitarian object and purpose of the Protocol is highly questionable. See also J. Gaudreau, *International Review of the Red Cross*, No. 849 (March 2003) 143-184.

55 On this question, see J. Moussa, 'Nuclear weapons and the separation of *jus ad bellum* and *jus in bello*', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.

56 ICJ, *Nuclear Weapons Advisory Opinion*, Dispositif, §2(C).

57 R. Ticehurst, 'The Martens Clause and the Laws of Armed Conflict', *International Review of the Red Cross*, No. 317, 1997.

58 M. Koskeniemi, 'Case Analysis: Faith, Identity, and the Killing of the Innocent: International Lawyers and Nuclear Weapons', *Leiden Journal of International Law*, vol. 10(1)(1997) 137-162.

59 ICJ, *Nuclear Weapons Advisory Opinion*, Dispositif, §2(A) and 2(B). Whilst the finding about the absence of an authorisation was unanimous, three judges voted against the finding that there was no prohibition.

60 For a discussion of what such a treaty could look like, how to achieve it, and what its potential impact would be, see Article 36 and Reaching Critical Will, *A Treaty Banning Nuclear Weapons: Developing a legal framework for the prohibition and elimination of nuclear weapons*, May 2014, <http://bit.ly/R7LXbA>.

61 'It is unlikely that the establishment of ... an undisputed customary law prohibition against use will develop within the NPT framework as long as the NWS parties continue to retain the right to actually use these weapons.' G. Nystuen and T. Graff Hugo, 'The Nuclear Non-Proliferation Treaty', in G. Nystuen et al. (Eds.), *Nuclear Weapons Under International Law*.

62 This is reflected in the existence of withdrawal clauses in many existing treaties on nuclear weapons. The (unaffected) operation of such treaties in times of armed conflict is by no means certain.