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“Humanitarian Disarmament”: Powerful New Paradigm or Naive Utopia?

Marc Finaud

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"Humanitarian Disarmament": Powerful New Paradigm or Naive Utopia?

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Content

Executive Summary

As early as the 19th century, international efforts led to the regulation or prohibition of the use of some means of warfare such as biological and chemical weapons, because of the possible consequences of their use for civilians and non-combatants. In the post-Cold War period, similar humanitarian motivations explained civil society organisation initiatives that convinced governments to regulate or ban some conventional weapons such as anti-personnel landmines, cluster munitions, small arms and light weapons. Indeed, especially in internal conflicts and armed violence, civilians paid the highest price for the uncontrolled spread and use of such weapons.

The more recent initiative to apply the same humanitarian paradigm to nuclear weapons because of the potentially devastating consequences of their use is gaining traction both among civil society and a majority of states. This initiative's ability to convince the states that still consider the use of nuclear weapons as legitimate to move towards their prohibition remains to be demonstrated, but its initiators have already succeeded in leading the international community no longer to address nuclear weapons in national security terms, but through the lens of human security.

1. Introduction

This paper will address the question of whether the humanitarian motivation, i.e. efforts to protect civilian populations from the suffering caused by weapons used in conflict or armed violence, can apply equally to conventional weapons and weapons of mass destruction (WMD), especially nuclear weapons.

During the Cold War, three broad legal frameworks regulated the use of military force. Firstly, there was jus ad bellum, i.e. the body of law regulating the international use of force by states, referring to the use of force considered to be illegal by the United Nations (UN) Charter except in cases of legitimate self-defence. Then there was jus in bello, or the laws of war, i.e. the legacy of international humanitarian law (IHL) developed over centuries to constrain armed conflict between states — and increasingly in internal conflicts — and to protect civilians and non-combatants. Finally, a particular set of rules was constructed after the Second World War to address the use, acquisition, or possession of specific weapons or categories of such weapons.

This body of rules can be subdivided into three distinct groupings, despite some overlapping:

1. Arms control, defined as

   > rules for limiting arms competition ... in particular those intended to: (a) freeze, limit, reduce or abolish certain categories of weapons; (b) prevent some military activities; (c) regulate the deployment of armed forces; (d) proscribe transfers of some military important items; (e) reduce the risk of accidental war; (f) constrain or prohibit the use of certain weapons or methods of war; and (g) build up confidence among states through greater openness in military matters;[1]

2. Non-proliferation, i.e. "the means and methods for preventing the acquisition, transfer, discovery, or development of materials, technology, knowledge, munitions/devices or delivery systems related to weapons of mass destruction (WMD)"[2]; and

3. Disarmament, or "the reduction or destruction of some of a state's weapons (or the withdrawal of armed forces)" and, in international weapons law, rules referring to "treaties or initiatives that prohibit or restrict the production, stockpiling, and/or transfer of weapons".[3]

The main motivation of states for adopting such rules was the preservation or enhancement of their national security against external threats, principally relying on military power, which was a traditional preoccupation of the Westphalian nation-state. The purpose of these rules was to contain, control, or prevent developments in and deployments of weaponry that could have destabilising effects on the balance of power among states or give any one of them incentives for perpetrating aggression without suffering severe consequences. In particular, this approach was seen as the basis for the doctrine of nuclear deterrence.[4]

At the end of the Cold War, the whole concept of security evolved towards a less state-centric approach based on a new paradigm: "human security", i.e. the security of individuals or societies, including through protection against threats emanating from their own states. This new concept appeared in particular in the ground-breaking Human Development Report 1994 of the UN Development Programme (UNDP). It is said to have two main aspects: "first, safety from such chronic threats as hunger, disease and repression. And second ... protection from sudden and hurtful disruptions in the patterns of daily life — whether in homes, in jobs or in communities".[5]

Although, as the UNDP report put it, "Human security is not a concern with weapons — it is a concern with human life and dignity", this paradigm shift would strongly affect one of the main aspects of security policy, i.e. the body of rules dealing with arms control, non-proliferation and disarmament. In fact, the borders between those two sets of concepts (military, state or national security, on the one hand, and humanitarian or human security, on the other), which were not absolutely clear, became more and more blurred.

Traditionally, IHL regulated the use of the means or methods of warfare in international armed conflict, with the aim of preventing the use of those methods "which are of a nature to cause superfluous injury or unnecessary suffering".[6] This was the main purpose of the 1949 Geneva Conventions and the 1977 Protocols, which combined the codification of customary law and new treaty law. It was also the more specific aim of the 1980 Convention on Certain Conventional Weapons (CCW). The preamble to the CCW reaffirmed some principles derived from customary law, e.g. "the right of the parties to an armed conflict to choose methods or means of warfare is not unlimited", and "the employment in armed conflicts of weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering is prohibited". Moreover, it confirmed the

> determination [of states parties] that ... the civilian population and the combatants shall at all times remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience.[7]

However, IHL was gradually expanded beyond its traditional scope to include even more specific rules prohibiting the introduction of new weapons such as blinding laser weapons,[8] applying IHL not only in international conflicts, but also in non-international armed conflicts,[9] or imposing on states obligations that were applicable after military operations had ended, such as those dealing with unexploded or abandoned remnants of war.[10]

For its part, the particular body of rules dealing with arms control, non-proliferation and disarmament increasingly began to take into account humanitarian considerations, mostly regarding those weapons most likely to cause mass casualties, which were called WMD

(biological, chemical and nuclear weapons). These motivations appeared in the preamble to several instruments:

- The 1963 Partial Test Ban Treaty: states parties expressed their "desir[e] to put an end to the contamination of man's environment by radioactive substances".

- The 1967 Treaty of Tlatelolco establishing a zone free of nuclear weapons in Latin America: states parties declared that they were

  > convinced ... that nuclear weapons, whose terrible effects are suffered, indiscriminately and inexorably, by military forces and civilian population alike, constitute, through the persistence of radioactivity they release, an attack on the integrity of the human species and ultimately may render the whole earth uninhabitable.

- The 1967 Outer Space Treaty: states parties recognised "the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes".

- The 1968 Nuclear Non-Proliferation Treaty (NPT): states parties considered "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".

- The 1972 Biological Weapons Convention (BWC): states parties declared that they were "Determined, for the sake of all mankind, to exclude completely the possibility of bacteriological (biological) agents and toxins being used as weapons" and were "Convinced that such use would be repugnant to the conscience of mankind".

- The 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques: states parties recognised that "military or any other hostile use of [environmental modification] techniques could have effects extremely harmful to human welfare" and expressed their desire "to prohibit effectively military or any other hostile use of environmental modification techniques in order to eliminate the dangers to mankind from such use".

- The 1993 Chemical Weapons Convention (CWC), which had been negotiated during the Cold War: its states parties declared that they were "Determined for the sake of all mankind, to exclude completely the possibility of the use of chemical weapons" and that they "Consider[ed] that the achievements in the field of chemistry should be used exclusively for the benefit of mankind".

Until then, apart from IHL, conventional weapons had not been closely associated with humanitarian considerations: for most states they were considered as legitimate means of ensuring national security against external military threats. But with the end of the Cold War, the increase in the number of internal conflicts harming mainly civilians, and the appearance of the concept of human security, a series of initiatives from civil society organisations (CSOs) began to emphasise the humanitarian motivations of arms control, disarmament and non-proliferation instruments dealing with conventional weapons. Such motivations were eventually reflected in the provisions of the treaties that were concluded. The phrase "humanitarian disarmament" was crafted.

The first initiative was related to anti-personnel landmines, and led to the 1997 Ottawa Convention. The second addressed cluster munitions and culminated in the adoption of the Oslo Convention in 2008. The third dealt with small arms and light weapons (SALW) and became the UN Small Arms Process, which included the 2001 UN Programme of Action on SALW. The fourth initiative related to the international trade in conventional arms, and resulted in the negotiation of the 2013 Arms Trade Treaty (ATT). Further initiatives addressed lethal autonomous weapons systems and the use of explosive weapons in populated areas, but have not to date led to any new international instrument. We will examine these initiatives and their outcomes in Section 2 of this paper.

In parallel, some CSOs, while supporting the above-mentioned initiatives dealing with conventional weapons, considered that similar motives also justified action on the prohibition of nuclear weapons, which had the potential to cause catastrophic humanitarian devastation, especially because of their indiscriminate effects on civilian populations. Indeed, these organisations considered that the same motivations that had led to prohibiting the first two categories of WMD (biological and chemical weapons) and then some types of conventional weapons should also apply to nuclear weapons.

In Section 3 we will consider the humanitarian approach to biological and chemical weapons, and in Section 4 the humanitarian approach to nuclear weapons, before analysing the challenges facing and prospects for humanitarian disarmament in Section 5.

2. The humanitarian approach to conventional weapons

A whole movement was created at the end of the Cold War to apply the same paradigms as IHL to arms control, non-proliferation and disarmament, based on humanitarian considerations, i.e. the goal of reducing the suffering of the victims of armed conflict or violence – particularly civilians. Indeed, the proportion of casualties between combatants (or the military) and non-combatants (or civilians) was said to have become the reverse of what it had been during the First World War, when 90 per cent of victims were military (between 22.1 and 23.6 million) and 10 per cent civilian (around 2.25 million).[11] In the Second World War, this ratio moved to 60-67 per cent of civilian casualties out of some 70 million victims[12] due to the massive use of the strategic bombing of populated areas, famine, and disease caused by large-scale destruction, as well as deliberate racial extermination. In subsequent wars, the share of civilian casualties and fatalities kept increasing: 67 per cent in the Korean[13] and Vietnam[14] wars, and 72.6 per cent in the Chechen[15] wars. In the post-2001 war in Afghanistan, while "only" some 28.6 per cent of direct victims were civilians (out of some 91,000 fatalities), the number of indirect civilian deaths caused by displacement, malnutrition or disease may have reached 360,000.[16] In the Iraq war from 2003 onwards, the proportion of civilian casualties was estimated at 72 per cent (some 174,000 out of 242,000).[17] During one week of Israel's invasion of Lebanon in June 1982, some 8,000 civilians were killed out of 10,000 victims, i.e. a proportion of 80 per cent.[18]

In 2003, the European Union (EU) Security Strategy stated that "Since 1990, almost 4 million people have died in wars, 90% of them civilians".[19] Some experts consider it difficult to assess such a ratio with accuracy and believe it should be differentiated in terms of each conflict. However, this trend in the vulnerability of civilian populations, especially in urban warfare, asymmetric warfare or internal conflict, is undeniable. Such a high figure is acknowledged to be certain in the cases of the genocides in Cambodia (1975-1979) and Rwanda (1994), and likely in the protracted civil wars in the Democratic Republic of the Congo (since 1996), Uganda (since 1986) and Darfur (since 2003).[20]

Beyond any exact figures, in light of the fact that civilians had become regular targets in post-Cold War conflicts, it was only natural that the international community would attempt to mitigate the humanitarian impact of some means of warfare and weapons.

2.1 Anti-personnel landmines

A category of weapon with potentially devastating humanitarian impact is the anti-personnel landmine. Although it was initially conceived as a military device targeting combatants (more for maiming than killing, to weaken enemies) and a means of denying access to strategic locations, in practice it causes more casualties among civilians; indeed, this victim-activated device cannot discriminate between combatants and non-combatants. Moreover, as a robust piece of military hardware, it can remain operational for a long time even after military operations have ended, and the millions that have been laid continue to kill and wound people,

rendering large areas unusable for livelihoods and impeding social and economic development. According to the International Campaign to Ban Landmines (ICBL), civilians account for 70-85 per cent of casualties.[21] In 2003, this amounted to an overall total of one million people killed or maimed. In 1996, the number of active mines deployed was estimated at 110 million, with another 110 million in storage. While an average of 110,000 mines were cleared annually, it was calculated that it would take 1,100 years to clear all the landmines in the world, provided no more were laid.[22]

In October 1992, the ICBL was launched by a group of six non-governmental organisations (NGOs). This number grew to 40 organisations at the first International NGO Conference on Landmines in London in May 1993.

The goal of this campaign was to lead to a full prohibition of anti-personnel landmines, beyond the restrictions on their use enshrined in the 1980 Protocol II to the CCW on "Landmines, Booby-Traps, and Other Devices". Indeed, in this IHL instrument, only certain uses of landmines were prohibited, i.e. any use "against the civilian population as such or against individual civilians" or "indiscriminate use" (with detailed definitions and exceptions).

Evidently, these complex provisions of Protocol II were negotiated by states with the aim of preserving and justifying some military uses for landmines. This is why the International Committee of the Red Cross (ICRC) commissioned a report in 1996 from a group of military experts to determine whether the implementation of such rules was practically compatible with the requirements to protect civilians and generally feasible in situations of armed conflict. This group concluded that

> The limited military utility of [anti-personnel] mines is far outweighed by the appalling humanitarian consequences of their use in actual conflicts. On this basis their prohibition and elimination should be pursued as a matter of utmost urgency by governments and the entire international community.[23]

As a result, the civil society-led campaign to ban landmines gained even more traction and convinced a large number of states to negotiate a treaty providing for the total prohibition and elimination of anti-personnel landmines. This was achieved on the initiative of Canada, when the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction was adopted in Ottawa on 18 September 1997. It entered into force on 1 March 1999, and to date 162 states are party to it. In its preamble, states parties declared that they were "determined to put an end to the suffering and casualties caused by anti-personnel mines, that kill or maim hundreds of people every week, mostly innocent and defenceless civilians and especially children".

The Convention prohibits the use, stockpiling, production and transfer of anti-personnel mines. States parties agree to destroy both stockpiled and emplaced anti-personnel mines

and assist the victims of mines. This instrument can be considered as one of the first international treaties to be both fundamentally motivated by humanitarian considerations and also to provide for concrete disarmament obligations. It was thus not surprising that its initiator, Jody Williams, the coordinator of the ICBL, was awarded the Nobel Peace Prize in 1997.

There is no doubt that the Ottawa Treaty has been a most effective instrument. In the 25 years since its entry into force, the world has witnessed a virtual halt in the global trade in anti-personnel mines; a sharp drop in the number of producing countries (from 50 to 11, with only four still actually producing landmines: India, Myanmar, Pakistan and South Korea); a drastic reduction in the number of states laying mines, even among non-signatories; mine clearance of vast tracts of land and widespread and extensive destruction of stockpiled mines; a considerable reduction in the number of landmine victims each year (in the early 1990s, the number of victims reached some 24,000 per year, of which some 10,800 died;[24] in 2013, this number had fallen to some 4,000 victims).[25]

Table 1: Victims of anti-personnel landmines and explosive remnants of war, 1999 and 2014

Year	Recorded casualities	Total estimated casualities
1999	9,000	16,000-22,000
2014	3,678	4,600

Source: Landmine and Cluster Munition Monitor, "Casualties and Victim Assistance", 2015.

On the negative side, most of the 33 countries remaining outside the treaty keep stockpiles that total around 50 million landmines ready to be deployed.[26] Moreover, while the number of factory-made landmines used by state actors has been reduced, the share of casualties resulting from the use of improvised explosive devices (IEDs) by non-state actors has dramatically increased: by 2015 it had increased by 31 per cent.[27]

2.2 Cluster munitions

The work accomplished by the ICBL and the Ottawa Convention was considered incomplete because it only applied to landmines laid in the ground and not to those dropped by air or fired from land or sea, which were called cluster munitions or cluster bombs. These are weapons containing multiple explosive submunitions (or bomblets) that, like landmines, can remain a deadly threat long after a conflict ends. When dropped or fired, they release tens or hundreds of bomblets that can saturate wide areas. Anybody within the strike area is likely to be killed or seriously injured immediately or after a long time by unexploded ordnance (UXO). In practice, many cluster munitions have a failure rate of up to 30 per cent, which may cause the scattering of hundreds of unexploded bomblets. According to the ICRC, during

the Vietnam War in the 1960s and 1970s, the United States (US) dropped some 270 million cluster submunitions on Laos, and between nine million and 27 million unexploded submunitions remained on the ground at the end of the conflict. It is estimated that the cluster bombs fired by Israel in Lebanon in 2006 contained more than four million cluster submunitions, up to one million of which remained unexploded after the fighting ended.[28] According to Handicap International, 98 per cent of recorded casualties were civilian.[29]

Like for landmines, the few legal restrictions on the use of cluster munitions were derived from IHL, which intended to protect non-combatants, but appeared to be insufficient to achieve that goal. This is why in 2000, the ICRC called on states to strengthen the law in this area by negotiating a new protocol to the CCW on "explosive remnants of war" (ERW). The purpose was to reduce the threat posed by UXO found after the end of active hostilities. After three years of negotiation, on 28 November 2003, the states parties to the CCW adopted Protocol V on Explosive Remnants of War, which was the first multilateral agreement to deal with the wide range of unexploded and abandoned ordnance that regularly threaten civilians, peacekeepers and humanitarian workers after the end of an armed conflict. Protocol V entered into force on 12 November 2006 and has 91 states parties as of 1 December 2016.

However, like for landmines, some of the many states that produced, stockpiled, used or transferred cluster munitions wanted to retain some possible uses for them and opposed a full prohibition. In Protocol V, eventually the main burden of responsibility to clear landmines paradoxically fell on the affected states, while users of mines only agreed to provide some qualified assistance to them in the clearance process. Moreover, because no user state could guarantee that cluster munitions would be used only against military objects and would not leave unexploded ordnance, the effectiveness of Protocol V was questioned. This is why CSOs launched a new campaign in order to pursue these weapons' total prohibition.

The Cluster Munition Campaign (CMC), formed in November 2003, included both large worldwide organisations and nationally based organisations and campaigns. After lobbying the ICRC, the UN Secretariat and some states that had been frustrated by the limited results achieved in Protocol V to the CCW, the CMC convinced Norway to launch a governmental process to negotiate a complete ban.

As a result, the Convention on Cluster Munitions (CCM) was adopted in Dublin on 30 May 2008 and opened for signature in Oslo on 3-4 December 2008. In its preamble, states parties declared that they were "Determined to put an end for all time to the suffering and casualties caused by cluster munitions at the time of their use, when they fail to function as intended or when they are abandoned", and

> Concerned that cluster munition remnants kill or maim civilians, including women and children, obstruct economic and social development, including through the loss of livelihood, impede post-conflict rehabilitation and reconstruction, delay or prevent the

> return of refugees and internally displaced persons, can negatively impact on national and international peace-building and humanitarian assistance efforts, and have other severe consequences that can persist for many years after use.

The main obligation of the CCM is

> never under any circumstances to: (a) use cluster munitions; (b) develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, cluster munitions; (c) assist, encourage or induce anyone to engage in any activity prohibited to a state party.

The Convention entered into force on 1 August 2010, and as of 1 August 2016, it has a total of 100 states parties and 19 signatories.

In 2011, having succeeded in achieving their goals, the ICBL and CMC merged into a single umbrella organisation in order to continue campaigning for the universalisation of the Ottawa and Oslo conventions, and their effective implementation. Indeed, because neither convention includes any compliance or enforcement mechanism apart from a regular review cycle by states parties, monitoring and lobbying on the part of CSOs remains crucial for ensuring that states abide by their commitments.

The six years since the entry into force of the CCM is too short a period to witness dramatic changes on the ground. However, at the 2015 Review Conference of the CCM, the ICRC expressed satisfaction that 90 per cent

> of the cluster munitions in States Parties' stockpiles – some 160 million submunitions – have already been destroyed. Contaminated land is being surveyed and cleared in a timely fashion, and determined efforts are being made to assist and rehabilitate cluster munition victims.[30]

Unfortunately, of the 91 countries that stockpiled cluster munitions, over 60 have still not destroyed them; of the 21 users, only seven are party to the CCM; and of the 34 producers, only 17 are party to the Convention. Cluster munitions use has been reported in Libya, South Sudan, Sudan, Syria, Ukraine and Yemen. Some 23 countries are considered to be seriously affected.[31]

2.3 Small arms and light weapons

In a post-Cold War context characterised by renewed action by the UN Security Council, the number of UN peacekeeping operations increased, mostly in internal conflicts. This trend led to growing awareness of the widespread humanitarian impact of the uncontrolled proliferation of and illicit trafficking in SALW. In 1995, the UN Secretary-General called for "practical

disarmament in the context of the conflicts the United Nations is actually dealing with, and of the weapons, most of them light weapons, that are actually killing people in the hundreds of thousands".[32]

A process similar to the dual track observed above for anti-personnel landmines and cluster munitions – one governmental and the other non-governmental – thus began to address SALW, and was called the "Small Arms Process". A UN Panel on Small Weapons called for an "international conference on the illicit arms trade in all its aspects".[33] As a result, the UN General Assembly convened a Group of Governmental Experts (GGE) to prepare for the suggested conference.[34]

In his Millennium Report in 2000, Secretary-General Kofi Annan stated:

> The death toll from small arms dwarfs that of all other weapons systems — and in most years greatly exceeds the toll of the atomic bombs that devastated Hiroshima and Nagasaki. In terms of the carnage they cause, small arms, indeed, could well be described as "weapons of mass destruction".[35]

These historic words dissolved the previously admitted division between conventional weapons and WMD, thus justifying the applicability of humanitarian criteria to all of them. Figures on casualties reinforced the urgent need for action: according to the Small Arms Survey, in 2001, "Even conservative estimates suggest that well over half a million lives are lost to small arms and light weapons each year: some 300,000 in armed conflict and another 200,000 from gun-inflicted homicides and suicides".[36]

After a preparatory process, the UN Conference met in 2001 and adopted the UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects (PoA) on 21 July 2001.[37]

In parallel, as of 1998, the International Action Network on Small Arms (IANSA) was established as a coalition of CSOs campaigning for the humanitarian consequences of the uncontrolled proliferation of SALW to be addressed.[38] But because of the resistance of some states to provisions that might in their view affect the legitimate trade in arms or include unwanted references to human rights, as well as opposition from pro-gun groups, humanitarian considerations eventually remained relegated to the preamble of the PoA.[39]

In that document, UN member states declared that they were

> Gravely concerned about the illicit manufacture, transfer and circulation of small arms and light weapons and their excessive accumulation and uncontrolled spread in many regions of the world, which have a wide range of humanitarian and socio-economic consequences and pose a serious threat to peace, reconciliation, safety, security,

> stability and sustainable development at the individual, local, national, regional and international levels.

They also stated that they were

> Determined to reduce the human suffering caused by the illicit trade in small arms and light weapons in all its aspects and to enhance the respect for life and the dignity of the human person through the promotion of a culture of peace.

Even if the PoA is only a politically binding document, its humanitarian motivation is undeniable, and its effective implementation is likely to improve the welfare of individuals and communities affected by armed violence and conflict. Moreover, as in the case of anti-personnel landmines, CSOs are still playing an active role together with — and sometimes in opposition to — governments to ensure full compliance with states parties' commitments.

In addition, two further instruments emerged in parallel to the PoA and are based on the same motivations:

- The first one is the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition (known as the Firearms Protocol): it was adopted by the UN General Assembly prior to the PoA on 31 May 2001 and entered into force on 3 July 2005. It is meant to supplement the 2000 UN Convention against Transnational Organised Crime and is the only legally binding instrument on small arms at the global level.[40] It provides for a framework for states to control and regulate licit arms and arms flows, prevent their diversion into illegal hands, and facilitate the investigation and prosecution of related offences. In its preamble, states parties declare that they are

  > aware of the urgent need to prevent, combat and eradicate the illicit manufacturing of and trafficking in firearms, their parts and components and ammunition, owing to the harmful effects of those activities on the security of each state, region and the world as a whole, endangering the well-being of peoples, their social and economic development and their right to live in peace.

- The second document is the International Tracing Instrument (ITI):[41] following a recommendation of the 1997 Panel of Experts and a provision of the PoA, in 2002 a GGE addressed the issues of marking, record-keeping, and tracing as tools for fighting the illicit trade in SALW. Eventually, an open-ended working group (OEWG) negotiated a politically binding instrument that was adopted by consensus by the UN General Assembly on 8 December 2005. Its purpose is to enable states to identify and trace, in a timely and reliable manner, illicit SALW; it also seeks to promote and facilitate international cooperation and assistance in marking and tracing to complement and

enhance the effectiveness of existing agreements to address the illicit trade in small arms — notably the PoA. The ITI includes useful definitions of "small arms" and "light weapons".

In 2011 – ten years after the adoption of the PoA – an analysis of 604 national reports indicated a mixed picture of states' implementation of their key commitments regarding SALW (e.g. on control of manufacture, marking, record-keeping, tracing, brokering, stockpile management, surplus stockpiles, criminalisation, etc.).[42] However, in 2015 the Small Arms Survey estimated at 508,000 the annual number of violent deaths between 2007 and 2012, down from 526,000 reported in 2011 for the period 2004-2009. A larger proportion of these deaths were directly related to conflict (70,000 deaths per year, up from 55,000). Firearms were used in 44 per cent of all violent killings, or an annual average of nearly 197,000 deaths for the period 2007-2012.[43]

2.4 The international trade in conventional arms

Another initiative dealing with conventional arms and motivated by humanitarian purposes was launched in the wake of the achievements related to anti-personnel landmines and cluster munitions. In 1997, a group of Nobel Peace Prize laureates led by Óscar Arias advocated an International Code of Conduct on Arms Transfers, arguing that "Indiscriminate weapon sales foster political instability and human rights violations, prolong violent conflicts, and weaken diplomatic efforts to resolve differences peacefully".[44] In November 2000, Arias and other Nobel Peace laureates and NGOs tabled a draft legally binding International Code of Conduct on Arms Transfers at the UN, and one year later a Draft Framework Convention on International Arms Transfers.[45]

Following the previous pattern, a coalition of NGOs was established in November 2003 under the generic name of Control Arms.[46] It included IANSA (the Small Arms Process coalition), as well as global and national organisations. Its priority was to seek champion states in each region to build support for a treaty, and the campaign targeted mass public awareness of the damage caused by the irresponsible arms exports of some producers. By mid-2005, it had succeeded in convincing 55 states at the Biennial Meeting of the UN PoA to call for an arms trade treaty. In July 2006 seven states (Argentina, Australia, Costa Rica, Finland, Japan, Kenya and the United Kingdom (UK)) tabled a draft UN General Assembly resolution "Towards an Arms Trade Treaty (ATT)", which was adopted in December 2006 by 153 member states with 24 abstentions and one vote against (the US, which was still under the George W. Bush administration). In December 2009, after the Obama administration reversed the Bush administration's opposition to a treaty, the UN launched a formal process leading to the ATT negotiating conference in July 2012. During that process, Control Arms and the ICRC lobbied in favour of strong provisions to prevent international arms transfers from being used for serious violations of international human rights law or IHL. A final UN Conference on the ATT

was held in March 2013, but three states objected to the adoption of the Treaty by consensus (Iran, North Korea and Syria). The General Assembly nevertheless adopted the ATT by an overwhelming majority on 2 April 2013 (154 votes in favour, 23 abstentions, three against).[47]

The ATT was rapidly signed by 130 states and reached the threshold of 50 ratifications for entry into force on 24 December 2014. As of 1 January 2017, 91 states are party to it. The humanitarian considerations of the Treaty appear, as in previous instruments, in its preamble: the states parties noted that "development, peace and security and human rights are interlinked and mutually reinforcing", and also recognised "the security, social, economic and humanitarian consequences of the illicit and unregulated trade in conventional arms". They equally bore in mind "that civilians, particularly women and children, account for the vast majority of those adversely affected by armed conflict and armed violence". However, for the first time, in Article I of the Treaty, states parties also included as a provision among the purposes of the ATT those of "Reducing human suffering" and "Contributing to international and regional peace, security and stability".

The main obligation of ATT states parties is that of preventing the transfer of all categories of conventional arms[48] that could be used to violate arms embargoes or arms control treaties, or for the "commission of genocide, crimes against humanity, grave breaches of the Geneva Conventions. … attacks directed against civilian objects or civilians protected as such, or other war crimes". Moreover, states parties need to assess the "potential" (or risk) that arms exports

> (a) would contribute to or undermine peace and security; (b) could be used to: (i) commit or facilitate a serious violation of international humanitarian law; (ii) commit or facilitate a serious violation of international human rights law; (iii) commit or facilitate an act constituting an offence under international conventions or protocols relating to terrorism to which the exporting State is a Party; or (iv) commit or facilitate an act constituting an offence under international conventions or protocols relating to transnational organised crime to which the exporting State is a Party.

In particular, thanks to the insistence of CSOs, the exporting state party, "in making this assessment, shall take into account the risk" of the arms transfers "being used to commit or facilitate serious acts of gender-based violence or serious acts of violence against women and children".

According to the ICRC,

> the Arms Trade Treaty has a solid humanitarian basis. It regulates international transfers of conventional arms, ammunition, and parts and components, with a view, notably, to reducing human suffering. The Treaty subjects arms transfer decisions to humanitarian concerns by forbidding transfers when there is a defined level of risk that war crimes or

> serious violations of international human rights law will be committed. Moreover, a key principle underpinning the Treaty, and explicitly recognised in the text, is the duty of the States to respect and ensure respect for international humanitarian law.[49]

In the view of its civil society initiator, Control Arms, the ATT is "ground-breaking" because it

> is the first time that human rights and humanitarian concerns have been so deeply integrated into a global arms control agreement. ... While certain regional and national export laws did include these considerations others did not. These gaps are what enabled weapons to fall into the wrong hands or be diverted onto black markets. The ATT has helped to level the playing field and close the loopholes used by arms dealers and unscrupulous governments.[50]

It is, of course, too early to witness any direct consequence of the ATT's entry into force. However, the legality of some recent arms transfers, especially to the Middle East, has been questioned by CSOs in their monitoring role.[51]

2.5 Lethal autonomous weapons systems (LAWS)

According to the IHL customary rule embedded in Article 36 of the 1977 Additional Protocol I to the Geneva Conventions, "In the study, development, acquisition or adoption of a new weapon, means or method of warfare", states are "under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by" international law. Precisely because some CSOs were concerned that some autonomous weapons that were being developed — in particular in the US — would not allow any distinction between combatants and non-combatants or protected civilians, they raised this issue.

In 2009, the International Committee for Robot Arms Control, which called for the "prohibition of the development, deployment and use of armed autonomous unmanned systems", was established. It gradually convinced other NGOs to join its cause, and seven organisations formed a coordinated Campaign to Stop Killer Robots in 2012 aimed at securing a pre-emptive prohibition on the development, production and use of fully autonomous weapons.[52]

In a report published in 2012, Human Rights Watch concluded that "fully autonomous weapons would not only be unable to meet legal standards but would also undermine essential non-legal safeguards for civilians". The term "fully autonomous weapon" refers to both (1) weapons systems that are capable of selecting targets and delivering force without any human input or interaction; and (2) those that allow human supervision, but effectively have the same capabilities because that supervision is so limited.[53]

As the result of this initiative, governments were convinced to begin multilateral discussions of this issue within the framework of the CCW. In 2013, the states parties to the CCW agreed

on a mandate for a working group to study the possible implications of this emerging technology. Experts met in 2014, 2015, and 2016, while more civil society personalities and CSOs joined the call for a pre-emptive prohibition of lethal autonomous weapon systems. In December 2016, at the Review Conference of the CCW, the states parties discussed whether to proceed to the negotiation of a new Protocol prohibiting such weapons despite ongoing disagreements on definitions. They could only agree to convene and open-ended GGE related to emerging technologies in the area of LAWS in 2017.

2.6 Use of explosive weapons in populated areas

Explosive weapons include bombs, cluster munitions, grenades, landmines, missiles, mortars, rockets, UXO and IEDs – the latter two of which are subject to legal rules in the CCW. They generally affect an area around the point of detonation, usually through the effects of blast and fragmentation. When explosive weapons are used in populated areas, up to 91 per cent of victims are civilians.[54] In 2012, the five most affected countries were Syria, Iraq, Pakistan, Afghanistan and Nigeria.[55]

In his 2009 report to the Security Council on the protection of civilians in armed conflict, the UN Secretary-General expressed increasing concern that the use of explosive weapons in "densely populated environments inevitably has an indiscriminate and severe humanitarian impact".[56] For its part, in a December 2011 report, the ICRC considered that "due to the significant likelihood of indiscriminate effects and despite the absence of an express legal prohibition for specific types of weapons ... [the use of] explosive weapons with a wide impact area should be avoided in densely populated areas".[57]

In March 2011, a group of humanitarian NGOs launched the International Network on Explosive Weapons, which called "for immediate action to prevent human suffering from the use of explosive weapons in populated areas". It asked states and other actors to

> Acknowledge that use of explosive weapons in populated areas tends to cause severe harm to individuals and communities and furthers suffering by damaging vital infrastructure .... [and to] Develop stronger international standards, including certain prohibitions and restrictions on the use of explosive weapons in populated areas.[58]

Together with the civil society movement, the ICRC convened an expert meeting in 2015 that could not agree on any straightforward conclusions, because "there [were] divergent views on whether existing IHL rules sufficiently regulate the use of explosive weapons in populated areas or whether there is a need to clarify their interpretation or to develop new standards or rules".[59] This was confirmed at the 2015 Meeting of the States Parties to the CCW, which could only "not[e] the concerns raised by some [states] regarding the implementation of existing international humanitarian law, in particular the use of explosive weapons in populated areas".[60]

Nevertheless, the president of the ICRC and the UN Secretary-General launched an unprecedented joint appeal on 31 October 2015 to "Stop the use of heavy explosive weapons in populated areas".[61] Both personalities renewed this call to the UN Security Council on 16 June 2016 on the occasion of the presentation of UN Secretary-General Ban Ki-moon's report on the protection of civilians in armed conflict.[62] But the Security Council only held a debate and did not agree on a resolution.

Here too, such initiatives are too recent to allow findings regarding changes on the ground. But as an indication of the need for action on the use of explosive weapons, in 2013, the Syrian opposition considered that the death toll from "barrel bomb" attacks by the Assad regime throughout Syria had reached 20,000 people since 2011.[63]

3. The humanitarian approach to biological and chemical weapons

As mentioned above, since the end of the Cold War, the humanitarian motivations of arms control, non-proliferation and disarmament were mainly applied to conventional weapons. It is interesting to compare this approach to the genesis of international instruments meant to address two categories of WMD: biological and chemical weapons. Indeed, one can trace the historical origin of such instruments in IHL, which by definition was principally motivated by humanitarian considerations long before the concept of human security was even crafted.

3.1 Biological weapons

Already in the 19th century, in view of the potential dangers entailed by the use of disease as a weapon, not only for soldiers, but mainly for civilians, the major powers decided to exert some control over such a means of warfare.[64] On the initiative of Emperor Alexander II of Russia, on 27 July 1874, 15 European states adopted the Brussels Declaration related to the laws and customs of war, prohibiting, among others, the use of "poison or poisoned weapons".[65] This legal instrument was never ratified, but served as a basis for further agreements such as the Hague Conventions of 1899[66] and 1907,[67] which reiterated this prohibition, this time in a legally binding form. As in many IHL instruments, those conventions mainly consisted of the codification of customary law. At the 1945 Nuremberg Trials, the Hague Convention, including the poison clause, was declared universally applicable. In 1949 it was subsumed into the Geneva Conventions.

After the First World War, which had been marked by the large-scale use of toxic gases as a weapon, the Allied powers initiated several attempts to regulate or prohibit such dangerous weapons. At the 1925 diplomatic conference convened at the League of Nations in Geneva on a Convention for the Supervision of International Trade in Arms, Munitions and Implements of War, France introduced an additional protocol for banning the use in war of toxic gases; this was complemented by Poland, which added bacteriological warfare to the prohibition. Although the Convention itself never entered into force because of a lack of ratifications, the Geneva Protocol, officially named the Protocol for the Prohibition of the Use in War of Asphyxiating and Poisonous or Other Gases, and of Bacteriological Methods of Warfare,[68] was signed on 17 June 1925 and entered into force on 8 February 1928; to date it has 140 states parties.

The prohibition applied to what was called "bacteriological means of warfare". Indeed, at that time, only bacteria (such as anthrax) were scientifically known for their destructive power. Later, when new living pathogens such as viruses (e.g. smallpox), rickettsiae (Q fever), chlamydia and fungi were also discovered, they were included into the generic term of biological agents that could be used as weapons. In 1925, the US representative supported this prohibition, stating that "Bacteriological warfare is so revolting and so foul that it must meet with the condemnation of all civilized nations".[69]

However well intended, this prohibition was weak because it only applied to "use in war", i.e. in armed conflict between states; it did not prevent states from developing, possessing or transferring such weapons; and it allowed reservations legitimising any use of such weapons in in-kind retaliation or in response to attacks by states not party to the Protocol.

This is why it was felt necessary to introduce a new legal instrument as a disarmament treaty prohibiting the development, production and stockpiling of biological weapons. This was done in 1972 with the Biological and Toxin Weapons Convention (BWC), which opened for signature on 10 April 1972 and entered into force on 26 March 1975. As of 1 December 2016, it has 178 states parties and six signatories. Although as a disarmament treaty the BWC includes clear provisions prohibiting states parties from "develop[ing], produc[ing], stockpil[ing] or otherwise acquir[ing] or retain[ing]" and "transfer[ring]" biological weapons, as well as obligations to destroy any existing stockpiles, in its preamble states parties declared themselves "Determined, for the sake of all mankind, to exclude completely the possibility of bacteriological (biological) agents and toxins being used as weapons" and "Convinced that such use would be repugnant to the conscience of mankind and that no effort should be spared to minimise this risk".

While the initiators of the BWC intended to produce a fully fledged prohibition, no verification measure was included in its provisions. Indeed, it was felt at that time that it would be fairly easy to track the origin of any use of biological weapons by a state. However, even in the context of the Cold War, these initiators did not suspect that some states parties would continue with or begin the clandestine development and production of pathogens to be weaponised, often under the disguise of scientific research. Russia admitted in 1992 that programmes of this kind had been carried out by the Soviet Union, one of the BWC's depositary states.[70]

Government efforts to negotiate a verification protocol for the BWC failed, mainly because of US opposition and technical challenges. However, in its stead, a process of annual meetings was instituted in 2001 between the Convention's Review Conferences, attended by government and civil society representatives, as well as scientific experts and representatives of industry. The synergies that have subsequently developed allowed the in-depth discussion of issues related to human security such as biosecurity and biosafety, codes of conduct for scientists, criminal legislation, the impact of export controls on economic development, etc.[71]

No state, even not party to the 1925 Geneva Protocol and/or the BWC, officially admits to possessing or developing biological weapons. This is a sign of how "repugnant to the conscience of mankind" any use of biological weapons would be, because they would not discriminate between combatants and civilians, or in certain circumstances would only target the latter. Full compliance with the prohibition is, of course, difficult to assess in the absence of a verifi-

cation system, and some suspicions are occasionally voiced regarding possible research into and development or stockpiling of offensive biological agents by some countries.[72] However, thanks to the so-called "inter-sessional process" of annual meetings of states parties (referred to above), a strong consensus has emerged against any intentional use of pathogens as weapons.

Information has emerged about attempts by non-state actors to resort to such weapons in terrorist or criminal attacks, as in the case of the Japanese cult Aum Shinrikyo.[73] Whenever such attempts have been successful, they have caused limited casualties. To date, terrorist or criminal groups have found it more affordable and effective to resort to conventional weapons and explosives than to use biological weapons. Because the biological risk includes the whole spectrum from natural outbreaks to deliberate, hostile use, societies have developed detection systems, immunisation measures, and other protective public health measures that have also probably made this means of warfare less attractive. The bioterrorist risk still remains, but is difficult to assess with accuracy, as a US Congressional Research Service study admitted:

> Unfortunately, the nature of the bioterrorism threat, with its high consequences and low frequency, makes determining the bioterrorism risk difficult. Additionally, the presence of an intelligent adversary who can adapt to the presence of successful countermeasures complicates the use of standard assessment techniques.[74]

3.2 Chemical weapons

As recalled above, the IHL initiative to prohibit the use of poison in war, and then chemical weapons, dates back to the 19th century. The 1874 Brussels Convention prohibited the employment of "poison or poisoned weapons", and the use of arms, projectiles or material that would cause unnecessary suffering.[75] Later, the states parties to the 1899 Hague Conventions committed to abstain from the "use of projectiles, the sole object of which is the diffusion of asphyxiating or deleterious gases". This obligation was included in the rules of warfare codifying customary law in the 1907 Hague Regulations (Art. 23 A). In the preamble of this instrument, states parties declared that they were "Animated by the desire to serve, even in this extreme case [i.e. war], the interests of humanity and the ever progressive needs of civilization".[76]

These efforts were renewed after the large-scale battlefield use of chemical weapons in the First World War, which caused some 1.2 million military casualties, including over 90,000 deaths,[77] but also some 100,000-260,000 civilian casualties.[78] The latter were caused by the indiscriminate character of toxic gases, which often contaminated populated areas.

As in the case of biological weapons, the prohibition of the use of chemical weapons was enshrined in the 1925 Geneva Protocol (see sec. 3.1, above). The humanitarian motivation of the Protocol is evidenced in its preambular language: any use in war of chemical weapons "has been justly condemned by the general opinion of the civilized world", and their prohibition should bind "alike the conscience and the practice of nations".

However, this prohibition was weakened by the flaws and limitations of this legal instrument. This is why, following the prohibition of biological weapons in the 1972 BWC, the international community began to negotiate a fully fledged prohibition of chemical weapons at what would then become the Geneva Conference on Disarmament. In 1984 the US tabled a draft treaty that included an intrusive verification regime. The use of chemical weapons in the 1980-1988 war between Iran and Iraq gave a final impulse to the conclusion of the negotiations. The Chemical Weapons Convention was adopted by the UN General Assembly in December 1992 and entered into force on 29 April 1997. As of 1 December 2016, it has 192 states parties and one signatory (Israel).

Although the CWC can clearly be described as a disarmament treaty (with non-proliferation provisions), its humanitarian motivations are recalled in its preamble. Its states parties declared that they were "Determined, for the sake of all mankind, to exclude completely the possibility of the use of chemical weapons" and they considered that "achievements in the field of chemistry should be used exclusively for the benefit of mankind".

Moreover, the implementation of some of its provisions is intended to have an undeniable humanitarian impact. Under Article I (3), "Each State Party undertakes to destroy all chemical weapons it abandoned on the territory of another State Party". Under Article X, "Each State Party has the right to request and ... to receive assistance and protection against the use or threat of use of chemical weapons". This is similar to the obligations of assistance contained in Article 6.3 of the Anti-personnel Landmine Convention or Article 6 of the CCM.

Since the CWC's entry into force in 1997, it is undeniable that the risk of the use of chemical weapons has dramatically been reduced. Some 98 per cent of the world's population is covered by the prohibition; as of December 2016 some 93 per cent of the world's declared stockpile of 72,525 metric tonnes of chemical agent have been verifiably destroyed; over 60 per cent of the 8.67 million chemical munitions and containers covered by the CWC have been verifiably destroyed; and 93 per cent of the declared chemical weapons production facilities have been inactivated.[79] Only four states still remain outside the CWC (Egypt, North Korea, Palestine and South Sudan). The use of chemical weapons in the Syrian civil war prompted the accession of Syria to the Convention in 2013 and the destruction of its stockpiles. However, sporadic cases of attacks with toxic chemicals continue to be reported in Syria, and a joint UN and Organisation for the Prohibition of Chemical Weapons report attributed responsibil-

ity for them to both the Syrian regime and the so-called Islamic State.[80] In March 2016, the Syrian-American Medical Association estimated that some 1,500 people had died from such attacks since the beginning of the civil war in 2011, and noted that "The fear caused by these silent and unpredictable weapons cause[d] civilians to flee in larger numbers than in the aftermath of conventional attacks".[81]

4. The humanitarian approach to nuclear weapons

As a logical consequence of the humanitarian approach to biological and chemical weapons, which led to their prohibition, and of the humanitarian approach to conventional weapons, which justified the prohibition of some and the strict regulation of others, some CSOs began to advocate a similar approach to nuclear weapons.[82] Indeed, nuclear weapons are considered as potentially the most dangerous category of WMD, capable of causing massive civilian casualties, as demonstrated by the two atomic bombs dropped on Hiroshima and Nagasaki in August 1945. It is estimated that those two separate attacks caused the immediate deaths of some 105,000 people and wounded some 94,000 more, mostly civilians, mainly from burns, falling debris or irradiation.[83] By November 1945, the death toll of both explosions is said to have reached some 200,000, and even seven decades later, many after-effects remain among survivors: cancer, cataracts, birth defects of children, etc.[84] Additionally, of the 2,120 nuclear weapons tests carried out between 1945 and 2016, some 500 occurred in the atmosphere, causing an unknown number of victims that some estimate to be up to ten million.[85] In the US, an official study estimated that nuclear fallout might have led to approximately 11,000 deaths, most of which were caused by thyroid cancer.[86] Another study found evidence that some 33,480 Americans had died as a result of exposure to radiation and other toxic materials used in the manufacture of nuclear weaponry.[87]

During the Cold War, the international debate about nuclear weapons evolved mainly around the concept of national security, which nuclear deterrence was meant to protect, as well as arms control, non-proliferation and disarmament. Even then, however, some CSOs raised the possible catastrophic humanitarian consequences of any detonation of nuclear weapons. As the guardian of IHL, the ICRC initiated a resolution at the 1948 Stockholm International Red Cross Conference by

> noting that the use of non-directed weapons which cannot be aimed with precision or which devastate large areas indiscriminately, would involve the destruction of persons and the annihilation of the human values which it is the mission of the Red Cross to defend, and that use of these methods would imperil the very future of civilisation.

Accordingly, the conference requested "the Powers solemnly to undertake to prohibit absolutely all recourse to such weapons and to the use of atomic energy or any similar force for purposes of warfare".[88]

In 1950, the ICRC declared:

> With atomic bombs and non-directed missiles, discrimination becomes impossible. Such arms will not spare hospitals, prisoner-of-war camps and civilians. Their inevitable consequence is extermination, pure and simple. Furthermore, the suffering caused by the atomic bomb is out of proportion to strategic necessity; many of its victims die as a result of burns after weeks of agony, or are stricken for life with painful infirmities.

> Finally, its effects, immediate and lasting, prevent access to the wounded and their treatment .... The [ICRC requests all states] to take ... all steps to reach an agreement on the prohibition of atomic weapons, and in a general way, of all non-directed missiles.[89]

Among CSOs, the movement in favour of nuclear disarmament was affected by sporadic mobilisation and allegations of instrumentalisation by the Soviet Union. Nonetheless, it often resorted to humanitarian arguments against nuclear weapons, such as those promoted by scientists of the Pugwash Conferences on Science and World Affairs, created in 1957; peace activists of the UK Campaign for Nuclear Disarmament, which was also launched in 1957; the World Peace Council, founded in 1949 (and initiator of the 1950 Stockholm Appeal); or environmentalists from Greenpeace, which was established in 1971.

At the inter-governmental level, nuclear disarmament was on the agenda from the early days of the UN's existence. The very first resolution of the UN General Assembly established a Commission to Deal with the Problem Raised with the Discovery of Atomic Energy, which was mandated to make "specific proposals ... for the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction".[90] However, these efforts failed to prevent states other than the US from acquiring nuclear weapons (the Soviet Union in 1949, the UK in 1954, France in 1960, China in 1964, Israel in 1967, India in 1974, South Africa in 1979, Pakistan in 1998 and North Korea in 2006).

Apart from the general references to humanitarian concerns in the preambles of treaties mentioned in Section 1 of this paper, during the Cold War some debate took place among scientists regarding the possible "nuclear winter" effect of nuclear war, but it was controversial and did not convince the public to campaign actively against nuclear weapons.[91]

After the end of the Cold War, two major developments occurred. Firstly, on 8 July 1996, the International Court of Justice (ICJ) issued its Advisory Opinion on the following question: "Is the threat or use of nuclear weapons in any circumstance permitted under international law?"[92] The ICJ concluded unanimously that

> A threat or use of nuclear weapons should ... be compatible with the requirements of the international law applicable in armed conflict, particularly those of the principles and rules of international humanitarian law, as well as with specific obligations under treaties and other undertakings which expressly deal with nuclear weapons.

The majority of its judges considered 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 the principles and rules of international humanitarian law".

The ICJ declared that

> in view of the current state of international law, and of the elements of fact at its disposal, 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.

In response, the ICRC made an important statement to the UN General Assembly on 19 October 1996:

> We were pleased to see the reaffirmation of ... the absolute prohibition of the use of weapons that are by their nature indiscriminate as well as the prohibition of the use of weapons that cause unnecessary suffering. We also welcome the Court's emphasis that humanitarian law applies to all weapons without exception, including new ones .... It is our earnest hope that the opinion of the Court will give fresh impetus to the international community's efforts to rid humanity of this terrible threat.[93]

The second development was that, thanks to new scientific findings regarding the potential effects of climate change, as well as new technologies and models, some studies reassessed the impact of even limited exchanges of nuclear weapons in a regional conflict. They concluded that, in addition to direct victims, this impact would include massive smoke clouds that would block sunrays; this in turn would devastate food crops and lead to worldwide famine, with up to two billion victims.[94] These findings, combined with the mobilisation of civil society on humanitarian approaches to conventional weapons and on responses to climate change, also created favourable conditions for its mobilisation on humanitarian approaches to nuclear weapons.

Initiated in 2006 by International Physicians for the Prevention of Nuclear War (the winner of the 1985 Nobel Peace Prize), the International Campaign to Abolish Nuclear Weapons (ICAN) was launched in Vienna in 2007.[95] As a global coalition of NGOs, it called on states, international organisations, CSOs and other actors to acknowledge that

> any use of nuclear weapons would cause catastrophic humanitarian and environmental harm; there is a universal humanitarian imperative to ban nuclear weapons, even for states that do not possess them; the nuclear-armed states have an obligation to eliminate their nuclear weapons completely[,]

and thus to "Take immediate action to support a multilateral process of negotiations for a treaty banning nuclear weapons".

As a result of ICAN's outreach efforts to governments, and with the support of some states that championed the initiative (Norway, New Zealand, Mexico, South Africa and Switzerland), the states parties to the NPT at the 2010 Review Conference in New York for the first time "expresse[d their] deep concern at the continued risk for humanity represented by the possibility that [nuclear] weapons could be used and the catastrophic humanitarian consequences that would result from the use of nuclear weapons".[96] Unsurprisingly, there was no consensus on the logical consequence of this recognition, i.e. on the necessity to prohibit nuclear weapons. However, taking advantage of the momentum thus created, CSOs convinced an increasing number of governments to support their humanitarian approach to nuclear disarmament. At the UN, two processes were launched:

- Firstly, on Switzerland's initiative, a "Statement on the Humanitarian Dimension of Nuclear Disarmament" was adopted by 35 member states on 22 October 2012, calling for "All states to intensify their efforts to outlaw nuclear weapons and achieve a world free of nuclear weapons", and noting that "Civil society plays a crucial role in raising the awareness about the devastating humanitarian consequences as well as the critical IHL implications of nuclear weapons".[97] When this statement was reiterated in 2013, it was supported by 125 states, and in 2014 by 155 states.

- Secondly, in 2012, the General Assembly decided to convene an OEWG to "develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons". The OEWG met in 2013, with a mix of governmental and civil society representatives, and adopted a final report addressing the humanitarian impact of nuclear weapons.[98] Furthermore, in December 2015, the General Assembly decided to establish a second OEWG to address "concrete effective legal measures, legal provisions, and norms that will need to be concluded to attain and maintain a world without nuclear weapons". The OEWG met in 2016 and held an extensive discussion of the humanitarian consequences of nuclear weapons and the possible means to fill the "legal gap" related to their prohibition. A majority of participants supported the launch of a negotiation of a nuclear weapons ban in 2017. The report of the OEWG was welcomed by the UN General Assembly (UNGA) in the fall of 2016, and on 24 December 2016 the UNGA adopted Resolution A/RES/71/258 in which it decided to launch the negotiation of a "legally binding instrument to prohibit nuclear weapons, leading towards their total elimination" in March 2017.[99] None of the nuclear-armed states participated in any of the OEWG's discussions, and none except North Korea supported the resolution on a nuclear weapons ban.

In parallel, the "humanitarian initiative" launched by CSOs had led to the convening of three unprecedented large-scale meetings attended by representatives of both governments and NGOs:

- In Oslo on 4-5 March 2013: the Norwegian foreign minister emphasised that "The effects of a nuclear weapon detonation, irrespective of cause, will not be constrained by national borders, and will affect states and people in significant ways, regionally as well as globally".[100]

- In Nayarit (Mexico) on 13-14 February 2014: the Mexican chairperson concluded that

> As more countries deploy more nuclear weapons on higher levels of combat readiness, the risks of accidental, mistaken, unauthorized or intentional use of these weapons grow significantly .... In the past, weapons have been eliminated after they have been outlawed. We believe this is the path to achieve a world without nuclear weapons.[101]

- In Vienna on 8-9 December 2014: the Austrian chairperson's summary noted that "The new evidence that has emerged in the last two years about the humanitarian impact of nuclear weapons casts further doubt on whether these weapons could ever be used in conformity with IHL" and that "Many delegations stressed the need for security for all and underscored that the only way to guarantee this security is through the total elimination of nuclear weapons and their prohibition".[102]

On the occasion of the Vienna meeting, 66 states endorsed the "Austrian Pledge" to fill the legal gap and move towards the prohibition of nuclear weapons. Later, at the 2015 NPT Review Conference, and renamed the "Humanitarian Pledge", it received the support of 107 states. On 7 December 2015, the UN General Assembly adopted the pledge with Resolution 70/48 by 127 votes in favour.[103] It "Appeals to all States to follow the imperative of human security for all and to promote the protection of civilians against risks stemming from nuclear weapons", and it

> Calls upon all relevant stakeholders, States, international organisations, the International Red Cross and Red Crescent Movement, parliamentarians and civil society to cooperate in efforts to stigmatize, prohibit and eliminate nuclear weapons in the light of their unacceptable humanitarian consequences and associated risks.

5. Conclusion: challenges and prospects

As we have seen, despite limitations (in the universality of treaties and compliance with obligations), the concept of human security and the humanitarian approaches to disarmament, whether referring to conventional armaments or WMD, have increasingly gained traction and are now dominating the international scene. Some experts go as far as claiming that they gave rise to humanitarian security regimes, which they define as regimes "driven by altruistic imperatives aiming to prohibit and restrict behaviour, impede lethal technology or ban categories of weapons through disarmament treaties". Such regimes "embrace humanitarian perspectives that seek to prevent civilian casualties, precluding harmful behaviour, protecting and ensuring the rights of victims and survivors of armed violence".[104] For its part, the UN Institute for Disarmament Research (UNIDIR), from the early 2000s, had done pioneering work in rethinking the relationship between, on the one hand, multilateral negotiations in disarmament and arms control and, on the other hand, humanitarian action. In 2004, its research project entitled "Disarmament as Humanitarian Action: Making Multilateral Negotiations Work" was based on the recognition that a greater humanitarian focus was relevant to disarmament and arms control processes, and sought to develop practical proposals on how humanitarian perspectives can be applied in functional terms to assist negotiators.[105]

However, despite being deep-rooted and supported by civil society, the initiative to apply the humanitarian paradigm to nuclear weapons is meeting strong resistance from nuclear-armed states and states protected by a nuclear umbrella (or extended nuclear deterrence). Only India and Pakistan participated in the three humanitarian consequences conferences, while the US and the UK only sent representatives and China sent an "academic" to the Vienna conference. At the 2015 NPT Review Conference, a fundamental disagreement arose, among other things, on the negotiation of a ban treaty as a logical consequence of the humanitarian approach, and no final document was adopted.[106] Regarding the UNGA resolution launching the negotiation of a nuclear weapons ban, some 35 states voted against, including five nuclear-armed states (France, Israel, Russia, UK, US) and all NATO members (except Albania, Italy and the Netherlands) as well as Australia and Japan, while 13 upstained (including China, India, and Pakistan).[107]

Some analysts explain this resistance by the fact that

> possessor states and those allied with them characterize nuclear weapons as strategic tools, symbols and an "ultimate guarantee of security" .... The nuclear-weapon states ... still accept the basic principle that the threat to use nuclear weapons is an acceptable strategic doctrine, despite broad recognition that their devastating effects can never be confined by geography and therefore represent a threat to global security and to people everywhere.[108]

This is confirmed by the statement made at the 2015 NPT Review Conference by the UK delegate on behalf of the five NPT nuclear-weapon states:

> We underline the need to pursue further efforts in the sphere of nuclear disarmament ... in a manner that promotes international stability and security. We stress that addressing further prospects for nuclear disarmament would require taking into account all factors that could affect global strategic stability. ... While we continue to work towards our common goal of nuclear disarmament, we affirm that our nuclear forces should be maintained at the lowest levels needed to meet national security requirements. ... We are ever cognizant of the severe consequences that would accompany the use of nuclear weapons. We affirm our resolve to prevent such an occurrence from happening.[109]

Thus, a major discrepancy persists between those who argue that a prohibition of nuclear weapons is needed to achieve these weapons' elimination because of their humanitarian impact, and those in favour of a step-by-step reduction of nuclear arsenals leading to their eventual elimination and prohibition, on the basis of security needs. The divide may become even deeper when the negotiation of a legal ban on nuclear weapons is achieved. Indeed, nuclear-weapon states have already declared that they would not participate in such negotiations. To the argument that actual nuclear disarmament requires the inclusion and commitments of possessor states, the proponents of the humanitarian approach reply that a ban "could blunt or even reverse the incentive to possess nuclear weapons, and would fundamentally withdraw the implicit recognition of certain states as being entitled to possess them".[110]

Another argument used to justify nuclear deterrence is that nuclear weapons are so horrific that they cannot be used. This could also have been said about chemical and biological weapons, but it did not prevent them from being used – and therefore later prohibited. No state can give the absolute guarantee that nuclear deterrence will always work and that there can never be any unauthorised, accidental or terrorist nuclear explosion. Nuclear weapons are also said to be different from the conventional weapons that have been prohibited because of their humanitarian consequences, but it is now evident that nuclear weapons would have even more devastating impacts, particularly on innocent civilians beyond military targets, including among the populations of the states using them.

To some "realists", the humanitarian approach may seem utopian or naive – if not downright risky. It has, however, already succeeded in leading the international community no longer to address nuclear weapons from a zero-sum-game national security viewpoint only, but increasingly through a human security lens.

In the recent debate in the UK Parliament on the renewal of the Trident missile programme, to the question "Is [the prime minister] personally prepared to authorise a nuclear strike that can kill a hundred thousand innocent men, women and children?", UK prime minister Theresa May replied, "Yes ... the whole point of a deterrent is that our enemies need to know

that we would be prepared to use it".[111] At least, the question could no longer be eluded.

Supporters of the humanitarian approach may find hopeful arguments in favour of their case in President Barack Obama's statement at Hiroshima, which does not contain any reference to security, but five humanitarian references:

> [We must] define our nations not by our capacity to destroy but by what we build. And perhaps, above all, we must re-imagine our connection to one another as members of one human race. ... That is a future we can choose, a future in which Hiroshima and Nagasaki are known not as the dawn of atomic warfare but as the start of our own moral awakening.[112]

They may also recall the words of Mikhail Gorbachev on the 30th anniversary of the 1986 Reykjavik summit: "a nuclear weapon-free world is not a utopia, but an imperative necessity."[113] What will happen under a Donald Trump presidency is still uncertain, but the adoption of a nuclear weapons ban treaty would no doubt create a new world environment in which at least one cause of the possible extinction of the human race had been removed.

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Abbreviations and acronyms

ATT	Arms Trade Treaty
BWC	Biological Weapons Convention (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)
CCM	Convention on Cluster Munitions
CCW	Convention on Certain Conventional Weapons (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)
CMC	Cluster Munition Campaign
CSO	Civil society organisation
CWC	Chemical Weapons Convention (Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction)
ERW	Explosive remnant of war
EU	European Union
GGE	Group of Governmental Experts
IANSA	International Action Network on Small Arms
ICAN	International Campaign to Abolish Nuclear Weapons
ICBL	International Campaign to Ban Landmines
ICJ	International Court of Justice
ICRC	International Committee of the Red Cross
IED	Improvised explosive device
IHL	International humanitarian law
ITI	International Tracing Instrument
LAWS	Lethal Autonomous Weapon Systems
NGO	Non-governmental organisation
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
OEWG	Open-ended Working Group
PoA	Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects

SALW	Small arms and light weapons
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
US	United States
UXO	Unexploded ordnance
WMD	Weapons of mass destruction

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