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Lessons from Protocol IV on Blinding Laser Weapons for the Current Discussions about Autonomous Weapons

A Memorandum to Convention on Conventional Weapons Delegates

**Mines Action Canada
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Introduction

In November 2013, the High Contracting Parties of the Convention on Conventional Weapons (CCW) agreed to hold informal international discussions on “questions related to emerging technologies in the area of lethal autonomous weapons systems” in May 2014. This agreement is an important first step towards a potential ban on weapons that would be able to identify and select targets on their own, without meaningful human intervention. The 1980 Convention on Conventional Weapons is an umbrella agreement that provides a framework for elaborating prohibitions or restrictions on the use of certain conventional weapons, in the form of protocols annexed to the Convention. At present 117 states are parties to the CCW. For humanitarian reasons, the treaty and its attached protocols focus on weapons that are deemed to cause “unnecessary or unjustifiable suffering to combatants or to affect civilians indiscriminately.”ⁱ At present, there are five additional protocols attached to the treaty including Protocol IV, a pre-emptive international ban on blinding laser weapons. This memo outlines how the High Contracting Parties achieved a pre-emptive ban on blinding laser weapons and clarifies the links between that process and the current discussions on fully autonomous weapons systems.

Protocol IV Process

Discussions on instituting a ban on lasers that have the capacity to blind began in the mid-1970s. Sweden expressed concern about the issue at meetings of the International Committee of the Red Cross at Lucerne and Lugano under the auspices of “Future Weapons” and “New Weapons” respectively. They made the argument that the use of lasers to blind enemy combatants would lead to unnecessary suffering on the part of enemy soldiers and should be therefore unlawful under customary international law.ⁱⁱ The conversation at these meetings included concerns about the humanitarian impact of such weapons but there was debate about the likelihood of laser weapons being created and used. These discussions failed to gather any significant support for a ban.ⁱⁱⁱ

Sweden continued to pursue the issue including at the initial negotiations of the Convention on Conventional Weapons. At the 25th International Conference of the Red Cross in October 1986, Sweden was joined by Switzerland in calling for a ban on blinding lasers.^{iv} The ICRC chose to host a series of four meetings of experts from 1989-1991 which ultimately resulted in the publication of several documents exploring the issue.^v These reports were important to establishing blinding lasers as a subject for consideration in the CCW.

Following these meetings of the experts hosted by the ICRC, Human Rights Watch and several experts in the field of lasers released statements and reports supporting the ban.^{vi} In particular, the Human Rights Watch Arms Project issued two reports in 1995 outlining justifications for a ban.

There was broad support for a ban from civil society on a moral and legal basis. The organizations that publicly stated their support included national and international veterans associations, medical associations and associations related to blindness.^{vii} The moral and legal argument was grounded in the principle that the means and methods of warfare are not unlimited, which had been widely recognized over the past century. Numerous legal and normative restrictions have limited the means of warfare. Of special importance to the Protocol IV discussions was the Martens Clause, which appears in several important international instruments, including the preamble to the CCW. As it appears in the 1977 Additional Protocol to the Geneva Conventions, the Martens Clause states, “In cases not covered by this Protocol or by other international agreements, civilians and combatants 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.”^{viii} The civil society advocates for a ban and experts at the ICRC meetings stated that blinding lasers were contrary to the dictates of public conscience. The Martens Clause means that weapons contrary to public conscience should not be used even if no specific prohibition exists yet.

In February 1993, France requested that the Secretary General of the United Nations convene a Review Conference for the Convention on Conventional Weapons to work on landmines. This was an opportunity for Sweden, Switzerland, the ICRC and others to put forward discussion about blinding lasers. By the end of the preparatory meetings for the Review Conference, Sweden and the ICRC had garnered significant international support for an additional protocol with the notable exception of a few major military powers.^{ix} Many states had begun to seriously consider the issue of blinding lasers due to the work of the ICRC and nongovernmental organizations and due to the further development of the technology.

Some states opposed the idea that blinding by lasers caused unnecessary suffering because of concerns that this might limit the use of other types of lasers on the battlefield. The United States in particular noted there were other reasons lasers are employed such as those used for weapons guidance. In the face of this objection, Sweden and others agreed that the ban would be limited to anti-personnel weapons. This limitation on the ban helped reduce states’ concerns and allowed many of the major military powers to adopt the ban.^x

At the opening of the Review Conference on September 24, 1995 the High Contracting States established Committee III, the Laser Working Group to consider the preparatory work done at the meeting of the experts prior to the Review Conference. The Committee met officially four times and had additional informal meetings to resolve issues with language among interested parties.^{xi} As the review conference progressed, states which were expected to oppose a ban on blinding lasers remained silent. The committee forwarded a near complete document to the Drafting Committee, chaired by Canada’s Mark Mahon on October 12, 1995. The document was subsequently agreed upon the following day October 13, 1995.^{xii} Protocol IV entered into force on the 30th of July 1998 after 20 ratifications were achieved.

Relevancy to Current Discussions on Autonomous Weapons Systems

Protocol IV has a number of parallels to the CCW's discussion of lethal autonomous weapon systems. At the most basic level, Protocol IV is a pre-emptive legal instrument that prevented human suffering before the weapons were fully developed and deployed. Even before the weapons were used, the High Contracting Parties recognized that blinding lasers would cause unnecessary suffering and were contrary to the public conscience. The desire to avoid an arms race also contributed to support for Protocol IV. By instituting a pre-emptive ban, states prevented the mass proliferation of blinding laser weapons.

Similarly, fully autonomous weapons raise grave concerns about human suffering, and run counter to the principles of humanity and the dictates of public conscience. The Campaign to Stop Killer Robots is advocating for a pre-emptive legal instrument to prevent human suffering before fully autonomous weapons systems are developed and deployed. A pre-emptive ban will prevent the proliferation of fully autonomous weapons. Protocol IV demonstrates clearly that the Convention on Conventional Weapons can accommodate pre-emptive bans.

Beyond the pre-emptive nature of Protocol IV, there are other aspects of the process that are relevant to the discussion of autonomous weapons systems. Although the topic of blinding laser weapons had been discussed on and off since the 1970s, the CCW discussions began at a time when the world was poised to delve headlong into the development and proliferation of these new weapons. A Human Rights Watch report, published just before the CCW negotiations, stated that the "international community is at a crucial juncture in the research, development and acquisition of blinding laser weapons. If steps are not taken soon to prohibit these systems, the prospect of rapid and widespread proliferation - is very real."^{xiii} We are currently at a similar point in the development of fully autonomous weapons systems. Robotists, scientists and others are concerned that we are on the edge of a slippery slope toward fully autonomous weapons. Now is the time to discuss this issue in the CCW and ensure that we never start down the slope towards the delegation of life and death decisions to armed machines.

Like the advocates for Protocol IV, the Campaign to Stop Killer Robots is strictly concerned with the humanitarian impacts of weaponizing new technology. Protocol IV has not prevented the development of laser technology nor has it prevented military use of lasers; the Protocol merely preemptively bans combat lasers that are designed to blind people permanently. The Campaign the Stop Killer Robots takes a similar view of robotics. The weaponization of fully autonomous robots is problematic, while the use of autonomous robots for other purposes, even other military purposes, is not dealt with under this campaign.

Finally, Protocol IV and the focus of the discussions that led to it are quite illuminating. The military or strategic considerations, such as if and when blinding weapons could be used on the battlefield, were put aside because of the overwhelming humanitarian and health impacts of possible use. In regards to the present discussion on fully autonomous weapons systems, it may be tempting to engage in long discussions about when, if and where fully autonomous weapons systems will be first deployed or the military utility of possible autonomous weapons but that should not overshadow the more important discussion of what the use of these weapons systems could mean. The humanitarian, ethical and legal impacts of fully autonomous weapons systems

will persist regardless of when they are deployed or what utility they may have just as the humanitarian and health impacts of blinding lasers were not dependant on when the weapons would be deployed. The focus should be on the humanitarian, ethical and legal issues associated with autonomous weapons.

Key lessons from Protocol IV

- **Pre-emptive bans of weapons are not new**
Weapons have been banned prior to their use on the battlefield before through Protocol IV of the CCW and the 1868 St. Petersburg Declaration banning exploding bullets.
- **Weapons can be banned due to the public revulsion to their use**
When a weapon or method of warfare runs counter to the principles of humanity and the dictates of public conscience an absolute and pre-emptive ban is necessary and achievable.
- **Pre-emptive bans can work**
The conclusion of Protocol IV halted the development of US and Chinese blinding laser weapons. Blinding laser weapons have not been used in any conflict situation.
- **Pre-emptive bans do not prevent the development of technology for civilian and related military applications**
Lasers are still employed by militaries in many roles. Lasers have also been further adapted to a variety of peaceful civilian uses.
- **ICRC and Non-Governmental Organizations are valuable to the process**
The ICRC, Human Rights Watch and various other organizations provided important expertise and background on the issue. These organizations provided valuable support to the Protocol by fostering discussion on the technical, legal and moral implications of blinding laser weapons.

ⁱ United Nations Office at Geneva, "The Convention on Certain Conventional Weapons."

[http://www.unog.ch/80256EE600585943/\(httpPages\)/4F0DEF093B4860B4C1257180004B1B30?OpenDocument](http://www.unog.ch/80256EE600585943/(httpPages)/4F0DEF093B4860B4C1257180004B1B30?OpenDocument).

ⁱⁱ Sweden, Statement before the First Committee of the UN General Assembly, UN Doc. A/C. 1/47/PV.26.9 November 1992, p.19.

ⁱⁱⁱ International Committee of the Red Cross, Report on the Conference of Government Experts on the Use of Certain Conventional Weapons – Lucerne 1974, www.loc.gov/rr/frd/Military_Law/pdf/RC-conf-experts-1974.pdf International Committee of the Red Cross, Report on the Conference of Government Experts on the Use of Certain Conventional Weapons – Lugano, 1976, www.loc.gov/rr/frd/Military_Law/pdf/RC-conf-experts-1976.pdf

^{iv} Louise Doswald-Beck, International Committee of the Red Cross, "New Protocol on Blinding Laser Weapons," <http://www.icrc.org/eng/resources/documents/misc/57jn4y.htm>.

^v Doswald-Beck, <http://www.icrc.org/eng/resources/documents/misc/57jn4y.htm>.

^{vi} Human Rights Watch Arms Project, "U.S. Blinding Laser Weapons, 1995" <http://www.hrw.org/legacy/reports/1995/Us2.htm>.

^{vii} Jean-Montarie Henckaerts, and Louise Doswald-Beck, "Customary International Humanitarian Law," Vol. II, (Cambridge: Cambridge University Press, 2005), p. 1979.

^{viii} *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)*, 8 June 1977.

^{ix} Ann Peters, Blinding Laser Weapons: New Limits on the Technology of Warfare, 18 Loy. L.A. Int'l & Comp. L. Rev. 733 (1996). Available at: <http://digitalcommons.lmu.edu/ilr/vol18/iss4/3> p. 756-758

^x Peters, 758-759.

^{xi} Including France, United Kingdom and United States. Doswald-Beck, <http://www.icrc.org/eng/resources/documents/misc/57jn4y.htm>.

^{xii} "Review Conference of the States Parties to the Convention on Prohibitions or Restrictions in the Use of Certain Conventional Weapons, Final Report", http://sedi.esteri.it/rapparm/ccw/ccw_documento_finale.htm.

^{xiii} Human Rights Watch Arms Project, "Blinding Laser Weapons: the need to ban a cruel and inhumane weapon" accessed March 19, 2014, http://www.hrw.org/reports/1995/General1.htm#P67_4051.