Existing International Humanitarian Law applicable to Lethal Autonomous Weapon Systems

I. Introduction

1. This background paper was prepared by the Implementation Support Unit of the Convention on Certain Conventional Weapons (CCW) at the request of the Chair of the Group of Governmental Experts (GGE) on emerging technologies in the area of lethal autonomous weapons systems (LAWS), to facilitate discussions of the Group.

2. The paper aims to respond to requests from delegations made during the 2024 first session of the Group, whereby it was suggested that the Group might benefit from considering in future discussions how existing international humanitarian law (IHL) applies, among others, to LAWS. Delegations also referred to the need to rely on language already agreed by the Group, such as the Guiding Principles and conclusions adopted by the Group in past reports.

3. The paper first provides the context for the consideration of this topic by the GGE and an explanation of how this may assist the GGE in achieving its mandate. A concise overview is then provided of the provisions under existing IHL that apply to all weapons, including LAWS, focusing on “weapons law” and “targeting law”. It then summarizes the views of the GGE regarding the application of existing IHL to LAWS, based on the Group’s agreed conclusions. Finally, an Annex provides a comprehensive compilation of the agreed conclusions by the GGE on the matter, organized by year.

II. Context for the topic and possible focus areas for discussion by the Group

4. The matter of the application of IHL to LAWS is at the centre of the GGE’s current discussions, as High Contracting Parties (HCPs) continue to hold differing views on whether existing IHL is sufficient to effectively prohibit and/or regulate the use of LAWS, or whether additional measures and/or more specific rules are needed. Notwithstanding, the Group has already concluded that IHL fully applies to the potential development and use of LAWS and

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1 Chair’s summary: First 2024 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons System. CCW/GGE.1/2024/WP.6, 3 April 2024, para. 15.
2 Ibid., para. 10.
3 In keeping with the plan of intersessional informal consultations for the GGE in 2024, this paper focuses only on the application of existing IHL to LAWS. The topic of measures needed to ensure compliance with IHL and the question of additional rules needed is accordingly dealt with in a separate paper. The matter of accountability and responsibility will also be examined separately.
has additionally identified certain existing rules and principles of IHL that are particularly pertinent to LAWS (see section IV below).

5. Focussed discussions on this topic could facilitate the identification of the aspects of the use of LAWS that are most concerning and that could violate existing IHL. Prohibitions and/or regulations could then be crafted to respond to these concerns and prevent such violations. For example, these could be based on whether the use of LAWS would be indiscriminate, and whether the indiscriminate result would emanate from the effects of a LAWS or from the manner of its use, or both.4

6. Accordingly, in the context of this topic, the Group may wish to discuss which IHL rules and principles are most at risk of being violated by the use of LAWS, why and/or how, taking into account the specificities and particularities of LAWS. On this basis, the Group could then consider how those particular rules and principles would need to be protected and how their compliance should be upheld. Similarly, such discussions could assist HCPs and the Group in identifying what types of LAWS could or cannot be used in compliance with IHL, which could in turn assist in identifying the LAWS that would need to be prohibited and which require further regulation.

III. International Humanitarian Law applicable to LAWS

7. LAWS represent a relatively new and rapidly evolving facet of warfare technology. Certain overarching applicable rules and norms are clearly identifiable and serve as the legal basis for the use of all weapons in armed conflict, including LAWS.5 These general rules are codified in IHL treaties, notably in Additional Protocol I (API) to the Geneva Conventions, and are also reflected as rules of CIHL and general principles of international law.

8. A first set of applicable rules, commonly referred to as “weapons law”, establishes prohibitions and restrictions on weapons, means, and methods of warfare and pertains to “the nature and design of weapon systems, their innate behaviour and how they affect people or objects against which they are directed.”6 A second set of applicable rules, commonly known as “targeting law”, prescribes prohibitions and restrictions on the conduct of hostilities, i.e. how weapon systems should be used and “how operators of a weapon system must behave while planning and conducting an attack.”7

9. Furthermore, the principle of humanity, as reflected and expressed in the Martens Clause,8 prescribes that in situations not encompassed by existing treaties, civilians and combatants are shielded by customary IHL, the principles of humanity, and the dictates of public conscience.9 As a result, the principle of humanity acts as a universal standard,

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4 See also the background paper prepared by the ISU on “Examples of existing CCW Protocols” for further information on how the CCW Protocols approach prohibitions and regulations (CCW/GGE.1/2024/CRP.2, 25 April 2024).
5 For instance, among other things, the GGE on LAWS has concluded that the use of LAWS must be carried out in accordance with the requirements and principles of IHL, “including inter alia distinction, proportionality and precautions in attack.” Report of the 2019 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, CCW/GGE.1/2019/3, para. 17 (a). See also W. Boothby, New Technologies and the Law in War and Peace. Cambridge: Cambridge University Press, 2018: 146.
7 Ibid.
8 The Martens Clause, coined by F.F. Martens, was initially introduced in the preamble of the 1899 Hague Convention. Found in Article 1(2) of the API and the preambles of APII and of the CCW, the Martens Clause can be said to have acquired the status of a customary rule (International Committee of the Red Cross (ICRC). Martens Clause. Available at: https://casebook.icrc.org/a_to_z/glossary/martens-clause).
9 See, for instance, ICRC. Fundamental Principles of IHL. Available at: Customary IHL Database.
guaranteeing that emerging situations and innovative means and methods of warfare are adequately addressed within the ethical and legal framework outlined by IHL.  

10. The following is a non-exhaustive and abridged compilation of the applicable rules and norms under the above-mentioned categories.

**Prohibitions and restrictions on weapons, means, and methods of warfare (weapons law)**

**Prohibition on the use of weapons causing superfluous injury or unnecessary suffering**

- The use of weapons causing excessive or unnecessary harm to combatants or civilians is prohibited (API, Article 35(2) and CIHL, Rule 70).

**Prohibition on the use of weapons which are by nature indiscriminate**

- The use of weapons which are by nature indiscriminate is prohibited (API, Article 51(4) and CIHL, Rule 71).

**Prohibitions and restrictions on the conduct of hostilities (targeting law)**

**Principle of distinction**

- Parties must distinguish between civilians and combatants. Attacks must only target combatants/military objects, not civilians/civilian objects (API, Articles 48, 51(2) and 52(2), APII, Article 13(2) and CIHL, Rules 1 and 7).
- Indiscriminate attacks are prohibited (API, Article 51(4) and CIHL, Rules 11-12).
- Attacks treating multiple separate military targets in civilian-populated areas as a single target are prohibited (API, Article 51(5)(a) and CIHL Rule 13).

*Definitions relevant to the principle of distinction between civilians and combatants (paraphrased):*

- **Combatants:** All members of armed forces except medical and religious personnel (API, Article 43(2) and CIHL, Rule 3).
- **Armed Forces:** Organized armed groups under a responsible command (API, Article 43(1) and CIHL, Rule 4).
- **Civilians:** Individuals who are not members of the armed forces (API, Article 50 and CIHL, Rule 5).
- **Military Objectives:** Objects that make an effective contribution to military action (API, Article 52(2) and CIHL, Rule 8).
- **Civilian Objects:** Objects that are not considered military objectives (API, Article 52(1) and CIHL, Rule 9).

**Principle of proportionality**

- Launching attacks causing excessive civilian harm compared to the concrete and direct anticipated military advantage is prohibited (API, Article 51(5)(b) and CIHL, Rule 14).

**Principle of precautions in attack**

- Constant care must be taken to spare civilians and civilian objects. All feasible precautions must be taken to avoid, and in any event to minimize, incidental loss of

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civilian life, injury to civilians and damage to civilian objects (API, Article 57(1) and CIHL, Rule 15).

- Precautions include:
  - Target verification to ensure military objectives are identified (API, Article 57(2)(a)(i) and CIHL, Rule 16).
  - Choosing means and methods of warfare to minimize civilian harm (API, Article 57(2)(a)(ii) and CIHL, Rule 17).
  - Assessing the potential impact of attacks (API, Article 57(2)(a)(iii) and CIHL, Rule 18).
  - Suspending or cancelling attacks if civilian harm is excessive (API, Article 57(2)(b) and CIHL, Rule 19).
  - Providing advance warning of attacks if feasible (API, Article 57(2)(c), and CIHL, Rule 20).
  - Selecting military objectives that pose the least danger to civilians (API, Article 57(3) and CIHL, Rule 21).

Other relevant rules

Protection of the natural environment

- The use of weapons that are intended, or may be expected, to cause widespread, long-term, and severe damage to the natural environment is prohibited (API, Article 55(1) and CIHL, Rules 43–45).

Weapon reviews

- States must determine whether the use of new weapons complies with international law, including API (API, Article 36 and, generally, Article 1 common to the Geneva Conventions and CIHL, Rule 139).

The “principles of humanity” and the “dictates of the public conscience”

- In cases not covered by API 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 (API, Article 1(2) and APII, Preamble).

IV. Conclusions of the GGE on LAWS regarding how existing IHL applies to LAWS

11. The GGE on LAWS has also reached a number of conclusions on how existing IHL applies to LAWS, which can be summarized as follows:13

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11 These rules are being highlighted here as they form part of the scope of the CCW, as per preambular paragraph 4 of the Convention.
12 Weapon reviews are a particularly pertinent provision of IHL in the context of LAWS, as concluded by the GGE. See, for instance, Guiding Principle (e), Annex IV to the GGE Final Report of 2019. No.5 supra.
13 The full text of the conclusions organized by year is contained in the annex to this paper.
• Existing IHL fully applies to all weapons systems, including LAWS.\textsuperscript{14}

• States and individuals responsible for planning and conducting attacks must comply with IHL.\textsuperscript{15}

• The potential use of LAWS must adhere to IHL principles, including distinction, proportionality, and precautions in attack.\textsuperscript{16}

• LAWS should not be deployed if they could cause excessive harm, are inherently indiscriminate, or cannot adhere to IHL requirements.\textsuperscript{17}

• States must assess whether the use of new weapons or methods of warfare would violate international law.\textsuperscript{18}

• If not covered by specific agreements, LAWS must still abide by principles of international law, humanity, and dictates of public conscience safeguarding civilians and combatants.\textsuperscript{19}


\textsuperscript{16} GGE Final Report of 2019, para. 17 (a). No. 5 supra.

\textsuperscript{17} Ibid., para. 17 (h) and GGE Final Report of 2023, para. 21 (b). No. 14 supra.


\textsuperscript{19} GGE Final Report of 2019, para. 17 (g). No. 5 supra.
Annex

IHL and Laws: conclusions of the GGE (2017 – 2023)


International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems (para. 16 (b)).


International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems (para. 21 (a)).

In accordance with States’ obligations under international law, in the study, development, acquisition, or adoption of a new weapon, means or method of warfare, determination must be made whether its employment would, in some or all circumstances, be prohibited by international law (para. 21 (d)).


The potential use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems must be conducted in accordance with applicable international law, in particular IHL and its requirements and principles, including *inter alia* distinction, proportionality and precautions in attack (para. 17 (a)).

In cases involving weapons systems based on emerging technologies in the area of lethal autonomous weapons systems not covered by the CCW and its annexed Protocols or by other international agreements, 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 (para. 17 (g)).

A weapons system based on emerging technologies in the area of lethal autonomous weapons systems, must not be used if it is of a nature to cause superfluous injury or unnecessary suffering, or if it is inherently indiscriminate, or is otherwise incapable of being used in accordance with the requirements and principles of IHL (para. 17 (h)).


International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems (a).

In accordance with States’ obligations under international law, in the study, development, acquisition, or adoption of a new weapon, means or method of warfare, determination must be made whether its employment would, in some or all circumstances, be prohibited by international law (e).

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States must comply with international humanitarian law. Humans responsible for the planning and conducting of attacks must comply with international humanitarian law (para. 19).


IHL continues to apply fully to the potential development and use of LAWS (para. 21 (a)).
Weapons systems based on emerging technologies in the area of LAWS must not be used if they are incapable of being used in compliance with IHL (para. 21 (b)).

In accordance with States’ obligations under international law, in the study, development, acquisition, or adoption of a new weapon, means or method of warfare, determination must be made whether its employment would, in some or all circumstances, be prohibited by international law (para. 23).