

Meeting of the High Contracting Parties to the 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

20 November 2018

English only

Geneva, 21-23 November 2018

Item 8 of the provisional agenda

Consideration of the report of the Group of Governmental Experts on lethal autonomous weapons

The Element of Human Control

Submitted by the International Committee of the Red Cross (ICRC)

I. Introduction

1. The International Committee of the Red Cross (ICRC) acknowledges the Report of the 2018 Group of Governmental Experts (GGE) on Lethal Autonomous Weapon Systems (CCW/GGE.1/2018/CRP.1), in particular Part IV on “Emerging Commonalities, Conclusions and Recommendations” and the Chairperson’s helpful summary of the discussions in Annex III.

2. As evident from the GGE’s report and discussions, there is general agreement among States that human control — be it qualified as ‘meaningful’, ‘substantive’, ‘appropriate’, ‘sufficient’ or ‘effective’, or ‘appropriate levels of human judgement’, or ‘human involvement’ — must be retained over weapon systems and the use of force. Likewise, the Possible Guiding Principles included in Part IV. A of the GGE’s Report affirm that ‘**human responsibility for decisions on the use of weapon systems must be retained**’. Human control therefore provides the baseline from which further common understandings can be developed.

3. States have presented different options to address the risks and challenges posed by autonomy in weapon systems, including a legally-binding instrument, a political declaration, and clarity on the implementation of existing obligations under international law, particularly international humanitarian law (IHL).

4. No matter which of these policy options is pursued by States, the ICRC considers that in order to retain ‘human responsibility for decisions on the use of weapon systems’, it is essential that States develop **common understandings on the elements and criteria of human control**.

5. Part II of this working paper recalls the ICRC’s views on the legal and ethical basis for the focus on human control and provides examples of questions that could guide the development of common understandings on the elements and criteria of human control. Part III outlines the ICRC’s recommendation to the High Contracting Parties regarding the scope of the GGE’s work in 2019.



II. Legal and ethical basis for the focus on human control

6. The ICRC has posited that **human control must be maintained for both legal and ethical reasons.**¹ Indeed, the loss of human control over the selection and attack of targets in armed conflict could entail significant humanitarian consequences and IHL violations. In addition to questions about IHL compliance, autonomy in the critical functions of weapon systems raises profound ethical concerns about the erosion of human responsibility for decisions to kill, injure or destroy. In 2017 and 2018, the GGE discussed such legal and ethical issues, among others.

7. The ICRC is of the view that civilians are put at risk when the design and/or the use of a weapon system with autonomy in its critical functions prevents the human commander or operator from making the judgements required by IHL. It is not machines that ‘apply’ or ‘respect’ the law, it is humans who are responsible and accountable for respecting the law. This responsibility and accountability cannot be transferred to a machine, a computer program, or a weapon system. It follows that human combatants will need to retain a level of control (whether qualified as meaningful, substantive, appropriate, sufficient or effective) over weapon systems and the use of force so that they can make context-specific legal judgements in specific attacks as required by IHL, notably the rules of distinction, proportionality and precautions. Human control is also critical to ensure accountability, as it is unclear how responsibility could be attributed in relation to unpredictable acts by autonomous weapon systems. There are doubts about the capability of developing and using autonomous weapon systems that would comply with IHL in all but the narrowest of scenarios and the simplest of environments, at least for the foreseeable future.

8. Moreover, the loss of human agency in decisions to use force, diffusion of moral responsibility and loss of human dignity raise profound ethical concerns. From an ethical perspective, human control would be required to a level that preserves human agency and upholds moral responsibility in decisions to use force.

9. In 2019, the GGE should focus on **determining the type and degree of human control that would be necessary to comply with IHL rules and satisfy ethical concerns.** To this end, discussions could be guided by the following questions:

- What is the level of *human supervision*, including the ability to intervene and deactivate, that would be required during the operation of a weapon that can autonomously select and attack targets?
- What is the level of *predictability and reliability* that would be required, also taking into account the weapon’s tasks and the environment of use?
- What *other operational constraints* would be required, notably on the weapon system’s **tasks**, its targets (e.g. materiel or personnel), the **environment** in which it operates (e.g. populated or unpopulated area), the duration (time-limit) of its operation, and the **scope of its movement** (fixed/stationary only or constraints on area of operation)?

III. Next steps

10. The overall purpose of the GGE in 2019 should be to agree limits on autonomy in weapon systems, building on the substantive work of the GGE in 2017 and 2018. A ‘human-centred’ approach must guide the identification of these limits. Therefore the ICRC recommends that the 2019 GGE be dedicated **to reaching common understandings on the elements of human control over the critical functions of weapon systems that are**

¹ See *Autonomous weapon systems under international humanitarian law*, November 2017, <https://www.icrc.org/en/document/autonomous-weapon-systems-under-international-humanitarian-law> and *Ethics and autonomous weapon systems: An ethical basis for human control?* April 2018, <https://www.icrc.org/en/document/ethics-and-autonomous-weapon-systems-ethical-basis-human-control>.

needed to ensure compliance with international law and ethical acceptability. This should be explicitly reflected in the GGE's mandate.

11. This approach will facilitate the identification of a standard of human control that is clear, robust and practical, and that can hold up to future technological and operational developments. States must approach this task with some urgency, as technological developments that remove or reduce human control over weapon systems are threatening to outpace international deliberations.
