

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

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Group of Governmental Experts on Emerging Technologies
in the Area of Lethal Autonomous Weapons System
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Consideration of proposals and elaboration, by consensus, of possible measures, including taking into account the example of existing protocols within the Convention, and other options related to the normative and operational framework on emerging technologies in the area of lethal autonomous weapon systems, building upon the recommendations and conclusions of the Group of Governmental Experts related to emerging technologies in the area of lethal autonomous weapon systems, and bringing in expertise on legal, military, and technological aspects

Elements for a Legally Binding Instrument to Address the Challenges Posed by Autonomy in Weapon Systems

Submitted by Chile and Mexico

1. This working document/proposal is based on the contribution presented by our delegations (“Elements for a future normative framework conducive to a legally binding instrument to address the ethical, humanitarian and legal concerns posed by emerging technologies in the areas of (lethal) autonomous weapons (LAWS)”) on “Possible consensus recommendations in relation to the clarification, consideration and development of aspects of the normative and operational framework”. It was formally introduced August 5th, 2021, at the first meeting of the 2021 GGE LAWS session.

I. Introduction

2. Technology plays a central role in international relations; it shapes the way states fight during wartime and compete during peacetime. In this regard, emerging technologies pose concrete challenges to peace, stability and security and raise new fundamental ethical, legal, political and humanitarian questions about how power is understood and used, and the role of humans in warfare.

3. Today, the rapid pace of developments in and diffusion of technology present substantive challenges to existing regulatory frameworks, hence efforts must be made to create “technology neutral” regulations.

4. In the view of our delegations, the focus of concern should be on how to preserve meaningful human control in weapons which incorporate autonomous functionalities, as to prevent the further dehumanization of warfare.

II. Background

5. In its origin, the intergovernmental multilateral debate at the UN level on the impact of emerging technologies and the need for their regulation started in the Human Rights



Council and was subsequently referred to the Convention on Certain Conventional Weapons (CCW). In 2013, the late Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, Professor Christof Heyns, addressed the issue in a seminal report¹:

“Lethal autonomous robotics (LARs) are weapon systems that, once activated, can select and engage targets without further human intervention. They raise far-reaching concerns about the protection of life during war and peace. This includes the question of the extent to which they can be programmed to comply with the requirements of international humanitarian law and the standards protecting life under international human rights law. Beyond this, their deployment may be unacceptable because no adequate system of legal accountability can be devised, and because robots should not have the power of life and death over human beings. The Special Rapporteur recommends that States establish national moratoria on aspects of LARs, and calls for the establishment of a high level panel on LARs to articulate a policy for the international community on the issue”.

6. The report of the Secretary General on the work of the Advisory Board on Disarmament Matters (July 2013) also suggested that the Secretary General should promote coordinated efforts in an existing forum, such as the Conventional Weapons Convention, to address the possible need for disarmament measures in respect of potential future fully autonomous systems. On 15 November 2013 the CCW decided to address the issue as “LAWS”, lethal autonomous weapon systems.

7. However, because of the wide spread implications of emerging technologies, this hasn't prevented the topic from being addressed by other fora, particularly in the field of human rights. An interesting example of this is the General Comment 36 on article 6 of the International Covenant on Civil and Political Rights on the Right to Life, 2018², the 2021 Report of the Special Rapporteur on Disabilities³, the 2021 Recommendation on the Ethics of Artificial Intelligence by UNESCO⁴, among others. While these frameworks do not regulate weapon systems specifically, the nature of emerging technologies touches upon important crosscutting issues which impact our work in the CCW and should be taken into consideration. If the CCW is to remain relevant and responsive to the challenges that increased incorporation of autonomous functionalities in weapon systems entail, it should take developments in other fora into account. The CCW does not operate in a vacuum.

¹ Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, A/HRC/23/47 <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G13/127/76/PDF/G1312776.pdf?OpenElement>.

² General Comment 36 on article 6 of the International Covenant on Civil and Political Rights, on the Right to Life, 2018. “65. States parties engaged in the deployment, use, sale or purchase of existing weapons and in the study, development, acquisition or adoption of weapons, and means or methods of warfare, must always consider their impact on the right to life. [271] For example, the development of autonomous weapon systems lacking in human compassion and judgement raises difficult legal and ethical questions concerning the right to life, including questions relating to legal responsibility for their use. The Committee is therefore of the view that such weapon systems should not be developed and put into operation, either in times of war or in times of peace, unless it has been established that their use conforms with article 6 and other relevant norms of international law.” https://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/1_Global/CCPR_C_GC_36_8785_E.pdf

³ Report of the Special Rapporteur on the Rights of Persons with Disabilities 2021, “the deployment and use of fully autonomous weapons systems, like other artificial intelligence systems, raises concerns as to the ability of weaponry directed by artificial intelligence to discriminate between combatants and non-combatants, and make the nuanced determination as to whether an assistive device qualifies a person with disabilities as a threat. Further, the use of facial or emotion recognition technology at security checkpoints to assist in determining whether an individual may pose a threat lacks the same ability to correctly assess the reactions of persons with disabilities, owing to incomplete or biased data sets. To alleviate and address such concerns, persons with disabilities must be involved in the development, procurement and deployment of artificial intelligence technology as applied to situations of risk.” <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G21/397/00/PDF/G2139700.pdf?OpenElement>.

⁴ Recommendation on the Ethics of Artificial Intelligence, 2021 <https://unesdoc.unesco.org/ark:/48223/pf0000381137>.

8. Thus a holistic, multidimensional understanding of the effects of the incorporation of autonomy in weapon systems is needed in order to fully grasp its shaping, potential annulation or magnifying effects over human agency and how this impacts upholding of ethical imperatives, compliance with international law, international humanitarian law and international human rights law as well as its impact on international security.

9. At this stage of technological development, the question is not if we “can” remove the user from the application of force to kill, injure or harm another human being, rather, the consequences that the removal of the human operator entails.

10. From a legal perspective, it remains highly questionable whether weapons which incorporate autonomous functionalities are able to be used in compliance with key provisions of International humanitarian law and human rights law, given the inherent uncertainties and complexities of wartime environments. We are of the view that there is an implicit requirement for meaningful human control imbedded in IHL, notably vis-à-vis the principles of distinction, proportionality, precautions in attack and military necessity. Similar requirements are also at the core of international human rights law.

11. Beyond the very real concerns regarding the feasibility of weapons which incorporate autonomous functionalities to operate within legal constraints (vg. issues of predictability and reliability), the ethical perspective should guide the work of the GGE on retaining human agency and intent in the decisions to use force, specifically on matters of life and death.

12. In this regard, our delegations have suggested a Joint Special Session of the GGE LAWS with the Special Rapporteur on Extrajudicial, Summary and Arbitrary Executions to consider the development of the issue since 2013, regarding the requirements of IHL and the standards to protecting life under human rights law respectively.

13. International security related questions posed by autonomy in weapon systems have remained, to a large extent, at the outskirts of the current debate in the CCW. From an arms control perspective, weapons which incorporate autonomous functionalities raise concerns regarding asymmetric warfare, force multiplication and lowering the threshold for nations to start wars, as well as increasing the potential of conflict escalation. It is also important to determine weapons with autonomous functionalities’ potential of entanglement with other weapon capabilities and how that might affect the CCW’s objective to contribute to States general and complete disarmament and ending of the arms race and building confidence among States.

14. Ethical concerns, likewise, have not been sufficiently considered in the context of the GGE LAWS. The ethical considerations in our discussions must not be reduced to simply informing the legal analysis of a given situation: not everything illegal is unethical and vice versa. Precisely because of their impact on the right to life and human dignity, the use of force, increasingly mediated through technology, must consider the wider ethical and societal implications as the main parameters to confront these challenges.

15. In this regard, the concerns and questions raised by the 2013 report of Professor Christoph Heyns are still valid: how to address these unprecedented, qualitative changes in the conduct of hostilities in a manner that is consistent with the principles of humanity and the dictates of public conscience in the context of the CCW?

III. International Regulation in the Framework of the CCW

16. The challenges posed by autonomy in weapon systems are of such nature that there is a clear need for a legally binding instrument, the reasons being the following:

(a) The need to clarify, strengthen and advance IHL regarding the specific challenges posed by weapons which incorporate autonomous functionalities. Existing international law, including international humanitarian law, while still applicable, is insufficient because its fundamental rules regarding the use of force were designed when humans made value judgements notably vis-à-vis the principles of distinction, proportionality, precautions in attack and military necessity at the moment of the application of force.

(b) Autonomous functionalities in weapon systems also call for a broader approach than the traditional scope of IHL. In this regard, IHL would need to focus not only on use but also other aspects in the weapon's lifecycle.

(c) The need to avoid a fragmented approach through national measures, which might give leeway to dispersion and lack of homogeneity in the adopted measures, contrary to the interest of having an international benchmark from which compatible national measures are implemented.

(d) The nature of the CCW as a normative framework which reaffirms the need to continue the codification and progressive development of the rules of international law applicable in armed conflict, with regard to weapon systems, which are or have the potential as weapons with autonomous functionalities to be excessively injurious or have indiscriminate effects.

IV. Draft Legally Binding Instrument on Prohibitions and Regulations

17. Taking into account the specific ethical, legal and societal questions and international security related concerns raised when removing human decision making from the application of force, there is a clear need for establishing a set of specific rules to regulate at an international level, regarding weapons which incorporate autonomous functionalities.

18. In this regard, the following draft of a legally binding instrument establishing prohibitions and regulations can be considered:

(a) Due to the challenges of autonomy in weapon systems, in order to fully comply with key legal obligations and ethical imperatives, States shall:

- Prohibit the development and the use of weapons with autonomous functionalities that cannot be controlled by humans, therefore subject to cognitive and epistemological limitations.
- Prohibit the development and the use of weapons which incorporate autonomous functionalities that cannot be used in compliance with IHL, including weapons that:
 - Cannot be directed at a specific military objective;
 - Cause superfluous injury or unnecessary suffering; or
 - Have effects that cannot be limited as required by IHL.
- Prohibit the development and use of weapons which incorporate autonomous functionalities whose effects cannot be sufficiently understood, predicted and explained.

(b) Positive obligations, in the form of regulations, should be developed to ensure humans exercise control in the use of weapons which incorporate autonomous functionalities, in line with their obligations under IHL and ethical requirements, notably in terms of:

- While recognizing that the nature and degree of human control may vary during all/different stages of a weapon's development and use, a human operator shall:
 - Be certain that there are adequate environmental limits in place, including spatial and temporal limits;
 - Be fully aware and approve any decision on determining the operational context through a sufficient level of situational awareness;
 - Be certain on the reliability and predictability in the identification, selection and engagement of targets;
 - Take the necessary precautions during the conduct of operations to ensure that a weapons system is not able to change mission parameters without human validation.
 - Allow for constant human supervision and ensure intervention where necessary as to be able to:
 - Interrupt and deactivate the weapon during its operation phase.
 - Verify that auto-deactivation features operate as intended, in particular when required by the legal assessment of the user.

(c) States should ensure that there are means to conduct effective investigations, prosecution and punishment for violations incurred during the use of weapons with autonomous functionalities, so as to ensure individual responsibilities. It is the responsibility of commanders and operators to ensure that they can comply with their legal obligations in the deployment and use of weapons with autonomous functionalities.

19. Taking into account technological advancements which impact autonomy in weapons systems States may need to identify additional recommendations, provided that such additions are guided by the principles of humanity and the dictates of public conscience.

20. Such recommendations may include additional prohibitions and regulations as well as *inter alia*, voluntary measures, exchange of best practices.

21. Any further recommendations shall be grounded so as to preserve human control and to avoid any accountability gap.

V. Legal Weapons Review

22. Legal weapons review must include an assessment that allows for the understanding of the attributes and effects in weapons with autonomous capabilities, as well as its conformity with international humanitarian law and international law, in particular:

(a) Evaluate its technical performance, including in terms of reliability and predictability and whether its foreseeable effects are capable of being limited to military objectives and controlled in time and space;

(b) Confirm its intended or expected use; and

(c) Confirm the placement of adequate limits on tasks and types of targets.

23. Legal reviews of weapons autonomous functionalities should adopt a precautionary approach and deny authorization when there might be less than full certainty of all the characteristics listed in the paragraph above.

VI. Conclusions

24. The reflections mentioned above derive from the substantive discussions within the GGE LAWS for the past years. They provide a basis for a framework that while ensuring the full applicability of international law, including IHL, highlights the need to develop additional legally binding norms based on ethical standards, to give an adequate normative response to the challenges posed by autonomy in weapon systems.

25. Risks associated with ending of the arms race and building confidence among autonomous functionalities in weapons systems could be inherent/built in, thus further consideration is needed on the viability of mitigation measures particularly when dealing with categorizations that are context-dependent as prescribed by IHL (vg. distinction between combatants and non-combatants, or military targets or civilian objects).

26. Furthermore, taking into account the irreversibility and magnitude of the risks we are dealing with (particularly with regard to decisions on life and death) the most effective way to address this is through prohibitions as risk avoidance measures and regulations as risk prevention/mitigations measures. Prohibitions and regulations once established, should then be operationalized through national implementation measures.

27. As has been stated before, innovation and regulation need not be at odds. The history of technological innovation shows that the innovation in and of itself is not what matters but how and why it's used. At its core the main concern is how we embed our fundamental values in each and every step of the development and deployment of the systems.