

**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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English only

**Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons System**  
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Item 5 of the agenda

**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**

## **Roadmap Towards a New Protocol on Autonomous Weapons Systems**

**Submitted by the delegations of Argentina, Costa Rica, Guatemala, Kazakhstan, Nigeria, Panama, Philippines, Sierra Leone, State of Palestine and Uruguay**

1. The mandate of the Group of Governmental Experts (GGE) on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems (LAWS) for 2022 is “to consider proposals and elaborate, by consensus, possible measures, including taking into account the example of existing protocols within the Convention” and other options, building upon previous recommendations and conclusions of the Group.
2. This mandate must be understood in accordance with the spirit of the Convention on the Prohibition or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed To Be Excessively Injurious Or To Have Indiscriminate Effects (CCW), among the objectives and purposes of which is “to continue the codification and progressive development of the rules of international law applicable in armed conflict.”
3. In this regard, the following proposal is submitted for the consideration of the GGE:

### **I. Recognize the common grounds**

4. The current cycle of GGE shall aim to formally recognize the common elements that have arisen through constructive engagement among delegations throughout the CCW discussions on autonomous weapon systems (AWS), particularly in the last GGE cycle. These common elements include recognizing:
  - (a) the importance of the centrality of the human element in the use of force and the recognition that AWS raise important challenges with respect to human control and judgment over the use of force is important;
  - (b) the importance of ensuring that human beings retain decisions with regard to the use of force, exert control over weapon systems that they use, and remain accountable for decisions over the use of force;



(c) the serious risks and challenges posed by AWS in terms of compliance with international law, upholding humanitarian considerations, ensuring non-proliferation, and maintaining international peace and security;

(d) the importance of relevant ethical perspectives in addressing these risks and challenges;

(e) the fundamental starting point that AWS that cannot be used in accordance with International Humanitarian Law (IHL) must not be developed, deployed, or used and are de facto already prohibited, and that AWS that would select and engage targets without any human control would not only be unlawful, but they would also be questionable from an ethical point of view, particularly with regard to the need to uphold human dignity;

(f) the need to work collaboratively to prohibit or regulate AWS that are not sufficiently predictable or controllable to meet legal requirements and in a manner that sufficiently addresses relevant ethical perspectives;

(g) the need to work collaboratively to identify and agree on limits and other regulations to uphold the rules of IHL;

(h) the importance of the obligation of states to conduct national weapons review to determine, in the study, development, acquisition, or adoption of a new weapon, means, or method of warfare, whether its employment would, in some or all circumstances, be prohibited by international law;

the value of voluntary measures such as the sharing of national policy and standards and good practice guidance, which can act as confidence building measures that complement, but are not replacement for, and without prejudice to, international rules and regulations on AWS;

(i) the principle that progress in or access to peaceful uses of intelligent autonomous technologies should not be hampered;

(j) the need to ensure that, in accordance with the principle of state responsibility, every internationally wrongful act of a state, including such other actions or omissions involving the use of AWS, entails the international responsibility of that state; and

(k) the importance of ensuring physical security and appropriate non-physical safeguards, including cybersecurity against hacking or data spoofing, and of considering the risk of acquisition by terrorist groups and the risk of proliferation.

## II. Elaborate these common grounds

5. Proceeding from this recognition, the GGE shall further elaborate these common grounds in the form of a report to the Meeting of High Contracting Parties (MHCP). This elaboration could be organized on the basis of the following provisional outline:

### A. Introduction

6. Recall the objectives and purposes of the CCW, specifically “the need to continue the codification and progressive development of the rules of international law applicable in armed conflict.”

7. Recognize the risks and challenges posed by autonomous weapon systems to:

(a) compliance with international law, including IHL, international human rights law (IHRL), and international criminal law (ICL);

(b) ethical considerations, including undermining of human dignity, loss of human agency and erosion of moral responsibility and accountability in the use of force;

(c) humanitarian considerations; and

(d) non-proliferation and the maintenance of international peace and security, including thresholds for armed conflict and new arms races.

8. Recognize that new legally binding rules and principles are needed to safeguard against such risks and challenges.
9. Affirm that responsibility and accountability for decisions on the use of force must be retained by humans, since this cannot be transferred to machines.
10. Affirm that context-based human judgement and control is essential in order to ensure that the use of AWS is in compliance with international law, and in particular IHL.

## **B. Characterization**

11. Recognize that an exact technical definition of AWS is not required for the elaboration, development, and negotiation of any normative and operational framework in the context of the Convention, bearing in mind that autonomy exists on a spectrum and purely technical characteristics may alone not be sufficient to characterize AWS in view of rapid evolution in technology.
12. Recognize that a working characterization is a useful starting point and that such characterization should focus on the human element and human-machine interaction since these are essential to addressing the issue of attribution of responsibility.
13. Affirm that a weapon system may be characterized as an AWS if it incorporates autonomy into the critical functions of selecting and engaging to apply force against targets, without human intervention. This means that a target is selected and force is applied based on the processing of sensor data, rather than direct human inputs.
14. Affirm that lethality is not an intrinsic characteristic of a weapon system but an effect or manner of use, and that any weapon system can be contrary to international law regardless of whether it is lethal or not.

## **C. Meaningful human control**

15. Recognize that meaningful human control is context-based, dynamic, multidimensional, and situation-dependent. Meaningful human control must ensure that a human can make moral and legal judgement over the acceptability of the effects of an attack. It must also ensure that there is a human user who is legally and morally responsible for the effects of an attack.
16. Recognize that meaningful human control consists of the elements of human judgment and human intervention. Human judgment refers to the application of human agency in undertaking decisions regarding the use of any weapon. Human intervention, on the other hand, refers to the ability of the operators to effectively supervise any weapon, to undertake the necessary interaction that could either be directive or preventive, and to deactivate, terminate, or abort the operation of the weapon altogether.
17. Recognize that the application of machine learning could have implications on the maintenance of meaningful human control over an AWS.
18. Affirm that any weapon system in which the system operator relies on autonomous functions to select and engage targets with lethal force and, before activation, the system does not identify target and targets for intended engagement are by definition outside the scope of meaningful human control.

## **D. Ethical considerations**

19. Recognize that autonomous weapon systems could raise three main ethical concerns, namely the possible loss of human dignity in the process of using force, the possible loss of human agency in the decision to use force, and the erosion of moral responsibility and accountability for decisions to use force.
20. Recall that the Martens' Clause, which is a customary international law that brings together law and ethics, is particularly relevant in assessing new technologies and new means

and methods of warfare and provides that civilians and combatants remain under the protection and authority of the principles of humanity and the dictates of public conscience in cases not addressed by existing treaties.

## **E. General commitments**

21. Agree to prohibit the development, production, possession, acquisition, deployment, transfer or use under any circumstances of AWS if:

(a) its autonomous functions are designed to be used to conduct attacks outside a responsible chain of human command and control; and

(b) its use cannot comply with principles of IHL or the dictates of public conscience. This includes systems that:

- i. are incapable of distinguishing between civilians, enemy combatants and combatants hors de combats;
- ii. are of a nature to cause superfluous injury or unnecessary suffering or are inherently indiscriminate.

22. Recognize the need to address the risks and challenges posed by AWS that rely on data sets that can perpetuate or amplify unintentional social biases, including gender and racial bias.

23. Recognize the need to prevent the development of AWS that cannot be used in accordance with IHL by ensuring, inter alia, that:

(a) weapon systems are not designed to be used to conduct attacks against the civilian population, including attacks against civilian population and attacks to terrorize the civilian population;

(b) weapon systems are not designed to cause incidental loss of civilian life, injury to civilians, and damage to civilian objects that would invariably be excessive in relation to the concrete and direct military advantage expected to be gained; and

(c) the autonomous function in weapon systems must not be designed to be used to conduct attacks that would not be the responsibility of the human commander under which the weapon systems would be used.

24. Recognize the need to implement regulations to ensure that all weapon systems incorporating autonomy must be used with meaningful human control.

25. Reaffirm that every internationally wrongful act of a state, including such conduct involving AWS, entails the international responsibility of that state.

26. Reaffirm that the conduct of a state's organs such as its agents and all persons forming part of its armed forces, is attributable to that state. In accordance with IHL, IHRL, and ICL, this includes any such acts and omissions involving the use of AWS.

27. Agree that any discussion and any policy measure or instrument on AWS taken within the context of the Convention should not hamper the inalienable right of each High Contracting Party to access, development, research, production, and use of artificial intelligent technologies for peaceful purposes without discrimination.

## **F. National weapons review**

28. Reaffirm that states have obligations under international law whereby, 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.

29. Recognize that legal weapon reviews at the national level are a useful tool to assess nationally whether potential weapons systems based on emerging technologies in the area of lethal autonomous weapons systems would be prohibited by any rule of international law applicable to that state in all or some circumstances.

30. Reaffirm that, where feasible and appropriate, interdisciplinary perspectives must be integrated in research and development, including through independent ethics review, bearing in mind national security considerations and restrictions on commercial proprietary information.

## **G. Risk mitigation**

31. Affirm that, when developing or acquiring new AWS, physical security, appropriate non-physical safeguards, including cyber-security against hacking or data spoofing, the risk of acquisition by terrorist groups and the risk of proliferation should be considered.

32. Affirm that, during the design, development, testing and deployment of AWS, the risks inter alia of civilian casualties, as well as precautions to help minimize incidental loss of life, injuries to civilians and damage to civilian objects must be considered. Other types of risks should be considered, as appropriate, including but not limited to the risk of unintended engagements, risk of loss of control of the system, risk of proliferation, and risk of acquisition by terrorist groups.

33. Agree that risk mitigation measures to help minimize incidental loss of life, injuries to civilian and damage to civilian objects resulting from the use of AWS may include, inter alia: (a) incorporating self-destruct, self-deactivation, or self-neutralization mechanisms into weapon systems; (b) measures to control the types of targets that the system can engage; (c) measures to control the duration and geographical scope of the weapons system; and (d) clear procedures for trained human operators to activate or deactivate functions in weapons systems.

34. Agree that risk assessments and mitigation measures should be part of the design, development, testing and deployment and use cycle of emerging technologies in any weapons systems, including weapons systems based on emerging technologies in the area of lethal autonomous weapons systems.

## **III. Recommend the negotiation of a protocol**

35. Based upon these commonalities as reflected in the report of the GGE, the current GGE shall recommend that the MHCP provide the next GGE the mandate to initiate open-ended negotiation on a legally-binding instrument.

36. This proposal is without prejudice to the substantive discussion and the consensus that may arise at this current cycle of the GGE. It is subject to modification as delegations see fit, taking into account the commonalities among a broad spectrum of views and proposals, and guided by the objectives and purposes of this Convention and the mandate of this Group.

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