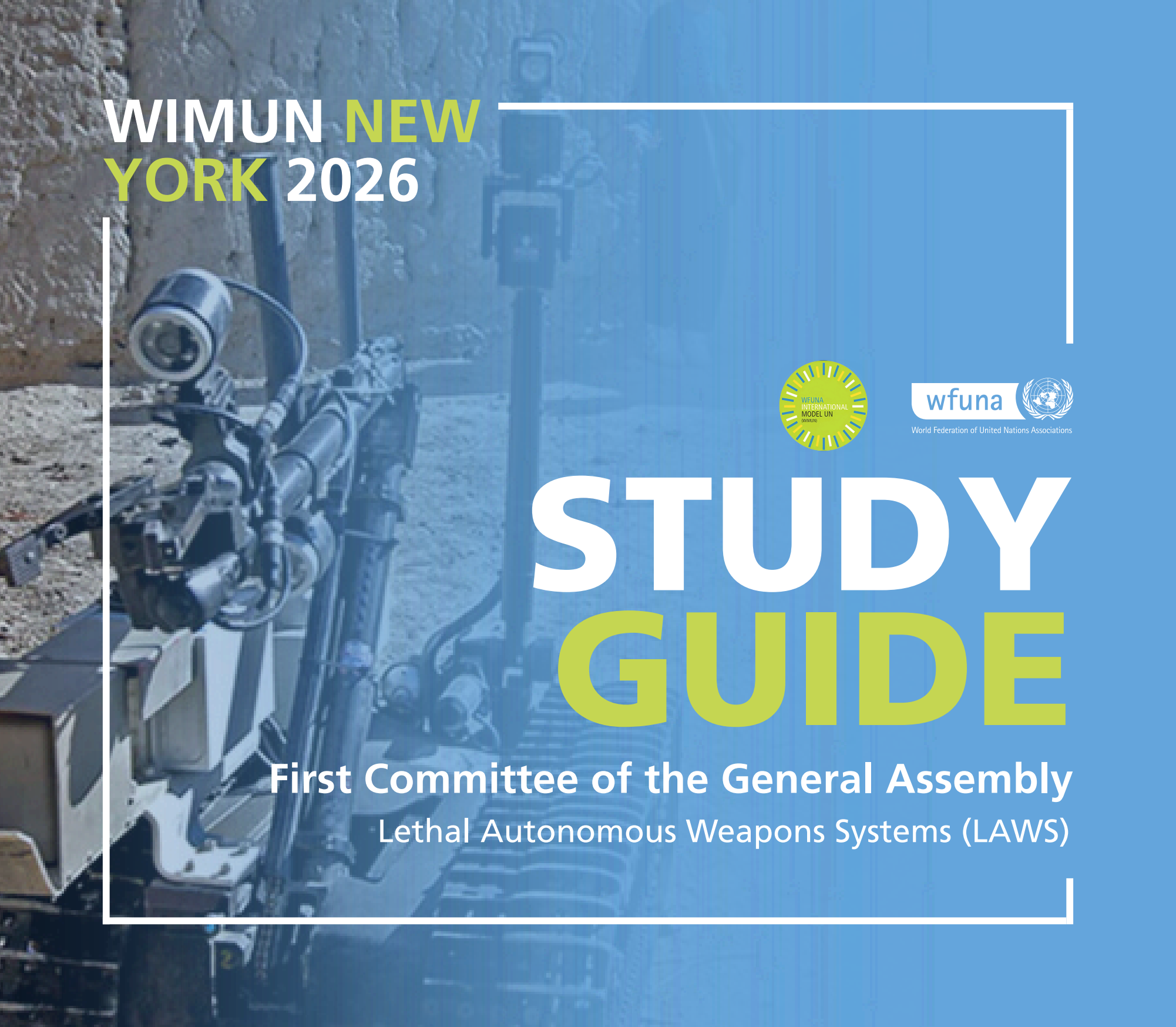

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STUDY GUIDE

First Committee of the General Assembly

Lethal Autonomous Weapons Systems (LAWS)

United Nations A/79/88

General Assembly

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Item 98 (ss) of the preliminary list*
General and complete disarmament: lethal autonomous weapons systems

Lethal autonomous weapons systems

Report of the Secretary-General

Summary

The present report provides a consolidated summary of elements from the submissions received from Member States and observer States pursuant to resolution 78/241, without prejudice to their individual positions. It includes definitions and characterizations; challenges, concerns and potential benefits; deliberations by States; next steps; and the observations and conclusions of the Secretary-General.

* A/79/50.

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Contents

I. Introduction

1. In paragraph 2 of its resolution 78/241 on lethal autonomous weapons systems, the General Assembly requested the Secretary-General to seek the views of Member States and observer States on lethal autonomous weapons systems, inter alia, on ways to address the related challenges and concerns that they raised from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force, and to submit a substantive report reflecting the full range of views received with an annex containing those views, to the Assembly at its seventy-ninth session for further discussion by Member States. In paragraph 3 of the same resolution, the Assembly also requested the Secretary-General to invite the views of international and regional organizations, the International Committee of the Red Cross, civil society, the scientific community and industry and to include those views in the original language received in the annex of the aforementioned report. The present report is submitted pursuant to those requests.

2. On 1 February 2024, the Office for Disarmament Affairs sent a note verbale to all Member States and observer States, drawing their attention to paragraph 2 of General Assembly resolution 78/241 and seeking their views on the matter. Notes verbales and letters were also sent to the entities specified in paragraph 3 of the same resolution, drawing their attention to that paragraph and seeking their views on the matter. The views received by 25 May 2024 are reproduced in the annexes to the present report. Any views received after that date will be posted on the website of the Office in the original language of submission.

3. Sections II to VI of the present report provide a consolidated summary of elements from the submissions received from Member States and observer States, without prejudice to their individual positions. The observations and conclusions of the Secretary-General are set out in section VII.

II. Background

4. States noted that rapid technological processes, including artificial intelligence, could drive economic growth, improve human well-being and help to achieve the Sustainable Development Goals. At the same time, emerging technologies could also pose challenges for international peace and security and raise questions about the role of humans in war. States considered that the unique challenges that lethal autonomous weapons systems posed required particular attention.

III. Definitions and characterizations

Towards a definition

5.

States noted that there was currently no internationally agreed definition of autonomous weapons systems or lethal autonomous weapons systems. Several States noted that agreement on a definition or general characterization could be useful for future work. They noted that such an agreement could be reached when formulating specific prohibitions, for example in the course of negotiating on a legally binding instrument. Several States expressed the view that an exact definition was not required to make progress and begin negotiations on a legally binding instrument.

6. In their submissions, States variously referred to “autonomous weapons systems” and “lethal autonomous weapons systems”. Some States considered the word “lethal” to be an important reference to a system’s capability to apply lethal force. Others were of the view that the lethality of a weapons system depended on its

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1 Definition

Resolution 78/241 expresses concern about the possible negative consequences and impact of autonomous weapons systems on global security and regional and international stability, and affirms that international law, in particular the UN Charter, international humanitarian law, and international human rights law, applies to LAWS. Furthermore, it highlights the need for cooperation amongst the global community to address the challenges of the technology. The resolution passed with 152 votes in favor, 4 against, and 11 abstentions.

4 Interesting Facts

The same artificial intelligence that powers medical breakthroughs or climate models can also be used to build autonomous weapons. These are known as ‘dual use’ technologies, which are tools that can serve both peaceful and military purposes.

5 Something to Think About

While progress has been made, reaching consensus on the definition of LAWS remains difficult due to competing national interests and proposals, the far-reaching consequences of any agreed definition, and the inherent novelty and rapidly evolving nature of the technologies involved. What steps could be taken to achieve consensus on this important issue?

use rather than on its design. Several States argued against the use of the word "lethal", stating that it had no basis in international humanitarian law and noting, inter alia, that lethality was an effect of the manner in which a weapon was used. It was also noted that the non-lethal use of force could also lead to violations of international humanitarian law. In the present report, in accordance with the terminology of General Assembly resolution 78/241, the term "lethal autonomous weapons systems" is used without prejudice to the preference of States regarding its use.

7. Several States emphasized the importance of the degree of human intervention in particular in the identification, classification, interception and engagement of a target. They underscored that nominal human input – meaning inputs or actions that did not materially affect the autonomous functions of target selection or engagement – was not sufficient.

8. States offered several working definitions and general characterizations of lethal autonomous weapons systems. Some drew on the working definition of the International Committee of the Red Cross, in which it is stated that "autonomous weapons system" is referring to a weapons system that is designed to select and engage one or more targets without the need for human intervention after activation.

9. The view was expressed that a characteristic of lethal autonomous weapons systems could include incorporation of artificial intelligence into target selection and use of force. The view was also expressed that lethal autonomous weapons systems did not need to incorporate artificial intelligence.

10. Several States suggested that certain autonomous or automatic anti-aircraft and missile defence systems should not be considered lethal autonomous weapons systems, given their defensive nature and the deterministic, rather than probabilistic, nature of the algorithms used by those systems for the detection and engagement of targets. They noted that such systems had been used for decades without legal controversy.

Human control

11. It was noted that the concepts of human control, meaningful human control, appropriate human judgment, and human involvement had been widely discussed and that further discussion and clarification of these concepts were necessary.

12. Many States stressed the importance of maintaining human control with regard to the use of force. Several States emphasized the importance of maintaining such control or involvement throughout the entire life cycle of a system, in particular during use. They noted that the exact nature of human control or involvement would depend the specific capabilities of the system and the context of its use. In their view, human control was particularly important to ensure compliance with international law, especially international humanitarian law, and responsibility and accountability. The view was also expressed that a focus on meaningful human control was not useful and that it would not be appropriate to adopt a single standard to describe human control over the use of lethal autonomous weapons systems.

13. States considered the necessary elements of human control, which included that humans retained the following:

- Sufficient information, including on the capabilities of the weapons system and the operational context, to ensure compliance with international law
- The ability to exercise their judgment to the extent required by international humanitarian law
- The ability to limit the types of tasks and targets

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8 Interesting Facts

This definition distinguishes LAWS from other weapons that can apply force without direct human activation, for example, landmines, because LAWS, according to this definition, have the capability to actively select their targets rather than simply responding passively.

11 Definition

A general term that broadly describes any human control throughout the lifecycle of a weapons system. Control can take place in a single or multiple lifecycle stages from initial design and programming to mid-operation decision making.

11 Definition

'Meaningful human control' emphasizes that human control is sufficient and informed. 'Meaningfully' involved humans should (1) understand the system's functions, (2) be able to supervise and override its activities at any point, and (3) make conscious decisions about targeting and engagement. It should be noted that consensus has not been reached on the precise definition of this term.

11 Definition

This term is primarily used in legal contexts surrounding International Humanitarian Law (IHL). It describes the quality and context of human decision making, especially when assessing proportionality and distinguishing between combatants and civilians.

11 Definition

Similar to human control, human involvement is a broad term that can describe human management at all lifecycle stages and range from minimal to extensive engagement.

- The ability to place limitations on the duration, geographical scope and scale of use
- The ability to redefine or modify the system's objective or missions
- The ability to interrupt or deactivate the system

14. States suggested various measures through which the required degree of human control could be achieved, which included:

- Creating an intuitive interface for human-machine interaction
- Procedures to ensure that lethal autonomous weapons systems were tested, evaluated, validated and verified
- Sufficient legal reviews of lethal autonomous weapons systems
- Appropriate training for all humans that interacted with lethal autonomous weapons systems
- Ensuring the predictability, reliability and explainability of lethal autonomous weapons systems

15. It was noted that further discussions on the measures to maintain the necessary level of human control were required, and that a good first step could be the sharing of good practices in that area.

IV. Challenges, concerns and potential benefits

16. States noted that lethal autonomous weapons systems raised a number of concerns, including from humanitarian, human rights, legal, security, technological and ethical perspectives. They called for those concerns to be addressed in a comprehensive manner.

17. Several States noted that the risks concerned all States and all parts of society and could have a disproportionate effect on the most vulnerable populations. Concern was expressed that those risks might disproportionately affect the States of the global South.

Humanitarian considerations

18. It was noted that the development and use of lethal autonomous weapons systems raised fundamental humanitarian concerns. It was also noted that humans would continue to bear the brunt of the consequences of armed conflicts. The view was also expressed that humanitarian concerns were not by themselves sufficient to impose restrictions and prohibitions on certain types of weapons systems.

19. Other concerns raised related to the environmental impact of lethal autonomous weapons systems, in particular the energy costs of and attendant carbon footprint associated with developing and operating such systems.

Legal considerations

20. States recalled that international law was fully applicable to lethal autonomous weapons systems. They identified the following applicable legal instruments and fields of law:

- The Charter of the United Nations
- Customary international law
- International humanitarian law

16 Something to Think About

Why is it important for countries to bring together voices from law, technology, ethics, human rights, and beyond when addressing the challenges of autonomous weapons? Concerns about LAWS are being raised from many groups. Humanitarian concerns focus on civilian harm, legal experts debate how existing laws apply, and security analysts warn about proliferation and easier access to deadly force. Serious questions are being asked about the ethics of letting machines independently make life and death decisions.

18 Something to Think About

As we debate the use of autonomous weapons, international and national interests, it's important to remember that real people, not machines, suffer the most in war. How can we stay focused on the UN's core goal of preventing conflict while navigating new technologies?

19 Interesting Facts

LAWS impact the environment and contribute to carbon emissions throughout their lifecycle. If a system uses AI or machine learning, training the models it uses is often one of the most energy intensive and carbon emitting stages of its development.

- International human rights law
- International criminal law
- The law of State responsibility

21. States stressed the importance of compliance with international law. Several States noted that lethal autonomous weapons systems posed challenges for compliance with international law, in particular international humanitarian law, international human rights law and international criminal law. It was noted that there was no international legal instrument specifically regulating or prohibiting lethal autonomous weapons systems. The view was expressed that voluntary exchanges of views between States on lethal autonomous weapons systems and international law could be useful.

22. States noted that the choice of weapons, means and methods of warfare, including lethal autonomous weapons systems, must be compliant with international law, especially international humanitarian law. States stressed the importance of the principles of distinction, proportionality, military necessity and precautions in attack, as well as the requirement to avoid superfluous injury or unnecessary suffering. 23. Several States emphasized that any weapon, including lethal autonomous weapons systems, that could not comply with international humanitarian law was de facto already prohibited and must not be used. Several States called for further specifying how the rules and principles of international humanitarian law applied to lethal autonomous weapons systems. 24. Several States emphasized that human control was required to ensure compliance with international humanitarian law. The view was also expressed that human control was not an end in itself, but might be a relevant concept in the implementation of various international humanitarian law obligations in different contexts. Several States underlined the importance of taking into account the operational context and the characteristics and capabilities of the weapons system as a whole. 25. Several States noted that lethal autonomous weapons systems were not capable of replicating the nuanced decision-making required of humans using force in an armed conflict. The importance of maintaining human control over life-and-death decisions was stressed. Several States considered that predictability, reliability, understandability and explainability were fundamental to ensuring compliance with international law.

26. In order to ensure compliance with international humanitarian law, it was considered that States should:

- Assess the presence of civilians
- Limit the types of targets with which a system could engage
- Limit the duration, geographical scope and scale of operation of the weapons system
- Put in place rules of engagement
- Put in place technical safeguards, such as self-destruct and self-deactivation

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20 Interesting Facts

The highlighted international legal instruments address a range of issues, from individual rights to the rules of armed conflict. Member states have determined that they are applicable to the case of LAWS for the following reasons:

- The Charter of the United Nations
- Establishes a universal system of collective security, limits the use of force; any deployment of LAWS must comply with the UN's principles on peace, security, and sovereignty.
- Customary International Law
- Encompasses binding legal norms derived from consistent international practice.
- International Humanitarian Law (IHL)
- Governs conduct during armed conflict; requires that LAWS adhere to rules on distinction, proportionality, and precautions in attack.
- International Human Rights Law (IHRL)
- Applies in both peacetime and conflict, and governs the right to life, dignity, and due process in all contexts.
- International Criminal Law (ICL)
- Provides the legal basis for assigning individual responsibility for serious violations such as war crimes and crimes against humanity.
- The Law of State Responsibility
- Holds states accountable for internationally wrongful acts, including harm caused by LAWS.

25 Interesting Facts

Like humans, computers are not perfect. Algorithm bias happens when the data or code behind an AI system reflects human prejudices. That means lethal autonomous weapons could make flawed or unfair decisions in conflict situations leading to deadly consequences.

27. Several States stressed the importance of the Martens clause[1] and expressed the view that the use of lethal autonomous weapons systems without human control would likely violate it.

28. Several States referred to the importance of reporting incidents involving lethal autonomous weapons systems that could involve violations of international humanitarian law. A call was made for the universalization of the Geneva Conventions of 1949 and their Additional Protocols.

29. In order to ensure compliance with international humanitarian law, the role of military legal advisers was highlighted. Several States also stressed the importance of providing appropriate training and instruction on international humanitarian law to personnel in national armed forces.

30. It was noted that technological developments without safeguards heightened the risk of lethal autonomous weapons systems being used in a manner not compliant with international humanitarian law. In that regard, the importance of responsible innovation was stressed.

31. Reference was made to jus ad bellum, as articulated in the Charter of the United Nations, including the prohibition of the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the purposes and principles of the United Nations, the right of self-defence and the requirement to settle conflicts by peaceful means. The view was expressed that those obligations applied to all State activity, including in relation to lethal autonomous weapons systems. 32. States stressed the importance of ensuring accountability in accordance with applicable international law. They emphasized that humans retained responsibility and accountability for the effects of weapons in military operations, including lethal autonomous weapons systems, and that that accountability could not be transferred to machines. It was noted that that responsibility applied throughout the life cycle of a weapons system.

33. The view was expressed that lethal autonomous weapons systems must not be designed in such a way as to prevent responsibility or accountability. The view was also expressed that accountability could only be achieved through human control and that it required those authorizing the use of force to be able to predict and explain its effects. 34. Several States stressed the importance of command responsibility, under which commanders were accountable for all uses of force that occurred under their command, whether exercised by a human subordinate or a machine. Concern was expressed that the use of lethal autonomous weapons systems could undermine that principle.

35 It was noted that individuals were accountable under disciplinary proceedings, national criminal law and international criminal law. Concern was expressed that lethal autonomous weapons systems could further undermine efforts to hold accountable perpetrators of unlawful violence in conflict. In addition, several States noted that States were responsible for internationally wrongful acts, including the unlawful use of a weapons system.

36. Several States expressed doubt that lethal autonomous weapons systems could comply with international human rights law. It was noted that the requirements

[1] See for example, 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, fifth preambular para.

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27 Definition

Martens Clause is a principle in international humanitarian law that says even if a situation isn't covered by a specific treaty, people are still protected by the LAWS of humanity and the public conscience. Some countries argue that fully autonomous weapons would violate this principle by removing human judgment from life-or-death decisions.

31 Definition

Jus ad bellum is Latin for "the right to war." It refers to the rules that decide when a country is legally allowed to go to war. The UN Charter says countries must not use force unless they are defending themselves or acting with UN approval. LAWS raise new questions about how these rules apply.

35 Something to Think About

LAWS raise profound questions. For instance, who is responsible if an autonomous weapon makes a mistake?

regarding the use of force imposed through international human rights law were stricter than those of international humanitarian law. Concern was expressed in particular that the use of autonomous targeting could be arbitrary, which would violate international human rights law. The view was expressed that the requirement of human control was key to compliance with international human rights law. It was suggested that the applicability of international human rights law to the design, development and use of lethal autonomous weapons systems be further discussed.

37. Several States stressed the importance of conducting legal reviews of weapons, means and methods of warfare, as required in article 36 of Protocol I Additional to the Geneva Conventions of 1949. It was noted that the possible unpredictability of lethal autonomous weapons systems raised challenges for the conduct of such legal reviews. It was suggested that legal reviews include aspects of human-machine interaction and how they were addressed in training. The view was expressed that legal reviews were insufficient on their own to address the concerns raised by lethal autonomous weapons systems, and that specific rules were required. Reference was made to two expert meetings on the legal reviews of autonomous weapons systems that were held in Australia in 2023 and 2024.

38. It was noted that there was no provision governing how legal reviews should be conducted and no requirement to publicize the outcome of such reviews. Several States emphasized the utility of voluntary exchanges of information and practices regarding the legal review of lethal autonomous weapons systems.

Security considerations

39. Several States referred to the risks that lethal autonomous weapons systems posed to international peace and security. The importance of taking into account the national security concerns of all States was stressed.

40. Several States noted that the use of lethal autonomous weapons systems could be a destabilizing factor, including by lowering the threshold for the use of force, which could worsen the frequency and intensity of conflicts and precipitate humanitarian crises. Concern was also expressed regarding the potential destabilizing effect of the proliferation of lethal autonomous weapons systems. Several States referred to escalation risks caused by the unpredictability of lethal autonomous weapons systems, including the potential for machine-to-machine interaction, increased speed of warfare, lowered risk of military casualties for the user State and asymmetric warfare. States expressed concern that lethal autonomous weapons systems might become the objects of an arms race. The view was expressed that lethal autonomous weapons systems should not be used to seek absolute military superiority and hegemony.

41. Several States expressed concern that lethal autonomous weapons systems could be fitted with nuclear weapons or other weapons of mass destruction, which could undermine strategic stability and heighten the risk of nuclear war.

42. States expressed concern regarding the consequences of the proliferation of lethal autonomous weapons systems for non-State actors, such as terrorist and criminal groups. Several States also expressed concern regarding the use of lethal autonomous weapons systems by domestic law enforcement officials, which could raise human rights concerns.

43. The view was expressed that proliferation risks associated with emerging technologies such as lethal autonomous weapons systems could be addressed in the multilateral export control regimes. However, it was stressed that there must be no undue restrictions for the transfer of technologies related to such systems.

Technological considerations

44. Several States expressed concern regarding the susceptibility of lethal autonomous weapons systems to a number of technological risks, including:

- Malicious cyberactivity
- Hardware and software anomalies and malfunctions
- Decision-making based on incorrect or incorrectly interpreted information

45. The view was expressed that the application of artificial intelligence to critical functions of lethal autonomous weapons systems could heighten the risk of unintended outcomes.

46. States also expressed concern regarding algorithmic bias in lethal autonomous weapons systems, which exacerbated existing power imbalances, disproportionately affected marginalized groups and led to collateral harm to women and children in conflict zones. The importance of rigorous documentation of the data sets used and of comprehensive testing and reviews, as well as of training on and awareness of that issue, was stressed.

Ethical considerations 47. Several States expressed concern regarding machine processes substituting for human judgment, as they deemed ethical and moral considerations fundamental to the discussion on lethal autonomous weapons systems. Those systems and other machines were considered to lack empathy, compassion and the ability for moral reasoning. The view was expressed that ethical responsibilities in connection with decisions to apply force required the context-specific, value-based judgment of humans. Several States found the targeting of humans and, in particular, the delegation of the decision to take a human life by machines to be unethical.

48. States recalled that it was recognized in the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights that human rights were derived from the inherent dignity of all, and they stressed the duty of all States to ensure the inviolability of human dignity. Concern was expressed by several States that the use of lethal autonomous weapons systems could lead to the loss of dignity and dehumanization, which could result in unjustified violence and civilian casualties.

49. It was noted that ethical concerns often led to the adoption of legal constraints. Several States were of the opinion that the most effective way to address ethical concerns was the proper application of international humanitarian law.

Potential benefits

50. The view was expressed that autonomous weapons systems may offer legitimate military benefits, including:

- Improving safety and efficiency
- Improving compliance with international humanitarian law, improving the protection of civilians and reducing the risk of collateral damage, including by enhancing precision
- Reducing risk to defence personnel
- Avoiding errors caused by the human operator's mental or physical state, as well as their moral, religious and ethical predisposition
- Making more efficient use of labour

44 Something to Think About

LAWS face many technology related risks. Why is it important for governments to carefully assess these risks before using such systems in conflict?

46 Interesting Facts

Autonomous weapons systems that rely on AI algorithms can contain built-in biases and are prone to errors. These flaws increase the risk of civilian casualties, including women and children.

V. Deliberations by States

Convention on Certain Conventional Weapons

51. States referred to the consideration of lethal autonomous weapons systems in the context of the Convention on Certain Conventional Weapons. The view was expressed that the structure of the Convention – with the possibility to negotiate on additional protocols – was well suited to address problems raised by emerging technologies. Many States considered the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems to be the appropriate forum for discussions on the topic.

52. Several States noted that the Group of Governmental Experts ensured a balance between humanitarian concerns and the legitimate self-defence interests of States in relation to such weapons. They also noted that all relevant actors were represented, including those States with the most advanced capabilities in that area.

53. Several States welcomed the fact that the Group of Governmental Experts had brought together experts from various fields, including those with legal, military, technological and diplomatic expertise. However, several States called upon the Group to further strengthen inclusivity in order to reflect more diverse views.

54. Several States noted that the deliberations of the Group of Governmental Experts to date had led to progress and convergences. Among the most notable achievements cited were the 11 guiding principles adopted by the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems[2] and convergence around the two-tier approach.[3] Several States expressed regret at the slow pace of progress.

55. Several States welcomed the mandate adopted by the 2023 Meeting of the High Contracting Parties to the Convention on Certain Conventional Weapons that the work of the Group of Governmental Experts should continue and should submit a substantive report to the Seventh Review Conference of the High Contracting Parties to the Convention in 2026.[4] Several States called upon the Group to avoid further delay and to achieve tangible results within that period.

56. Looking ahead, a call was made for the Group of Governmental Experts to work on the basis of previous agreements, taking into account the manifold proposals that had been made. It was also suggested that General Assembly resolution 78/241 be taken into full account by the Group. Several States suggested that the Group focus on clarifying how existing law, especially international humanitarian law, applied to lethal autonomous weapons systems. Additional suggested areas of focus included strengthening understanding of characterizations and definitions, human-machine teaming, and technical and governance standards for safe and responsible development and use of lethal autonomous weapons systems, as well as prohibitions and regulations.

57. Several States suggested the establishment of a group of technical experts to periodically update high contracting parties on developments related to lethal

[2] CCW/MSP/2019/9, annex III.

[3] See the report of the 2023 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, paras. 21 and 22. Available at https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/CCW-GGE.1-2023-2_English.pdf.

[4] See CCW/MSP/2023/7, paras. 20 and 26.

54 Interesting Facts

The Guiding Principles document affirmed by the GGE on LAWS outlines 11 principles for the development and use of lethal autonomous weapons systems and reaffirms state responsibility, compliance with international law, and the importance of human accountability. Cited by many states as one of the most notable achievements of the GGE, it serves as a foundation for ongoing international dialogue.

54 Definition

The 'two-tier approach' refers to a proposed structure for GGE discussions in which one tier focuses on prohibiting certain types of LAWS, while the second tier addresses regulations for those not covered by the ban. This proposal is supported by a large group of states.

56 Definition

The Group of Governmental Experts on LAWS was created in 2016 to examine issues related to emerging technologies in the area of LAWS in the context of the Convention on Certain Conventional Weapons (CCW). The group is composed of High Contracting Parties and non-State Parties to the CCW, international organizations (such as the International Committee of the Red Cross), and non-governmental and civil society organizations (including Human Rights Watch, academics, and technical experts).

autonomous weapons systems and to assist States in adopting appropriate measures to respond to specific challenges.

58. With regard to the outcome of the work of the Group of Governmental Experts, several States expressed support for negotiations on and adoption of a protocol to the Convention on Certain Conventional Weapons on the issue of lethal autonomous weapons systems. Another suggestion was made for the Group to develop a statement on the application of international humanitarian law and best practices regarding lethal autonomous weapons systems.

59. Several States expressed the view that consideration of the issue of lethal autonomous weapons systems in parallel processes outside the Group of Governmental Experts could be counterproductive and lead to fragmentation. However, several States expressed the view that discussions in other forums could have advantages in terms of inclusivity and making linkages to related topics, especially if such discussions supported the work of the Group.

General Assembly

60. Several States noted the value of consideration of lethal autonomous weapons systems by the General Assembly, given its inclusive membership. In that regard, several States welcomed the adoption of Assembly resolution 78/241, which they hoped would accelerate the international response to lethal autonomous weapons systems. Several States noted that the present report would allow all Member States and observer States to express their views and could serve as a resource, including for the Group of Governmental Experts.

61. The view was expressed that lethal autonomous weapons systems should be addressed by the Disarmament Commission and in "A Pact for the Future". The view was also expressed that the General Assembly could consider beginning negotiations on a legally binding instrument on lethal autonomous weapons systems.

Stakeholders

62. Several States stressed the importance of contributions by all stakeholders, including representatives of international organizations, civil society, academia and industry, in discussions on lethal autonomous weapons systems. Several States called for strengthening cooperation with stakeholders, as appropriate. The view was expressed that negotiations on a legally binding instrument on lethal autonomous weapons systems should be held in the forum most inclusive of stakeholders.

Regional and international meetings

63.

Several States called for strengthening regional cooperation and partnership in order to advance common positions on lethal autonomous weapons systems. In that regard, they welcomed the international and regional meetings and conferences on the issue of lethal autonomous weapons systems, including those held in Costa Rica, Luxembourg, the Philippines, Sierra Leone and Trinidad and Tobago. Several States referred to the special communiqué adopted by the Ibero-American Summit in March 2023, as well as the international Conference on Autonomous Weapons Systems that was held in Austria.

Artificial intelligence in the military domain

64. Noting that artificial intelligence was a key enabler of autonomy, several States referred to the use thereof in the military domain, which could have both positive and negative impacts. It was noted that artificial intelligence was already being used on

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60 Did You Know That

At the time of publishing this report only 60 countries shared their position on LAWS with the UN.

61 Definition

"A Pact for the Future" is a landmark UN agreement adopted by world leaders in 2024 to modernize international cooperation for today's realities and future challenges. It includes two major components: (1) the Global Digital Compact, which outlines principles for responsible digital governance, and (2) the Declaration on Future Generations, which calls for long-term thinking in global decision-making. The Pact reflects a major renewed commitment to multilateralism, international law, and inclusive global governance. Among the wide range of issues addressed by the Pact, are discussions on an instrument to govern the development and use of LAWS and military applications of AI.

63 Did You Know That

In 2023, the member states present at the 28th Ibero-American Summit endorsed a communique that recognized the need to (1) negotiate a strict legally binding international instrument which regulates autonomy in weapons systems, (2) ensure compliance with International Law, including International Humanitarian Law and International Human Rights Law, ethical perspectives, and (3) recognize the negative social and humanitarian impacts that might follow from unregulated autonomous weapons systems.

the battlefield. A call was made for States to commit to the responsible use of artificial intelligence in the military domain.

65. Several States welcomed initiatives in that regard, including the Responsible Artificial Intelligence in the Military Domain process, the Global Artificial Intelligence Governance Initiative, the political declaration on responsible military use of artificial intelligence and autonomy, and the Bletchley Declaration. The view was expressed that initiatives related to the governance of artificial intelligence should be brought under the auspices of the United Nations to ensure inclusivity and effectiveness. The view was also expressed that those initiatives should not undermine the work of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems.

VI. Next steps

66. Several States stressed the urgency of addressing the concerns raised by lethal autonomous weapons systems through multilateral discussions. Several States emphasized the importance of the principle of consensus in negotiations on international security, including on lethal autonomous weapons systems.

67. Several States called for further development of the normative and operational framework governing lethal autonomous weapons systems. While several States called for strengthening the international legal framework and to further specify it in relation to lethal autonomous weapons systems, others expressed the view that the existing legal framework was sufficient to address new military capabilities, including lethal autonomous weapons systems.

68. Many States expressed support for the two-tier approach, according to which lethal autonomous weapons systems that could not be used in accordance with international law should be prohibited, while others should be appropriately regulated. The view was expressed that prohibitions should not be seen as a way to hinder technological innovation and should not hinder the use of technology for peaceful purposes or legitimate defence purposes.

Legally binding instrument

69. Several States called for negotiations on a legally binding instrument on lethal autonomous weapons systems in order:

- To continue the codification and progressive development of the rules of international law applicable in armed conflict, in line with the preamble to the Convention on Certain Conventional Weapons
- To clarify the application of international humanitarian law to lethal autonomous weapons systems and to facilitate its implementation
- To fill lacunae in international law, in particular international humanitarian law

70. Those States calling for negotiations on a legally binding instrument made several recommendations with regard to its contents. They stated that it should, inter alia:

- Incorporate relevant norms and principles of international law, including from international humanitarian law, international human rights law, international criminal law and other relevant instruments
- Facilitate a comprehensive approach to the issue
- Ensure compliance with relevant international law

65 Definition

The Responsible AI in the Military Domain (REAIM) process is a recurring global summit focused on guiding military AI toward ethical and responsible use. Participants include representatives from governments, academia, and technology companies around the world. Multiple outcome documents are published at the conclusion of every summit detailing updated steps towards responsible military-AI usage, Calls to Action, and more. 60 countries supported the Call to Action published at the end of the 2024 summit.

65 Definition

A 2023 framework that outlines China's vision for AI development, security, and governance. It supports the creation of 'people-centered AI' that benefits humanity, and calls for global cooperation on the issue.

65 Definition

A 2023 proposal by the US government on international norms and arms control for military AI-use. It includes proposed regulations for LAWS and decision-making by weapons. The proposal is largely based on current domestic US military regulations. As of early 2024, 51 countries have signed the declaration.

65 Definition

The Bletchley Declaration is an agreement issued by 28 countries and political entities, including the United States, China, and the European Union, at the 2023 AI Safety Summit at Bletchley Park, UK. The agreement calls for international cooperation to manage the challenges and risks of AI and for it to be designed, developed, deployed, and used in a manner that is safe, human-centric, trustworthy and responsible.

the battlefield. A call was made for States to commit to the responsible use of artificial intelligence in the military domain.

65. Several States welcomed initiatives in that regard, including the Responsible Artificial Intelligence in the Military Domain process, the Global Artificial Intelligence Governance Initiative, the political declaration on responsible military use of artificial intelligence and autonomy, and the Bletchley Declaration. The view was expressed that initiatives related to the governance of artificial intelligence should be brought under the auspices of the United Nations to ensure inclusivity and effectiveness. The view was also expressed that those initiatives should not undermine the work of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems.

VI. Next steps

66. Several States stressed the urgency of addressing the concerns raised by lethal autonomous weapons systems through multilateral discussions. Several States emphasized the importance of the principle of consensus in negotiations on international security, including on lethal autonomous weapons systems.

67. Several States called for further development of the normative and operational framework governing lethal autonomous weapons systems. While several States called for strengthening the international legal framework and to further specify it in relation to lethal autonomous weapons systems, others expressed the view that the existing legal framework was sufficient to address new military capabilities, including lethal autonomous weapons systems.

68. Many States expressed support for the two-tier approach, according to which lethal autonomous weapons systems that could not be used in accordance with international law should be prohibited, while others should be appropriately regulated. The view was expressed that prohibitions should not be seen as a way to hinder technological innovation and should not hinder the use of technology for peaceful purposes or legitimate defence purposes.

Legally binding instrument

69. Several States called for negotiations on a legally binding instrument on lethal autonomous weapons systems in order:

- To continue the codification and progressive development of the rules of international law applicable in armed conflict, in line with the preamble to the Convention on Certain Conventional Weapons
- To clarify the application of international humanitarian law to lethal autonomous weapons systems and to facilitate its implementation
- To fill lacunae in international law, in particular international humanitarian law

70. Those States calling for negotiations on a legally binding instrument made several recommendations with regard to its contents. They stated that it should, inter alia:

- Incorporate relevant norms and principles of international law, including from international humanitarian law, international human rights law, international criminal law and other relevant instruments
- Facilitate a comprehensive approach to the issue
- Ensure compliance with relevant international law

69 Did You Know That

As of April 2025, from the 195 UN member states and non-member observer states, 129 (66%) are in favor of creating a legally binding instrument while only 12 countries (6%) oppose the idea with another 54 (28%) remaining undecided

- Prevent regulatory fragmentation through divergent national measures
- Address the humanitarian risks and fundamental ethical concerns related to lethal autonomous weapons systems
- Address issues related to the targeting of humans by lethal autonomous weapons systems
- Facilitate the equal participation of all States

71. Several States made reference to the call by the Secretary-General to conclude, by 2026, a legally binding instrument to prohibit lethal autonomous weapons systems that functioned without human control or oversight and that could not be used in compliance with international humanitarian law, and to regulate all other types of autonomous weapons systems and the October 2023 call by the Secretary-General and the President of the International Committee of the Red Cross, as well as by other United Nations system actors, including Special Rapporteurs.

72. Several States considered existing rules of international humanitarian law to be sufficient and that there was no need for a new legally binding instrument. Another view was expressed that a shared understanding of how existing law, especially international humanitarian law, applied to lethal autonomous weapons systems was needed before pursuing a new legal instrument. The view was expressed that additional clarity on the utility of such a legally binding instrument was necessary. Other States noted that an instrument on lethal autonomous weapons systems could be either politically or legally binding.

73. The view was expressed that the development of norms and standards for responsible development and use of lethal autonomous weapons systems was the best way forward. The view was also expressed that negotiations on rules of behaviour in relation to lethal autonomous weapons systems were premature. Several States considered that voluntary initiatives could be useful to share best practices and build norms, but could only serve as interim measures pending negotiations on a legally binding instrument. 74. Moving forward, several States called for an inclusive, multidisciplinary approach, with the buy-in of the widest possible group of States. A call was also made for regional and subregional action on lethal autonomous weapons systems. Several States stressed the importance of taking into account a gender perspective in discussions on lethal autonomous weapons systems. The suggestion was made that a moratorium on the development of lethal autonomous weapons systems be declared until the adoption of an instrument on those weapons systems.

Scope of prohibitions

75. The view was expressed that any instrument on lethal autonomous weapons systems should reiterate the relevant prohibitions that already existed under international humanitarian law. In addition, many States called for the prohibition of lethal autonomous weapons systems that operated completely outside human control and those that could not be operated in accordance with international humanitarian law.

76. States presented several characteristics of lethal autonomous weapons systems that could not be operated in compliance with international humanitarian law and that would render those systems:

- Inherently indiscriminate
- Unable to distinguish between combatants and civilians
- Designed to apply force against civilians or civilian objects

- Unable to determine whether an attack could cause incidental damage to civilian objects that would be excessive in relation to the military advantage anticipated
- Of a nature to cause superfluous injury or unnecessary suffering
- Having effects that could not be reliably predicted, anticipated, understood or explained
- Having effects that could not be limited and controlled

77. Several States called for the prohibition of lethal autonomous weapons systems that were designed to target humans directly.

Scope of regulations

78. Several States called for those lethal autonomous weapons systems that would not be subject to the prohibitions outlined above to be regulated.

79. It was noted that the measures to be taken with regard to a lethal autonomous weapons system depended on the characteristics of the system, the operational environment and the user. It was also noted that autonomy existed on a spectrum, and a range of measures may have to be articulated for lethal autonomous weapons systems depending on where they were situated on that spectrum.

80. States considered the purposes that such regulation would serve, including:

- To ensure the retention of human control, in particular over critical functions, at all times
- To ensure a chain of human command and responsibility
- To ensure full compliance with international law, including international humanitarian law, throughout a system's life cycle

81. In order to ensure full compliance with international humanitarian law, a number of measures were proposed, including:

- Controlling or limiting the types of targets that a system could engage, including by restricting targets to only objects that were military objectives by nature
- Limiting duration, geographical scope and scale of use
- Ensuring human approval of any decision to use force
- Ensuring human approval of any change in mission parameters, such as duration, geographical scope and scale of operations, including through self-destruction, self-deactivation and self-neutralization mechanisms
- Limiting the number of engagements
- Ensuring due diligence in the implementation of the principles and requirements of international humanitarian law by the human operator
- Ensuring sufficient predictability and reliability
- Ensuring legal reviews to ascertain that new weapons, means and methods of warfare complied with international humanitarian law

82. Additional measures were proposed, including:

- To ensure rigorous testing to evaluate and assess how the weapons system will perform in the various circumstances of its use
- To ensure registration, tracking and analysis of lethal autonomous weapons systems

recommendations in the report are not intended to prejudge any future negotiations or agreements and are without prejudice to national positions.

A. Evolving nature of outer space activities, threats and related capabilities

11. The Group noted that its work was taking place in a difficult geopolitical environment that creates greater mistrust and increases the risk of misperceptions and miscalculations, which has significant implications for international security.

12. The use of outer space has changed significantly over the past several decades. The space security environment is no longer solely tied to the dynamics of competition between two super Powers. An increasing number of State and non-State actors operate in outer space with more and more satellites providing a growing range of benefits and essential services. Space services are increasingly being integrated into various aspects of essential services to all States and peoples, such as communications, energy, transportation, finance, emergency and humanitarian operations, as well as into defence and national security. Space science and technology and their applications, including satellite communications, Earth observation systems and satellite navigation technologies, provide indispensable tools for sustainable development. Therefore, every State has an interest in pursuing a stable, secure, safe and sustainable outer space environment, and the interests of all States should be taken into account in the elaboration of measures for the prevention of an arms race in outer space in all its aspects.

13. The Group noted that the elaboration of substantial elements on the prevention of an arms race in outer space should be based on a comprehensive understanding of threats in the context of outer space. The Group also noted that the perception of threats may differ among States.

14. The Group considered all vectors of threats relating to space systems and the broadest possible range of practical measures relevant for the prevention of an arms race in outer space in all its aspects. The increasing variety of threats to or involving space systems were considered along four vectors: Earth-to-space, space-to-Earth, space-to-space and Earth-to-Earth. These threats could involve kinetic and non-kinetic means, resulting in a gradient of reversible or irreversible effects.

B. Evolution of United Nations efforts for the prevention of an arms race in outer space in all its aspects

15. The Group discussed how developments relating to the evolving nature of outer space activities and space threats have influenced efforts to address the prevention of an arms race in outer space. The Group recalled that the goal of the prevention of an arms race in outer space was first agreed to in 1978 during the first special session of the General Assembly devoted to disarmament and that, in its final document, the Assembly stated that “further measures should be taken and appropriate international negotiations held in accordance with the spirit of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies”.3

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World Federation of United Nations Associations

11 Interesting Facts

Similar to the nuclear arms race, competition among countries to develop space-based and ground-based weapons could escalate tensions, leading to security dilemmas where defensive measures (such as ASAT) by one nation are perceived as threats by others, spurring further militarization.

12 Did You Know That

In 2024, global government expenditure for space programs hit a record of approximately 135 billion U.S. dollars. The United States Government spent around 79.7 billion U.S. dollars on its space programs in that year, making it the country with the highest space expenditure in the world. The U.S. was followed by China, with government expenditure on space programs of over 19 billion U.S. dollars.

13 Something to Think About

Countries with large military space programs often worry about hostile attacks on satellites, anti-satellite weapons, or interf

Can you think

14 Definition

In the context of space disarmament, "kinetic" weapons refer to systems that physically destroy their targets through direct impact or explosions - such as anti-satellite (ASAT) missiles or weapons that can result in the cre\

- To ensure risk assessments
- To ensure adequate training of human decision makers and operators
- To promote risk mitigation measures and safeguards to ensure reliability and to prevent failures, misuse, diversion and relinquishment of human prerogatives
- To address environmental impacts

Other issues to be included in an instrument

83. Several States considered the contents of an instrument on lethal autonomous weapons systems, beyond prohibitions and regulations. Such an instrument could include:

- A preamble making reference to the 11 guiding principles adopted by the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems
- A technical annex, to be updated on a regular basis
- An obligation to implement the provisions of the instrument in domestic law
- Regular reporting by States on their implementation of the instrument
- A monitoring process to review the implementation of the instrument
- Measures for investigation of and redress for any suspected, reported or documented violations of the instrument
- Measures to prevent the proliferation and unauthorized use of lethal autonomous weapons systems
- Capacity-building

Risk mitigation measures

84. States stressed that risk assessments and mitigation measures should be part of the full life cycle of emerging technologies in any weapons system. It was noted that such assessments and mitigation measures should take into account existing legal obligations and respect national jurisdictions and capacities. Several States called for the identification of risk mitigation measures.

85. A number of risk mitigation measures were suggested, including:

- Retention of a responsible human chain of command
- Effective life cycle management
- Comprehensive testing
- Prevention of unauthorized access, including of non-State actors
- Operator training
- Continuous operator monitoring of the operation of lethal autonomous weapons systems, ensuring the possibility of termination
- Safeguards, such as data protection
- Well-documented safety procedures

86. It was suggested that lessons learned in relation to risk mitigation practices could be shared on a voluntary basis.

84 Something to Think About

Some states have proposed implementing risk mitigation measures to reduce the potential harms of LAWS. Through the CCW, international restrictions have been placed on other types of weapons, including a preemptive ban on blinding laser weapons before they saw widespread use. What lessons or effective strategies from these past efforts could be applied to the case of LAWS?

Other measures

87. The view was expressed that technical standardization was critical to ensuring the compatibility of lethal autonomous weapons systems with international law, and that Institute of Electrical and Electronics Engineers standard 7007-2021 could be a useful reference. It was noted that transparency and confidence-building measures could play a role in addressing concerns related to lethal autonomous weapons systems. Several States highlighted the importance of international cooperation and capacity-building to facilitate the meaningful engagement of States in multilateral discussions related to lethal autonomous weapons systems and to facilitate risk mitigation.

VII. Observations and conclusions of the Secretary-General

88. The numerous views received for the present report are evidence of the strong interest in lethal autonomous weapons systems of States, international organizations and civil society. There is widespread recognition of the deleterious effects that lethal autonomous weapons systems could have, from humanitarian, human rights, legal, security, technological and ethical perspectives. There is widespread concern that those weapons systems have the potential to change warfare significantly and may strain or even erode existing legal frameworks.

89. There is widespread recognition that human control is essential to ensure responsibility and accountability, compliance with international law and ethical decision-making. I therefore reaffirm the need to act urgently to preserve human control over the use of force. Machines that have the power and discretion to take human lives are politically unacceptable and morally repugnant, and should be banned by international law.

90. There is a strong sense that time is running out for the international community to take preventive action on this issue. I therefore reiterate my call for the conclusion, by 2026, of a legally binding instrument to prohibit lethal autonomous weapons systems that function without human control or oversight and that cannot be used in compliance with international humanitarian law, and to regulate all other types of autonomous weapons systems. The autonomous targeting of humans by machines is a moral line that must not be crossed. 91. I note in this regard the current mandate of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems in the context of the Convention on Certain Conventional Weapons. I call upon all High Contracting Parties to the Convention to work diligently to fulfil the mandate as soon as possible. I also call upon all other States to take part in the work of the Group as observers and to urgently consider adhering to the Convention in order to participate in deliberations and decision-making. I recall that the High Contracting Parties to the Convention reaffirmed the need for the continued codification and progressive development of the rules of international law applicable in armed conflict, and I call upon States to use every opportunity to make progress in this regard.

92. I encourage the General Assembly to continue its consideration of the matter of lethal autonomous weapons systems. With its near universal membership and wide substantive scope, the Assembly is a venue for inclusive discussions and for considering the relationship of lethal autonomous weapons systems to other matters of international peace and security. I recommend that the Assembly remain fully apprised of the efforts undertaken in this regard under the auspices of the Convention on Certain Conventional Weapons. States could consider holding informal consultations on the matters raised in the present report. The Summit of the Future,

to be convened on 22 and 23 September 2024, also represents an important opportunity to build momentum towards the conclusion, by 2026, of a legally binding instrument on lethal autonomous weapons systems. The present report can serve as a reference for the work of the Group of Governmental Experts, as well as for any future processes on lethal autonomous weapons systems.

96. Notwithstanding the need for new prohibitions and regulations tailored specifically to lethal autonomous weapons systems, it is essential to fully implement existing international law, including international humanitarian and human rights law, applicable to those weapons systems. To that end, I call upon all States that have not yet done so to ratify the four Geneva Conventions and their Additional Protocols, as well as the core international human rights instruments. All States should strictly abide by their obligations under international humanitarian law and international human rights law.

Annex I

Replies received

A. Member and observer States

Andorra, Argentina, Bolivia (Plurinational State of), Brazil, Colombia, Costa Rica, Cuba, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Spain, Uruguay and Venezuela (Bolivarian Republic of)

[Original: Spanish]
[24 May 2024]

Twenty-eighth Ibero-American Summit of Heads of State and Government, Santo Domingo, 25 March 2023

Special communiqué on the social and humanitarian impact of autonomous weapons

The Heads of State and Government of the Ibero-American countries, gathered in Santo Domingo, Dominican Republic, at the twenty-eighth Ibero-American Summit:

Emerging technologies pose specific challenges to international peace and security, and raise new questions about the role of humans in warfare. A holistic understanding of the effects of autonomy in weapons systems and its impact on meaningful human control is required to fully assess the ethical, legal, humanitarian and security implications.

As new weapons technologies continue to be developed and used in armed conflicts, there is a need for new prohibitions and regulations guided by international law, including international humanitarian law and international human rights law, and grounded in the principles of humanity and the dictates of public conscience; the principles of distinction, necessity and proportionality; the importance of individual responsibility for serious violations of international humanitarian law; and ethical perspectives.

In accordance with international law, including the purposes and principles enshrined in the Charter of the United Nations, international human rights law and international humanitarian law, the international community is called upon to respond to these threats by developing and strengthening the international legal framework so as to prevent the effects of displacement, the injury and death of civilians, and the destruction of civilian objects.

It is paramount to maintain meaningful human control to prevent further dehumanization of war and ensure individual accountability, the responsibility of the State and of non-State armed groups, and the human rights of victims.

Ibero-American States have actively participated in discussions of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, within the framework of the Convention on Certain Conventional Weapons. A group of States has presented elements for a future normative framework and a draft version of a protocol VI under the framework of the Convention on Certain Conventional Weapons. Some States in the region have also joined the statement on autonomous weapons by 70 States at the United Nations General Assembly in October 2022.

Furthermore, the Declaration of Buenos Aires, issued at the seventh Summit of Heads of State and Government of the Community of Latin American and Caribbean States on 24 January 2023, highlighted the Proclamation of Latin America and the Caribbean as a Zone of Peace, signed at the second Summit of Heads of State and Government in Havana in January 2014.

The United Nations Secretary-General, the United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions, the Special Rapporteur on the rights of persons with disabilities, the United Nations Special Rapporteur on contemporary forms of racism, the International Committee of the Red Cross, civil society, the scientific community and academia have expressed concern about autonomy in weapons systems and repeatedly called upon States to negotiate a legally binding instrument in that regard.

In the communiqué of the Latin American and Caribbean Conference on the Social and Humanitarian Impact of Autonomous Weapons held on 23 and 24 February 2023, the delegates of the region recognized the risks and challenges posed by autonomy in weapons systems, as well as the need for a legally binding international instrument establishing prohibitions and regulations to guarantee meaningful human control.

Echoing that communiqué, the delegates of the Ibero-American States acknowledge the need for further actions to:

1. Collaborate to promote the urgent negotiation of a legally binding international instrument containing prohibitions and regulations on autonomy in weapons systems, in order to ensure compliance with international law, including international humanitarian law and international human rights law, and ethical perspectives, as well as the prevention of the social and humanitarian impact that autonomy in weapons systems entails;

2. Commit to actively participate in order to advance common positions and furthering such negotiations;

3. Continue and strengthen cooperation and partnership with international and civil society organizations, academia and other relevant stakeholders, to draw upon their relevant expertise and support;

4. Continue discussions among States to develop possible recommendations that could be promoted in the framework of the Convention on Certain Conventional Weapons and other multilateral forums.

Argentina

[Original: Spanish]
[24 May 2024]

Argentina considers it important to begin by recognizing the serious risks and challenges posed by lethal autonomous weapons systems in terms of compliance with international humanitarian law, the protection of human dignity and human rights, ethical concerns, international stability and security, and peacekeeping. Argentina is committed to preventing an arms race in autonomous weapons, as such a development could exacerbate international security vulnerabilities and broaden technological disparities.

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 is the appropriate forum for discussion on the topic, given that its aim and raison d'être are to foster the progressive development of

international humanitarian law and enable the constant assessment of new developments in technology and weapons. This forum is also relevant in terms of its experience and representativeness, as it has held discussions on the matter for 10 years, with some basic agreements having been reached, and includes the States with the highest level of technological development in the sector. However, we recognize that discussion in other forums may be beneficial with regard to universality, linkages and synergies with other topics of discussion, such as cybersecurity, labour, transport and intellectual property.

Any developments in the regulation of lethal autonomous weapons systems should be guided by the principles of distinction, proportionality and human responsibility in the use of force. As a general rule of governance of the application of artificial intelligence to autonomous weapons systems, a balance should be struck between defence needs and humanitarian protection.

Argentina believes that it is important to preserve a distinction between prohibition and regulation in the development, manufacture, use, possession and transfer of such systems. With regard to regulation, the general principle should be to maintain meaningful human control over the critical functions of autonomous weapons systems. In addition, it is important that there be sufficient knowledge and information to understand lethal autonomous weapons systems, that the functioning of such systems be assessed and that the development of algorithmic biases be avoided.

Argentina maintains that States should commit themselves to updating their systems for regulating the export of military and sensitive materials, including intangible technologies, in order to prevent the proliferation of lethal autonomous weapons systems.

In 2018 and 2019, Argentina submitted two documents (CCW/GGE.1/2018/WP.2 and CCW/GGE.1/2019/WP.6), in which it underscored the obligation to conduct weapons assessments in accordance with article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I). Measures relating to lethal autonomous weapons systems could include stricter requirements with regard to assessing systems that have been acquired or developed, with a view to ensuring their compatibility with international law, including international humanitarian law, and developing common assessment criteria shared by States. As highlighted in the document, it is important to promote international cooperation and assistance in order to bridge the gaps in countries' technological capabilities for carrying out assessments. In this regard, the exchange of best practices, the development of human resources and technology transfer are essential.

Argentina, as part of a group of 13 countries (Argentina, Costa Rica, Ecuador, El Salvador, Guatemala, Kazakhstan, Nigeria, Panama, Peru, the Philippines, Sierra Leone, Uruguay and the State of Palestine), submitted a proposal for a protocol VI to the Convention on Certain Conventional Weapons at the July 2022 session of the Group of Governmental Experts on lethal autonomous weapons systems. In May 2023, at the second session of the Group of Governmental Experts on lethal autonomous weapons systems held in 2023, the group submitted a revised draft version of a protocol VI containing updates and revisions, taking into account the discussions and proposals from the March 2023 session. More countries have joined the group, including Chile, Colombia and the Dominican Republic.

Argentina considers it important to promote regulations that are focused on lethal autonomous weapons systems and take into account the diverse economic and technological capabilities of all States, in order to avoid approaches that limit the use and benefits of new technologies to countries that are more technologically advanced.

Any potential measures considered should neither limit nor deny the right of States to access, develop, research, acquire, produce, transfer or use autonomous technologies, including developments in artificial intelligence.

Lastly, in order to advance sustainable and equitable international security standards, the promotion of the effective regulation of lethal autonomous weapons systems should include instruments other than binding instruments, such as political declarations, codes of conduct, market rules and restrictions, system architecture, programming benchmarks and shared military doctrines.

Australia

[Original: English]
[24 May 2024]

Australia appreciates the opportunity to make a submission to the report of the Secretary-General on lethal autonomous weapons systems in accordance with General Assembly resolution 78/241 on lethal autonomous weapons systems adopted on 22 December 2023.

In Australia's submission to the report,1 we provide our views on "ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force", while acknowledging the potential benefits of lethal autonomous weapons systems.

Australia's submission outlines our views on lethal autonomous weapons systems under the following headings:

- Legal considerations
  - Application of international humanitarian law
  - Undertaking legal reviews
  - Human involvement and control
  - Harnessing technology in support of international humanitarian law
  - Risk mitigation measures
- Ethical considerations
- Accountability considerations
- Security and technology considerations
  - Cybersecurity vulnerabilities
  - Proliferation risks
- Unintended bias
- Australian Defence Strategies
- Complementary efforts on responsible military use of artificial intelligence and autonomy
  - Responsible Artificial Intelligence in the Military Domain
  - Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy

[1] Submission available at https://meetings.unoda.org/ga-c1/general-assembly-first-committee-seventy-ninth-session-2024.

Austria

[Original: English]
[24 May 2024]

Austria welcomes the opportunity to submit its views for consideration by the Secretary-General of the United Nations, pursuant to General Assembly resolution 78/241.

On 29 and 30 April 2024, Austria convened the international conference "Humanity at the crossroads: autonomous weapons systems and the challenge of regulation" in Vienna.

The Chair's summary of the conference reflects the fundamental challenges of autonomous weapons systems as relating to the nature of human control, accountability and compliance with international law, including international humanitarian law and international human rights law. It also reflects the ethical concerns they raise regarding the dignity of the person and the moral demands stemming from the principles of humanity and the requirements of public conscience.

Like the International Committee of the Red Cross, we consider the current international legal framework as fully applicable to autonomous weapons systems, but not sufficiently developed to address all these challenges. The complexities of increased autonomy in weapons systems raise unprecedented challenges regarding the application of and compliance with international law. A legally binding instrument also needs to address wider issues, such as humanitarian risks and the fundamental ethical concerns related to autonomous weapons systems.

We emphasize that the relevant legal framework should not only relate to international humanitarian law, but also to international human rights law and international criminal law, which are relevant due to the high likelihood of autonomous weapons systems being used outside of armed conflict, the prevalence of dual use within the related technologies and the major role of private industry in the design and development of such systems.

Autonomous weapons systems present global risks to peace and security, including proliferation to non-State armed groups. Against the backdrop of an accelerating security competition, autonomous weapons systems may become objects of an arms race. In this context, they can lower the threshold of war and lead to unintended escalations.

A fundamental humanitarian, legal, security and ethical concern is the risk of humans losing control over the use of force, while it is humans who will continue to bear the consequences of armed conflict.

Autonomous weapons systems may present challenges in attributing responsibility for attacks. Proliferation of autonomous weapons systems to non-State armed groups and other violent actors may escalate security risks in armed conflict as well as in law enforcement.

These profound concerns and risks concern all States and all parts of society. The need for the regulation of autonomous weapons systems is in the interest of humanity to maintain peace and security. The technology sector and industry should be partners in this endeavour of striving for legal clarity.

All relevant stakeholders, including States, the United Nations system, international and regional organization, the technology sector and industry, academia and civil society play a role and should be closely involved in the multilateral efforts towards the regulation of autonomous weapons systems.

Humanity is at a crossroads and must come together to address the challenge of regulating these weapons. This could be the “Oppenheimer moment” of our generation. Experts from various fields have been warning about the profound risks and severe consequences for humanity of an unregulated autonomous weapons systems race. International efforts must rise to the challenge of regulating those systems. So far, they have not been commensurate with the speed and significance of this development. Determined political leadership is urgently needed to this end.

Austria strongly supports the joint call by the Secretary-General of the United Nations and the President of the International Committee of the Red Cross of 5 October 2023 urging Member States to launch negotiations of a new legally binding instrument to set clear prohibitions and restrictions on autonomous weapon systems and to conclude such negotiations by 2026. Austria stresses the urgency of the matter and the need to address the profound concerns raised by autonomous weapons systems from a legal, ethical and security perspective. Austria also strongly supports the fact that autonomous weapons systems are addressed within the forthcoming document A Pact for the Future.

In the light of the speed of technological progress on autonomous weapons systems and the work already conducted on the issue within the United Nations, 2026 is an appropriate target date. Any further delay would have negative repercussions on the impact of such an instrument.

The Parliament of Austria adopted an all-party motion on 17 April 2024 urging the Government to continue to strenuously engage at the multilateral level for the negotiation and adoption of an international legally binding instrument to regulate autonomous weapons systems.

Austria encourages negotiations for a legally binding instrument that consists of prohibitions and regulations. Autonomous weapons systems that cause effects that cannot be adequately explained or predicted or sufficiently controlled are unacceptable and would violate international humanitarian law and must therefore be prohibited. Autonomous weapons systems that select and engage persons as targets in a manner that violates the dignity and worth of the human person as well as the principles of humanity or the dictates of public conscience are unacceptable and must be prohibited. All other autonomous weapons systems should be regulated in order to ensure meaningful human control over their use. Additional details on Austria’s view on this issue are contained in the working papers submitted to the Group of Governmental Experts on lethal autonomous weapons systems in 2023 and 2024.

Meaningful human control over autonomous weapons systems can be achieved by a combination of several conditions, including: (a) a functional understanding of the weapon system; (b) an adequate assessment of the context in which the weapon can be and is used; and, resulting from these factors, (c) limitations that may need to be set with regard to the duration, geographical area, number of engagements and types of targets. Meaningful human control also implies that a human operator is able to assess the foreseeable effects of an intended use of force on a legal and moral basis. There is a requirement throughout research on and the development, acquisition and use of autonomous weapons systems to constantly review and reassess any possible changes and modifications in their functioning, with regard to the fulfilment of the conditions listed above. This should include technical aspects such as machine learning and any datasets upon which system functions are based.

This monitoring process should be embedded in an adequate multilayered international regulatory framework that entails regular review of the implementation of prohibitions and positive obligations to ensure that meaningful human control is preserved over autonomous weapons systems and that legal rules and ethical principles are protected in their design, development and use.

Another layer of regulations concerns measures that are related to artificial intelligence-based systems, such as ensuring the integrity, quality and veracity of data, preventing algorithmic bias, preventing automation bias and adequately training personnel on all relevant levels. It is also necessary to ensure the safety of such weapons systems, in particular with regard to cybersecurity, artificial intelligence-specific vulnerabilities and proliferation risks.

Accountability for the use of force and its consequences cannot be transferred to machines or algorithms. The rules of international humanitarian law and international human rights law are addressed to people, individually and collectively. Accountability as a legal requirement can be achieved through meaningful human control. In particular, it requires that those authorizing the use of force can explain and predict its foreseeable effects. Effective governance is necessary to avoid an accountability gap.

Finally, autonomous weapons systems can be characterized as systems, which, once activated, select targets and apply force without further human intervention. We do not see the need to continue to use the qualifier “lethal” as we do not see this as a suitable characteristic to describe autonomous weapons systems. It finds no justification in international humanitarian law, which protects civilians not only against death, but also against injury.

Humanity at the Crossroads: Autonomous Weapons Systems and the Challenge of Regulation, Vienna, 30 April 2024: Chair’s Summary

Albania, Armenia, Austria, Belgium, Chile, Costa Rica, Cyprus, Democratic Republic of the Congo, Georgia, Hungary, Ireland, Kazakhstan, Kiribati, Liechtenstein, Madagascar, Malawi, Peru, Republic of Moldova, San Marino, Sri Lanka associate themselves with this submission thus far.

The Conference “Humanity at the Crossroads: Autonomous Weapons Systems and the Challenge of Regulation”,1 convened in Vienna, Austria, on 29 and 30 April 2024, and gathered States, United Nations representatives, international and regional organizations, academia, industry, parliamentarians and civil society to discuss the implications of and challenges related to Autonomous Weapons Systems (AWS), as well as possible avenues to address them. More than 1,000 participants, including from 144 States, attended the Conference.

The Conference provided for a rich exchange of views through high-level political panels, experts discussions and the statements delivered by States and other stakeholders. The following points represent exclusively the Conference Chair’s Summary and are presented without prejudice to the positions of States and other stakeholders. Statements delivered by States and other stakeholders during the Conference are available on the Conference website.

Autonomous Weapons Systems (AWS), which – once activated – select targets and apply force without further human intervention, raise concerns from legal, ethical and security perspectives. Fundamental challenges relate to the nature of human control, accountability and the overall compatibility of such systems with international law, including international humanitarian law (IHL) and international human rights law (IHRL). They raise ethical concerns regarding the dignity of the person and face moral demands from the principles of humanity and requirements of the public conscience.

[1] See https://www.bmeia.gv.at/en/european-foreign-policy/disarmament/conventional-arms/autonomous-weapons-systems/2024-vienna-conference-on-autonomous-weapons-systems.

AWS also present global risks to peace and security, including risks of proliferation, also to non-state armed groups. Autonomous weapons systems that promise the advantage of speed may not allow for meaningful human control, and risk destabilizing international security. A dangerous autonomy arms race looms. These risks concern all states and all parts of society, and have disproportionate effects on those more vulnerable.

New technologies hold great promise for the advancement of human welfare. It must empower people, not dehumanize them. How we regulate against harms from technology has a bearing also on our ability to reap the benefits of such technologies. Human control must prevail in the use of force. The delegation to machines of decisions over choice of targets and life and death is an issue that concerns all of us. It profoundly challenges our global social contract and the UN Charter.

The need to address AWS is demonstrated by the ongoing and valuable discussions in the GGE established in the framework of the CCW, the regional conferences on AWS organized by Costa Rica, Luxembourg, Trinidad and Tobago, the Philippines and Sierra Leone, as well as related processes on the broader issues of AI in the military domain.

There is strong convergence that AWS that cannot be used in accordance with international law or that are ethically unacceptable should be explicitly prohibited. All other AWS should be appropriately regulated (the so-called two-tier approach). The UN Secretary-General (UNSG), and the President of the International Committee of the Red Cross (ICRC) have emphasized the urgency of negotiating and adopting an international legal instrument to set clear prohibitions and restrictions on autonomous weapons systems and to conclude negotiations by 2026. The preventive window for such action is closing. Many states and other stakeholders have supported this call.

The following points emerged from the panel discussions, which the Conference Chair considers to be of central importance for future prohibitions and regulations to comprehensively address AWS:

- The rules of IHL and IHRL are addressed to people, individually and collectively. Accountability is central to legal systems and cannot be transferred to machines. Effective governance is necessary to avoid an accountability gap.
- The informed, moral engagement of human decision makers is the basis of our legal frameworks governing the use of force. It is what makes people responsible and accountable for the outcomes that occur.
- Legal judgments regarding the use of AWS require sufficient understanding of both the weapons systems, the conditions in the context where they may be used and their predicted outcomes.
- Systems that cannot be adequately understood or limited to a specific context cannot be subject to human control and so would not be compatible with legal use and accountability.
- The seriousness of risks regarding AWS require us to clarify the application of existing legal rules and to establish clear prohibitions and regulations to preserve the human element in the use of force.
- AWS raise concerns in relation to IHRL, human dignity and foundational ethical principles and ethics should be a force that drives our response.
- Ethics have been the main engine in the creation and development of law with regards to conduct in war.

- Targeting people is a most pressing ethical issue. Furthermore, AWS that would function by distinguishing certain groups of people from others would be liable to problems of bias in the datasets and algorithms that they are built on.
- Such problems of bias reflect societal structures and can disproportionately affect already marginalised groups and lead to grievous error.
- Increasing levels of autonomy in weapons systems also raise serious challenges with regard to international peace and security.
- Distance and dehumanisation, the risks of lowering the political threshold to use force as well as escalation risks, including by machine-to-machine interaction, raise further concerns.
- AWS may present challenges in attributing responsibility for attacks. Further proliferation of AWS to non-state armed groups and other violent actors may escalate security risks in armed conflict as well as in law enforcement.
- In the civil space, countries and regions have developed new legal and regulatory regimes to address concerns that autonomous decisions that harm people, without recourse to a human explanation, threaten to undermine human dignity.
- The Martens Clause in IHL recognizes that the law can develop in relation to societal concerns and the dictates of public conscience and is, thus, of particular relevance to the AWS issue.
- Artificial intelligence has the potential to fundamentally change our relationship with technology, for good or for bad. The challenge of AWS is also an opportunity, through their regulation, to establish shared norms and guardrails for the role of AI in society in order to prevent the most negative outcomes.
- We have a responsibility to act and to put in place the rules that we need to protect humanity.

These points underline the crucial moment we find ourselves in. Humanity is at a crossroads.

This is our generation's "Oppenheimer Moment" where geopolitical tensions threaten to lead a major scientific breakthrough down a very dangerous path for the future of humanity. We must heed the warning of experts and show the political leadership and foresight that this challenge demands of us.

The fact that the international situation is difficult does not absolve us from the political responsibility to address the challenges of autonomous weapons systems. This requires us to build partnerships across States and regional bodies, UN entities, international organizations, civil society, academia, the tech sector and industry.

Austria will submit this Summary to the UN Secretary-General for consideration for the report mandated by the 2023 UNGA Resolution on "Lethal Autonomous Weapons Systems". We urge all states and stakeholders to make use of the opportunity provided by that resolution and to submit their views to the UN Secretary-General. We encourage all states and stakeholders to consider these points for inclusion in their views. We also invite states to associate themselves with this Summary.

This Chair's Summary affirms our strong commitment to work with urgency and with all interested stakeholders for an international legal instrument to regulate autonomous weapons systems.

Bulgaria

[Original: English]
[25 May 2024]

Bulgaria welcomes the opportunity to submit its views for consideration by the Secretary-General of the United Nations, in accordance with resolution 78/241 on lethal autonomous weapon systems, adopted by the General Assembly on 22 December 2023, which requested the Secretary-General to seek views on "ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force".

Bulgaria has been consistently engaged in the deliberations on emerging technologies in the area of lethal autonomous weapons systems within the framework of 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. Since the establishment of the Group of Governmental Experts on lethal autonomous weapons systems in 2017, Bulgaria has been participating proactively and constructively in the discussions by sharing its views and ideas on issues and concepts related to autonomous weapons systems in the light of technology, military effects and legal and ethical considerations.

Having a clear understanding of the urgency of clarifying the international regulation of autonomous weapons systems, in October 2023 Bulgaria joined as a co-sponsor of General Assembly resolution 78/241 on lethal autonomous weapons systems, through which the overwhelming majority of States stressed the urgent need for the international community to address the challenges posed by autonomous weapon systems.

I. Ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives

Being a strong proponent of the two-tier approach, Bulgaria considers such an approach to offer a legitimate and favourable framework to address the related challenges and concerns raised by autonomous weapon systems from humanitarian, legal, security, technological and ethical perspectives.

The two-tier approach calls for a distinction between (a) autonomous weapons systems operating completely outside human control and a responsible chain of command; and (b) autonomous weapons systems featuring autonomous functions, requiring regulations to ensure compliance with international law and, more specifically, international humanitarian law.

The application of international humanitarian law lies at the heart of the two-tier approach, which should aim to prohibit weapons systems that cannot ensure conformity with such law. The regulation of autonomous weapons systems, on the other hand, requires the process of their development and use to be conducted in full accordance with international humanitarian law and its key principles, in particular the principles of distinction, proportionality and precautions in attack. At the same time, such regulation should include the introduction and implementation of certain policies and measures to be applied throughout the whole life cycle of an autonomous weapons system.

Bulgaria, together with Denmark, France, Germany, Italy, Luxembourg and Norway, has submitted guidance on possible concrete types of measures and policies on the basis of the two-tier approach.1

The role of humans

II.

Human control is central to compliance with international humanitarian law and the ethical acceptability of autonomous weapon systems. To ensure the use of such weapons systems fully complies with international humanitarian law and its key principles and to avoid any accountability gaps, human control must be preserved and retained at the various phases of research and development, validation, deployment and use of autonomous weapons systems, primarily in the targeting cycle.

Human control can be exercised in a distinct way during the different phases of the life cycle of an autonomous weapons system. The extent and type of human control to be exerted over an autonomous system to guarantee compliance with international humanitarian law depend on the complexity of the operational environment, the intricate characteristics of the weapons system itself and its capabilities and capacities, as well as on its intended use and the tasks to be performed.

The targeting process requires making a complex assessment of the conflict environment and military objectives to be achieved, in order to verify that an attack is lawful under the norms and principles of international humanitarian law. The subordination of an autonomous weapons system to a higher military authority in the responsible chain of command must be assured before the authorization of use of force is issued.

Applying the requirements of the legitimate use of autonomous weapons systems and assessing the lawfulness of the use of force by such a system, prior to its authorization, is a complex process, which requires humans to have:

- A deep and thorough understanding of the capabilities and functionalities of the system in use, an appropriate situational awareness of the conflict environment in which an autonomous weapons system is anticipated to operate and a sufficient level of intelligence about the military target, thus enhancing the levels of predictability and reliability of the system's performance and actions.

- Approval and validation, before every mission and operation, of rules of engagement that set time-related and dimensional limits and define the controlled and proportional use of military power on the basis of the norms and requirements of international humanitarian law described in detail in the planning process of the specific operation. In any situation, the use of force must be controlled and restricted to a commander's initial intent and to the effects needed to achieve military objectives.

III. Operationalization of the two-tier approach

Bulgaria considers the Convention on Certain Conventional Weapons to offer an appropriate international framework for discussions, exchanges of views and the sharing of expertise among a broad range of stakeholders on issues and concepts of various dimensions related to emerging technologies in the area of lethal autonomous weapons systems such as technology, military effects, international law and ethics.

[1] Working paper submitted by Bulgaria, Denmark, France, Germany, Italy, Luxembourg and Norway, available at https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2024)/CCW-GGE.1-2024-WP.3.pdf.

As Chair of the Convention on Certain Conventional Weapons in 2024, Bulgaria stands committed to undertake every necessary effort to facilitate the work of the Group of Governmental Experts in advancing the deliberations on the regulation of autonomous weapons systems and fulfilling its mandate to further consider and formulate, by consensus, a set of elements for the establishment of an instrument.

In this endeavour, the Group of Governmental Experts profits from several years of in-depth, sound and well-grounded discussions, previously adopted reports and dozens of working papers that have encouraged States to build upon shared understandings and seek even further commonalities on fundamental issues of essence. The convergence on the two-tier approach based on prohibitions and regulations could be considered as one of the achievements of the work of the Group in recent years.

Bulgaria will continue its proactive and constructive work within the Group of Governmental Experts in an effort to promote further convergence on the two-tier approach on the basis of prohibitions and regulations. Clarifying the content of the two-tier approach in existing law and its application to autonomous weapons systems, within an instrument, is a condition for effective regulation.2

Regarding the form of an instrument on lethal autonomous weapon systems, Bulgaria stands ready to support the start of negotiations and the adoption of an additional protocol (VI) to the Convention on Certain Conventional Weapons, on the basis of the two-tier approach.

Canada

[Original: English]
[24 May 2024]

In its resolution 78/241 on lethal autonomous weapons systems, adopted on 22 December 2023, the General Assembly calls for the views of Member States and observer States on such systems, inter alia, on ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force, for the purposes of submitting a substantive report reflecting the full range of views received from those States to the General Assembly at its seventy-ninth session, for further discussion by Member States.

At the seventy-eighth session of the General Assembly, Canada was pleased to support resolution 78/241 and to see it gain the additional support of 163 other States. We view this resolution as the appropriate progression of the joint statement on lethal autonomous weapons systems delivered at the seventy-seventh session of the General Assembly, which Canada also supported.

Canada appreciated that the language within resolution 78/241 was refined through informal consultations in Geneva and New York and believes that the resolution could go further in articulating the importance of algorithmic biases, for example on gender, at the development phase of lethal autonomous weapons systems.

Canada appreciated that the resolution highlighted the need for compliance with international humanitarian law and reinforced the two-track approach (regulation and prohibition) that has largely been discussed within the Group of Governmental

[2] A comprehensive proposal for an instrument under the mandate of the Group of Governmental Experts on lethal autonomous weapons systems can be found at https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2024)/CCW-GGE.1-2024-WP.3.pdf.

Experts on lethal autonomous weapons systems, established under 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, in which Canada is actively engaged. Canada would like to see resolution 78/241 taken into full account by the Group, given that it highlights the Group as the "central and unique forum to address various issues pertaining to lethal autonomous weapons systems".

General Assembly resolution 78/241 also represents the wider interest in discussing lethal autonomous weapons systems within the United Nations sphere, as further emphasized by the reference to autonomous weapons systems in the forthcoming document A Pact for the Future. The resolution recognizes the great promise that new and emerging technologies hold for the protection of civilians in conflict, alongside concerns about the potential negative consequences and impact of lethal autonomous weapons systems on global security and regional and international stability. Canada agrees that these wider geopolitical considerations should be taken into consideration in future discussions.

The growing pace of technology requires commensurate advancement in international policy discussions on lethal autonomous weapons systems. This response providing the views of Canada builds on much appreciated work submitted by other States in the spirit of collaboration and advancement of international discussion on this topic. Further discussions are needed to examine the potential challenges posed by emerging technologies such as lethal autonomous weapons systems – in particular, the role of humans in the use of lethal force, human-machine interaction and the rules and principles applicable to the development, deployment and use of emerging technologies in the area of lethal autonomous weapons systems.

Canada recognizes that there are various options to address potential prohibitions, including a potential legally binding instrument. That said, it is unclear at this stage what gaps in the current international framework a new instrument would seek to fill and, consequently, what a new treaty might entail.

Canada is of the view that all discussions related to lethal autonomous weapons systems must be anchored in ensuring compliance with existing international law, including international humanitarian law. This implies that a weapons system must always maintain a degree of human involvement and that accountability and responsibility must remain with humans. Weapons systems that could operate without a degree of human control and accountability would not be compliant with international humanitarian law.

As a next step, consensus should be sought on reaching a common understanding of what "human involvement" would be required in order for weapon systems to be compliant with international humanitarian law. Through further discussion and refinement of the interpretation of this concept, States could agree on where the line should be drawn between "fully autonomous weapons systems" (i.e. that lack appropriate human involvement and are therefore not compliant with international humanitarian law), and weapons systems whose autonomy is accompanied by appropriate human involvement and that are therefore able to maintain compliance with international humanitarian law.

From Canada's perspective, this concept is closely related to guiding principle (c) of the 11 guiding principles developed by the Group of Governmental Experts. Appropriate human involvement must be maintained in the use of force. In accordance with article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), Canada conducts national legal reviews of new weapons, means or methods of warfare, to ensure compliance with international humanitarian law. Canada ensures this necessary element first through its national legal reviews of

all new weapons, which ensure that weapons systems meet Canada's international legal obligations. We also ensure strict adherence to international humanitarian law throughout the life cycle of the weapon.

Another area to examine is how the conduct of reviews of article 36 is linked to ensuring that appropriate human involvement is maintained in the use of force. From Canada's perspective, humans – not machines – are responsible for the use of force. Removing human involvement from part of the life cycle of fully autonomous weapons systems would render responsibility for decision-making difficult to trace, which is one reason why Canada is opposed to such systems. Military commanders are accountable for all uses of force that occur under their command, whether by a human subordinate or a machine. We see the term "involvement" as encompassing both human judgment and human control; it is our view that armed conflict should remain fundamentally a human enterprise. The sharing of good practices would be a logical first step in this area.

The concepts of predictability and reliability of lethal autonomous weapons systems should also be further examined by States. States appear to differ in their interpretations of how measures of predictability should be applied to such systems. With the use of current conventional weapons, militaries must reasonably and objectively anticipate what will happen as a result of the use of a weapon. That said, responsible militaries adopt a range of methods to enhance predictability and reduce collateral harm, in order to ensure that weapons systems are only used in accordance with international law.

Canada is of the view that autonomy in weapons systems must stem from a high level of trustworthiness such that the level of unpredictability is sufficiently low, and that any risks may be mitigated by appropriate measures similar to those managed when using conventional weapons. Canada would support broad ranging consensus principles, including the following:

- Weapons systems based on emerging technologies in the area of lethal autonomous weapons systems that cannot be used in compliance with international humanitarian law are prohibited.

- To be compliant with international humanitarian law, emerging technologies in the areas of lethal autonomous weapons systems must maintain an appropriate level of human involvement.

- National policies, doctrines, directives and processes should be updated to ensure that new technologies are used in compliance with applicable international law.

- Stakeholders should engage in the voluntary exchange of information on legal reviews of new weapons and emerging technologies in the areas of lethal autonomous weapons systems.

A primary concern for Canada remains the potential for the inclusion of unintended or intended biases in the development and programming of autonomous functions in a weapons system. We are concerned that fully autonomous weapons systems may not be consistent with the principles related to the women and peace and security agenda. During a dialogue that Canada held with Indigenous and civil society partners on its feminist foreign policy, participants raised a number of concerns related to lethal autonomous weapons systems, including the issue of collateral harm to women and children in conflict zones and the risk that autonomous weapons systems could exacerbate existing power imbalances and biases.

In addition, many States have expressed a desire to discuss the moral and ethical implications surrounding the automation of weapons systems. Canada is committed

to advancing international discussions on lethal autonomous weapons systems that take into account all of these concerns.

Finally, Canada wishes to acknowledge the invaluable contributions (including research papers, data presentations and interventions) made by civil society and international organizations to help advance discussions on lethal autonomous weapons systems.

Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Kazakhstan, Nigeria, Panama, Peru, Philippines, Sierra Leone and State of Palestine

[Original: English]
[24 May 2024]

Overview

In view of the objectives and purposes of 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, commonly known as the Convention on Certain Conventional Weapons, among which is "to continue the codification and progressive development of the rules of international law applicable in armed conflict",1 a group of 16 like-minded High Contracting Parties to the Convention continues to call on all High Contracting Parties to expeditiously address the risks and challenges posed by autonomous weapons systems during the sessions of the Group of Governmental Experts on lethal autonomous weapons systems.

The group of 16 reaffirms that the emergence of autonomous weapons systems and their impact to the changing landscape of warfare require the development of legally binding rules and principles, including regulations and prohibitions on the development, production, possession, acquisition, deployment, transfer and use of autonomous weapon systems without meaningful human control or in the absence of compliance with international law.

In this context, a group of 13 delegations first proposed and submitted a draft protocol VI on autonomous weapons systems to the July 2022 session of the Group of Governmental Experts. In May 2023, the group of 13 delegations submitted a revised draft protocol VI during the second annual session of the Group with a few updates and revisions taking into account the discussions and proposals of the session held in March 2023.2 The group of 13 delegations has since received support from three more, namely Chile, Colombia and the Dominican Republic.

Structure

Draft protocol VI aims to address the ethical, legal, humanitarian and security concerns presented by autonomous weapons systems. It contains prohibitions and regulations on autonomous weapons systems that may serve as a basis for the negotiation of a legally binding instrument. Draft protocol VI also emphasizes

[1] Written commentary calling for a legally-binding instrument on autonomous weapon systems, available at https://documents.unoda.org/wp-content/uploads/2022/05/20220309-G13-Written-Submission.docx.

[2] More concrete characterization of meaningful human control incorporating positions expressed at the March 2023 session of the Group of Governmental Experts on lethal autonomous weapons, improved language on the prohibition of systems that are outside the threshold of meaningful human control reflecting the exchange of views at the same meeting, additional section dedicated to regulations (thereby separating prohibitions from regulations) incorporating elements of the proposal for draft articles presented by a group of United States-led co-sponsors at the same meeting.

prohibiting autonomous weapons systems if their autonomous functions are designed to be used to conduct attacks outside meaningful human control.3

The draft protocol includes a preamble and eight articles: (a) General provisions; (b) Characterization; (c) Prohibitions; (d) Regulations; (e) Review of weapons; (f) Risk mitigation; (g) Compliance; and (h) Consultations of High Contracting Parties. Those articles highlight the following provisions:

- First, the proposal offers simple characterizations of "autonomous weapons systems" and "meaningful human control".

- Draft protocol VI establishes a set of prohibitions to the design, development, production, possession, acquisition, deployment, transfer or use of autonomous weapons systems that cannot be used with meaningful human control, including those that cannot be operated in a manner that cannot be predicted, explained, anticipated, understood or traced.

- It also establishes regulatory measures to ensure effective human oversight, intervention and deactivation of autonomous weapons systems. It emphasizes the capacity of humans to limit the type of targets, duration, geographical scope and scale of use. It stipulates the need for clear procedures to be put in place to inform and empower humans in exerting control over autonomous weapons systems. Rigorous testing and limitations on data-processing complexity are also mandated to guarantee understandability, explainability and predictability.

- Finally, the draft protocol contains a mechanism for regular reviews and amendments to ensure it remains relevant and effective in the light of changing technological and security environments.

This draft protocol VI represents a significant step in proposing a way forward to address the challenges posed by autonomous weapons systems and present a suggested blueprint to start negotiations on a legally binding instrument on this matter. It invites all interested parties to engage in constructive dialogue to further develop and strengthen this proposal.

Recommendations

(a) Recognize that new legally binding rules and principles are needed to safeguard against the risks and challenges posed by autonomous weapons systems, given the growing common recognition that current international humanitarian law does not hold all the answers to the humanitarian, legal and ethical questions raised by such systems;

(b) Affirm that responsibility and accountability for decisions on the use of force must be retained by humans since this cannot be transferred to machines;

(c) Affirm that context-based human judgment and control are essential to ensure that the use of autonomous weapons systems is in compliance with international law and in particular international humanitarian law. Therefore, meaningful human control must ensure that a human can make moral and legal judgments about the acceptability of the effects of an attack. It must also ensure that a human user is legally and morally responsible for the effects of an attack.

(d) Call for the initiation of negotiations on a legally binding treaty to regulate autonomous weapons systems as soon as possible. Said negotiation process should be inclusive, involving all interested stakeholders, and maintain a multidisciplinary

[3] Draft protocol VI, article 3, available at https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/CCW_GGE1_2023_WP.6_2.pdf.

approach incorporating elements from international human rights law, obligations under the Charter of the United Nations, other disarmament conventions, international criminal law, ethical considerations, international arms trade regulations and environmental regulations, among others.

China

[Original: Chinese]
[23 May 2024]

Lethal autonomous weapons systems are a product of scientific and technological development and of the new revolution in military affairs. They are both a matter of national defence and security and a matter of humanitarian concern. There has been growing attention to and understanding of the issues raised by such systems on the part of the international community. To safeguard the common values and interests of humanity, all countries have the responsibility and the security and development need to effectively manage the security, legal, ethical and humanitarian risks posed by artificial intelligence.

China has always played a constructive role in relevant international discussions and governance processes and has actively contributed to governance programmes. Since 2017, China has participated in successive meetings of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, established under the Convention on Certain Conventional Weapons. Within the Convention framework, China put forward a position paper on regulating military applications of artificial intelligence. In October 2023, Chinese President Xi Jinping announced the launch of the Global Artificial Intelligence Governance Initiative. The Initiative emphasizes that the development of artificial intelligence should comply with applicable international law and that all countries, especially major Powers, should be prudent and responsible in developing and applying artificial intelligence technologies in the military field, ensuring that artificial intelligence is always under human control.

China takes the view that all parties should seek to prevent a new arms race and should abide by the principle of equal, common and universal security in dealing with the issue of lethal autonomous weapons systems. It opposes the use of such systems to pursue absolute military superiority and hegemony. China maintains that:

First, the Convention on Certain Conventional Weapons framework is the appropriate forum for the discussion of lethal autonomous weapons systems. It is important to uphold the principle of consensus in the field of international security. Discussions within the Convention framework have continued to make progress, and the Group of Governmental Experts has played a constructive role in promoting the achievement of important outcomes such as the 11 guiding principles. The positions of all parties have tended to converge to a certain extent on many issues. In 2023 the Group of Governmental Experts adopted a substantive report that reflected the unique value of the Convention framework. Against this backdrop, any hasty attempt to start over again by promoting other forums for the discussion of lethal autonomous weapons systems could impact existing processes, widen differences between countries and reverse the results and consensus achieved over the years.

Second, defining these systems' characteristics is the key to developing any practical control measures. Lethal autonomous weapons systems involve very complex issues; the more diffuse the discussions, the more concerns and differences will emerge and the more difficult it will be to make substantive progress. Priority should be given to discussions on definitions, with a view to first reaching an agreed understanding on key elements and technical characteristics as a basis on which to

formulate targeted measures and negotiate a legally binding international instrument. Lethal autonomous weapons systems should not be discussed in isolation from "lethality"; otherwise, they will diverge from the original intention of humanitarian arms control, conflate the concept of lethal autonomous weapons systems with that of autonomous weapons systems, complicate the issue and further stall the discussion process.

Third, the application of the relevant laws to lethal autonomous weapons systems should be fully studied and demonstrated in the light of technological development trends. International humanitarian law, including the Geneva Conventions and the two Protocols Additional thereto, is fully applicable to all weapons systems, including lethal autonomous weapons systems. However, there is still considerable uncertainty as to whether existing international humanitarian law is adequate to meet the challenges posed by lethal autonomous weapons systems at their current level of development, such as whether such systems have the ability to discriminate and make proportional decisions in a battlefield environment. Accordingly, States should innovate responsibly and take effective preventive measures to ensure that the use of new technologies in the field of lethal autonomous weapons systems minimizes harm to civilians and fulfils humanitarian purposes and objectives.

Fourth, tiered and categorized management is a reasonable way to deal with the issue of lethal autonomous weapons systems. The introduction of blanket bans or restrictions would undermine States' legitimate defence capabilities and even their right to the peaceful use of these technologies. China believes that consideration should be given to classifying lethal autonomous weapons systems as either "acceptable" or "unacceptable". For those deemed "unacceptable", consideration should be given to concluding a legal instrument to prohibit them, following the example of the Protocol on Blinding Laser Weapons. For those deemed "acceptable", the necessary risk mitigation measures should be taken. China has already proposed five characteristics of unacceptable lethal autonomous weapons systems and is willing to continue exploring this issue with all parties.

China will continue to uphold the spirit of openness, inclusiveness and mutual learning, maintain communication and exchanges with all parties within the Convention on Certain Conventional Weapons framework, strive to build greater consensus on issues concerning lethal autonomous weapons systems and jointly safeguard and promote international peace and security.

Costa Rica

[Original: Spanish]
[24 May 2024]

As a neutral country and unarmed democracy, Costa Rica reaffirms its commitment to global peace and security, with respect for multilateralism, the Charter of the United Nations and international law. This commitment was reflected in the country's role as host of the Latin American and Caribbean Conference on the Social and Humanitarian Impact of Autonomous Weapons in 2023 and in its active participation in the core group that initiated General Assembly resolution 78/241 on lethal autonomous weapons systems. In response to the call by the Secretary-General, Costa Rica hereby presents its position in support of the negotiation of a legally binding instrument to prohibit autonomous weapons systems.

Need for a legally binding instrument

The term “autonomous weapons systems” is preferred to that of “lethal autonomous weapons systems” because of the interpretation, shared by the International Committee of the Red Cross and several States, that lethality depends on the use of the weapons system rather than on its design. Such systems raise important ethical and legal questions, especially in relation to their limited ability to make context-specific decisions, as humans would. This gives rise to doubts about their compatibility with international law, including international humanitarian law and international human rights law.

The current international regulatory framework does not have all the answers to the legal challenges posed by autonomous weapons systems. Costa Rica therefore advocates the complete prohibition of autonomous weapons systems whose critical functions lack meaningful human control, including systems with functions that cannot be predicted, explained, anticipated, understood or tracked.

Costa Rica supports the implementation of a legally binding instrument that regulates autonomous weapons systems, integrates a multidisciplinary approach and incorporates rules of international law, including international humanitarian law and international human rights law, international criminal law and other instruments, such as the Arms Trade Treaty, along with agreed-upon ethical considerations. Such an approach seeks to ensure meaningful human control at all stages and to promote transparency and explainability in order to counteract biases in the operation of such systems and avoid the systematic reproduction of assessments that discriminate against historically vulnerable populations.

Considerations relating to autonomous weapons systems from a Costa Rican perspective

a. Meaningful human control as a central pillar

Costa Rica is of the view that autonomous weapons systems that do not allow the maintenance of human agency, including the preservation of human judgment and intervention, over the use of force, cannot comply with the principles of international law.

Ensuring meaningful human control requires, for example, the ability to adjust targets depending on the environment, deactivate the system when necessary and restrict the autonomy of the system. In addition, the scope, selection and distinction of targets should be regulated, taking into account aspects relating to time and space. It must be possible to understand and explain the system’s functioning in order to uphold legal requirements and accountability, attribute responsibility and retrospectively explain its actions.

b. Assignment of responsibility and accountability Costa Rica notes with concern the lack of clarity in the assignment of responsibilities and accountability in the use of autonomous weapons systems, as it could weaken the attribution of responsibility and facilitate impunity in cases of breaches of international law, including international humanitarian law and international human rights law. It is essential to establishing clear mechanisms that ensure that the decisions and action taken by these systems are traceable and attributable to human decision makers, thus ensuring accountability and respect for international norms.

c. Acquisition and use of autonomous weapons systems by non-State actors

Costa Rica is particularly concerned about the consequences of non-State actors acquiring and using autonomous weapons systems. At the international and regional levels, countries have worked together to combat drug trafficking and organized crime, condemning activities that promote terrorism and paramilitary groups. However, the development of such systems could provide criminal groups with a new means of diversifying their arsenals, posing a significant risk to regional stability and security. Such systems could be used to protect drug transport, control territories, attack police and emergency forces, and even civilians.

The specialization required for these systems could lead to the proliferation of cybercrime groups, as autonomous weapons systems are vulnerable to hacking. This could result in the manipulation of their programmed functions and targets, rendering their behaviour less predictable and fostering criminal activities that undermine regional stability and international efforts to promote security and peace.

d. Advancing technology for peace

The proliferation of autonomous weapons systems threatens global peace, and Costa Rica is deeply concerned about the potential of such systems to provoke armed conflict. Such systems enable warfare without human military intervention, a phenomenon that could lead to arbitrary attacks in violation of international law. Furthermore, the development of such systems has triggered an arms race that contravenes the principles of disarmament and non-proliferation promoted in the Charter of the United Nations and in landmark international treaties that foster peace.

Costa Rica advocates the use of emerging technologies for peaceful purposes, such as health care, education and climate change action, and rejects the development of technologies that promote armed conflict.

e. Ethical considerations Delegating life-and-death decisions to autonomous weapons systems is unacceptable, as doing so reduces human beings to mere data points and contradicts fundamental ethical principles. Costa Rica fosters technological development that respects human dignity and universal rights.

Final points

- An open-ended mandate must be established, within the framework of the United Nations, to initiate negotiations on a legally binding international instrument on autonomous weapons systems.
- The negotiations on such an instrument should be focused on prohibitions and regulations to ensure meaningful human control, so as to avoid the further dehumanization of war and ensure individual accountability and State responsibility, thereby promoting compliance with international law, including international humanitarian law and international human rights law, and addressing ethical perspectives and the prevention of the social and humanitarian impact of autonomous weapons systems.
- Costa Rica highlights the shared concern about the risks and challenges posed by autonomous weapons systems, and emphasizes the need for such systems to be predictable, understandable and explainable, given their ethical, legal, humanitarian and security implications.
- The matter should be approached from a multidisciplinary perspective that ensures respect for the fundamental principles of international law, incorporating

clear criteria relating to predictability, proportionality and explainability, as well as, inter alia, ethical considerations and environmental regulations.

- The negotiation process must be inclusive, ensuring true representation of all States involved and allowing the participation of all stakeholders, including civil society, academia and the private sector.

Communiqué of the Latin American and Caribbean Conference on the Social and Humanitarian Impact of Autonomous Weapons

Emerging technologies pose concrete challenges to international peace and security, and raise new questions about the role of humans in warfare. A holistic understanding of the effects of autonomy in weapons systems and its impact on meaningful human control is required to fully assess the ethical, legal, humanitarian, and security implications.

As new weapons technologies continue to be developed and used in armed conflicts, there is an urgent need for new prohibitions and regulations guided by international law, including international humanitarian law and its principles, and grounded in the principles of humanity and the dictates of public conscience, as well as ethical perspectives.

In accordance with international law, including the purposes and principles enshrined in the Charter of the United Nations, international human rights law and international humanitarian law, the international community is called upon to respond to these threats by developing and strengthening the international legal framework so as to prevent the effects of displacement, the injury and death of civilians, and the destruction of civilian objects.

It is paramount to maintain meaningful human control to prevent further dehumanization of warfare and ensure individual accountability and State responsibility.

Latin American and Caribbean States have actively participated in discussions of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, within the framework of the Convention on Certain Conventional Weapons. A group of States presented elements for a future normative framework and a draft version of a protocol VI under the framework of the Convention on Certain Conventional Weapons. Some States in the region have also joined the statement on autonomous weapons by 70 States at the United Nations General Assembly in October 2022.

Furthermore, the Declaration of Buenos Aires, issued at the seventh Summit of Heads of State and Government of the Community of Latin American and Caribbean States on 24 January 2023, highlighted the Proclamation of Latin America and the Caribbean as a Zone of Peace, signed at the second Summit of Heads of State and Government in Havana in January 2014.

The United Nations Secretary-General, the United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions, the United Nations Special Rapporteur on the rights of persons with disabilities, the United Nations Special Rapporteur on contemporary forms of racism, the International Committee of the Red Cross, civil society, the scientific community and academia have expressed concern about autonomy in weapons systems and have repeatedly called upon States to negotiate a legally binding instrument in that regard.

h. The delegates of the region recognized the risks and challenges posed by autonomy in weapons systems, as well as the need for a legally binding international

instrument establishing prohibitions and regulations to guarantee meaningful human control.

The delegates of the Latin American and Caribbean States acknowledge the need for further actions to:

1. Collaborate to promote the urgent negotiation of a legally binding international instrument, with prohibitions and regulations with regard to autonomy in weapons systems, in order to ensure compliance with international law, including international humanitarian law, and ethical perspectives, as well as the prevention of the social and humanitarian impact that autonomy in weapons systems entails;

2. Commit to actively participate in order to advance common positions to further such negotiations;

3. Continue and strengthen cooperation and partnership with international and civil society organizations, academia and other relevant stakeholders, to draw upon their relevant expertise and support;

4. Continue discussions among Latin American and Caribbean States to develop possible recommendations that could be promoted in the framework of the Convention on Certain Conventional Weapons and other multilateral forums.

La Ribera de Belén, Heredia, Costa Rica

23 and 24 February 2023

Cuba

[Original: Spanish]
[25 May 2024]

Cuba supports the urgent adoption of a legally binding international instrument that prohibits the manufacture, possession and use of fully autonomous weapons and regulates the use of semi-autonomous weapons, including drones.

Discussions on lethal autonomous weapons systems under 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 have taken into account the legal, ethical, humanitarian and security dimensions that are important to the High Contracting Parties to the Convention.

We note the outcomes of the sessions of the Group of Governmental Experts on lethal autonomous weapons systems held between 2018 and 2024.

We believe, however, that discussions should facilitate progress towards a legally binding instrument that includes not only prohibitions on fully autonomous weapons systems and regulations on semi-autonomous weapons, but also a general requirement to maintain meaningful human control in the use of force, and the prohibition of all systems that are unpredictable or prevent the attribution of responsibility in the event of non-compliance with binding obligations. It is our hope that, with its new mandate to formulate a set of elements for an instrument, the Group of Governmental Experts will deliver tangible results in that regard.

The use of autonomous lethal weapons cannot ensure compliance with, or the observance of, the rules and principles of international law, in particular international humanitarian law, including its principles of distinction and proportionality.

The use of fully autonomous weapons would preclude the effective assessment of the responsibility of States for internationally wrongful acts. The very nature of autonomous weapons renders it difficult or impossible to attribute responsibility to a

State or individual in the event of unlawful acts involving the use of such weapons. Machines cannot replace human beings in making the most important decisions in war, and in no case can they make decisions about human life.

The level of autonomy and lethality is the key factor that should guide the prohibition or regulation of autonomous weapons: the greater the autonomy and lethality, the stricter the regulatory framework.

Egypt

[Original: English]
[23 May 2024]

Fully autonomous weapons pose a grave threat to international peace and security and raise several humanitarian, legal and ethical concerns that have to be addressed, in order to ensure the conformity of such weapons with international law and international humanitarian law, including in particular the cardinal principles of humanity, necessity, proportionality and distinction.

The United Nations and its disarmament machinery represent the only effective and inclusive platform for developing the necessary international rules and normative framework, especially since technological developments continue to starkly outpace the necessary regulation at the international level.

Egypt attaches great importance to advancing the efforts of the United Nations in this regard and strongly supports General Assembly resolution 78/241, which represents a good first step towards fostering multilateralism on the issue of autonomous weapons systems and providing an equal opportunity for all United Nations Member and observer States to directly engage in determining how relevant challenges and concerns are to be addressed.

In the same vein, Egypt welcomes the attention paid to this issue in the policy briefs prepared by the Secretary-General of the United Nations in the context of the New Agenda for Peace and the Summit of the Future, and supports including clear guidance on this important topic in the outcome of the Summit.

Egypt also believes that the second agenda item that is suggested for the Disarmament Commission in its 2024–2027 cycle represents a good opportunity to put forward agreed principles and practical recommendations towards establishing the necessary normative framework. Focusing on this topic during the current cycle of the Commission, which represents the deliberative pillar of the United Nations disarmament machinery, would represent an excellent opportunity to take forward the discussions that took place within the framework of the Group of Governmental Experts, established under 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.

While Egypt acknowledges the importance of the relevant discussions within the aforementioned Group of Governmental Experts on lethal autonomous weapons systems, it regrets that progress remains quite minimal and that no tangible results have been reached. This is mainly due to the continued misguided belief by some States that an absolute dominance or advantage in this domain can be maintained and hence their resistance to any effort towards the development of rules that would restrict or prohibit the malicious uses of such technologies which are inconsistent with international humanitarian law or stop the excessive weaponization of such technologies.

In this regard, the main elements that underpin the Egyptian position on autonomous weapons systems are as follows:

(a) Egypt is of the view that pursuing a two-tiered approach comprising the prohibition of fully autonomous weapons and the regulation of other military applications of artificial intelligence represents the most realistic and effective course of action.

> The rapid development of lethal autonomous weapons systems is quite alarming and requires urgent action, including through a legally binding prohibition of fully autonomous weapons, as suggested by the Secretary-General of the United Nations in his proposal for a New Agenda for Peace.
>
> Needless to mention, this prohibition must be based on a clear definition of the term "fully autonomous lethal weapons" to exclusively target weapons that can operate without any meaningful human control or intervention, or without effective verification.

(b) The multiple international initiatives on the development of guidelines and rules for the military applications of artificial intelligence demonstrate the increasing international awareness of the associated risks. Nevertheless, there is a clear need to streamline these initiatives and bring them under the United Nations umbrella to ensure their inclusivity and effectiveness. Moreover, such initiatives must avoid introducing any arbitrary international oversight mechanisms or imposing any type of discriminatory export controls. Most importantly, such initiatives should not be regarded as a substitute for the objective of concluding a legally binding prohibition on fully autonomous weapons.

(c) The centrality of the principle of human responsibility cannot be overemphasized. The risks and concerns associated with a weapon that can activate itself, autonomously select and engage its targets and take a human life without direct human control or supervision are simply unacceptable. Accordingly, autonomous weapons systems must remain under meaningful human control and supervision to ensure human responsibility and accountability from the perspective of international law, including international humanitarian law.

> Regardless of the type of weapon systems that deliver force, delegating the decision to take a human life to machines is unethical and represents a grave violation of international humanitarian law. Even if an algorithm can be programmed to determine what is legal under international humanitarian law, it can never be programmed to determine what is ethical. There is also a need to ensure the responsibility of States for unlawful or wrongful acts caused by their use of autonomous weapons.
>
> Moreover, it is necessary to ensure that all software, algorithms and designs involving the utilization of artificial intelligence technologies and machine learning techniques in the military domain remain subject to human revision and the principle of explainability throughout their life cycle.

(d) Egypt advocates for a balanced and realistic approach, through which we can all continue to benefit from the new opportunities offered by artificial intelligence applications, while tackling the relevant challenges in a realistic and effective manner. In this regard, we stress the importance of building the capacity of developing countries and bridging the huge gaps in this domain.

Fiji

[Original: English] [25 May 2024]

The Government of the Republic of Fiji welcomes the opportunity to submit its views and recommendations for the consideration of the Secretary-General of the United Nations in response to General Assembly resolution 78/241 on lethal autonomous weapons systems, adopted on 22 December 2023. The resolution requests input from countries and stakeholders on ways to address the challenges and concerns raised by such weapons systems from humanitarian, legal, security, technological and ethical perspectives.

Challenges and concerns

As a Pacific small island developing State, we are deeply concerned about the serious ethical, moral, legal, accountability, environmental and security issues associated with autonomous weapons, particularly as they affect countries in the global South and the Pacific. The development and use of autonomous weapons systems pose significant risks that must be addressed urgently.

Autonomous weapons systems endanger both civilians and combatants, potentially escalating conflicts in unpredictable ways. These systems challenge compliance with international law, including international humanitarian law. The rules governing the conduct of hostilities and the protection of civilians may be undermined by the use of machines making life and death decisions. This substitution of human judgment with machine processes raises fundamental ethical concerns.

There is a clear danger of these weapons proliferating globally, to be accessed by non-State actors and used for criminal activities. The Pacific Islands, with their unique vulnerabilities, consider this a major concern. The risk of autonomous weapons falling into the hands of non-State actors is particularly alarming, as it could lead to increased instability and violence.

Historically, military technologies have caused lasting environmental damages. The development and use of autonomous weapons is likely to continue this trend. The automation of violence reduces human oversight over the consequences of weapons use, potentially leading to significant environmental harm. There is mounting evidence that training artificial intelligence and machine learning models carries significant carbon footprints. The potential energy cost of training and operating autonomous weapons systems is a concern, with studies indicating that training artificial intelligence could substantially contribute to climate change. At a time when reducing carbon emissions is a global priority, the development and use of autonomous weapons could further degrade our planet.

Algorithmic bias in autonomous weapons systems is a major concern, especially for historically marginalized populations. These systems could perpetuate racial, gender and other biases, leading to disproportionate harm to some groups. The reliance on data from sensors to apply force can embed systemic prejudices into the decision-making processes of autonomous weapons. Evidence from civilian applications of artificial intelligence, such as policing and criminal sentencing, shows that marginalized populations are disproportionately affected by algorithmic bias.

The issue of accountability is also critical. Responsibility for the actions of autonomous weapons cannot be easily assigned to human operators, as they do not have direct control over when, where and against whom the weapons apply force. In the context of armed conflict, where the fog of war already complicates accountability, autonomous weapons would further undermine efforts to hold

perpetrators of violence accountable. This lack of accountability would make it even more difficult to provide justice to victims.

Moreover, allowing machines to take human life dehumanizes individuals, reducing them to data points processed by sensors and algorithms. This mechanization of violence undermines human dignity and ethical principles.

Addressing the challenges

To address the challenges of lethal autonomous weapons systems, we call for the immediate start of negotiations for a legally binding instrument on autonomous weapons. This instrument should enforce:

(a) Prohibitions on weapons systems that would target people;

(b) Prohibitions on weapons systems that cannot be used with meaningful human control;

(c) Regulations on all other weapons systems to ensure that they are effectively controlled, understood and limited in the area and duration of their use;

(d) Include regulations to prevent the proliferation and unauthorized use of autonomous weapons;

(e) Address environmental impacts and ensure that militaries are held accountable for carbon emissions with immediate and appropriate remediation both to the environment and human lives.

The General Assembly is the ideal forum for these negotiations, ensuring diverse and inclusive representation. Its membership includes States from all corners of the globe, ensuring that the views of small and developing nations are heard. At the same time, we recognize that it is useful to continue dialogue in all appropriate multilateral forums as they can be mutually reinforcing. It is time to step outside the Group of Governmental Experts on lethal autonomous weapons systems to a forum that can aim higher, move faster and be more inclusive of countries that are not party 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, as well as of international organizations and civil society. Existing international humanitarian law is inadequate to address the challenges posed by autonomous weapons.

We stand with the 109 States supporting a legally binding instrument to address the issue of autonomous weapons. In his New Agenda for Peace, the Secretary-General of the United Nations urgently calls on States to adopt a treaty to prohibit and regulate autonomous weapons systems by 2026. In October 2023, the Secretary-General and the President of the International Committee of the Red Cross, Mirjana Spoljaric, called on States to “urgently establish new international rules on autonomous weapon systems, to protect humanity”.

We are grateful for the opportunity to share our views and recommendations on addressing this grave threat to humanity. It is imperative that the international community act swiftly and decisively to establish robust legal frameworks that prevent the proliferation and misuse of autonomous weapons systems. Protecting human dignity, ensuring accountability and safeguarding the environment must be at the forefront of these efforts, including their appropriate remediation to human lives and the environment. The future of global peace and security depends on our collective action against the unchecked development and deployment of autonomous weapons.

Finland

[Original: English]
[23 May 2024]

Finland has the honour to refer to the note verbale dated 1 February 2024, concerning General Assembly resolution 78/241 on lethal autonomous weapons systems, adopted on 22 December 2023, in which the Assembly requests the Secretary-General to seek Member States' views on "ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force", and submits the national views outlined below.

The adoption of international principles or regulations on the military use of artificial intelligence and autonomy, including lethal autonomous weapons systems, is fundamental to ensure compliance with international law, to increase security and to reduce potential risks of conflicts. At the same time, it is necessary to enable the development of national self-defence capabilities that do comply with international law.

Finland supports negotiations on principles or regulations, such as an international agreement on the development and deployment of lethal autonomous weapons systems. The instrument could be either politically or legally binding. Finland's objective is the conclusion of an international instrument, without prejudging its nature, with the widest possible group of States, including countries developing, producing and using such weapons, and for such an instrument to have a real impact in practice. Finland actively engages in the work of the Group of Governmental Experts on lethal autonomous weapons systems working under 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, and supports it as the forum for continuing the discussions on a future instrument. Additionally, other initiatives to ensure the safe and responsible military use of artificial intelligence and autonomy may also be useful, but must not contravene the objectives of the Group of Governmental Experts.

Finland emphasizes the importance of adhering to international law, including international humanitarian law, in the development and deployment of lethal autonomous weapons systems. It is vital that humans retain the decision on the use of force. Lethal autonomous weapons systems that cannot comply with the rules of international humanitarian law and its fundamental principles of proportionality, distinction and precaution are prohibited under existing international law and should not be used, acquired or developed. The rapid development of new technologies requires, however, additional international regulation to clarify how international humanitarian law applies to lethal autonomous weapons systems. Regulation is also necessary to enable the development and use of new technologies that comply with international law.

Lethal autonomous weapons systems should therefore be regulated using a two-tier approach that combines prohibitions and regulations. The approach seeks to:

(a) Outlaw autonomous weapons systems that operate without any form of human involvement and outside of a responsible human chain of command (i.e. systems capable of setting their own objectives or modifying and/or executing those objectives, without any human validation of their initial programme or their mission framework);

(b) Regulate the development and use of all other weapons systems having autonomous[1] features or functions, ensuring their compliance with the rules and principles of international law. The framework should include provisions to guarantee appropriate levels of human involvement and accountability, transparency and foreseeability in testing and operation, legal reviews and risk mitigation measures in the development, production, purchase and deployment of lethal autonomous weapons systems. Regulation should not address specific technologies as such but any application of those technologies that is not compatible with international humanitarian law. This allows also for regulations to sustain the test of time and developments in weapons technologies.

France

[Original: English]
[23 May 2024]

In France's view, in order to adequately address the challenges and concerns raised by lethal autonomous weapons systems, a two-tier approach should be retained by drawing a clear distinction between lethal autonomous weapons systems for which no sustainable assurance can be provided regarding compliance with international humanitarian law and other lethal autonomous weapons systems. In more concrete terms, France considers that:

(a) Lethal autonomous weapons systems that cannot be developed and used in accordance with international humanitarian law should be prohibited. Weapons systems falling under that category include the following: (i) systems that are inherently indiscriminate; (ii) systems whose effects cannot be limited, anticipated or controlled; (iii) systems capable of causing superfluous injury or unnecessary suffering; and (iv) systems operating completely outside human control and a responsible chain of command (i.e. "fully" autonomous lethal weapons systems);

(b) Lethal autonomous weapons systems to which the military command can assign the computation and execution of tasks related to high-level functions (identification, target selection and engagement) within a specific framework of action (i.e. "partially" autonomous lethal weapons systems) should be regulated through the implementation of appropriate measures, throughout their life cycle, in order to mitigate potential legal, ethical, technical and security challenges.

Such an approach primarily ensures that international humanitarian law will continue to be fully applicable to all weapons systems, including to the potential development and use of lethal autonomous weapons systems. This approach also takes into account the role of humans in the use of force, notably the importance of maintaining human control as well as human responsibility and accountability. The use of force is and must remain an inherent responsibility of the human chain of command and control, particularly in cases of violations of international humanitarian law. In this regard, the human chain of command and control must retain the ability to take critical decisions regarding the use of lethal force.

[1] Autonomy should be understood as a capability to perform the given task(s) in a self-sufficient and self-governing manner. This includes the freedom of self-planning in the tasks and required subtasks. Contextual assessment is crucial when assessing the compliance of lethal autonomous weapons systems with international humanitarian law. It is compulsory to have a specific and limited mission framework for the use of lethal autonomous weapons systems (target setting, spatial and temporal limits, human approval for any substantial modification of mission parameters) and assurance that the weapon system will act in a foreseeable manner. Meaningful human involvement does not always require constant human-machine connection, if compliance with international humanitarian law has otherwise been ensured.

In determining the quality and extent of human control, a range of factors should be considered, including the operational context, characteristics and capabilities of the weapons system as a whole. In France's view, sufficient human control requires that: (a) humans make informed decisions about the deployment and use of weapons; and (b) humans have sufficient information to ensure that force is used in accordance with international law, given what they know about the potential target, the capabilities and characteristics of the weapon to be used and the operational context in which the weapon is deployed. Human control may take various forms and be implemented at various stages of the life cycle of a weapon. In particular, to the extent required by international humanitarian law, humans must:

- Have a sufficient understanding, depending on their role and level of responsibility, of how such weapons systems operate and of the effect on and likely interaction they will have with the environment, and be able to predict and explain the behaviour of such weapons systems.
- Define and validate rules of use, rules of engagement and a precise framework for the mission assigned to the systems, limited in time, space and by determined objectives, according to the situation and context.
- Maintain the capacity to monitor the reliability and usability of the systems during their deployment and to approve any substantial modification to the parameters of the mission.
- Be in a position to exercise their judgment with regard to compliance with the rules and principles of international humanitarian law, in particular the principles of distinction, proportionality and precaution in attack, and thus to take critical decisions over the use of force.

This two-tier approach should serve as a basis for structuring a future instrument on lethal autonomous weapons systems within the framework of 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. As a key instrument of international humanitarian law that seeks to strike a balance between military necessity and humanitarian considerations, the Convention remains the most appropriate forum for responding to both ethical and legal issues raised by lethal autonomous weapons systems. Furthermore, the Convention brings together States engaged in the development of military applications of artificial intelligence, and its unique structure – by allowing for the possible negotiation and adoption of additional protocols – provides the flexibility needed to address new weapons technologies. Finally, the Group of Governmental Experts on lethal autonomous weapons systems, which comprises governmental experts and representatives of international organizations, civil society and academia, brings together technical, military, legal and diplomatic expertise, thus offering a unique framework to consider the various dimensions of the emerging technologies in the area of lethal autonomous weapons systems.

Thus, France considers that the work of the Group of Governmental Experts must be pursued and its current mandate, which is to develop a set of elements for the establishment of an instrument and present its conclusions at the next Review Conference 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 to be held in 2026, must be completely fulfilled. France considers that, based on the two-tier approach, such an instrument should contain the following elements:

(a) A preambular part that reaffirms, inter alia, the objectives and purposes of the Convention on Certain Conventional Weapons, the 11 guiding principles agreed

by the High Contracting Parties in 2019 and the applicability of international humanitarian law to these systems;

(b) A scope of application that defines lethal autonomous weapons systems, excludes systems that do not meet this definition and establishes a clear distinction between lethal autonomous weapons systems operating completely outside human control and a responsible chain of command and those featuring autonomy in high-level functions;

(c) Prohibitions that list the characteristics of the weapons systems they concern and recall that States are responsible at all times for adhering to their obligations under applicable international law;

(d) Regulations that place limits and requirements on the development and use of lethal autonomous weapons systems featuring decision-making autonomy in high-level functions. Such measures could include legal reviews; risk assessments, safeguards and mitigation measures (to ensure the reliability of such systems and prevent failures, misuse, diversion and the relinquishment of human prerogatives); adequate training (to ensure that human decision makers and operators adequately understand the systems' effects and likely interaction with their environment); the maintenance of sufficient human control (to ensure that humans will always define and validate rules of use, rules of engagement and a precise framework for the mission assigned to the system and make critical decisions over the use of force) and a chain of human command and responsibility (to ensure responsibility and accountability);

(e) Mechanisms that facilitate consultation and cooperation among High Contracting Parties and encourage them to exchange, on a voluntary basis, best practices with regard to national measures that they have put in place to implement the requirements contained in the instrument.

With regard to the form that an instrument on lethal autonomous weapons systems could take within the framework of the Convention on Certain Conventional Weapons, France supports the negotiation and adoption of an additional protocol to the Convention.

Furthermore, a committee of independent technical experts could be put in place within the framework of the Convention on Certain Conventional Weapons to periodically inform High Contracting Parties about new technological developments in the area of lethal autonomous weapons systems, help maintain a high level of vigilance on the issue, which is by nature prospective and dynamically evolving, and over time, as needed, help States adopting additional appropriate measures in the framework of the Convention to respond to specific challenges that have not yet been identified.

Germany

[Original: English]
[23 May 2024]

I. Introduction

The questions and challenges related to autonomous weapons systems are among today's most pressing and complex issues in the field of arms control. Potential challenges regarding the development and use of autonomous weapon systems include the possibility of unintended consequences when these systems are employed in armed conflict, questions regarding their compatibility with international law, and in particular with the requirements of international humanitarian law, as well as questions of accountability and potential negative effects on international security

and stability. At the same time, technological progress, including on dual-use technologies, is needed to increase depth and speed in data processing and decision-making. While the development and deployment of military artificial intelligence and weapons systems with autonomous functions can have benefits, as human decision-making is not infallible, autonomy in weapons systems comes with high risks and poses humanitarian challenges in cases where such systems are not being developed, fielded and deployed in accordance with international law, in particular international humanitarian law.

Germany highly commends regional efforts to foster the debate on lethal autonomous weapons systems, such as the ones undertaken by Costa Rica, Luxembourg, the Philippines, Trinidad and Tobago and Sierra Leone. In addition, the Vienna conference on "Humanity at the crossroads: autonomous weapons systems and the challenge of regulation" offered a valuable forum for exchanging views and searching for further common ground. Germany remains actively engaged in the Responsible Artificial Intelligence in the Military Domain process initiated by the Netherlands and the Republic of Korea, and in the implementation of the political declaration on responsible military use of artificial intelligence and autonomy launched by the United States. In Germany's view, these initiatives play an important role as they intensify the debate and contribute to the development of norms for responsible behaviour.

II. Principles and working assumptions

Key principles

Germany's position builds on the 11 guiding principles affirmed by the Group of Governmental Experts on lethal autonomous weapons systems in 2019 and the following principles of responsible use agreed by the North Atlantic Treaty Organization (NATO) in 2021: (a) lawfulness in developing and using artificial intelligence applications; (b) human responsibility for ensuring that the design and operation of artificial intelligence in military systems will be accountable; explainability and traceability of artificial intelligence applications in the military domain; reliability, safety, security and robustness throughout the entire life cycle of systems with artificial intelligence and autonomy; and governability for appropriate human-machine interaction and bias mitigation.

Lethal autonomous weapons systems

Germany understands lethal autonomous weapons systems to be systems that, once activated, are able to identify, select, track and apply force to targets, while acting outside human control and a responsible chain of command. In addition, such systems do not allow for further human intervention and are capable of setting their own objectives or modifying their initial programme or mission framework, without the possibility of any human validation.

In this context, Germany considers that certain self-defence systems – such as the Patriot missile system – can and must be able to operate in an automatic mode without human intervention after activation, without posing any international humanitarian law-related or ethical challenges. Once activated, such systems are designed to automatically detect, select and engage targets without further human interaction when required by time-critical factors (e.g. engagement of very fast targets such as artillery or in the case of missile defence). Systems such as those described above are not to be understood as autonomous systems, but as automatic systems, because their algorithms for detecting and engaging targets are deterministic, unlike autonomous systems whose algorithms are based on probability calculations.

III. Human control as a key requirement to ensure the responsible development and use of weapons systems with autonomous functions

Germany considers lethal autonomous weapons systems as defined above to be incompatible with international law, in particular with the requirements of international humanitarian law.

In assessing the admissibility of weapons systems that contain autonomous functions, maintaining a framework of human control is, in Germany's view, the key requirement. A responsible chain of command and human control must be at the centre of the development and use of any weapons system, including weapons systems with autonomous functions. The decision over life and death must be made by humans.

The required level of human control depends on the operational context and the characteristics and capabilities of a weapons system. The control of such systems can be retained through a framework of human control.

The framework of human control encompasses not only the human being, but also other measures and requirements that prepare and support decision-making (i.e., control in design and control in use). This framework entails:

- Data analysis methods and specific measures to mitigate unintended biases; algorithms featuring artificial intelligence are based on ethical norms in order to avoid reinforcing and exacerbating existing structures of inequality.
- Accountability, through the training of operators involved in the use of weapons and their ability to predict and explain the behaviour of the system being operated.
- Predictability, through the development of rules of engagement that define the limits within which the commander and the operator are permitted to use the system and of a weapons testing procedure in accordance with article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I).
- A responsible human chain of command that ensures that the system operates within established limits in terms of duration and geographical area of operation, type of targets to be engaged and scale of operation.
- Technical safeguards such as the self-destruction and self-deactivation of the deployed system to ensure that it operates within the permitted parameters.
- Procedures for reporting incidents that could involve violations of international humanitarian law.

Against this background, the design of the human-machine interaction is of key importance as it needs to ensure that weapons systems remain subordinate to the humans deploying and operating them. Humans have to be continuously able to exercise control over the weapons systems and must remain the essential element in this interaction, bearing the overall responsibility.

IV. Way ahead

Two-tier approach to effectively address challenges related to emerging technologies in the area of lethal autonomous weapons systems

In line with a growing number of members of the Group of Governmental Experts, Germany remains convinced that the two-tier approach is the most suitable one to ensure compliance with the aforementioned principles. In view of the substantial amount of convergence achieved on the basis of this approach, Germany supports further progress that can be built on the following propositions:

- First, consenting to a legally binding instrument in the framework of the Group of Governmental Experts that prohibits the development, fielding or deployment of lethal autonomous weapons systems that cannot comply with international humanitarian law and are ipso facto prohibited.

- Second, consenting, in the framework of the Group of Governmental Experts, to a set of regulations of weapons systems with autonomous functions, to ensure that human control is retained at all times.

Additional protocol 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 on the development and use of lethal autonomous weapons systems

Germany supports the creation of an additional protocol to the Convention on Certain Conventional Weapons that entails the prohibition of lethal autonomous weapons systems operating outside of human control and a responsible chain of command.

Group of Governmental Experts on lethal autonomous weapons systems as an inclusive forum

International law, in particular international humanitarian law, and the relevant ethical perspectives are guiding the work of the Group of Governmental Experts. The Group brings together experts from the High Contracting Parties to the Convention on Certain Conventional Weapons, including States with technologically advanced armed forces. In addition, it includes experts from academia and civil society. Germany highly appreciates the valuable contribution of those experts to the debate. The discussions held in the framework of the Group have resulted in significant and substantial convergence and continue to contribute to establishing further common ground.

Germany is convinced that the inclusive approach of the Group of Governmental Experts is important in order to achieve an effective outcome and remains committed to actively supporting the Group's work. In order to include deeper knowledge of technological developments, the establishment of a group of technical experts may be an option, as outlined in the joint working paper submitted by France and Germany in 2021.

At the same time, for the Group of Governmental Experts to live up to its mandate and deliver tangible results, there can be no further delay. Germany was therefore among the first co-sponsors of General Assembly resolution 78/241 on lethal autonomous weapons systems, adopted in 2023, and welcomes the report of the Secretary-General, which takes all perspectives into account, as a highly valuable exercise to gather existing standpoints. In Germany's view, this will help significantly in identifying even more areas of convergence and reinvigorate the important debate in the framework of the Convention on Certain Conventional Weapons.

Greece

[Original: English]
[23 May 2024]

The incorporation and use of emerging and disruptive technologies such as artificial intelligence and machine learning into weapon systems pose serious political, legal, moral and ethical concerns. From a political point of view, the development and use of lethal autonomous weapon systems may diminish the threshold of engagement in armed conflicts, thereby influencing relevant decisions.

The compliance of fully autonomous weapon systems with international humanitarian law remains dubious. In particular, their compliance with fundamental principles and requirements of international humanitarian law, such as the principles and requirements of target distinction, proportionality and precautions regarding the evolving environment of a battlefield, raises serious concerns.

Greece supports the two-tier approach highlighted by many countries during the deliberations of the Group of Governmental Experts on lethal autonomous weapons systems in Geneva.

In light of the above, we would like to reiterate that Greece strongly believes that 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 remains the appropriate forum to continue discussing the prohibitions and restrictions of use of conventional weapons including lethal autonomous weapons systems. The Convention ensures the necessary balance between humanitarian concerns and military necessity.

Greece welcomes the progress over the past year on the issue, including the adoption of General Assembly resolution 78/241 on lethal autonomous weapons systems on 22 December 2023, the Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, the work of the Group of Governmental Experts on lethal autonomous weapons systems in Geneva and the broad participation in the recent international conference entitled “Humanity at the crossroads: autonomous weapons systems and the challenge of regulation” held in Vienna on 29 and 30 April 2024.

In addition, the rapid technological evolution of artificial intelligence remains an issue of paramount concern for our country.

Greece supports that the military use of artificial intelligence must fully comply with applicable international law, in particular with international humanitarian law and its core principles and requirements, such as the principles and requirements of distinction, proportionality and precautions, and with international human rights law.

Greece will actively participate in future deliberations on this complex issue and in the shaping of an international instrument to ensure that autonomous weapons systems are in full respect of international humanitarian law.

Guatemala

[Original: Spanish]
[23 May 2024]

Guatemala considers it important to take into account the four Geneva Conventions of 1949, which set out the main rules to limit the barbarity of war and contain sections on the punishment of war crimes in which it is clearly established that, in order to punish such crimes, individual criminal responsibility must be assigned.

In that regard, Guatemala believes that creating a system that has lethal capability and is not controlled by a human being is a violation of the right to life and of international humanitarian law, as well as the Geneva Conventions, as the use of such systems would make it impossible to assign responsibility because an abstract entity, such as a weapon operated autonomously (or using artificial intelligence), cannot be subject to criminal responsibility.

Honduras

[Original: Spanish]
[24 May 2024]

Artificial intelligence, autonomous weapons systems and the challenge facing the world in terms of their regulation

It is currently very challenging to exert control over such technologies and activities, which are emerging on a daily basis, but the holding of conferences is certainly extremely important and a great start. Seminars, courses and various types of activities should also be developed in order to identify the means of exerting control and to introduce appropriate regulations, with a view to achieving control and raising the awareness of the general public so that such technological tools can be used properly and responsibly.

It is crucial to take into account all the regulations required with regard to the unfettered use of autonomous weapons systems, without downplaying worldwide innovations and the great strides made in recent years when it comes to the implementation and use of technology and artificial intelligence. Although new technologies have undeniably resulted in innovations that affect processes and procedures and are in some ways beneficial to States, in order for an object to be controlled, that object must comply with certain rules that limit inappropriate use. This must be regulated, and artificial intelligence cannot be the exception, as it can have positive and negative effects, given that the world is constantly changing and evolving.

Honduras is aware that the principles of international law, international humanitarian law and the Charter of the United Nations must be adhered to in all prohibitions and regulations that are needed to ensure that a balanced and responsible approach is taken to existing and future autonomous weapons systems. There is also a need to raise awareness of the proper use of artificial intelligence, and thus avoid the inappropriate use of such tools and limit their negative effects.

It is vitally important to be able to determine and make the best consensus-based decisions about the regulations that are needed to maintain full human control over all autonomous weapons systems that could benefit or otherwise affect entire countries or regions. This should be analysed from the best perspectives and always underpinned by the basic foundation of human rights, while avoiding the violation of such rights. Without regulations that ensure control over autonomous weapons, artificial intelligence could lead to a loss of control over the discriminate use of force, putting at risk, and violating the rights of, the general public.

Technological security in modern times is highly vulnerable to hackers, who may have and act with bad intentions, and thus cause damage to such systems, both to artificial intelligence-based controllers and to existing autonomous weapons control systems, a situation that jeopardizes autonomous decision-making by current technological systems.

In addition, systems are not perfect, as they are vulnerable and prone to mechanical and operating system failures. It is therefore to be expected that they will have anomalies, which could affect human integrity and entire countries or regions.

New technological systems are very promising, but human control must always prevail, as decisions and initiatives taken in relation to the use of such technologies must be focused on upholding human rights, striving to ensure people's well-being and thus avoiding their dehumanization, as the way in which we regulate the damage caused by technology has a profound influence on our future as a society and our

ability to benefit from these technologies. Human control, supported by technology, is therefore crucial so that, rather than harming society, such technology can support and streamline all processes and procedures used both in existing autonomous weapons systems and those based on artificial intelligence. When autonomous weapons systems are activated, they select one or more targets and use force with minimal human intervention, an issue that raises major legal, ethical and security concerns. Autonomous weapons systems also present global risks to peace and security.

Non-State armed groups are threatening to tamper with the security of the new technologies underlying autonomous weapons systems with a view to using them against States as they see fit, endangering people's physical and emotional integrity.

As already stated, regulation is crucial to maintain full control over new technologies and autonomous weapons systems. This calls for urgent and decisive political leadership, as well as foresight that reflects the importance of such developments, as humankind has reached a crossroads at which decisions about life and death are delegated to machines.

In conclusion, as a founding State member of the United Nations, Honduras is aware of technological developments and their vulnerability. It is therefore taking basic cybersecurity measures, training personnel and adapting to new opportunities and the related threats. Although Honduras has basic autonomous weapons systems, it keeps abreast of new technologies that are emerging worldwide, as it attaches great importance to remaining informed about such technologies, as well as to ensuring respect for universally recognized principles, given that significant scientific and technological advances, although helpful to the world as a whole, could pose an alarming threat to the future of humankind.

India

[Original: English]
[24 May 2024]

India acknowledges that emerging technologies in the area of lethal autonomous weapons systems raise challenges and concerns. India is committed to addressing these challenges and concerns and has participated actively and constructively in the consideration of these matters within the framework of 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 and, since 2016, in the Group of Governmental Experts on lethal autonomous weapons systems.

India also believes that emerging technologies can have transformational effects on reducing poverty and improving the lives of all people. This is particularly relevant in the case of developing countries. The stigmatization of such technologies should be avoided.

India is of the view that the laws of armed conflict must be respected at all times. The military use of emerging technologies in the area of lethal autonomous weapons systems must be in accordance with international humanitarian law.

Without downplaying many of the legitimate legal and ethical questions that arise from emerging technologies in the area of lethal autonomous weapons systems, India also supports the view that, in general, emerging technologies have the potential to actually improve compliance with international humanitarian law.

The Convention on Certain Conventional Weapons is the appropriate forum to discuss issues relating to emerging technologies in the area of lethal autonomous weapons systems, with a view to striking a balance between military necessity and

humanitarian imperatives. The Convention can and has brought together relevant stakeholders. It has also been successful in bringing together relevant expertise on legal, military and technological aspects. The broad and diverse participation, the number of working papers submitted by several countries and the global interest in those discussions further testify to the continuing relevance and importance of the deliberations of the Group of Governmental Experts.

It is India's understanding that, in generating concepts and a lexicon that capture some of the elusive characteristics of emerging technologies in the area of lethal autonomous weapons systems and their possible impacts, the accomplishments of the Group of Governmental Experts are significant. Those accomplishments include the 11 guiding principles, which provide a foundational framework for addressing the potential challenges posed by lethal autonomous weapons systems, and the understandings reached by the Group. The understandings, are contained in consensual reports adopted by the Group and by the High Contracting Parties to the Convention on Certain Conventional Weapons. Particular importance is attached to the conclusions contained in the report of the 2023 session of the Group (CCW/GGE.1/2023/2), in which it is stated, inter alia, that, without prejudice to the future work of the Group that continues to be guided by international law, in particular the Charter of the United Nations and international humanitarian law, as well as relevant ethical perspectives, the Group concluded that:

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

(b) Weapons systems based on emerging technologies in the area of lethal autonomous weapons systems must not be used if they are incapable of being used in compliance with international humanitarian law;

Contr(d) with regard to weapon systems based on emerging technologies in the area of lethal autonomous weapons systems is needed to uphold compliance with international law, in particular international humanitarian law, including the principles and requirements of distinction, proportionality and precautions in attack.

The Group of Governmental Experts also concluded that States must ensure compliance with their obligations under international law, in particular international humanitarian law, throughout the life cycle of weapon systems based on emerging technologies in the area of lethal autonomous weapons systems. When necessary, States should, inter alia:

(a) Limit the types of targets that the system can engage;

(b) Limit the duration, geographical scope, and scale of the operation of the weapon system;

(c) Provide appropriate training and instructions for human operators.

The Group of Governmental Experts further concluded that, 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. In this context, the voluntary exchange of relevant best practices between States is encouraged, bearing in mind national security considerations or commercial restrictions on proprietary information.

These understandings and agreements need to be acknowledged, used as a basis for further work, incorporated in the elements, without prejudging its nature, of any possible instrument, and be a primary focus for the future work of the Group of Governmental Experts.

India believes that the work of the Group of Governmental Experts should continue to accord priority to augmenting understandings on characterization and definitions relating to emerging technologies in the area of lethal autonomous weapons systems. The importance of achieving uniformity in how conceptual elements relating to their development and deployment are practically understood and interpreted needs to be emphasized.

India supports the consideration of appropriate action to address and mitigate risks associated with emerging technologies in the area of lethal autonomous weapons systems. An agreement on risk mitigation should take into account existing legal obligations and respect national jurisdictions and competence, as well as relevant national capacities.

Transparency and confidence-building measures are critical for addressing the concerns relating to emerging technologies in the area of lethal autonomous weapons systems.

It is also important for all parties to acknowledge that Member States inhabit differing security realities. Discussions on possible measures should endeavour to find common ground by taking into account the concerns of all. More importantly, deliberations on emerging technologies in the area of lethal autonomous weapons systems should not lead to a fragmentation of the normative sphere. It is important not to duplicate work being carried out in forums under their existing mandates. Efforts to create ground for generating parallel mandates or parallel sets of rules must be avoided.

Ireland

[Original: English]
[24 May 2024]

Introduction

Ireland associates the present submission with the Chair's summary from the Vienna Conference on "Humanity at the crossroads: autonomous weapons systems and the challenge of regulation".

Autonomous weapons systems pose acute risks, including:

- Humanitarian risks (e.g. failing to distinguish between civilians and combatants)
- Legal risks (e.g. ensuring compliance with and accountability and responsibility under international humanitarian law)
- Security risks (e.g. fuelling an arms race)
- Technological risks (e.g. malfunction and algorithmic bias)
- Ethical risks (e.g. loss of dignity and dehumanization).

Ireland participates actively within the primary forums on autonomous weapons systems and the Group of Governmental Experts on lethal autonomous weapons systems and participated in regional initiatives hosted by Costa Rica (2023), the Philippines (2023) and Sierra Leone (2024).1

[1] See https://conferenciaawscostarica2023.com/; https://dfa.gov.ph/dfa-news/dfa-releasesupdate/33834-philippines-calls-for-indo-pacific-voices-to-address-lethal-autonomous-weapons-systems-risks; and https://mofaic.gov.sl/sierra-leone-hosts-first-regional-conference-on-autonomous-weapons/ (accessed on 24 May 2024).

Ireland's position focuses on:

- Functional characterization
- International law
- Human control and accountability
- Ethics
- Bias
- Multilateral solutions.

Functional characterization

Autonomy is a feature of a weapon's functionality, rather than a specific weapon type. Ergo, focus should be on prohibiting or regulating the integration of autonomy into weapons systems, rather than on seeking a fixed definition based on specific technical characteristics. The latter approach is unlikely to remain fit for purpose amid rapidly evolving technology.

Ireland uses the International Committee of the Red Cross working definition, as set out below:

"Autonomous weapon system" means a weapon system that is designed to select and engage one or more targets without the need for human intervention after activation.2

The following points are a non-exhaustive list of functional characteristics that pose acute concerns:

- The ability to run through a targeting cycle, with the final intention to apply force, without human intervention
- The ability to switch to lethal mode without human intervention
- The ability to redefine mission or objective without human intervention
- The inability to interrupt or deactivate autonomous mode.

International law

International law, including the Charter of the United Nations, international humanitarian law, international human rights law and international criminal law, applies fully to the development and use of autonomous weapons systems.

Compliance with international humanitarian law requires context-specific, value-based judgment by humans (which cannot be substituted by autonomous weapons systems) and consideration of the following:

- Cognitive limitations (lack of common sense and human judgment)
- Epistemological limitations (making judgments based upon biased, incomplete, or inappropriate data)
- Algorithmic bias.

Autonomous weapons systems that cannot be used in accordance with international humanitarian law are de facto already prohibited under

[2] International Committee of the Red Cross submission on autonomous weapons systems, available at https://www.icrc.org/sites/default/files/wysiwyg/war-and-law/icrc_submission_on_autonomous_weapons_to_unsg.pdf.

international law.3 However, new rules and guidelines are needed to clarify the application of international humanitarian law to autonomous weapons systems.

Human control and accountability

Ireland adopts a human-centred approach to autonomous weapons systems.

Compliance with international humanitarian law requires that humans make and remain accountable for the decisions made by autonomous weapons systems and exert full control over such systems – retaining the ability to intervene, interrupt and deactivate them throughout their life cycles.4 This responsibility extends to developers and manufacturers and cannot be transferred to machines.

Attention must be paid to:

• Contextual considerations: whether autonomous weapons systems demonstrate sufficient situational awareness and can correctly interpret operational context.

• Technical considerations:

– whether autonomous weapons systems operate with sufficient reliability and predictability in identifying, selecting and engaging targets.

– whether adequate environmental limits exist to ensure that decisions made at the planning stage are respected throughout the execution stage.

• Forms of human control:

– whether human control is retained over the critical functions of autonomous weapons systems, such as the identification, selection and engagement of targets.

• whether the degree of human control prevents the redefinition of autonomous weapons systems missions without human validation and allows for their interruption or deactivation.

Autonomous weapons systems require a human chain of command and control throughout their life cycles. Commanders and operators must be informed and trained on any new characteristics, functions and/or parameters of such systems prior to deployment or use.

Ethics

Governance frameworks must consider if the use of autonomous weapons systems would be legally and ethically acceptable, including by recognizing that:5

• Ethical considerations, including the principles of humanity and dictates of public conscience, are central to determining the acceptability of and limits on autonomous weapons systems (including the degree of human control that must be retained).

[3] Group of Governmental Experts on lethal autonomous weapons systems, national statement, March 2023.

[4] See the European Union statement on conventional weapons at a meeting of the First Committee, during the seventy-eighth session of the General Assembly, available at https://estatements.unmeetings.org/estatements/11.0010/20231023100000000/6geoPnJ6HnKK/M8SpW99Xe5MF_en.pdf.

[5] These points have been made by the International Committee of the Red Cross, among others. See https://www.icrc.org/en/document/autonomous-weapons-icrc-submits-recommendations-un-secretary-general.

• The ceding of human control, agency, responsibility and/or intent on decisions regarding the application of force to algorithms and computer-controlled processes poses fundamental ethical concerns.

• Ethical responsibilities for decisions on applying force require context-specific value-based judgment by humans and that the delegation of that judgment to autonomous weapons systems is neither legally feasible nor ethically desirable.

• There must be a direct connection, with a clear and unambiguous line of human responsibility and accountability, between the human rationale for the deployment of autonomous weapons systems and the direct consequences of their use to prevent the erosion of existing ethical standards.

Bias

Below, Ireland highlights the key points of a joint submission to the Group of Governmental Experts.6

Algorithms and related machine learning risk repeating, amplifying, or contributing to unjust biases

First, data-based systems reproduce existing inequalities. A 2016 study7 of a computer program designed to evaluate the potential for recidivism for the criminal justice system found that the system unevenly predicted recidivism among race and genders.

Second, existing data sets and algorithms skew toward white males, meaning that women of colour, for example, are significantly less likely to be intelligible to machine learning programs trained to recognize images8 and voices.9

A review10 of publicly available information on 133 biased artificial intelligence systems, deployed across different economic sectors from 1988 to 2021, found that 44.2 per cent (59 systems) exhibited gender bias and that 25.7 per cent (34 systems) exhibited both gender and racial biases.

The consequences of bias in machine learning are amplified in a military context, as a recent United Nations Institute for Disarmament Research11 report has shown. Women of colour may be misrecognized at a higher rate, leaving them exposed to differential risks, or that an autonomous system may miscategorize civilian men as combatants, due to their traditional roles in warfare.

Recommendations include, but are not limited to:

(a) Comprehensive testing and reviews, in order to identify and correct potential biases;

(b) Rigorous documentation of the data sets used in autonomous weapons, in order to enhance traceability and transparency, and provide information regarding motivation, the collection process and recommended use;

[6] Joint submission by Austria, Belgium, Canada, Costa Rica, Germany, Ireland, Luxembourg, Mexico, Panama and Uruguay (CCW-GGE.1-2024-WP.5).
[7] See www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing.
[8] See http://gendershades.org/.
[9] See https://hbr.org/2019/05/voice-recognition-still-has-significant-race-and-gender-biases.
[10] See https://ssir.org/articles/entry/when_good_algorithms_go_sexist_why_and_how_to_advance_ai_gender_equity.
[11] See https://unidir.org/publication/does-military-ai-have-gender-understanding-bias-and-promoting-ethical-approaches-in-military-applications-of-ai/.

(g) Testing of algorithmic models against benchmarks that evaluate their operation against gender, age and race, and in scenarios that are distinct from the data sets used to train the machine learning model;

(d) Comprehensive training and awareness on this issue by those testing and using the system.

Multilateral solutions

Ireland supports legally binding rules and guidelines on autonomous weapons systems. Ireland supports the critical ongoing work of the Group of Governmental Experts, alongside parallel initiatives which are complementary to the Group and facilitate an inclusive approach. We note the essential roles of the International Committee of the Red Cross, civil society, academia, industry and the General Assembly.

Ireland supports the two-tier approach, whereby certain autonomous weapons systems are prohibited outright and all others are regulated.

Autonomous weapons systems must be prohibited if they:

- Cannot comply with international humanitarian law, including vis-à-vis distinction, proportionality, superfluous injury and/or unnecessary suffering.
- Are not sufficiently predictable, controllable or understandable.
- Can elect and engage targets without the necessary degree of human control to ensure compliance with international humanitarian law.

Multilateral regulation should apply to all other autonomous weapons systems, including:

- Limits on type of target
- Limits on duration, geographical scope and scale of use
- Ensuring maintenance of human control.

Israel

[Original: English]
[24 May 2024]

Israel notes the adoption of General Assembly resolution 78/241 entitled “Lethal Autonomous Weapons Systems” of 22 December 2023 and, in accordance with paragraph 2 of the resolution, has the honour to submit its national contribution to the report of the Secretary-General to the General Assembly at its seventy-ninth session for further discussion by Member States.

Israel recognizes the potential advantages and challenges regarding lethal autonomous weapons systems. In this regard, Israel would like to note that weapons systems based on emerging technologies in the area of lethal autonomous weapons systems may serve both military necessity and humanitarian considerations and can be used to uphold compliance with international humanitarian law.

Israel sees great importance in 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 and acknowledges its uniqueness as a forum focused on international humanitarian law with the participation of relevant stakeholders who hold military, legal and technical expertise, which has the ability to strike the appropriate balance between military necessity and humanitarian considerations in any deliberation concerning conventional weapons.

These features have rendered its achievements in the field of conventional weapons as those with the greatest practical effect on the ground, and are also cardinal when discussing the issue of lethal autonomous weapons systems.

With regard to lethal autonomous weapons systems, the progress that has been made within the framework of the Convention on Certain Conventional Weapons should be recognized, alongside the need for further in-depth discussions within the Group of Governmental Experts on lethal autonomous weapons systems that could lead to tangible consensual outcomes. The recent constructive atmosphere of the discussions reaffirms Israel's conviction that the Convention remains the most suitable forum for addressing the challenges and opportunities presented by emerging technologies in the area of lethal autonomous weapons systems.

The Group of Governmental Experts has a robust mandate to further consider and formulate, by consensus, a set of elements for the establishment of an instrument, without prejudging its nature, and other possible measures to address emerging technologies in the area of lethal autonomous weapons systems. Such a consensus-based forum, which includes a wide participation of States, civil society representatives and experts, promotes inclusivity. External initiatives that lack such characteristics risk not only the duplication but also the fragmentation of approaches. It is essential not to undermine the important gains achieved within the Convention on Certain Conventional Weapons and the continuation of dialogue in its framework, including by creating different initiatives aimed at crafting policy measures on the subject of lethal autonomous weapons systems.

In addition, it is Israel's position that any characterization of the topic must continue to focus on lethal autonomous weapon systems (rather than autonomous weapon systems), as has been the focus of the Group of Governmental Experts since its inception.

It is of importance to stress that existing international law, and in particular, international humanitarian law, fully applies to lethal autonomous weapons systems and, in Israel's view, provides a sufficient legal framework for any future use of lethal autonomous weapons systems in the context of armed conflicts.

Israel believes that when discussing the topic of lethal autonomous weapons systems, the focus must be on discussing the application of existing international humanitarian law to lethal autonomous weapons systems while keeping the operational context in mind. It is problematic to discuss the legality of lethal autonomous weapons systems while focusing only on the capabilities of the weapon, without consideration of the operational context in which it is intended to be used or the type and level of human input involved in the process. Also, discussion of the implementation of the rules of international humanitarian law that are context-dependent should not be conflated with discussion of the per se legality of weapons.

It is critical to distinguish, on the one hand, between primary rules of international humanitarian law – including categorical prohibitions on weapons, targeting rules and other legal rules – and on the other hand, legal or practical aspects which are not by themselves primary rules of international humanitarian law. This includes issues such as control, responsibility, foreseeability, predictability and reliability. While some of these concepts have significance in other fields of law, such as the law of State responsibility or international criminal law, or have a practical meaning in the implementation of international humanitarian law, treating them as rules of international humanitarian law, or even framing prohibitions while using them, would be problematic on many legal and practical levels. For example, there is no requirement under international law that refers to human control in the context of using weapons. Human control is not an end in and of itself, but rather, it may be a

relevant concept in the implementation of various obligations under international humanitarian law in different circumstances (as could be other concepts as well).

Finally, considering the continuous evolution of technology, it is important to recognize that our understanding and expectations of emerging technologies in the area of lethal autonomous weapons systems can shift over time. Therefore, in order to conduct a serious and responsible discussion on lethal autonomous weapons systems there is a need to approach the matter in a careful and measured manner.

Italy

[Original: English]
[24 May 2024]

Italy co-sponsored General Assembly resolution 78/241 and welcomes the opportunity to present its views for inclusion in the report to be submitted by the Secretary-General to the seventy-ninth session of the General Assembly, in accordance with paragraph 2 of the above-mentioned resolution.

Since 2013, Italy has actively participated in the international debate on lethal autonomous weapons systems, launched under the auspices of 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, first within the framework of informal meetings of experts and later as a participant in the Group of Governmental Experts on lethal autonomous weapons systems itself.

Lethal autonomous weapons systems pertain to a vast category encompassing new developments in warfighting, armed conflicts and weapons technologies, as well as associated concepts such as artificial intelligence and machine learning. Concrete and structured discussions on the advancement of autonomy in weapons systems and related implications have achieved substantial progress over time.

In Italy's view, the Convention on Certain Conventional Weapons is by far the most suitable forum to address current and emerging issues relating to the development and use of weapons systems. A large number of parties have acceded to the Convention, among which are the States that are the major developers and producers of military applications of artificial intelligence. Moreover, it allows for the combination of diplomatic, legal and military expertise, including through representatives not only of States parties but also of international organizations, specialized institutions and civil society organizations. The Convention is also the best forum to review the compatibility of a weapon system with international humanitarian law.

Italy welcomed the renewal of the mandate of the Group of Governmental Experts on lethal autonomous weapons systems until 2026 and is committed to advancing discussions on the development of elements of a future instrument. This instrument should set clear prohibitions and regulations, so as to be eventually adopted as an additional protocol to the Convention on Certain Conventional Weapons. Italy is in fact fully committed to the very spirit and objectives of the Convention, in which the High Contracting Parties recognize, as stressed in its preamble, "the importance of pursuing every effort which may contribute to progress towards general and complete disarmament under strict and effective international control". This is indeed a major challenge for all of us and has to be a source of inspiration for our work.

International law, including international humanitarian law, is fully applicable to lethal autonomous weapons systems, as recalled in the guiding principles endorsed in 2019, which state that "international humanitarian law continues to apply fully to

all weapons systems, including the potential development and use of lethal autonomous weapons systems". International humanitarian law imposes requirements on parties to a conflict before and during an attack. These requirements include that the attack must be discriminate, permitting the distinction of lawful targets (combatants and military objectives) from unlawful targets (civilians, persons hors de combat and civilian objects); proportionate, prohibiting attacks that are expected to cause, inter alia, incidental loss of civilian life, injury to civilians and damage to civilians that would be excessive in relation to the anticipated military advantage; and compliant with requirements for precautions in the attack, which demands that constant care be taken to spare civilian populations, civilians and civilian objects.

In addition to these principles, article 35 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I) reaffirms that methods and means or warfare are not unlimited, a concept that is operationalized by article 36, which imposes an obligation on States parties to ensure that unlawful weapons are not used. Weapons review processes are a mechanism to ensure the fulfilment of this obligation during the development and acquisition of new weapons. In the case of lethal autonomous weapons systems, there is an intrinsic challenge in review processes that is related to the complexity of the underlying technology and the possible unpredictability of the autonomous system in changing physical and operational environments.

Although not facing a legal vacuum, in Italy's view a normative and operational framework governing autonomous weapons systems needs to be further developed. This could be done using a two-tier approach for setting prohibitions and regulations. According to this approach, lethal autonomous weapons systems that cannot be developed and used in accordance with international humanitarian law would be ipso facto prohibited. On the other hand, systems featuring decision-making autonomy in critical functions, which can be developed and used in full compliance with international humanitarian law, would be regulated. More specifically, in line with existing provisions of international humanitarian law, lethal autonomous weapons systems that are inherently indiscriminate or whose effects cannot be limited, anticipated or controlled, or are such as to cause superfluous injury or unnecessary suffering, would fall under the category of prohibitions. This would also encompass weapons systems operating completely outside human control and a responsible chain of command.

Other lethal autonomous weapons systems would fall under the category of being governed by regulations. Such systems would include those whose compliance with international humanitarian law could be assessed by taking into account their existing capacities, by applying appropriate testing and training of human operators (to evaluate their reliability, understandability and predictability) or by limiting the types of targets as well as the duration, geographical scope and scale of operations. Furthermore, intervention by an operator should be possible during crucial, "high-level" functions. For a system to be considered not fully autonomous and for it not to be banned but regulated, it would be sufficient for a human operator to retain at least the final crucial function, which is the decision of whether or not to apply force to a previously identified and selected target.

The human element is, in Italy's view, crucial for the entire life cycle of lethal autonomous weapons systems, namely for their design, development, production, deployment and use. If the goal is to ensure compliance with international humanitarian law, then an appropriate level of human judgment and control should be retained, so as to ensure accountability under international humanitarian law. Only a human being can be held accountable under international humanitarian law, never a machine. Throughout the chain of command and control and in line with different

levels of responsibility, humans must have an adequate understanding of the characteristics and functioning of the weapons systems. Exerted control should apply parameters that allow the type of tasks and targets assigned to lethal autonomous weapons systems to be limited, make the presence of deactivation and fail-safe mechanisms mandatory and place temporal and space limits on their operation according to the assessment of the situation and military context.

On the definition and characterization of lethal autonomous weapons systems, it is Italy's view that the lethality of a system should not be determined solely by its intrinsic characteristics, but also by the context of its use and its unintended or ancillary effects. Within the Convention on Certain Conventional Weapons itself, Protocol I does not specify the functions of the weapons, but refers to permanent blindness as intended or produced effect of the weapon. The Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III) refers to incendiary weapons as weapons that cause burn injuries.

Lastly, we support the future establishment of a cooperative and consultative mechanism that could facilitate exchanges among the High Contracting Parties on the operation of an instrument and the sharing of information and best practices on measures for risk mitigation and legal reviews.

Japan

[Original: English]
[24 May 2024]

Japan recognizes that it is of the utmost importance to work towards clarifying the normative and operational framework pertaining to lethal autonomous weapons systems, while considering their relationship with existing international law, in particular international humanitarian law, in anticipation of the further development of emerging technologies.

The military use of emerging technologies should be examined in a comprehensive manner, with a sufficient understanding of their risks and benefits, and take into account both humanitarian considerations and security perspectives. Japan places importance on conducting the military use of emerging technologies in a responsible manner, maintaining the "human-centric" principle and ensuring reliability and predictability. Japan also supports the view that the obligations of international humanitarian law apply to all weapon systems, including lethal autonomous weapons systems, that weapon systems must not be used if they are incapable of being used in compliance with international humanitarian law and that other weapon systems should be subject to necessary restrictions to ensure compliance with international humanitarian law. Japan recognizes that, in the use of weapon systems, human responsibility cannot be transferred to machines and that measures must be taken to ensure that they are operated under a responsible chain of human command and control, in a manner consistent with the obligations of States under international humanitarian law, in which responsibility is clearly attributed.

Views regarding main topics on lethal autonomous weapons systems

I. Characteristics

1.

Japan recognizes that the weapon systems to which the current discussion on autonomous weapon systems relates are those that, once activated, can identify, select and engage targets with lethal force, without further intervention by an operator.

2. Application of international humanitarian law

Japan will not conduct research on, develop or operate weapon systems whose use is not permitted under domestic or international law, including international humanitarian law.

Human involvement is required to ensure that weapon systems are used in compliance with international law, especially international humanitarian law, as it is humans who can be held accountable under international humanitarian law. For weapon systems operating completely without human involvement, the engagement of targets may be conducted in a manner that makes it difficult to identify the commander or operator responsible for the consequences of their use. In addition, the lack of human involvement may result in the inability of a system to operate as intended by its users, which in turn may lead to unexpected harm to civilians.

Japan believes that autonomous weapon systems with lethal force that operate completely without human involvement are not necessarily reached a stage of ensuring compliance with international humanitarian law. Conversely, Japan believes that weapon systems that ensure human involvement can reduce human error providing efficiencies in labour and manpower, which can provide significant benefits for security. Accordingly, Japan has stated that it does not intend to develop "autonomous weapon systems with lethal force that operate completely without human involvement".

In light of the above, Japan considers that the development and use of autonomous weapons systems that fulfil the conditions set out below must not be permitted internationally, as such weapon systems can potentially cause unacceptable consequences:

- Weapon systems of a nature to cause superfluous injury or unnecessary suffering, be inherently indiscriminate or otherwise incapable of being used in accordance with international humanitarian law.

- Autonomous weapon systems with lethal force that operate completely without human involvement, which do not incorporate an appropriate level of human judgment and which cannot be operated within a responsible chain of human command and control.

Weapon systems other than those that cannot be used in compliance with international humanitarian law should be restricted, or risk mitigation measures should be taken in relation to such systems, in order to ensure that they are used in a manner that complies with international humanitarian law. Japan believes that, in terms of regulatory measures, it is particularly important to control or limit the types of targets that the systems can engage, as well as the duration, geographical scope and scale of their operations, including through self-destruction, self-deactivation and self-neutralization mechanisms. In addition, it is necessary to improve the predictability and reliability of the effects of the use of such systems as a prerequisite for an appropriate level of human judgment.

3. Human involvement The most important aspect of human involvement is to ensure that commanders and operators are able to operate weapon systems as they intend. To this end, it is necessary for them to have sufficient information about the weapon system that is being used and to ensure human involvement that allows for the exercise of appropriate levels of human judgment to ensure proper operation under a responsible chain of human command and control.

4. **Responsibility and accountability**
Based on the principles confirmed in the 11 guiding principles (CCW/GGE.1/2019/3, annex IV, subpara. (b)), the report of the 2019 session of the Group of Governmental Experts on lethal autonomous weapons systems (CCW/GGE.1/2019/3, para. 17 (c)) and the report of the 2022 session of the Group of Governmental Experts (CCW/GGE.1/2022/2, para. 19), Japan recognizes that weapon systems should be operated within a responsible chain of human command and control, that responsibility should be attributed and that human responsibility, or the means by which humans can be held accountable for the actions of machines, should be ensured.

Risk assessment and mitigation measures

5.

As recognized in the 11 guiding principles (CCW/GGE.1/2019/3, annex IV, subpara. (g)), risk assessments and mitigation measures should be part of the design, development, testing and deployment cycle of emerging technologies in any weapon system.

It is particularly important to take measures such as bias minimization, the monitoring of capabilities that are updated through self-learning, the introduction of safeguards to avoid unintended consequences and education on the use of artificial intelligence and other technologies.

Japan will implement training programmes to ensure the appropriate use of artificial intelligence technologies.

6. **Legal review** In determining whether the employment of new weapon systems using emerging technologies in the area of autonomous weapons systems is prohibited by international law that is applicable to a country concerned, it is important for each State to conduct a legal review concerning such weapon systems in accordance with article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I).

Views on the future of discussions

II.

Japan reiterates that what is required in the outcome that should be produced in the course of future discussions is not legally binding provisions, but rather effective rules. In a challenging security environment, the development of rules by consensus is key to ensuring the effectiveness of those rules. In this process, it is important to take into account the perspective of seeking a balance between humanitarian considerations and security perspectives and that of ensuring the participation of all stakeholder States, including those with advanced technological capacities. For this reason, Japan strongly supports the continuation of the discussions under the framework of the Convention on Certain Conventional Weapons. Furthermore, Japan welcomes the recent discussions on the responsible military use of artificial intelligence. Japan expects that such discussions will complement and strengthen discussions within the Group of Governmental Experts under the framework of the Convention.

Lastly, Japan reaffirms that it will contribute actively and constructively to the development of international rules for weapon systems using emerging technologies.

Kiribati

[Original: English]
[24 May 2024]

Overview

Kiribati welcomes the opportunity to submit its views for consideration by the Secretary-General, in accordance with resolution 78/241 entitled "Lethal autonomous weapons systems", adopted by the General Assembly on 22 December 2023, in which the Assembly requested the Secretary-General to seek views on ways to address the related challenges and concerns that autonomous weapon systems raise from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force.

Kiribati is a small island State in the Pacific region, a peaceful region that is not a major producer of autonomous weapons. Nevertheless, Kiribati remains highly concerned about the presence of autonomous weapons and their ability to cause grave harm to both the environment and civilians, especially in the light of the nexus between nuclear weapons and autonomous weapons.

Nuclear dimension

Between 1957 and 1962, the Republic of Kiribati experienced 33 nuclear weapons tests on both Malden and Kiritimati Islands. As a result, Kiribati is alarmed about the potential use of autonomous systems in nuclear decisions as echoed in numerous recent publications.

Kiribati also recalls with alarm popular films in which autonomous machines launch nuclear strikes. Any situation in which nuclear-armed States enable autonomous machines to control their nuclear weapons should be avoided. Thus, Kiribati demands that nuclear-armed States never allow autonomous weapon systems to control their command-and-control systems and that they ban nuclear weapons.

Co-sponsorship of Austria's resolution

Against this backdrop, Kiribati sponsored Austria's resolution on lethal autonomous weapon systems submitted to the First Committee of the General Assembly.

Attendance at "Humanity at the crossroads" conference in Vienna

At the "Humanity at the crossroads: autonomous weapons systems and the challenge of regulation" conference, Kiribati listened closely to experts and representatives of academia, civil society and the International Committee of the Red Cross (ICRC) on autonomous weapon systems. In this regard, Kiribati fully agrees with the view contained in the Chair's summary that autonomous weapons systems, which – once activated – select targets and apply force without further human intervention, raise concerns from legal, ethical and security perspectives. Thus, Kiribati fully endorses the Chair's summary.

Request for a prohibition on autonomous weapons systems

Due to its shared concerns about autonomous weapons systems, Kiribati is calling for a new legally binding treaty to prohibit these weapons. Its position is based on the general views expressed among regional States, as reflected in the Freetown communiqué of the Economic Community of West African States, the Belén

communiqué of the Latin American and Caribbean States and the Port of Spain declaration of the Caribbean Community.

This treaty could be negotiated either within the auspices of the General Assembly of the United Nations or among the 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.

Incorporating international law

A new legally binding instrument should underscore the need for all States to comply at all times with international law, including international humanitarian law, international human rights law, and the Charter of the United Nations.

Defining an autonomous weapon system

The new treaty should contain an unambiguous definition of what constitutes an autonomous weapon system. In this regard, Kiribati agrees with ICRC that an autonomous weapon system means "a weapon system that is designed to select and engage one or more targets without the need for human intervention after activation".

The phrase "without the need for human intervention" can be expanded upon. As explained by ICRC, this phrase could be defined as follows:

> After initial activation by a human, the application of force is triggered in response to information from the environment received through sensors measuring phenomena such as heat, light, movement, shape, velocity, weight or acoustic or electromagnetic signals; and on the basis of a generalized "target profile" such as the shape, infrared or radar "signature" and speed and direction of a type of military vehicle, etc. "Human intervention", for these purposes, should be understood as excluding human inputs or actions that do not materially affect the autonomous functions of target selection or engagement.

Prohibitions

Kiribati strongly endorses the ICRC perspective that a new and legally binding treaty should provide that it is prohibited to:

> Develop, produce, otherwise acquire, stockpile or retain, or transfer, directly or indirectly to anyone, or to use any autonomous weapon system that is designed or of a nature, or used in such a manner that does not allow a human user to both (1) understand, predict and explain how the [automatic weapon system] will function in any normal or expected circumstances of use, in particular what circumstances or conditions will trigger the system to apply force, and (2) predict and limit the effects of the [autonomous weapon system] in all such circumstances as required by [international humanitarian law.]

Kiribati also agrees that the instrument should ban anti-personnel autonomous weapon systems. Specifically, as explained by ICRC, the instrument should:

> Provide that it is prohibited in all circumstances to develop, produce, otherwise acquire, stockpile, or retain, or transfer, directly or indirectly to anyone, or to use any autonomous weapon system:
>
> – that is designed or used in such a manner to be triggered by the presence, proximity or contact of one or more persons, or
>
> – the target profile of which otherwise represents one or more persons.

Inclusivity

If the international community initiates negotiations on a new treaty to ban autonomous weapon systems, it is vital that we invite representatives of academia, civil society, religious communities and youth organizations to share their input and perspectives. They can bring fresh ideas to States and we must encourage them to contribute and to provide their views.

Conclusion

Given the current geopolitical situations across the world, we must safeguard the lives of civilians. We cannot have uncontrollable weapons, which can cause indiscriminate harm and cannot differentiate between civilians and non-civilians. As a result, the proposed treaty should address a series of prohibitions concerning autonomous weapons systems, which have artificial intelligence and hinder human users from understanding and predicting the systems' behaviours.

We cannot allow any type of weapon that can potentially harm civilians.

Luxembourg

[Original: English]
[25 May 2024]

Luxembourg has been actively involved in various international initiatives regarding lethal autonomous weapons systems and hosted a conference on autonomous weapons systems in April 2023, with the aim of raising public awareness on the topic and offering a platform to discuss the risks and challenges.

In July 2022, the Government of Luxembourg set up an interministerial working group on lethal autonomous weapons systems. Its task was to establish a proposal on Luxembourg's position regarding lethal autonomous weapons systems and follow-up actions aimed at defining principles, rules and control mechanisms at the national level, pending regulation at the international level.

Based on an analysis of existing definitions, the group proposed the following definition of autonomous weapons systems:

"Weapon systems capable of identifying, selecting and deploying force against a target without human intervention".

Considering that autonomous weapon systems may be used to lethal and non-lethal ends and that the use of force does not need to have lethal consequences in order to be contrary to international humanitarian law, it is Luxembourg's position to refer to them as "autonomous weapons systems" instead of "lethal autonomous weapons systems". In line with the terminology used in General Assembly resolution 78/241, Luxembourg will however continue to refer to "lethal autonomous weapons systems" for the purpose of the present submission.

A key factor in characterizing lethal autonomous weapons systems is their capacity for adaptation, made possible by artificial intelligence, that is an inherent part of their capabilities and the corresponding ethical and legal debates. However, as these technologies are still being developed, autonomy is a characteristic that is not sufficient to provide a precise definition. Therefore, Luxembourg believes that it is more effective to define the degree of human intervention, rather than attempting to quantify the degree of autonomy.

Furthermore, it is Luxembourg's position that a common definition is not necessary to start negotiations on a legally binding instrument on lethal autonomous weapons systems.

I. Addressing the challenges and concerns raised by lethal autonomous weapons systems

Luxembourg considers the two-tier approach to be the appropriate way to address the challenges and concerns raised by lethal autonomous weapons systems, since it entails the:

(a) Prohibition of the development and use of lethal autonomous weapons systems that cannot be deployed in compliance with international law and notably international humanitarian law; that are inherently indiscriminate and whose effects cannot be limited, anticipated or controlled; that are of a nature to cause superfluous injury or unnecessary suffering; and that operate completely outside of human control.

(b) Regulation of all other lethal autonomous weapons systems to ensure their compliance with international law, especially international humanitarian law. To ensure this, a series of positive obligations should apply to States to take appropriate measures throughout the life cycle of such systems, in order to mitigate potential legal, ethical, technical and security challenges. Such obligations could include the preservation of meaningful human control over the use of lethal autonomous weapons systems and, inter alia, legal reviews of weapons to comply with international humanitarian law, adequate training, mitigation measures and other safeguards.

The two-tier approach ensures that international law, especially international humanitarian law, will continue to apply fully to lethal autonomous weapons systems, from their development to their use. The role of humans in the use of force is a key factor of the two-tier approach to ensure compliance with international humanitarian law. Thus, lethal autonomous weapons systems that operate outside of human control and without a precise and limited mission framework set by a responsible chain of command would be prohibited, as compliance with international law and international humanitarian law cannot be ensured.

Lastly, the aim of prohibiting and regulating lethal autonomous weapons systems should not be seen as an attempt to hinder technological innovation, but it is imperative to ensure that international humanitarian law governs both their development and deployment.

II. Role of humans in the use of lethal autonomous weapons systems

The concept of human control is an imperative to ensure that lethal autonomous weapons systems are used in compliance with international law and international humanitarian law. Two key principles must be taken into consideration, namely appropriate human control and human responsibility.

Concerning appropriate human control, the measures set out below could be taken.

- Once activated, lethal autonomous weapons systems should act predictably in accordance with international law and international humanitarian law and with the intentions of the commander and operator.
- Sufficient understanding of the system's mode of operation is critical. Operators should be able to adequately anticipate the system's functioning and effects in different operational environments, to avoid engagements that are not compliant

with international humanitarian law. Operators should be able to understand ex post the actions performed by the system.

• There must be a capacity to set precise deployment frameworks, curb unwanted interactions with the system's environment and prevent the emergence of critical situations resulting in the violation of international law and international humanitarian law.

• International law and international humanitarian law should be developed to include compliant legal reviews for assessing reliability and predictability and introducing certification procedures.

• Human judgment regarding compliance with international law and international humanitarian law must be retained during deployment and in the phase of critical decision-making concerning the use of force. The operator should, as far as possible, be familiar with all environmental and technical factors concerning the system, so as to determine whether its use could potentially violate the principles of international humanitarian law.

• Lethal autonomous weapons systems should not be able to make autonomous decisions concerning mission parameters or the spatial or temporal framework of the mission.

• If the lethal autonomous weapons system acts fully autonomously, contrary to the will of the operator or commander, the latter should be able to deactivate the system ("kill switch") to prevent violations of international law and international humanitarian law.

Human responsibility should always be preserved and never transferred to machines. Various measures can be taken, including those set out below.

• Elaboration of precise doctrines and procedures for the use of lethal autonomous weapons systems, from the moment when consideration is given to integrating such systems into the military arsenal. These doctrines and procedures should be adapted to the technological specificities of the systems in question.

• Adequate training of decision makers and human operators to fully understand the effects of lethal autonomous weapons systems and their interaction with the environment.

• Human responsibility for deployment decisions and for defining and validating rules for the operation, use and operational engagement of lethal autonomous weapons systems.

• Implementation of a post-deployment review to assess compliance with international humanitarian law.

• Procedures for reporting violations of international law and international humanitarian law.

• Disciplinary proceedings and prosecutions of alleged perpetrators of serious breaches of international humanitarian law.

Lastly, the underrepresentation of historically marginalized communities or victims of discrimination in the fields of science, technology, engineering and mathematics could create significant biases in artificial intelligence systems. These may be amplified by generative artificial intelligence and machine learning functions. Therefore, adopting a gender-sensitive and intersectional approach to all facets of emerging technologies regarding lethal autonomous weapons systems is essential.

III. Operationalization and recommendations

Luxembourg considers that the challenges posed by lethal autonomous weapons systems are best addressed in the context of 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. Discussions should develop elements for an instrument, potentially as an additional protocol to the Convention, to ensure that lethal autonomous weapons systems comply with international humanitarian law and that sufficient human control and accountability are maintained.

The Group of Governmental Experts on lethal autonomous weapons systems should fulfil its current mandate of developing a set of elements for the establishment of a possible instrument and present its conclusions at the next Review Conference of the Convention on Certain Conventional Weapons in 2026, moving towards negotiating an additional protocol on lethal autonomous weapons systems. The Convention brings together States that are developing military artificial intelligence applications and, with its ability to negotiate new additional protocols, provides a flexible framework to address lethal autonomous weapons systems. The Group comprises experts from governments, international organizations, civil society and academia, combining the technical, military and legal expertise required to examine emerging technologies regarding lethal autonomous weapons systems.

The joint working paper submitted by Bulgaria, Denmark, France, Germany, Italy, Luxembourg and Norway during the first session of the Group of Governmental Experts in 2024 introduces further elements for the establishment of an instrument to address the issue of lethal autonomous weapons systems within the framework of the Convention on Certain Conventional Weapons.[1]

Malawi

[Original: English]
[25 May 2024]

The Permanent Mission of the Republic of Malawi to the United Nations has the honour to inform that the Republic of Malawi is extremely concerned about the challenges and concerns related to autonomous weapons systems, from humanitarian, legal, security, technological and ethical perspectives. Therefore, the Republic of Malawi would like to call for the start of negotiations on a legally binding instrument on autonomous weapons systems, as soon as possible. The negotiations should be held in the forum that is most inclusive, open to all stakeholders and most likely to be ambitious and successful. The General Assembly should consider starting negotiations in 2024, in parallel to continued dialogue in all appropriate multilateral forums, to encourage mutual enforcement.

The Republic of Malawi is of the view that a treaty is required to prohibit fundamentally unacceptable autonomous weapons systems and regulate the use of other autonomous weapons systems. Meaningful human control over an attack should be a central element of a regulatory framework. The human user must be able to make a legal and moral judgment and capable of being held accountable for any violations of legal and moral norms. This means that autonomous weapons systems that target people must also be prohibited for legal and ethical reasons. All other autonomous weapons systems should be regulated through restrictions and positive obligations to ensure meaningful human control over the use of force. The development of a legally binding instrument on autonomous weapons systems should include perspectives on

[1] CCW/GGE.1/2024/WP.3.

human rights, ethics, bias and perspectives from marginalized and affected communities. The Republic of Malawi stands ready to work with all States to urgently develop a legal instrument.

Mexico

[Original: Spanish]
[24 May 2024]

There is an urgent need to establish prohibitions and regulations on autonomous weapons systems, as such systems represent a risk to international peace and security and are incompatible with the full observance of the rules of international law, in particular international humanitarian law.

Mexico promoted and co-sponsored General Assembly resolution 78/241, entitled "Lethal autonomous weapons systems", because the Assembly is the main multilateral political forum with almost universal membership, discussions on the matter had been fragmented across different forums and such systems should be given visibility in the light of the multiple challenges they pose.

Mexico underlines its support for the communiqué of the Latin American and Caribbean Conference on the Social and Humanitarian Impact of Autonomous Weapons (Costa Rica, 2023) and endorses the final report of the Chair of the international conference held under the theme "Humanity at the crossroads: autonomous weapons systems and the challenge of regulation" (Vienna, 2024).

1. Risks and challenges

Autonomous weapons systems entail multiple legal, ethical, humanitarian and security risks and challenges with regard to the conduct of hostilities and the protection of civilians and those not participating in armed conflict.

- *Ethical perspective*: the risk of machines making life-and-death decisions is alarming.
- *Security perspective*: such systems could lead to asymmetric warfare, would lower the threshold for the use of force, would increase the risk of unintended conflict and the escalation of conflict, and could accelerate an arms race.
- *Humanitarian perspective*: potential risk of the development and use of autonomous weapons systems that are not subject to meaningful human control and cannot fully comply with the rules and principles of international humanitarian law.

The removal of human control would lead not only to the replacement of human judgment with technical or operational indicators, but also to disregard for human assessment and the qualitative, context-based judgments necessary to determine the legality of the use of force in complex and changing situations.

2. Possible definition

Although there is no agreed definition of autonomous weapons systems, such a definition is not essential to achieving progress in terms of regulation.

Such a definition should not be overly specific so that it does not exclude future systems that will need to be regulated, and should also not be too general or ambiguous, as that could give rise to grey areas and allow some autonomous weapons systems to operate indiscriminately.

In 2013, the Special Rapporteur on extrajudicial executions identified an autonomous weapons system as any weapons system with autonomy that is designed, once activated, to select targets and use force against them without the need for human intervention.

The essential elements include: (a) autonomy, namely, the capacity for independent decision-making and uncontrolled operation in selecting and using force against military targets, including civilians and other humans; (b) the use of artificial intelligence-based technologies in the critical functions of selection and the use of force; and (c) limited or no human control.

Mexico does not consider the characteristic of lethality to be suitable, as that term is not used or justified under international law.

Applicability of international law

3.

All weapons systems must be developed, deployed and used in accordance with international law, including the Charter of the United Nations, international humanitarian law, international human rights law, international criminal law and the law of international responsibility.

The general rules and principles of international humanitarian law are applicable when considering possible prohibitions and regulations on autonomous weapons systems.

The methods and means of warfare are not limitless. The use of force must be guided by the principles of humanity and the dictates of public conscience (Martens clause), which pertain only to individuals.

State and individual responsibility

4.

Humans must be held accountable and assume responsibility for any decisions regarding the use and deployment of autonomous weapons systems, any use of force and any violations of the rules of international law, in particular international humanitarian law. Responsibility and accountability cannot be transferred to machines.

Autonomous weapons systems must operate within a responsible chain of command and with meaningful human control. The existence of a commander makes it possible to attribute responsibility in cases of violations, as well as individual criminal responsibility for the commission of war crimes and other serious crimes.

Mexico believes that violations of the rules and principles of international humanitarian law can also give rise to State responsibility for unjustifiable wrongful conduct. The conduct of State bodies and their personnel, as well as members of the armed forces, is attributable to the State. The State is also responsible for any use of force (*ius ad bellum*) that endangers international peace and security.

Elements for a future regulation

5.

There is a need to reiterate the existing prohibitions under international humanitarian law and to prohibit autonomous weapons systems that, by their very nature, cannot be used in accordance with the limitations established in international humanitarian law, cannot comply with the principles of distinction, proportionality and precautions in attack and are not sufficiently understandable, predictable or explainable.

There should be prohibitions on autonomous weapons systems that:

– Do not distinguish between military targets and civilian objects, between combatants and civilians, and between active combatants and those hors de combat.

– Cannot determine whether an attack might cause incidental civilian casualties or damage to civilian objects that would be excessive in relation to the concrete and direct military advantage anticipated.

– Do not have a mechanism to cancel or suspend an attack if it is clear that the target is not a military target or is subject to special protection.

– Cause superfluous injury or unnecessary suffering.

Mexico believes that meaningful human control is an implicit element in the application of international humanitarian law, and, therefore, that the scope of such control must be defined.

The involvement of a human being in the selection of targets and use of force does not itself address risks relating to compatibility with international humanitarian law. Meaningful human control should:

– Ensure appropriate limits on operating environments, including aspects relating to time and space.

– Entail the approval of decisions when the operational context is known, through a sufficient level of situational understanding.

– Ensure that precautions are taken in the conduct of operations so that mission parameters cannot be changed without human verification.

– Allow constant monitoring to ensure intervention where necessary, in particular the possibility of stopping and deactivating the system during operation.

– Ensure that human determination is substantive and not merely nominal.

6. Need for a legally binding instrument

Mexico, echoing the Secretary-General and the President of the International Committee of the Red Cross, considers it necessary to adopt a legally binding instrument that establishes prohibitions and regulations on autonomous weapons systems, is aimed at maintaining meaningful human control over critical system activities and includes effective measures relating to implementation, monitoring and accountability.

International treaties provide a sense of commitment and certainty that other types of instruments do not; they are the only way to ensure the truly equal participation of all States, and they avoid regulatory fragmentation arising from national measures.

The process initiated by General Assembly resolution 78/241 will enable the Assembly to guide the approach taken to the issue in the international arena, as well as serving as a catalyst for negotiating and adopting an effective regulatory framework with the inclusion of civil society, academia and technical experts.

Netherlands (Kingdom of the)

[Original: English]
[17 May 2024]

The Kingdom of the Netherlands welcomes the opportunity to submit its views, in accordance with General Assembly resolution 78/241, on ways to address the challenges and concerns raised by autonomous weapons systems.

In June 2022, in a letter to the Dutch Parliament, the Minister for Foreign Affairs set out the basis for the government's policy position on autonomous weapons

systems.1 The Netherlands Ministry of Defence is also drafting additional internal policies on this theme.

The main international forum to discuss the regulation of autonomous weapons systems remains the Group of Governmental Experts on lethal autonomous weapons systems, established under 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. The Netherlands is committed to making progress within the framework of the Convention, because all relevant actors in the field of autonomous weapons systems are represented therein, and recent years have shown that progress is possible despite challenging dynamics.

The starting point for the Netherlands is that autonomous weapons systems must be designed, developed and used responsibly and in accordance with international law. Autonomous weapons systems must retain a certain level of human judgment and control throughout the different stages of their life cycle to ensure compliance. Autonomous weapons systems that cannot be designed, developed or used in accordance with international law, in particular international humanitarian law, must be explicitly prohibited through a legally binding instrument, preferably by adding a new protocol to the Convention on Certain Conventional Weapons. Other types of autonomous weapons systems require further regulation.

The section below further summarizes the Dutch position and sets out key issues requiring further consideration.

Characterization

The Netherlands recognizes the need for a general characterization of autonomous weapons systems. However, at present, there is no international consensus on a definition or characterization of an "autonomous weapons system".

On a national level, the Netherlands uses the following general characterization of an autonomous weapons system: "a weapons system that is able to, after being activated, select and apply force against a target without further human intervention". If there is a need for human input after activation to select and apply force against a target, but this human input is merely nominal, this weapons system is still considered to be an autonomous weapons system.

Within this broad category of autonomous weapons systems, the Netherlands differentiates between autonomous weapons systems with the ability to change task, assignment or goal, including the applicable rules of engagement that were delegated to them, without human approval, and autonomous weapons systems without this ability. The first subcategory concerns weapons systems that are inherently unpredictable and that would operate outside of a responsible chain of command. Such systems could potentially be subject to a future prohibition.

Application of international humanitarian law

The existing rules and principles of international law, in particular international humanitarian law, apply to the design, development and use of autonomous weapons systems. Due to the autonomous features of those systems – such as the lower level of human judgment and control required for the use of force – it is important to specify which rules and principles of international humanitarian law in particular are applicable. Regarding the design, development and use of autonomous weapons

[1] See also the report of the Advisory Council on International Affairs and the Advisory Committee on International Public Law, *Autonomous Weapon Systems: the Importance of Regulation and Investment* (11 April 2022). Available at https://www.advisorycommitteeinternationallaw.nl/publications/advisory-reports/2021/12/8/autonomous-weapon-systems.

systems, the principles of distinction, precaution and proportionality are of particular interest from an international humanitarian law perspective. To comply with these rules and principles, it is important to ensure a certain level of human judgment and control with regard to the design, development and use of autonomous weapons systems. The necessary level of human judgment and control depends on different factors such as the context of use and the parameters of weapons systems. Specifying existing norms should help States to comply with their obligations.

With regard to autonomous weapons systems that cannot be designed, developed or used in accordance with international humanitarian law, an explicit prohibition should be adopted. To ensure effective implementation and enforcement, a new international legally binding instrument, such as a new protocol to the Convention on Certain Conventional Weapons, should clearly delineate the types of autonomous weapons systems to which this prohibition applies. Different categories could include:

- Autonomous weapons systems that are designed to apply force against civilians or civilian objects.
- Autonomous weapons systems that are inherently indiscriminate or cause superfluous injury or unnecessary suffering.
- Autonomous weapons systems that are designed in such a way that a human cannot reasonably predict and control the effects brought about by their use in various circumstances. This includes autonomous weapons systems with the ability to change task, assignment or goal, including the applicable rules of engagement that were delegated to them, without human approval. To ensure that an autonomous weapons system is designed, developed and used in accordance with international law (specifically international humanitarian law), different types of measures should be adopted. The measures should depend on the type of autonomous weapons system, its operational environment and its end user.[2] They should also regulate the level of human judgment and control required for autonomous weapons systems to comply with international law, in particular the distinction, precaution and proportionality. Below are a set of measures that could be included but require further discussion among States:
  - Imposing (a) limits on the types and number of targets that autonomous weapons systems can engage; and (b) temporal and spatial limits.
  - Maintaining situational awareness by humans over the geographical area in which an autonomous weapons system is deployed.
  - Creating an intuitive interface through which the human-machine interaction takes place.
  - Installing extensive procedures to ensure that autonomous weapons systems are tested, evaluated, validated and verified.
  - Undertaking extensive legal reviews of autonomous weapons systems.
  - Training human operators who interact with weapons system.

Responsibility

In the context of State responsibility, States can be held responsible under international law for unlawful actions involving the use of weapons systems with

[2] Stockholm International Peace Research Institute and International Committee of the Red Cross, *Operationalizing Human Control*, p. 26, 2020.

autonomous features. Where appropriate, individuals or legal entities that have played a role in the life cycle of an autonomous weapons system may be subject to civil liability, in accordance with national law, or to criminal prosecution. The responsibility for prosecuting possible international crimes falls primarily to national legal systems, with the International Criminal Court acting as a backstop.

International human rights law

In the Group of Governmental Experts, the Netherlands has consistently highlighted the importance of human rights as a relevant legal regime for the design, development and use of autonomous weapons systems, both inside and outside armed conflict. The Netherlands notes that the legal regime of human rights imposes stricter requirements on the use of force for law enforcement purposes than those imposed by the legal regime of international humanitarian law for combat operations. Although the applicability of international human rights law to the design, development and use of autonomous weapons systems and the use of artificial intelligence in the military domain has not yet been addressed in detail during the discussions of the Group, the Netherlands recognizes the importance of addressing this topic in relevant international forums. Beyond the scope of international law, the use of autonomous weapons systems brings further risks, such as humanitarian, ethical and security risks. For the Netherlands, it is important that these risks are also identified and mitigated.

Broader discussion on artificial intelligence in the military domain

Since artificial intelligence is an important enabler of autonomous weapons systems, there are clear parallels between this broader discussion on artificial intelligence in the military domain and the discussion about the regulation of autonomous weapons systems. The Netherlands regards the international discussions on both topics as complementary and mutually beneficial.

New Zealand

[Original: English]
[21 May 2024]

The present summary reflects the main points of New Zealand's national submission in response to the note verbale dated 1 February 2024.[1]

New Zealand seeks binding international prohibitions on and the regulation of autonomous weapon systems. Specifically, it seeks a comprehensive and specific prohibition on systems that cannot comply with international humanitarian law, for example, if they operate in a manner that users cannot predict or control and fail to meet relevant ethical requirements. Alongside this, New Zealand seeks the appropriate regulation of other autonomous weapons systems to ensure sufficient human control or oversight throughout the life cycle of those systems and full compliance with international humanitarian law.

Autonomy exists along a spectrum and a range of controls may therefore have to be articulated for autonomous weapons systems. Autonomous weapons systems that meet ethical and legal requirements may offer legitimate military benefits, so New Zealand does not consider that a blanket ban on autonomous weapons systems will be constructive or gain broad support at this time.

[1] The full submission is available at https://www.mfat.govt.nz/assets/Peace-Rights-and-Security/Disarmament/New-Zealand-submission-to-the-UN-Secretary-General-on-autonomous-weapon-systems.pdf.

New Zealand is also supportive of interim measures, such as non-legally binding guidelines, declarations or norms, as steps towards a legally binding instrument and/or as practical implementation tools of that instrument.

There is no internationally agreed definition of autonomous weapons systems.

Any broadly adhered to definition should be flexible and technology-neutral so as to ensure that it remains fit for purpose.

Considerations

Humanitarian considerations

Armed conflict continues to have extensive and intergenerational humanitarian impacts. New Zealand is concerned that the unconstrained development and use of autonomous weapons systems could lower the threshold for the use of force and thus worsen the frequency and intensity of conflicts and attendant humanitarian crises.

Legal considerations

International humanitarian law applies fully to all weapons systems, including autonomous weapons systems.2 There is some concern about whether it will be possible for all types of autonomous weapons systems to be operated in compliance with international humanitarian law. For example:

- It is unclear how autonomous weapons systems will comply with the requirement to distinguish between protected persons and objects on the one hand, and combatants and military objectives on the other, in particular due to the contextual human judgment required. A combatant can become hors de combat very quickly, requiring detailed qualitative and contextual judgment abilities.

- Parties to conflict must ensure that all attacks in pursuit of a military objective are proportional to any incidental civilian casualties or damage and take feasible precautions to avoid and minimize this. Proportionality is in essence a human decision-making process that depends on the ability to assess both current and likely future events when contemplating the anticipated military advantage of an attack. It requires the fusion of various forms of data but also demands a complex process of judgment drawing on operational experience, legal frameworks, ethics and other considerations, including judgment of the operation as a whole. Due to the nature of conflict, it is difficult to break proportionality judgments down to easily replicable or codable instructions.

- If an appropriate proportionality judgment cannot be made in assessing whether and how to launch an attack, this complicates the process of identifying the feasible precautions to take.

- In addition, it is not currently clear how legal accountability for violations of international humanitarian law involving autonomous weapons systems can be ensured. The implementation of law depends on holding those involved in conflict accountable for their actions. If this chain of human accountability is weakened or broken, then international humanitarian law will be undermined.

Weapons reviews3 are an important part of national obligations to respect international humanitarian law, and New Zealand supports their strengthening. While such reviews are necessary for autonomous weapons systems, New Zealand sees them

[2] As affirmed in CCW/MSP/2019/9.

[3] Article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I).

as insufficient, on their own, to address concerns about autonomous weapons systems and considers that they should be supplemented with specific rules and limits. While there is a general obligation to conduct weapons reviews, there are no common standards and no requirements to share results. There are also technical questions about how reliably reviews can assess how an autonomous weapons system might operate on any given occasion.

New Zealand also has concerns about how autonomous weapons systems could comply with international human rights law. Autonomous targeting decisions risk being arbitrary, which could violate human rights law. New Zealand is also concerned that biases in data sets that underpin the algorithms used in selecting targets and/or decisions to use force could lead to violations of international human rights law and international humanitarian law, depending on the context. This is not at the exclusion of violations of other bodies of law, including international criminal law. Under international criminal law, it would be possible for the use of autonomous weapons systems to constitute an international crime.

Security considerations

Autonomous weapons systems have the potential to be a destabilizing factor in conflicts and in the maintenance of peace. For example, depending on the type of autonomous weapons system used, the political threshold for deploying force may be lower, resulting in an increased likelihood of conflict.

It is almost certain that autonomous weapons systems will proliferate and, sooner or later, be obtained by non-State armed groups for use in armed conflict, terrorism or crime. It is also foreseeable that in some countries, autonomous weapons systems will find their way into domestic law enforcement use, which could raise additional questions in the area of international human rights law.

Technological considerations

New Zealand advocates a technology-neutral approach. To ensure that future developments are not inadvertently excluded, negotiations could centre on the effects and characteristics of autonomous weapons systems that require new rules and limits. If suitable limits are not placed on autonomous weapons systems and they are proven to have devastating effects that cannot be controlled, there may be irreparable damage to the social licence for artificial intelligence applications more generally.

Ethical considerations

Ethical considerations are linked to legal acceptability. Ethical concerns about a particular method of warfare often serve as the impetus for adopting legal constraints. Currently, views differ on the ethics of substituting human decision-making with algorithmic processes, including machine learning, and there are related outstanding questions about human moral responsibility, humanity and human dignity, including of the combatant.

New Zealand also recognizes outstanding issues in ensuring contextual judgment in the use of weapon systems with significant levels of autonomy. Human contextual judgment is critical to the implementation of international humanitarian law, for instance in assessing proportionality in any attack. It is unclear how machines could apply international humanitarian law in selecting targets or launching attacks.

Even if autonomous weapons systems could apply this type of judgment, there remains the issue of ensuring that human legal accountability for violations of international humanitarian law is preserved. A variety of overlapping and sometimes competing concepts, including the concepts of “sufficient” and “meaningful” human control and of “appropriate human judgment” or “involvement” have been debated.

This work needs to be accelerated, with weighting given to both legal and ethical considerations.

Multilateral efforts

New Zealand has engaged actively in the Group of Governmental Experts on lethal autonomous weapons systems and will continue to do so. The Group is a useful forum for sharing expertise and bringing together High Contracting Parties and signatory States 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 and civil society. However, New Zealand also sees value in a broader and more inclusive discussion through the General Assembly. The General Assembly has universal membership, whereas the Convention has 126 High Contracting Parties, most of which are concentrated in the global North.

Norway

[Original: English]
[24 May 2024]

Norway welcomes the opportunity to submit its views pursuant to General Assembly resolution 78/241 on lethal autonomous weapons systems. The resolution tasked the Secretary-General with seeking the view of Member States and producing a substantive report on "ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives and on the role of humans in the use of force".

For Norway, it is central that the development and use of any weapons system, including those with autonomous functions, comply fully with States' obligations under international law, in particular under international humanitarian law. This applies in general to any military application of artificial intelligence, not only to the development and use of autonomous weapons systems. While such systems also raise significant ethical concerns, the most effective way for States to address such concerns is currently to ensure the proper application of international humanitarian law.

The primary aim for the engagement of Norway in the Group of Governmental Experts under 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 has been to contribute to the clarification of how to apply the relevant existing rules of international law to autonomous weapons systems. In Norway's view, the discussions indicate the need for an instrument to clarify how existing international law applies to autonomous weapons systems. Norway remains agnostic as to the specific form and legal status of an instrument for such clarification, but we believe that a protocol under the Convention on Certain Conventional Weapons on autonomous weapons systems would be a desirable outcome.

Norway subscribes to the two-tier approach consisting of a combination of a prohibition on certain autonomous weapons systems combined with regulations on the use of other such systems. For a prohibition to be meaningful, it must take a binding form. In this sense, Norway supports a legally binding instrument to prohibit certain autonomous weapons systems.

Norway, together with Bulgaria, Denmark, France, Germany, Italy and Luxembourg, has submitted a working paper (CCW/GGE.1/2024/WP.3) to the Group of Governmental Experts that, among other things, calls for a distinction between two categories of autonomous weapons systems:

(a) Lethal autonomous weapons systems operating completely outside human control and a responsible chain of command (i.e. systems capable of setting their own objectives or modifying, without any human validation, their initial programme or their mission framework);

(b) Lethal autonomous weapons systems featuring decision-making autonomy in critical functions (i.e. lethal weapons systems featuring decision-making autonomy in critical functions such as identification, classification, interception and engagement to which, after assessing the situation and under their responsibility, the military command can assign the computation and execution of tasks related to critical functions within a specific framework of action).

Discussions on autonomous weapons systems should consider systems falling under both (a) and (b). Ideally, an instrument should apply to both categories, but separate instruments could be imagined if conducive to their negotiation. For Norway, the central objective of the distinction is to ensure that any allowable autonomous weapons system is subject to meaningful human control. Human control over autonomous systems must be meaningful as well as relevant in the sense that the human input must be sufficient to ensure that the system is operated in full compliance with international law, including international humanitarian law.

Human control over systems falling into category (a) is insufficient to satisfy the requirements of international humanitarian law. As such, they must already be regarded as prohibited under existing law. For the sake of clarity, we believe this prohibition should be made explicit in a future instrument. Moreover, while systems falling into the second category may be allowable under certain conditions, their development and use must comply with international law. It follows that both prohibited and allowable systems may fall within this category. Systems of this category must be considered prohibited if:

- They are inherently indiscriminate and/or incapable of distinguishing between military targets and/or enemy combatants, and civilians, combatants hors de combat and other protected objects or persons;
- Their effects cannot be limited, anticipated and controlled, as required by international humanitarian law in the circumstances of their use;
- They are of a nature to cause superfluous injury or unnecessary suffering; or
- They cannot be operated in accordance with international humanitarian law for any other reason.

The international community should urgently proceed with substantive discussions to make the application of international humanitarian law to autonomous weapons systems explicit. If new clarifications of, or even new rules of, international humanitarian law are required to ensure that the fundamental principles of international humanitarian law are adequately applied to autonomous systems, States should elaborate such rules in a future instrument. Urgency is required to heed the call of the Secretary-General to conclude negotiations on such an instrument by 2026.

It follows from this that the development and use of some autonomous weapons systems will not be prohibited. Those systems covered by a future instrument, but not prohibited by it, may be developed and employed only in full accordance with international humanitarian law. States should elaborate and agree on a framework for the application of international humanitarian law to these systems. Such a framework should ensure the reliability, understandability and predictability of such weapons systems. It should put in place measures to control, limit or otherwise affect the types of targets that such weapon systems can engage, as well as on the duration, geographical scope and scale of the operation of such weapon systems. Measures

should be put in place to preserve and retain human control at all times, in all circumstances and across the entire life cycle of the system.

For a system to be operated in accordance with international humanitarian law, Norway's starting point is that human operators must have sufficient understanding of the weapons systems' way of operating, effects and likely interaction with their environment. Humans must be able to predict and explain the behaviour of such weapons systems. Humans shall always define and validate rules of use, rules of engagement and a precise framework for the mission assigned to the system that is limited in time, space and by determined objectives according to the situation and context. Humans must be able to monitor the reliability and usability of the systems during their deployment and to approve any substantial modification of the mission's parameters. Humans must be in a position to exercise their judgment with regard to compliance with the rules and principles of international humanitarian law, in particular the principles of distinction, proportionality and precautions in attack and thus take critical decisions over the use of force.

A number of organizations have called for a prohibition on the targeting of humans by autonomous weapons systems. Norway believes that the targeting of humans, as such, by autonomous weapons systems raises important questions that States should address in the development of a future instrument.

The Group of Governmental Experts under the Convention on Certain Conventional Weapons continues to be Norway's primary arena for these discussions. Discussions in other forums can be fruitful if they facilitate or otherwise contribute to the urgent elaboration and adoption of recommendations for an instrument under the Convention on Certain Conventional Weapons in accordance with the mandate of the Group of Governmental Experts.

Pakistan

[Original: English]
[3 May 2024]

The development, deployment and use of lethal autonomous weapons systems give rise to humanitarian, legal, ethical and security challenges.

Humanitarian and legal perspectives

The essence of international humanitarian law is predicated on the capacity for human judgment and discretion, which is intrinsically context sensitive. International humanitarian law continues to rely on human agency for its implementation.

Delegating critical functions of a weapon system, that is, target selection and engagement, including application of force, would be extremely problematic in terms of compliance with and upholding the fundamental principles of international humanitarian law, such as distinction, proportionality, precautions in attack and military necessity.

International humanitarian law, which contains rules on means and methods of warfare and rules governing the conduct of hostilities, follows an "effects-based" approach to place certain limits. Therefore, if there is a weapon system with effects, which cannot be predicted, understood or explained in all circumstances, then it raises significant challenges. Such a weapon system will not include the required control to implement the limits on the effects prescribed under international humanitarian law.

The use of lethal autonomous weapons systems also gives rise to other legal challenges relating to responsibility and accountability. The absence of human decision-making in targeting and engagement raises issues over State responsibility,

accountability and attribution for illicit or internationally wrongful acts committed with the use of lethal autonomous weapons systems.

Ethical perspectives

Several ethical concerns have been raised regarding delegating the decision of killing humans to machines. The use of lethal autonomous weapons systems reduces the opportunity for compassion or moral reasoning in combat situations, especially during complex ethical decisions that require empathy, value judgments or an understanding of human emotions.

Security perspectives

The development, deployment and use of lethal autonomous weapons systems entail serious repercussions for security and stability at the international and regional levels.

As lethal autonomous weapons systems may eliminate the danger of human casualties for the user States, they lend themselves to an increased propensity of use, thus lowering the threshold for application of force and armed conflict.

In times of crisis, a low threshold for use of force would be highly destabilizing, as it would increase the risks of miscalculation and trigger conflict escalation. Completely eliminating human control at such critical times could result in unpredictable consequences and rapid escalation.

Increasing the speed of warfare at machine speed and compressing the decision-making time frame, eliminating crisis mitigation spaces, particularly in regions with high tensions and a history of accidental launch incidents, represents a recipe for an unmitigated disaster.

Lethal autonomous weapons systems are also likely to propel asymmetric methods and means of warfare, including anonymous and clandestine operations, such as targeted killings in foreign territories.

Absent any meaningful restraints, the development of lethal autonomous weapons systems can trigger costly new arms races, as other States may feel compelled to acquire such technology to maintain strategic balance or advantage. These developments would also increase the risks of proliferation of such weapon systems to non-State actors. Lethal autonomous weapons systems may also be vulnerable to cyberattacks.

Need for new international legal rules on lethal autonomous weapons systems

As confirmed by the guiding principles adopted by the Group of Governmental Experts on lethal autonomous weapons systems in 2019, international humanitarian law applies fully to all weapons systems, including to the potential development and use of lethal autonomous weapons systems. However, if stating that was enough, there would have been no need for additional legally binding rules, as contained in different Protocols 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.

In the case of lethal autonomous weapons systems, new international legal rules are needed for the following reasons:

- The existing international humanitarian law obligations need to be spelled out and further elaborated to clarify how they will be applied in the case of lethal autonomous weapons systems.

- Additional bridging principles need to be adopted to facilitate the implementation of existing international humanitarian law and to allow for its progressive development in order to address the humanitarian challenges associated with lethal autonomous weapons systems.
- The existing international humanitarian law does not fully address the humanitarian, ethical, legal and security challenges of lethal autonomous weapons systems.
- New international legal obligations are needed to address the significant risks in a comprehensive and integrated manner.

Elements of a new international legal instrument on lethal autonomous weapons systems

The ongoing efforts under the Convention on Certain Conventional Weapons should continue with the aim of developing international legal rules through a new protocol. Such a protocol will need to clearly spell out prohibitions and restrictions governing lethal autonomous weapons systems. This two-tier approach containing prohibitions and restrictions is also consistent with the existing Protocols to the Convention on Certain Conventional Weapons.

Pakistan would like to propose the following core elements of an international legal instrument on lethal autonomous weapons systems, which can be negotiated and adopted as a protocol VI to the Convention on Certain Conventional Weapons.

Definitions

The new instrument should adopt a functional approach to cover the general category of lethal autonomous weapons systems in its scope. It should include the following definitions:

- "Lethal autonomous weapons systems" means those weapons systems that are designed to select and apply force to target(s) without human intervention after activation.
- The use of the word "lethal" means that an autonomous weapon system that, by its design, has the capability to apply lethal force is included in the category of lethal autonomous weapons systems. However, regardless of the actual consequences of its use, whether the applied force results in lethal effects or not, it will be regulated under the protocol.

Prohibitions

It is prohibited in all circumstances to develop, produce, acquire, stockpile, retain, transfer, deploy or use lethal autonomous weapons systems that:

(a) Take decisions on the use of force without human control and do not enable a human user to understand, predict and explain the decisions on the use of force in all circumstances of use;

(b) By their design cannot be used in compliance with international humanitarian law in all circumstances;

(c) Produce effects that cannot be limited in all circumstances as required by international humanitarian law.

Restrictions

In the case of lethal autonomous weapons systems, which are not prohibited as outlined above, the following measures should be taken:

(a) Restricting the targets to only objects that are military objectives by nature;

(b) Ensuring provisions for a human user to intervene, interrupt and deactivate the system during all stages of use;

(c) Limiting the duration, geographical scope and scale of the operations to ensure compliance with international humanitarian law at all times and only to those areas without concentration of civilians or civilian objects;

(d) Limiting the number of engagements in order to predict and retain control over the effects, as required under international humanitarian law;

(e) Restricting the weapons systems from changing their targeting parameters autonomously without approval by a human user;

(f) Ensuring effective supervision and oversight during operations at all times.

Other provisions

Other provisions should include:

- Humans responsible for and in control of lethal autonomous weapons systems should at all times remain accountable for the consequences of using such weapons, in line with international law and the applicable provisions on the responsibility of States for internationally wrongful acts.
- States are required to develop and ensure an effective oversight, investigative and redressal mechanism for any suspected, reported or documented violation(s) in relation to the development, deployment or use of lethal autonomous weapons systems.

The international legal instrument should also include a technical annex (as in the cases of the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices as Amended on 3 May 1996 (Protocol II as amended on 3 May 1996) and the Protocol on Explosive Remnants of War 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 (Protocol V) to the Convention on Certain Conventional Weapons) containing best practices, guidelines and other risk reduction measures to facilitate the implementation of various articles of the instrument. Such an annex may include provisions on actions at the national level, including on policy, testing, training and reviews, including weapons' reviews and reporting.

Conclusion

The Group of Governmental Experts on lethal autonomous weapons systems, established under the Convention on Certain Conventional Weapons, with all the tools at its disposal and the work done so far, remains the most appropriate forum to develop a meaningful legal normative framework that responds to the challenges and concerns associated with lethal autonomous weapons systems comprehensively.

Philippines

[Original: English]
[16 May 2024]

The development of advanced technologies, including artificial intelligence and autonomous weapons systems, is rapidly transforming human life and experience. While the imminent diffusion of emerging technologies could solve many old problems, it could also disrupt political and social order. Because of this, the Philippines believes that international governance structures must keep up.

To provide a space to discuss and consider the implications of the use of autonomy in weapons systems from the point of view of the Indo-Pacific region, the Department of Foreign Affairs of the Republic of the Philippines, in cooperation with Nonviolence International Southeast Asia, organized the Manila Meeting on Indo-Pacific Perspectives on Autonomous Weapons Systems from 13 to 14 December 2023.

The Philippines believes that there is a need to firm up negotiations towards a robust and future-proof legally binding instrument to address the threats of autonomous weapons systems.

The Philippines sees 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 as the appropriate framework to address potential threats arising from autonomous weapon systems, including possible acquisition by armed non-State actors, through a new protocol that will include prohibitions and regulations on autonomous weapons systems.

Legally binding rules and principles are needed to safeguard against risks and challenges related to the development of autonomous weapons systems, to wit:

(a) *Characterization of autonomous weapons systems*. An exact definition of autonomous weapons systems is not required for the elaboration, development and negotiation of any normative and operational framework governing autonomous weapons systems. Autonomy exists on a spectrum and purely technical characteristics may alone not be sufficient to characterize autonomous weapons systems in view of the rapid evolution of technology. The following working characterization, focusing on the human element and human-machine interaction, which are essential to addressing the issue of attribution and responsibility, is a useful starting point:

> "Autonomous weapon systems" refers to weapon systems that incorporate autonomy into the critical functions of selecting, targeting, engaging and applying force to targets.

(b) *Prohibitions*. The development, production, possession, acquisition, deployment, transfer or use under any circumstances of autonomous weapons systems are prohibited if:

> (i) Their autonomous functions are designed to be used outside the scope of meaningful human control;
>
> (ii) Their use cannot comply with principles of international humanitarian law or the dictates of public conscience including systems that are (1) incapable of distinguishing between civilians, enemy combatants and combatants hors de combat; and (2) of a nature to cause superfluous injury or unnecessary suffering or are inherently indiscriminate.

(c) *Regulations*. Regulations must be put in place to ensure, inter alia, that (1) meaningful human control is retained in the entire life cycle of any weapons system that incorporates autonomy; (2) weapon systems do not rely on data sets that can perpetuate or amplify social biases, including gender and racial bias; and (3) regulations for due register, tracking and analysis of autonomous weapons systems are developed.

Meaningful human control. For the Philippines, the starting point is that humans must always retain meaningful control over the use of force, and that human targets must never be reduced to mere data for machines and algorithms to interpret. While the displacement of human centrality in the use of force could have legal implications related to accountability, the Philippines' premise transcends legal considerations and arises from the fundamental premise that human dignity is

inviolable. In this regard, the Philippines has raised “meaningful human control” as the standard by which to assess the development of autonomous weapons systems.

“Meaningful human control” concerns the maintenance of human agency, including the preservation of human judgment and intervention, over the use of force. This includes, inter alia, the following elements:

(a) The ability to redefine or modify the weapon system’s objectives or missions or otherwise adapt it to the environment; to deactivate, abort, terminate or interrupt its operation and use as needed, and to constrain its function to self-initiate;

(b) The ability to limit the scope and scale of use of the weapon system, including temporal and spatial limits, and to restrict its targeting parameters and targeting capability;

(c) The ability to understand and explain the weapon system’s functioning with a view to retrospectively providing an explanation that satisfies legal and other requirements regarding the operation of the weapon system, including the attribution of responsibility and accountability.

Applicability of international law. The Philippines affirms that international law, including customary international law, the Charter of the United Nations, the law on State responsibility, international humanitarian law, international human rights law and international criminal law are all applicable in the context of the development, use and transfer of any autonomous weapons systems.

Weapons review. A crucial implication of the applicability of international law is that States have an obligation to undertake national weapons review. In the study, development, acquisition or adoption of any new weapon, means or method of warfare, a determination must be made whether its employment would, in some or all circumstances, be prohibited by international law.

Ethical considerations. The Philippines asserts that ethical considerations are central to multilateral conversation regarding autonomous weapons systems and the military application of artificial intelligence. Beyond legal arguments, States have the duty to ensure the inviolability of human dignity. Any military application of artificial intelligence must not lead to the relegation of human lives to mere data for machines and algorithms to interpret in the context of the automation of the use of force.

Impact on the environment and ecological integrity. The presence of autonomous weapons systems raises concerns about environmental vulnerabilities, particularly its impact on the marine environment and ecosystems. It is important to consider maritime and ecological aspects in discussions involving autonomous weapons systems. One example is the belief that autonomous submarine warfare is relatively more desirable due to the low risk of human collateral damage underwater. However, it was pointed out by representatives of Pacific Island States during the Manila Meeting on Indo-Pacific Perspectives on Autonomous Weapons Systems that damage to the marine ecology is directly related to their livelihood.

Other military applications of artificial intelligence. The Philippines recognizes that the military application of artificial intelligence could have benefits, particularly in the context of enhancing precision. Such precision could aid military commanders and operators in ensuring compliance with international humanitarian law. In this regard, the Philippines does not oppose military applications of artificial intelligence in the context of associated functions related to automation, such as navigation systems, combat management systems and precision guidance, among others. The Philippines supports voluntary norms of responsible behaviour in the context of such applications of artificial intelligence, including weapons review.

Strategic trade regulations. States with strategic trade regulations and members of multilateral export control regimes should work together to agree on a functional definition of lethal autonomous weapons systems and narrow down possible controls for regulation. This may include emergent technologies that may be a precursor to lethal autonomous weapons systems, including, but not limited to, military-grade intangible technologies such as algorithms and programmes designed to autonomously identify targets for offensive weapons.

States should also consider establishing a clear technical distinction between lethal autonomous weapons systems and autonomous defence systems. In particular, defence equipment similar to automatic anti-aircraft and missile defence systems are not lethal autonomous weapons systems, since they only launch interceptors to legitimately engage hostile aircraft and projectiles that are already approaching. Interceptors and such analogous technologies should be made distinct from munitions launched by offensive systems since they only respond to – and do not instigate – armed conflict. Such a distinction should enable States to benefit from the protection granted by autonomous systems applied to defence while shunning the indiscriminate nature of such systems when deployed for offensive purposes.

The Philippines also submits the Philippine Report on the Manila Meeting on Indo-Pacific Perspectives on Autonomous Weapons Systems as an annex to these inputs.1

Republic of Korea

[Original: English]
[24 May 2024]

The Republic of Korea recognizes that the rapid development of new and emerging technologies holds great promise for the advancement of human welfare and could, inter alia, help to better protect civilians in conflict in certain circumstances; however, it is also mindful of the concerns regarding the possible negative consequences and impact of autonomous weapons systems.

In this regard, the Republic of Korea places great importance on addressing the issue of lethal autonomous weapons systems, maintaining a balanced approach between the benefits and risks as well as between humanitarian considerations and military necessity when we consider the possible ramifications of new and emerging technologies. The views presented below are based on the Republic of Korea's working understanding of lethal autonomous weapons systems as weapons systems that, once activated, will be able to identify, select and engage targets without further intervention by an operator.

The Republic of Korea appreciates the sustained efforts 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 on these issues. We particularly commend and welcome the valuable work and progress made since the first convening of the session of the Group of Governmental Experts on lethal autonomous weapons systems established under the Convention on Certain Conventional Weapons in 2017. The endorsement of the 11 guiding principles in 2019 and the inclusion of the two-tier approach in the report of the 2023 session of the Group of Governmental Experts are important milestones achieved by consensus.

The Republic of Korea continues to underscore that the Group of Governmental Experts is and should continue to serve as the central and unique forum to address

[1] On file with the Secretariat and available for consultation.

various issues pertaining to lethal autonomous weapons systems, focusing on the effective implementation of international humanitarian law, which applies to all weapons systems.

Recognizing the rapid advances in technology, for the furtherance of the discussion in the Group of Governmental Experts, the Republic of Korea stresses that the High Contracting Parties' approach should be practical, realistic and pragmatic and based on science. The work of the Group of Governmental Experts should focus on formulating elements of prohibition and regulation by, inter alia, reaching consensus-based agreement on what measures would be required to ensure compliance with international humanitarian law.

In this regard, the Republic of Korea affirms that lethal autonomous weapons systems that by their nature are incapable of being used in accordance with international humanitarian law because they, for instance, cause superfluous injury or unnecessary suffering or are inherently indiscriminate, or are otherwise incapable of being used in accordance with international humanitarian law, should be prohibited. This calls for a continued discussion on how to regulate the other lethal autonomous weapons systems in order to ensure full compliance with international humanitarian law.

It is important to note, however, that a degree of human involvement is not necessarily a requirement for ensuring compliance with international humanitarian law. Rather, it would be case specific and the principles of distinction, proportionality and precautions in attack are central when assessing compliance with international humanitarian law.

Furthermore, to adequately address potential risks associated with lethal autonomous weapons systems, the Republic of Korea believes that risk mitigation measures to ensure distinction and proportionality in conducting attacks and precautions in attack as well as to ensure accountability will need to be introduced, including the provision of training for military personnel, the retention of a responsible chain of human command and control across the entire life cycle of weapons systems and the establishment of adequate safeguards measures, such as data protection. We also believe that sharing lessons learned on risk mitigation practices as well as information on national frameworks, strategies and policies on lethal autonomous weapons systems will contribute to this effort. The Republic of Korea's basic position is well defined in the joint working paper contained in document CCW/GGE.1/2023/WP.4/Rev.2.

Recognizing various ongoing international initiatives, such as the Responsible Artificial Intelligence in the Military Domain Summit and the Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, the Republic of Korea underlines that all relevant international efforts should continue to complement and work synergistically with other initiatives.

Republic of Moldova

[Original: English]
[24 May 2024]

According to article 8(1) of its Constitution, the Republic of Moldova undertakes to respect the Charter of the United Nations and the treaties to which it is a party, and to build its relations with other States on the principles and rules of international law that are unanimously recognized.

This principle is enshrined in Law No. 595/1999 on international treaties of the Republic of Moldova, which, in its article 19, states: "International treaties are executed

in good faith, in accordance with the *pacta sunt servanda* principle. The Republic of Moldova may not invoke the provisions of its domestic law as justification for non-execution of a treaty to which it is a party".

The Republic of Moldova considers and fully respects the guidelines on new technologies in the field of lethal autonomous weapons systems, as well as the provisions of international human rights treaties and international humanitarian law. Currently, the country is a party to several international treaties in the field of international humanitarian law, including those dealing with victims of armed conflict, methods and means of warfare and international crimes.

The Republic of Moldova acceded to the Geneva Conventions of 12 August 1949 and the Additional Protocols thereto of 10 July 1977 by Parliament Decision No. 318/1993.

By Law No. 975-XIV/2000, the Republic of Moldova acceded 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, adopted in Geneva on 10 October 1980, and to the Protocols annexed to the Convention: Protocol on Non-Detectable Fragments (Protocol I), adopted in Geneva on 10 October 1980; Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices as Amended on 3 May 1996 (Protocol II as amended on 3 May 1996), originally adopted in Geneva on 10 October 1980; Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III), adopted in Geneva on 10 October 1980; and Additional Protocol 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 (Protocol IV, entitled Protocol on Blinding Laser Weapons), adopted in Vienna on 13 October 1995.

Existing international humanitarian law (article 36, on new weapons, of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)) provides that "in the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to that High Contracting Party".

Protocol I Additional to the Geneva Conventions of 1949 and 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 and its Protocols (I-IV), agreed in Geneva in 1980 (in force for the Republic of Moldova since 8 March 2001), do not define or regulate the prohibition of lethal autonomous weapons systems.

By Law No. 212/2010, the Parliament of the Republic of Moldova ratified the Rome Statute of the International Criminal Court, adopted on 17 July 1998.

To fulfil the international obligations assumed and to ensure compliance with the rules of law of armed conflict, the Instruction on the implementation of the rules of law of armed conflict in the National Army of the Republic of Moldova was approved by Minister of Defence Decision No. 275/2006.

According to this Instruction, the work of commanders and chiefs regarding the preparation of large units, military units and sub-units for the fulfilment of missions assigned to them and their conduct during military actions must be carried out in compliance with the principles of the law of war. Also, they must ensure compliance with the rules of the law of armed conflict, providing for all possible preventive measures to avoid, and – if this is impossible – minimize losses to the civilian population and damage to civilian property.

The fact that a violation of the law of armed conflict may be committed by a subordinate does not relieve his or her superiors of disciplinary or criminal liability. In the process of preparation and conduct of military actions, commanders and chiefs at all levels are obliged to consider certain limitations and restrictions on the application of force in the process of administrative activity.

Relevant provisions concerning the obligation to know and comply strictly with the requirements of international law on armed conflict are also contained in the Internal Service Regulations of the Armed Forces of the Republic of Moldova, approved by Presidential Decree No. 2327/2009.

Moreover, the need to respect international humanitarian law during armed conflicts and combat operations, in the context of new technologies in the field of lethal autonomous weapons systems, implies the importance of applying the provisions of articles 36 and 57 of Protocol I Additional to the Geneva Conventions of 1949, of 1977, on new weapons and precautions in attack.

Hence, we agree that international humanitarian law also applies to these systems and that the decision to use them must be taken by the individual. States should consider, at the conceptual stage, the legality of new weapons they develop or acquire.

However, in the light of existing international instruments, there is an obligation for individuals and States in peacetime, as well as for combatants, military organizations and States in situations of armed conflict, not to transfer to a machine or automated process the authority or capacity to use lethal force, so that in each case a human being should define this as legitimate, moral and legal.

In the case of atrocities caused by an autonomous weapons system under the control or command of those operating it, this can undermine the concept of commander responsibility and the obligation to control the actions of subordinates, thus protecting commanders from what might otherwise be considered a war crime charge.

Given the current increasing trend in the development and military use of lethal autonomous weapons systems to neutralize live force (for the first time in history in 2020, during the Libyan Civil War, as claimed in a Security Council report) and the global risks to peace and security, including proliferation risks, also to non-State armed groups, it is necessary to create and review the international normative framework to limit and prohibit the military use of lethal autonomous weapons systems, including in combination with artificial intelligence, and to prohibit the use of lethal autonomous weapons systems in connection with, for instance, nuclear, chemical and biological weapons.

Given the increasing level of regional and global risks and threats related to the development and military use of lethal autonomous weapons systems in connection with artificial intelligence, we consider it necessary to define and regulate internationally and nationally the circumstances of partial or total prohibition of the use of lethal autonomous weapons systems, in accordance with the principles of the Charter of the United Nations, international humanitarian law and international treaties, to regulate the circumstances in which the use of lethal autonomous weapons systems may be prohibited, including a prohibition of the use of lethal autonomous weapons systems in connection with, for instance, nuclear, chemical and biological weapons. Nevertheless, the effective implementation of these regulations on the limitations and prohibition of lethal autonomous weapons systems requires the establishment of international and national mechanisms for monitoring, control and legal accountability for the illegal development and military use of lethal autonomous weapons systems, including in connection with artificial intelligence and nuclear, chemical and biological weapons.

Russian Federation

[Original: Russian]
[8 May 2024]

The Russian Federation welcomes the adoption of United Nations General Assembly resolution 78/241 of 22 December 2023 and, in accordance with paragraph 2 thereof, has the honour to submit its national contribution to the report of the Secretary-General to the General Assembly at its seventy-ninth session for further discussion by Member States.

We consider the Convention on Certain Conventional Weapons to be the best framework for addressing the issue of lethal autonomous weapons systems. The Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, established by the High Contracting Parties to that Convention, is the body called upon to maintain a reasonable balance between humanitarian concerns and the legitimate defence interests of States in relation to such weapons, and to take decisions on the basis of consensus. We believe that it would be counterproductive to transfer this issue to any other international platform, including the United Nations.

The Russian Federation welcomes the approval by the Meeting of the High Contracting Parties to the Convention on Certain Conventional Weapons of a new discussion mandate for the Group until 2026. We hope that the Group will be able to agree, taking into account the opinions of all High Contracting Parties, on substantive conclusions and recommendations for submission to the Seventh Review Conference of the High Contracting Parties to the Convention.

There is no consensus definition of lethal autonomous weapons systems under existing international law, making it difficult to address this issue. Developing a common working understanding of lethal autonomous weapons systems would bring greater clarity to the subject and to future discussions on this topic.

The working definition should:

(a) Include a description of the types of weapons that fall under the category of lethal autonomous weapons systems and the specific key features of their use;

(b) Not be limited to the existing understanding of lethal autonomous weapons systems, but rather account for how such systems might evolve in the future;

(c) Be universally understood by the expert community, including scientists, engineers, technicians, military personnel, lawyers and ethicists;

(d) Not be construed as limiting technological progress or undermining research in the field of peaceful robotics and artificial intelligence;

(e) Not define lethal autonomous weapons systems solely by describing their functions.

Categorizing these weapons as either “bad” or “good” should be avoided; in other words, such weapons should not be categorized on the basis of the political preferences of a particular group of States.

We believe that it would be correct to define lethal autonomous weapons systems as fully autonomous uncrewed technical weapons, other than ammunition, designed for carrying out combat and support missions without any operator involvement.

Existing highly automated military systems should not be placed in a “special” category requiring urgent limitations and restrictions. It is this level of automation

that enables such systems to operate effectively in dynamic combat situations and in various environments, and that guarantees an adequate degree of specificity and accuracy, thus ensuring that they conform to the principles and norms of international humanitarian law.

It is generally accepted that existing international law, including international humanitarian law, applies fully to lethal autonomous weapons systems. International humanitarian law contains a number of important limitations, including the following:

(a) Lethal autonomous weapons systems should not be used indiscriminately or disproportionately, nor should they be used against civilians or without taking precautions to protect civilians;

(b) Any military use of lethal autonomous weapons systems should be consistent with the principle of proportionality between military necessity and the damage inflicted;

(c) A decision on the appropriateness, forms and means of using lethal autonomous weapons systems should be taken by the person planning the military operation and developing scenarios for the use (mission) of such systems.

The 1977 Protocol I Additional to the Geneva Conventions of 1949 also contains an important obligation to carry out legal reviews when studying, developing, acquiring or adopting new weapons. However, article 36 of Protocol I does not contain any provisions on how exactly the legal reviews should be conducted, nor does it impose an obligation on States to make the results of the reviews public or to provide anyone with information in that regard. The legal reviews are effectively handled by States at the national level. It would therefore be futile to also develop some kind of universal mandatory mechanism for carrying out such reviews, especially one designed specifically for lethal autonomous weapons systems. Nevertheless, we do not object to the voluntary exchange of best practices in the fulfilment of obligations under article 36 of Protocol I, taking into account national security and commercial confidentiality considerations.

The Russian Federation believes that there are currently no convincing grounds for imposing any new limitations or restrictions on lethal autonomous weapons systems, or for updating or adapting international humanitarian law to address such weapons. The discussions towards agreeing on some kind of “rules of conduct” for lethal autonomous weapons systems are also premature.

The principles of humanity, the dictates of the public conscience and the human rights component cannot be used as the absolute and sole sufficient condition for imposing limitations and restrictions on certain types of weapons.

We attach considerable importance to the universalization of the four Geneva Conventions of 1949 and their three Protocols Additional. In our view, concerns regarding lethal autonomous weapons systems should be addressed through the faithful implementation of existing international legal norms.

We consider an important limitation to be that humans should have control over the operation of lethal autonomous weapons systems. The control loop for such systems should therefore allow for a human operator or an upper-level control system to intervene to change the operating mode of such systems, including to partially or completely deactivate them. However, the specific forms and methods of human control should be left to the discretion of States, and direct control need not be the only option.

Control over such systems can be exercised by:

(a) Increasing their reliability and fault tolerance;

(b) Limiting the types of targets;

(c) Limiting the time frame of their operation, their geographical coverage and the scale of their use;

(d) Making prompt interventions and deactivating them;

(e) Testing them in realistic operational environments;

(f) Allowing people who have successfully mastered the procedures for the use of such systems to operate (control) them;

(g) Monitoring the manufacture of individual elements and the device as a whole;

(h) Monitoring the dismantling and disposal of individual elements and the device as a whole.

We consider it inappropriate to bring the concepts of "meaningful human control" and "forms and degrees of human involvement", which are promoted by certain States, into the discussion, since such notions generally have no legal bearing and lead only to the politicization of discussions.

The Russian Federation believes that States and individuals (including developers and manufacturers) at any time bear responsibility under international law for their decisions to develop and use new technologies in the area of lethal autonomous weapons systems. Responsibility for the use of such systems lies with the official who assigns them a task and gives the order for their use. To use lethal autonomous weapons systems, that official should possess the required knowledge and skills related to their functioning and operation, and should be responsible for taking the decision on the appropriateness of their use and planning the forms and means of their use.

It is commonly known that lethal autonomous weapons systems can be more effective than a human operator in performing assigned tasks and can reduce the likelihood of errors. Such systems are capable of significantly reducing the negative implications of the use of weapons for international humanitarian law that are associated with mistakes by operators, their mental or physical state and their moral, religious or ethical beliefs. The use of such systems in accordance with international humanitarian law can ensure greater accuracy in the targeting of weapons against military facilities and help to reduce the risk of unintentional strikes against civilians and civilian objects.

An assessment of the potential risks related to the use of lethal autonomous weapons systems and measures to mitigate them should be part of the process of designing, developing, testing and deploying new technologies in any kind of weapons system.

The risks associated with such systems could be minimized by:

(a) Ensuring effective life cycle management;

(b) Conducting comprehensive tests at all stages of the life cycle, including in near real-life environments;

(c) Ensuring their reliability and fault tolerance;

(d) Setting readiness criteria;

(e) Ensuring maximum protection against unauthorized access;

(f) Training operators;

(g) Prioritizing the use of artificial intelligence technologies in the gathering and processing of information to support military decision-making;

(h) Facilitating continuous monitoring by the operator of the operations of such systems and enabling the emergency termination of a combat mission at the operator's command;

(i) Preventing such systems from falling into the hands of non-State actors, who could use them for illegal purposes.

We believe that it would be useful to promote the voluntary exchange of views among States on the topic of lethal autonomous weapons systems and international law.

The Russian Federation requests the Secretary-General to take into account the above proposals in his substantive report pursuant to paragraph 2 of General Assembly resolution 78/241 and to include the present document in the annex to that report.

Serbia

[Original: English]
[18 May 2024]

The Government of Serbia shares the concern of the United Nations over the development of lethal autonomous weapons systems and is of the opinion that these systems should be prohibited or their production restricted and their use monitored.

The available data indicate that artificial intelligence operating the weapons systems is incapable of achieving a level of intelligence and awareness similar to humans. Absent human morals and ethics, it is appropriate to ask what will prevent excessive use of lethal force and unnecessary devastation and death, as well as to raise the question of collateral damage, that is, whether moral and criminal responsibility for the loss of innocent lives will be eliminated and which measures and weapons should be autonomous. Lethal autonomous weapons systems are designed to minimize own losses and resources and maximize those of the enemy, which, along with the elimination of moral and ethical norms, may mean that in the future they are fitted with nuclear missiles.

In this connection, there is a real possibility that the systems could be hacked and that software and hardware anomalies, inherent in mass production, would occur. Death and destruction are the only guarantee in such situations and it is practically impossible to establish responsibility. Accordingly, the Government of Serbia expresses serious concern over the systems' destructive potential and their negative impact on peace and regional and global security for the following reasons:

- Likelihood of lowering the threshold of conflict, partly because of the belief that the number of military casualties will decrease due to the systems' accuracy;
- Emergence of an arms race, particularly in asymmetric cases in which some countries possess the systems and some do not;
- Possession of the systems by violent non-State actors and criminal and terrorist groups with unforeseeable consequences;
- Evasion by the systems of the existing international conventions, control and regulations due to insufficient recognition;
- Potential for a swarm of single-use unmanned aerial vehicles to cause, irrespective of size, mass casualties. A single individual can carry out such an attack and defence is difficult and complex;

• Possibility of incorrect or misunderstood information causing wrong decisions and false targeting.

As a small, militarily neutral country and a victim of attacks by similar autonomous weapons systems of only a slightly older generation in 1999, Serbia considers that the use of these or more complex systems for military purposes is absolutely senseless for two reasons:

• Autonomous weapons systems capable of making independent decisions on the choice of targets cannot mimic the human operator entirely. They lack empathy, perhaps the most important feature in deciding the method of use of weapons and the achievement of combat goals with respect for the principle of 'efficiency/effectiveness'.

• Autonomous weapons systems cannot comprehend possible consequences, determine the weight of each and every consequence and evaluate and compare the consequences. It is therefore likely that autonomous weapons systems could not carry out military assignments autonomously and without any or with minimum collateral damage.

Accordingly, the question of ethics with regard to the fulfilment of the fundamental conditions of international humanitarian law (*jus in bello*), that is, the establishment of responsibility for causing human casualties, is of paramount importance. As a matter of fact, weapons or means that do not fulfil the aforementioned conditions of international humanitarian law should not be used in combat. If a human takes a decision resulting in action against a target, there is a clear chain of command responsibility from the one who decides, to the one who gives the order, all the way to the one who pulls the trigger/presses the button. In the case of autonomous weapons systems, no clear command responsibility is provided for the damage caused in combat actions.

For these reasons, it is important that the development, production and the use of lethal autonomous weapons systems be strictly regulated and rigorously monitored. Furthermore, international conventions should regulate the use of lethal autonomous weapons systems in order to provide for the standard in the ethical code of behaviour during the use of modern weapons, especially of this type, while they are still emergent and have not been massively used yet.

Sierra Leone

[Original: English]
[22 May 2024]

Introduction

This is a submission by the Government of Sierra Leone in line with the Secretary-General's call as outlined in resolution 78/241 on lethal autonomous weapons systems, adopted by the General Assembly in December 2023. It draws from the deliberations and communiqué (hereinafter "Freetown communiqué") adopted at a conference of States members of the Economic Community of West African States (ECOWAS) on the peace and security aspects of autonomous weapons systems, held in Freetown, Sierra Leone, on 17–18 April 2024; and from the official statement of President Julius Maada Bio on the urgent need for the creation of legally binding norms and principles that address the threats and challenges posed by autonomous weapons systems.

States members of ECOWAS were represented by high-level delegations, including Ministers of Foreign Affairs, at the conference, which focused on the theme

"Peace and Security Aspects of Autonomous Weapons Systems: An ECOWAS Perspective on a Path Towards the Negotiation Process of a Legally Binding Instrument". The Government of Sierra Leone offered to host the conference after the General Assembly adopted resolution 78/241 on 22 December 2023, which Sierra Leone had co-sponsored. In the resolution, the Secretary-General was requested to seek the views of Member States on ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives.

Submission

Sierra Leone's position is encapsulated in the Freetown communiqué of 18 April 2024. It supports the Secretary-General's call for urgent negotiation of a legally binding instrument to regulate autonomous weapons systems in line with international laws, including humanitarian and human rights laws, as well as fundamental ethical principles governing warfare. Sierra Leone pledges to advance the ECOWAS coordinated strategy, as emphasized in the Freetown communiqué, to address the multifaceted challenges posed by autonomous weapons systems.

The Government of Sierra Leone emphasizes the need to develop subregional accountability standards and operational frameworks for the procurement, transfer, and deployment of automated weapons systems; as well as for robust legal parameters and operational protocols that uphold international law and safeguard human rights. We place particular emphasis on the importance and urgency of building upon existing international treaties and the ongoing efforts of the United Nations to start negotiations that would lead to a legally binding instrument on automated weapons systems. Sierra Leone deplores the prospect of automated weapons systems leading to escalation of an arms race and weapons proliferation, and upending the longstanding work of ECOWAS on weapons control, conflict prevention and disarmament processes.

Sierra Leone submits the contents of the Freetown communiqué of 18 April 2024 to be included in the Secretary-General's report in line with resolution 78/241, as both a document of the Government of Sierra Leone, and – because the conference at which it was issued was the first regional conference to attract participation from the highest levels of government, including the Head of State of Sierra Leone – as the agreed position of States members of ECOWAS on the need for a legally binding instrument on autonomous weapons systems. The Freetown communiqué sums up this submission.

> Recognizing the significant regional and global security and geopolitical implications of emerging technologies;
>
> Recognising further that these technologies and artificial intelligence (AI), if equitably developed and shared, have the potential to support economic growth and enhance the quality of human lives; Cognizant that without equitable development such technologies may reinforce existing social, political and economic inequalities, and may foster prejudice, distrust and digital dehumanization; Concerned that autonomy of weapons systems raises serious ethical, humanitarian, legal, and peace and security concerns, including concerns about the potential use of autonomous weapons systems as deadly force against targets without the meaningful human control that is critical for upholding ethical, legal and humanitarian obligations; Conscious of the history and current context of our region, in relation to the issues of armed conflict, terrorism and internal disturbances that have been

exacerbated by the inadequate international regulation of arms traffic and weapons systems;

Concerned that autonomous weapons systems may become increasingly easy to replicate and easily fungible, and thereby become the object of trade and transfer, including for use by transnational criminal networks, terrorists, and other non-state armed groups;

Concerned also that such proliferation, in the absence of specific international regulation, will generate additional threats to national, regional, and global peace and security, including the risks of arms race and of conflict escalation, and will undermine regional efforts to build peace through economic and political integration;

Recognizing, therefore, the need to strengthen existing governance mechanisms, including international humanitarian law, international human rights law, and international criminal law, by establishing new legally binding rules, with prohibitions and regulations that effectively address the threats and challenges posed by autonomous weapons systems; ECOWAS member states resolved:

• To support the urgent negotiation of a legally binding instrument to regulate autonomous weapons systems, with specific prohibitions and regulations, in accordance with international law, including international humanitarian law and international human rights law, and ethical principles; and

• To work towards strengthening regional cooperation and partnership and, through inclusive and participatory approaches, advancing common positions on autonomous weapon systems that contribute to the broader global effort towards the establishment of a new legally binding instrument;

• To promote constructive dialogue and collaboration with international organizations, civil society, academia, and other stakeholders to address the challenges posed by autonomous weapons systems effectively; and

• To endorse the process of working towards the emergence of a common regional position on autonomous weapons systems, as articulated in the communiqué adopted at this conference, and pledge to work collectively towards its implementation.

Conclusion

Sierra Leone believes that the Freetown conference and communiqué, with their emphasis on the importance of global cooperation and a unified stance on regulation of autonomous weapons systems, set a strategic agenda for future negotiations that would lead to negotiations on a legally binding instrument on such systems. Sierra Leone hopes that the discussions and outcomes from this conference significantly influence the global conversation on automated weapons systems and contribute to the development of a legally binding international framework by 2026 – a target set by the United Nations. At the conference, the complex and urgent nature of the issues surrounding autonomous weapons systems and the collective responsibility of the international community to address those challenges were underscored. The proactive roles of Sierra Leone and ECOWAS in fostering a unified approach to enhance global security, respect for human rights, and adherence to international law were acknowledged.

Singapore

[Original: English]
[9 May 2024]

As a small State, Singapore has always supported the rules-based multilateral system and the role of the United Nations. The Organization provides the foundation for international law and norms. Multilateral institutions, systems, and laws are critical for the survival of all States, in particular small States.

Accordingly, with regard to the governance of lethal autonomous weapons systems, we believe that it is important for the international community to engage multilaterally to achieve substantive outcomes.

Singapore affirms the principle that international humanitarian law applies to the use of lethal autonomous weapons systems. Given the rapid advancement of autonomy in weapons systems and artificial intelligence technologies, we believe it is important to continue discussing the governance of lethal autonomous weapons systems in a multilateral setting.

Advancing international humanitarian law

Singapore became a High Contracting Party 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 in March 2024.

Singapore's accession to the Convention underscores our commitment to international humanitarian law. The Convention, as a framework convention, has yielded important protocols that have further enhanced international law. Singapore is committed to the continued codification and progressive development of the rules of international law applicable in armed conflict.

Under the ambit of the Convention, the Group of Governmental Experts on lethal autonomous weapons systems was formally convened seven years ago. Singapore believes that the Group is the appropriate forum to discuss the governance of lethal autonomous weapons systems, as the forum involves an inclusive representation of legal, military, and technological experts. Singapore supports the "two-tier approach" on the prohibition and regulation of such weapons systems as agreed by the Group in 2023. We believe that the use of lethal autonomous weapons systems that are incapable of being used in compliance with international humanitarian law should be prohibited, and support the concept of limits to ensure that such systems can be used in accordance with international humanitarian law.

As some States Members of the United Nations are not High Contracting Parties to the Convention and are unable to participate in the Group of Governmental Experts, the Secretary-General's call for views on such systems facilitates participation from the entire United Nations membership. Singapore voted in favour of General Assembly resolution 78/241, in which the Secretary-General was requested to seek the views of Member States on lethal autonomous weapons systems. We believe that the Secretary-General's report can act as an important resource for the Group to consider in the development of a governance framework for lethal autonomous weapons systems.

Singapore will continue to contribute constructively to the Group of Governmental Experts with a view to achieving substantive progress under its current mandate, and hopes that States will achieve alignment on the elements of an instrument to govern lethal autonomous weapons systems.

Incorporation of artificial intelligence into lethal autonomous weapons systems

Lethal autonomous weapon systems do not necessarily incorporate artificial intelligence, as such systems can also be built upon rules-based programming. However, where artificial intelligence is applied in critical functions in such systems, we must recognize the risks of unintended outcomes. If artificial intelligence behaves in an unanticipated manner in such systems, the resulting effects can be very serious, such as unintended escalation, friendly fire, or unlawful harm to civilians.

Singapore is committed to the responsible development and use of artificial intelligence in the military realm. Through several years of extensive consultations with defence technologists, military planners, international law experts, and policy professionals, Singapore developed national principles on responsible military artificial intelligence. These principles were announced in 2021 and address four key areas of concern pertaining to artificial intelligence in the military domain.

(a) Responsible. First, the risk of emergent artificial intelligence behaviour must be addressed. Artificial intelligence systems must have well-defined intended uses, and both developers and users are responsible for the outcomes of artificial intelligence systems.

(b) Reliable. Second, the risk of errors or inaccuracies in an artificial intelligence system's output must be addressed. Artificial intelligence systems should be tested and assured to a level appropriate for their intended use. They should be designed to minimize unintended bias and produce consistent outputs.

(c) Robust. Third, the risks from the exploitation of artificial intelligence by malicious actors must be addressed. Artificial intelligence systems should be designed with cyber and adversarial artificial intelligence threats in mind. In order to address the "black box effect", their development process should be well-documented to support explainability.

(d) Safe. Fourth, we must focus on the risk of artificial intelligence failure in safety-critical contexts. Artificial intelligence systems should be safe to use, not only in terms of the deployed platforms, but also for the surrounding assets and personnel.

Regional initiatives on artificial intelligence and lethal autonomous weapons systems

Regional initiatives are essential to ensure inclusive and context-specific discussions on lethal autonomous weapons systems. In February 2024, Singapore co-hosted the Responsible Artificial Intelligence in the Military Domain Regional Consultations for Asia. Responsible Artificial Intelligence in the Military Domain, a process jointly initiated by the Netherlands and the Republic of Korea, is focused on advancing norms on responsible artificial intelligence through inclusive, multi-stakeholder, and cross-regional dialogue. At the Regional Consultations for Asia, an interactive exercise was conducted, with discussion of the challenges and concerns of integrating artificial intelligence into military operations. During the exercise, open discussions were facilitated, and the participants deepened regional understanding of artificial intelligence developments in relation to lethal autonomous weapons systems.

Singapore also participated actively in the Manila Meeting on Indo-Pacific Perspectives on Autonomous Weapons Systems organized by the Philippines in December 2023. The participants in the Meeting considered the implications of the use of autonomy in weapons systems, and offered a platform for voices from civil society, industry, international law experts, as well as defence and foreign affairs officials.

Spain

[Original: Spanish]
[23 May 2024]

Spain has endorsed and fully supports the guiding principles established by the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems in December 2019, in which it is stated that the possible use of lethal autonomous weapons systems based on emerging technologies must comply with applicable international law, in particular international humanitarian law.

To that end, Spain, together with other like-minded countries, favours a two-tiered approach based on prohibition and regulation.

In line with the position of Spain, in July 2023, the Ministry of Defence approved a strategy for the development, implementation and use of artificial intelligence in the Ministry, which is aligned with the principles and initiatives of the European Union and the North Atlantic Treaty Organization. With regard to the principles advocated by Spain, the strategy includes the following points:

- Artificial intelligence applications should be developed and used in accordance with applicable national and international law, including the Universal Declaration of Human Rights and international humanitarian law.
- Any development or use of artificial intelligence should allow for clear human oversight in order to ensure due accountability and the attribution of responsibility.

Sri Lanka

[Original: English]
[25 May 2024]

Introduction

Sri Lanka, as a long-standing advocate of humanitarian disarmament, humanitarian methods of warfare and the non-proliferation of weapons of mass destruction, welcomes the adoption of General Assembly resolution 78/241 on lethal autonomous weapons systems, in which the Assembly stresses the urgent need for the international community to address the challenges and concerns raised by autonomous weapons systems. As a co-sponsor of the resolution, Sri Lanka appreciates the opportunity it provides to initiate inclusive dialogue and wider awareness of the issue as an important step forward to address the related challenges.

The rapid advancement of technology has revolutionized and significantly transformed every aspect of modern civilization. Sri Lanka recognizes the growing dependency on advanced technology for human development. However, the integration of autonomy, including artificial intelligence, in weapon systems requires particular consideration, given the fundamental challenges such weapon systems would pose to human dignity, and the moral and ethical considerations. Guided by its consistent call for humanitarian disarmament and support for multilateralism, Sri Lanka has actively contributed to the multilateral discussions on this topic in Geneva and in New York.

Sri Lanka recalls in this regard the first joint statement on lethal autonomous weapons systems delivered at the General Assembly in October 2021 with the support of a wide cross-regional group of 70 States, including Sri Lanka. Sri Lanka welcomes the joint appeal by the Secretary-General of the United Nations and the President of

the International Committee of the Red Cross to urgently establish new international rules on autonomous weapon systems by 2026 as well as the consideration of the issue by the Secretary-General in his policy brief "A New Agenda for Peace".

Sri Lanka remains fully convinced that the adoption of a legally binding treaty will be the most effective approach to address the serious challenges posed by autonomous weapons systems. This submission provides Sri Lanka's views on the humanitarian, legal, security, technological and ethical risks of autonomous weapons systems as well as on possible means to address such challenges.

Sri Lanka expects that the discussions initiated by this resolution will contribute to accelerating a global multilateral response on the issue in view of the fast-closing window for action.

Humanitarian considerations

The development and use of weapon systems with autonomous decision-making capabilities, particularly on critical decisions over life and death, raise fundamental humanitarian concerns. The disturbing possibility of the removal of the human element from the loop could result in anonymous selection of targets without human empathy, morality, and compassion.

The Martens clause – a long-standing and binding rule of international law – is of particular relevance in this context. As referred to in the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, and in the preamble 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, the Martens clause creates a legal obligation for States to consider principles of humanity and dictates of public conscience in the absence of a specific legal provision. A weapon system that selects and engages targets without meaningful human control that reduces human beings to mere data points would most likely run counter to both prongs of the Martens clause.

Legal considerations

The full application of international humanitarian law to autonomous weapon systems is undisputed.1 The pertinent question therefore is how exactly international humanitarian law provisions should be applied, and compliance therewith ensured.

It has been agreed that autonomous weapon systems must not be used if it would cause superfluous injury, unnecessary suffering, or inherently indiscriminate effects.2 It is highly questionable whether machine algorithms in complex battlefield environments could ensure the application of carefully calculated decisions on distinction, proportionality, and precautions in attack – which are fundamental obligations under international humanitarian law. Furthermore, serious legal challenges emerge on the issue of responsibility and accountability in situations where the human element is removed from the decision-making process. Sri Lanka considers that meaningful human control is an inherent requirement in this regard.

[1] 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, Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, 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, 25 September 2019, Annex IV, "Guiding principles", para. (a).

[2] Final document of the 6th Review Conference (CCW/CONF.VI/11, 10 Jan. 2022) – para. 19.

Predictability, reliability and explainability should be considered as some of the key elements of meaningful human control in weapon systems.

Security considerations

Deployment of autonomous weapon systems could result in asymmetric warfare. They would also risk conflict escalation as States are more likely to engage in armed conflicts when the risk of military casualties is reduced for the user State. Threats of proliferation, access by non-State actors and even the potential for mass destruction are some of the additional risks of autonomous weapon systems for destabilization at the national, regional, and international level. In the absence of binding regulations, these weapon systems are bound to trigger costly arms races given the relative ease in which the related technology could be acquired. Security concerns of unregulated artificial intelligence in weapons systems could be further exacerbated in cyber and space domains.

Technological considerations

Autonomy in weapon systems could exist over a spectrum within which the level of involvement of human agency could vary. Sri Lanka notes the current lack of consensus on an agreed definition of "autonomous weapon systems" as a challenge to reach common understandings on their regulation. However, the issue of a specific technical definition on autonomous weapon systems should not stand in the way of commencement of negotiations for development of the related legal limitations. In view of rapid evolution in technology, a working characterization of autonomous weapon systems which is future-proof and technology-neutral would provide a useful starting point in this regard.

Ethical considerations

The Universal Declaration on Human Rights and the International Covenant on Civil and Political Rights recognize that human rights are derived from the "inherent dignity" of all. For Sri Lanka, the ethical and moral element of the debate is one of the fundamental aspects, if not the most important aspect, of the issue. Allowing an algorithmic process to decide over the life and death of a human being poses significant challenges to the principles of humanity. Machine learning and data biases in potential autonomous weapons systems are also cross-cutting issues of grave concern relevant to both ethical and legal considerations.

Way forward: towards a legally binding instrument

At present, no rule of international law specifically prohibits or restricts the use of autonomy in weapon systems, nor do the existing international humanitarian law principles specifically require the maintenance of human control.

Sri Lanka welcomes the adoption of non-binding voluntary measures such as codes of conduct and political declarations on the use of autonomous weapons systems as progressive developments. However, such measures would only be of complementary value in strengthening the normative framework on the issue given their insufficiency to address the serious legal, ethical and security challenges involved. Similarly, legal reviews of weapon systems pursuant to already existing obligations under article 36 of the Protocol I Additional to the Geneva Conventions of 12 August 1949 would not be adequate in the absence of an internationally agreed binding regulation.

In view of the aforementioned serious humanitarian, legal, security, technological and ethical challenges, Sri Lanka strongly supports and advocates the negotiation of a legally binding instrument on autonomous weapons systems – a call

that has been voiced by a growing majority of States in the Group of Governmental Experts on lethal autonomous weapons systems. Such binding limitations would be the most effective response to the complexities of the issue and should entail the prohibition of certain autonomous weapons systems that cannot be in compliance with international humanitarian law and the strict regulation of others.

Intensifying efforts to reach an urgent multilateral agreement on the development and use of autonomous weapons systems is an important priority. Sri Lanka will therefore continue to be fully committed to engage constructively in discussions on this issue.

Sweden

[Original: English]
[24 May 2024]

Sweden welcomes the opportunity to submit its views to the Secretary-General, in accordance with resolution 78/241 on lethal autonomous weapons systems, adopted by the General Assembly on 22 December 2023.

The application of autonomous weapons systems has the potential to fundamentally change armed conflicts and offers both challenges that need to be addressed such as accountability and compliance, as well as advantages that can beneficial such as precision and protection of civilians. Thus, the discussions around lethal autonomous weapon systems should take into account operational, legal and technological aspects, bearing in mind ethical perspectives.

Sweden supports the so-called two-tier approach – whereby a distinction should be made between those weapon systems that cannot be used in accordance with international law, in particular international humanitarian law, and systems that include autonomous features, which should be regulated in order to ensure compliance with international humanitarian law and other applicable international law. While the former should be expressly prohibited, the latter would benefit from regulation, the form of which needs further thought and elaboration in order for the definitions and possible regulations to enjoy broad support by the international community. Sweden believes that the two-tier approach constitutes a middle ground where a consensus could be reached.

Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or Have Indiscriminate Effects and the Group of Governmental Experts on lethal autonomous weapons systems

The Convention on Certain Conventional Weapons offers an appropriate framework for the issues of emerging technologies in the area of lethal autonomous weapons systems for several reasons. The participation of experts from several relevant disciplines, as well as representatives from States, civil society and industry, provides a richness of perspectives. Regarding future efforts, the work needed to increase the common understanding of the concept of human control in relation to legal, military, and technological aspects is a challenge. Experts from all High Contracting Parties need to be part of the effort, including from those who possess the most advanced capabilities in this area.

While the negotiations on lethal autonomous weapons systems within the framework of the Convention have been slow, some encouraging progress within the Group of Governmental Experts could be noticed in the recent sessions. There were promising signs of convergence on several topics despite only meeting twice a year. The Group is now discussing concrete language for elements to include in a future

instrument, and this could be a clear path to a substantial breakthrough. The problem lies not in the format of the discussions but in the lack of political will on the part of some Member States. This problem will not be resolved by creating parallel processes and instruments which are not supported by key stakeholders, as this would not promote effective regulation and would risk further dividing Member States, as well as undermining international humanitarian law. In moving forward, we should continue to be guided by the substantive achievements already made, such as the 11 Guiding Principles and the consensus conclusions adopted by the Group.

Sweden underlines the importance of the Group of Governmental Experts delivering in line with its mandate. What type of regulation the High Contracting Parties can agree upon remains to be seen but even an agreement that might fall short of the expectations of some delegations would still amount to a step forward.

International humanitarian law and meaningful human control

Sweden supports the view that international humanitarian law applies fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems. This is a fundamental principle. In order for it always to be upheld, it is of the utmost importance to train and exercise personnel in national armed forces in international law applicable during armed conflict. Legal advisers specialized in international law play a valuable and important advisory role in military decision-making relating to the interpretation and application of international humanitarian law. Sweden welcomes the continued discussions on the application of existing international humanitarian law on account of possible future autonomous weapons systems.

Human responsibility for decisions on the use of weapons systems must be retained since accountability cannot be transferred to machines. This should be considered across the entire life cycle of the weapons system. The choice of military means and methods for a military operation must be compliant with the relevant rules and regulations. In planning a military operation, a military commander and his or her staff must consider and assess the presence of civilians in order to comply with the principles of distinction, proportionality, and precautions in attack. The use of a weapon that cannot, or will fail to, fulfil these provisions of international humanitarian law may not be deployed or used.

Preserving meaningful human control over the use of force is a key objective. Human-machine interaction can be seen as an important aspect that is needed to ensure such control. Military decision makers and operators need to be in control – both in terms of their understanding of the weapons systems and their ability and skill to control the systems. All weapons systems must be predictable and reliable so that their human operators can always be certain that the systems will function in accordance with the intentions of the operator. The more precise requirements of human control in various contexts still need to be analysed, understood in practical terms, and agreed.

In a military context, rules, regulations, and procedures form a hierarchy of instructions for all operations involving weapons. They should cover, inter alia, the organization, procedures, safety, basic command concepts, control of risk and necessary training requirements. Manuals and training programmes for all systems should accompany the regulations. Any complex system must have rigorous handling regulations, including methods for training and procedures for use.

Measures to ensure human control should be considered for the entire life cycle of a weapons system. The specific measures will be context-dependent. A system's type of target as well as spatial and temporal limits are likely to be important factors.

Review process

States are obligated to determine whether the employment of a new weapon would be prohibited under international law. In Sweden, this is carried out by the Delegation for International Humanitarian Law Monitoring of Arms Projects. All defence-related authorities must, without delay, report to the Delegation any proposed project that involves the study, development acquisition, or adoption of weapons or methods of warfare.

In the development of regulations, procedures, manuals and training programmes, the human-machine interaction and its limitations need to be considered. In the legal review of new weapons, as envisaged by article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, an analysis must be performed to determine whether the employment of a new weapon would be prohibited by international humanitarian law. This analysis should include aspects of human-machine interaction and the ways in which they are addressed in manuals and training programmes.

In a review by the Delegation for International Humanitarian Law Monitoring of Arms Projects in accordance with article 36, the characteristics of the weapons system are examined, as well as its planned use and other relevant aspects, such as training programmes and handling regulations. In case of doubt or scientific uncertainty, the Delegation could request further information or apply further test methods. The Delegation is then to issue a decision that approves or rejects the weapons system or method under review. It could also issue strict requirements for modifications or limitations that would bring the system in line with the requirements of international law.

Information is available on several national legal review systems that could assist High Contracting Parties that wish to examine existing systems.

Risk assessment and corresponding mitigation measures are part of the development of all advanced weapons systems. The processes of procurement, maintenance and use of such systems should be controlled by elaborate safety procedures. The procedures should be documented in handbooks on safety from different perspectives, ranging from questions about explosives and ammunition to software quality including consequences of unintended bias.

Describing technical systems in a non-technical context is a challenging task. Using adjectives normally used to describe human behaviour easily causes confusion and a risk of drawing inaccurate conclusions about technical systems that do not possess human qualities. To avoid this, only strictly technical terms should be used.

Although peaceful uses of technology are not within the scope of the Convention, the following may be noted: the overlap between the civilian and military spheres regarding technology development is significant and appears to be increasing. This creates a mutual dependency. If a new technology is adapted for military use, the requirements for robustness and reliability of the system need to be set very high.

Technological progress, in e.g. automation, autonomy, artificial intelligence and digitalization and computerization, is normally common to the military and the civilian spheres, although often driven by civilian (commercial) interests. The challenges of ensuring meaningful control are almost the same for technical systems that may be dangerous (civilian applications) and systems designed to be dangerous (weapons).

Switzerland

[Original: English]
[25 May 2024]

Switzerland welcomes the adoption of General Assembly resolution 78/241 entitled “Lethal autonomous weapon systems”, of which it was a lead sponsor, as well as the strong support it received.

Switzerland is of the view that, in general, new and emerging technologies hold great promise for the advancement of humanity and could contribute to strengthening human and international security. In the military domain, autonomy can provide advantages, including improved safety and efficiency. Also, it is envisaged that in specific applications and under certain conditions such technologies could contribute to better protecting civilians and civilian objects or to avoiding collateral damage.

While recognizing the potential benefits and opportunities of artificial intelligence, including the use of artificial intelligence and autonomous capabilities by armed forces, Switzerland sees an urgent need to intensify multilateral efforts to better understand, and address effectively and in a timely manner, the humanitarian, legal, security, technological and ethical concerns that these developments may pose, notably in relation to autonomous weapons systems.

Switzerland considers that autonomous weapons systems include weapon systems that, once activated, can operate without direct human intervention in the critical functions of target identification, target selection and the application of force thereto.

Adequate rules and limits on the development, deployment, and use of autonomous weapons systems are required in order to ensure conformity with international legal obligations, to uphold ethical requirements and to take into account humanitarian considerations and aspects related to international security. In particular, Switzerland sees the need to continue the codification and progressive development of the rules of international law applicable in armed conflict with regard to autonomous weapons systems.

In this context, Switzerland underlines the importance of the work undertaken in Geneva by the Group of Governmental Experts on lethal autonomous weapons systems in the framework of 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. Given its composition and the expertise that it has developed in more than ten years of deliberations, the Group of Governmental Experts is uniquely placed to develop multilateral governance measures in this field. Switzerland underlines the importance of the Group meeting its mandate to consider and formulate elements of an instrument on autonomous weapons systems by 2026 at the latest. In this regard, Switzerland takes note of the joint call by the Secretary-General of the United Nations and the President of the International Committee of the Red Cross for an international legally binding instrument by 2026.

Switzerland sees strong value in, and has been supportive of, the so-called two-tier approach consisting of specific prohibitions and regulations on the development, deployment and use of autonomous weapons systems that has been promoted in the framework of the Group of Governmental Experts, and which should be at the centre of any instrument:

First, Switzerland is actively supporting the negotiation of an international instrument to prevent, above all, the emergence of systems with increasingly

autonomous functions that would not be in compliance with international humanitarian law. This includes systems:

– That cannot perform their functions with a sufficiently high degree of reliability or predictability in line with the intent of a human operator or commander, or could function outside of their defined parameters;

– Whose effects cannot be limited in accordance with the provisions of international humanitarian law, for example because the extent and timing of the use of force cannot be sufficiently restricted;

– That cannot otherwise be used in accordance with international law, in particular international humanitarian law and human rights law.

Second, Switzerland advocates the adoption of regulations and measures concerning weapons with increasingly autonomous capabilities, provided that they can, in principle, be used in accordance with international law. These regulations should focus on risk mitigation, including positive obligations to uphold human control and on imposing limitations on weapon parameters and deployment contexts, all while considering military, security policy, and ethical considerations.

The concept of human involvement or control, notably to comply with international humanitarian law, is central to this approach. Switzerland sees it as a priority to develop an international framework to ensure a sufficient degree of and a type of human control, and underlines that control can be exercised over a system's entire life cycle, and notably in the targeting cycle. This is vitally important because when using autonomous weapons systems – as with any weapon system – humans must ensure legal conformity. In order to ensure human responsibility for decisions on the use of weapon systems, a certain degree of human control must be exerted or embedded at the appropriate stages of the life cycle of the weapon.

Advancing in the framework of the Convention is crucial and urgent. It has been, and will remain, a priority for Switzerland. We reiterate that no other multilateral forum seems to be better placed to deal with key aspects relevant to autonomous weapons systems which may be deemed to be excessively injurious or to have indiscriminate effects, and could serve to develop and adopt respective provisions of international humanitarian law. Switzerland calls upon all High Contracting Parties to the Convention to continue their efforts within the Group of Governmental Experts to effectively address these challenges and expects the Group to achieve its objective as outlined in the three-year mandate.

Notwithstanding our strong support for the Convention, Switzerland recognizes that weapons systems with increasing autonomy and, more broadly, the military use of artificial intelligence, and notably artificial intelligence-assisted decision-making in military operations, are a multifaceted issue. It is therefore important to adopt a comprehensive and inclusive approach on this matter as it encompasses various aspects of international law, stability, arms control, proliferation, export control and ethics in addition to international humanitarian law and the conduct of hostilities.

United Kingdom of Great Britain and Northern Ireland

[Original: English]
[23 May 2024]

Artificial intelligence is fundamentally transforming our societies and will change the threats we face. The United Kingdom recognizes that its adoption raises societal concerns and poses challenges to established systems of military governance and assurance.

The United Kingdom is leading efforts in artificial intelligence regulation. The 2023 AI Safety Summit and Bletchley Declaration, our National AI Strategy, AI Safety Institute and the Responsible Technology Adoption Unit all advocate the use of artificial intelligence that is safe, legal, ethical and responsible. Any United Kingdom use of artificial intelligence to enhance defence capabilities is governed by the country's Defence AI Ethical Principles, articulated in the "Ambitious, Safe, Responsible" policy statement.

Summary

- The United Kingdom does not possess fully autonomous weapon systems – meaning weapons that operate without context-appropriate human involvement or outside human responsibility and accountability – and has no intention of developing them. No State should develop or deploy such systems.
- International humanitarian law and the existing regulatory framework for development, procurement and use of weapons systems is the suitable framework for regulation of new military capabilities.
- Human judgment will always be necessary throughout the development and use of autonomous weapons systems.
- It is not possible to transfer accountability to a machine. Human responsibility for use of a system to achieve an effect cannot be removed – irrespective of the level of autonomy in a system.
- Working internationally to develop norms and standards for responsible development and use of autonomous weapon systems is the best way to ensure that any illegal, unsafe or unethical use of these technologies is identified and attributed, and those responsible held to account.

Compliance with international humanitarian law

International humanitarian law applies to all military capabilities used in the planning and conduct of hostilities, including those with autonomous functions. All States are required to comply with it. There are no waivers or exemptions, and we oppose any attempt to dilute or derogate from the robust, principle-based legal framework provided by international humanitarian law.

The United Kingdom believes that the use of weapons with autonomous functions requires governance systems that enable legal and ethical compliance with international humanitarian law. We recognize that some States and civil society are calling for new legally binding rules on the basis that weapons with autonomous functions will introduce new battlefield elements not covered by international humanitarian law. However, we believe that there is no gap in the application of international humanitarian law with respect to autonomy in weapons. Existing international humanitarian law already regulates States in their development and procurement of weapons, and methods and means of warfare – including those with advanced technologies. It is a technologically agnostic, robust, and flexible legal regime for regulation of armed conflict.

Under international humanitarian law, the right of the parties to a conflict to choose methods or means of warfare is not unlimited. This is emphasized by the obligation on States, under article 36 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, to determine whether employment of a new weapon, means or method of warfare would, in some or all circumstances, be prohibited by international humanitarian law.

Autonomy within weapon systems can and must be used lawfully and ethically. Indeed, autonomous systems have the potential to support better application of international humanitarian law and increased compliance with it. They can improve evidence, analysis and timeliness of decision-making, and so have the potential to ensure greater protection for civilians. Better decisions mean better outcomes in compliance with the fundamental principles of international humanitarian law.

Accountability and responsibility

The legal frameworks providing for the responsibility of States under international humanitarian law, and of individuals under international and domestic criminal law, do not allow for accountability for the effects of military action to be transferred to a machine. States are responsible for the commission of internationally wrongful acts, including in the indiscriminate or otherwise unlawful use of weapons systems. International humanitarian law relies on the precept of command accountability, which places humans at the centre of decisions over use of force. The use of autonomy in weapons does not, and cannot, negate the human's role as the accountable actor as a matter of law.

Humans are responsible for ensuring that the use of autonomous systems in defence is underpinned by a clear articulation of how governance is exercised. Personnel involved in decisions to use systems that include autonomous functions must understand the manner of use, expected effect, and the fact that they remain accountable in relation to that effect.

These principles apply throughout the life cycle of a system from concept to deployment. This includes direction given to developers, defined technical standards governing development; test and acceptance processes; rigorous field-testing procedures; and training of the personnel using the systems. This life cycle approach must include any changes made to the system, its context of use or intended operational environment once it enters service, and suitable feedback and reporting mechanisms.

Once deployed, accountability is vested in trained operators who employ the system, and in decisions taken by commanders at every level who have operational or tactical responsibility for the conduct of campaigns. The military chain of command and accountability measures are set out clearly in orders, directives and standard operating procedures that are enforced by all militaries engaged in conduct of operations.

Control

Across all use cases there must always be context-appropriate human involvement in the development and use of weapons systems, including those with autonomous functions. This must result in meaningful human control sufficient to satisfy national policies, ethical principles and obligations under international humanitarian law. The nature of human involvement will vary depending upon the nature of the capability, operational environment, and context of use (e.g. purpose, environment, possible threats, risks associated with system behaviour, and the regulatory environment). These factors will shape the type and timing of human involvement to ensure that it is best tailored to meet military, legal and ethical objectives.

Appropriate human involvement must be realized at numerous points throughout the system life cycle, requiring authorized, qualified, and experienced

people exercising judgment to influence, direct or limit the behaviour of an autonomous system and its effects.1

We oppose the creation and use of weapons with autonomous functions that would operate without context-appropriate levels of human involvement and accountability. We believe that all States should make a clear commitment to the responsible development and use of military artificial intelligence, including autonomous systems, and to ensure that any illegal, unsafe or unethical use of these technologies is identified, attributed and held to account.

International approach

Building international norms of use and positive obligations is the best way to demonstrate how autonomous weapons systems can be used in accordance with international humanitarian law.

The Group of Governmental Experts is the appropriate forum to consider this issue. Its mandate provides a positive basis for progress.

The United Kingdom proposes that the Group develop an authoritative statement on the application of international humanitarian law and best practice regarding lethal autonomous weapons systems. This and the proposal for a set of "draft articles on autonomous weapons systems" would demonstrate that there are rigorous principles that govern the use of weapons with autonomy and accountability with international humanitarian law.

The Group should assess:

- How autonomous capabilities can be used in accordance with international humanitarian law and how these can be applied practically for different use contexts.
- Norms and human-machine teaming approaches throughout the system life cycle.
- Technical and governance standards for safe and responsible development and use of autonomous systems.

United States of America

[Original: English]
[23 May 2024]

The United States appreciates the opportunity to provide its views pursuant to General Assembly resolution 78/241. The United States robustly engages in discussions in multilateral forums regarding lethal autonomous weapons systems, and we encourage other States to do so as well. We also strongly support the role of international organizations and civil society in observing and contributing to international discussions on lethal autonomous weapons systems.

The United States continues to view the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, convened under the auspices of 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, as offering the best opportunity to advance international efforts on lethal autonomous weapon systems. The Group of

[1] This life cycle approach to human involvement and control of artificial intelligence-enabled systems is described in the 2018 and 2020 United Kingdom working papers submitted to the Group of Governmental Experts on lethal autonomous weapons systems.

Governmental Experts is an inclusive, transparent forum in which States and civil society participate. The Group focuses on international humanitarian law, and benefits from the participation of delegations that routinely include members with military, technical, legal and policy experience. This expertise has resulted in a significant body of work that reflects the consensus of a very diverse group of participating States. Delegations to the Group have also submitted many substantive proposals since 2022, including proposals for legally binding instruments, for non-binding instruments, and other outcomes. The Group has a clear and robust mandate to formulate, by consensus, a set of elements for an instrument, without prejudging its nature, and other possible measures to address emerging technologies in the area of lethal autonomous weapon systems. This mandate clearly orients the Group's work towards the ultimate goal of producing an instrument by 2026. Efforts outside the Group that do not include all interested States or that do not operate by consensus may lead to fragmentation and divergent approaches.

The United States' approach to lethal autonomous weapon systems starts with the recognition that existing international humanitarian law already provides the applicable framework of prohibitions and restrictions on the use of autonomous weapon systems in armed conflict. The United States, along with Australia, Canada, Japan, Poland, the Republic of Korea and the United Kingdom, has submitted a proposal that articulates how international humanitarian law applies and how the requirements can be effectively implemented in relation to the use of autonomous weapon systems. This proposal, entitled "Draft articles on autonomous weapon systems – prohibitions and other regulatory measures on the basis of international humanitarian law"1 follows the "two-tier approach" widely supported within the Group of Governmental Experts, which reflects a distinction in international humanitarian law between weapons that are by their nature prohibited, and regulations for the use of other weapons not categorically prohibited from use in all circumstances.

International humanitarian law does not prohibit the use of autonomy in weapon systems or the use of a weapon that can select and engage a target. For many decades, States have been using computers and weapons that can select and engage targets without legal controversy. This includes systems like the AEGIS Weapon System and PATRIOT Air and Missile Defense System, as well "lock-on-after-launch" homing weapons. Far from international humanitarian law prohibiting weapons with target selection and engagement features, one of the main purposes of international humanitarian law is in fact advanced when such weapons are used with greater precision and accuracy and less risk to civilians and civilian objects than possible when using weapons without these "smart" features. However, the ability of operators to rely on weapons to perform target selection and engagement functions entails differences in how international humanitarian law applies to the use of these weapons, as well as different measures to be taken during development or before fielding to support the responsible use of these weapons.

The draft articles first contain measures to prevent autonomous weapon systems that, by their nature, are incapable of use in accordance with international humanitarian law. It is also explained in the draft articles that, under international humanitarian law, the use of an autonomous weapon system to conduct attacks must be consistent with the principles and requirements of distinction, proportionality, and precautions in attack. A combatant's reliance on autonomous functions to identify, select, or engage targets must be in good faith and in light of the information available

[1] CCW/GGE.1/2023/WP.4/Rev.2, available at https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/CCW_GGE1_2023_WP.4_US_Rev2.pdf.

at the time, and must be consistent with due diligence in the implementation of these principles and requirements. The draft articles detail measures that can be taken both in the development stage and during use to ensure effective implementation of international humanitarian law. They also articulate regulatory measures to ensure comprehensive accountability for the use of autonomous weapon systems.

The United States supports the use of these measures and others included in the draft articles. But the United States does not use terms like "meaningful human control" in its own policies and has explained in detail why a focus on "control" would obscure rather than clarify the genuine challenges in this area. Instead, the key issue, as reflected in Department of Defense Directive 3000.09 and in United States working papers to the Group of Governmental Experts, is ensuring that machines help effectuate the intention of commanders and the operators of weapons systems. This is done by, inter alia, taking practical steps – at different stages of the weapon design, development, and deployment process – to reduce the risk of unintended engagements and to enable personnel to exercise appropriate levels of human judgment over the use of force. There is not a fixed, one-size-fits-all level of human judgment that should be applied to every context. Some functions might be better performed by a computer than a human being, while other functions should be performed by humans. As weapons engineers improve the effectiveness of autonomous functions, more situations will likely arise in which the use of autonomous functions is more appropriate than manual control.

The United States Department of Defense has issued a policy directive on Autonomy in Weapons Systems (DoD Directive 3000.09), as well as a range of policies and other issuances to fulfil its commitment to developing and employing new and emerging technologies in a responsible manner, including the Department of Defense AI Ethical Principles, the Department of Defence Responsible AI Strategy and Implementation Pathway, and the Department of Defense 2023 Data, Analytics, and Artificial Intelligence Adoption Strategy. The United States has made these policies, and related resources such as the Responsible AI Toolkit, publicly available to demonstrate this commitment and encourage transparency internationally.

The United States also seeks to build international consensus around norms of responsible behaviour for the development, deployment, and use of military artificial intelligence and autonomy, namely through the Political Declaration on Responsible Military Use of AI and Autonomy, which is complementary but independent of the Group of Governmental Experts. The United States launched the Political Declaration in February 2023 to begin to build a consensus around norms of responsible behaviour to ensure that military use of these technologies is responsible, ethical, and enhances international security. This Political Declaration creates a foundation for an inclusive, international dialogue on the responsible development, deployment, and use of military artificial intelligence capabilities.

The United States believes the Secretary-General's report could provide a valuable contribution to progress on lethal autonomous weapons systems by bolstering efforts to find consensus on elements and measures in the Group of Governmental Experts. In order to achieve that aim, the report should be balanced and inclusive of the views of all Member States. We thank the Secretary-General for posting our full-length submission online.

State of Palestine

[Original: English] [25 May 2024]

We have entered a truly dangerous moment in history in which weapons systems incorporating artificial intelligence are being deployed for the commission of genocide in Gaza. Experts in the field of automated warfare technology have stated that the occupied Palestinian territory, including East Jerusalem, is being used as a laboratory for the testing of sophisticated forms of autonomous weapons systems that are now being sold worldwide. The development and use of these weapons pose a serious threat to all of humanity, and it is our view that it is vital that the Secretary-General boldly press upon all States the urgent necessity for a legally binding instrument to safeguard against the legal, ethical, humanitarian and security risks of these systems.

However, just as important as the form of an instrument, is the substantive policy of the framework which must be capable of actually addressing these risks in practice. For the State of Palestine, it is clear that a definition must be adopted that prevents loopholes that allow States to bypass agreed prohibitions and regulations. An indispensable component of this, is the need to recognize that a "nominal human input" does not amount to an intervention for the purpose of defining what an autonomous weapons system is.

It has been broadly agreed by a range of States 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, as well as by the International Committee of the Red Cross, that autonomous weapon systems can be characterised as:

"Systems that, upon activation by a human user(s), use the processing of sensor data to select and engage a target(s) with force without human intervention".

While the State of Palestine also uses the term "without human intervention" in our definition of autonomous weapons systems, we believe that if we accept the term "without human intervention" without further clarification, it could create a significant loophole in the definition. In theory, all it would require for a system to fall outside the scope of the framework of autonomous weapons systems is a single human input after activation of the system.

It is thus critical to define what we mean by "without human intervention". For example, if a human user was required to press a keyboard button after the system's activation in order for force to be executed, without any moral or legal consideration of the consequences, would this amount to a "human intervention" and therefore take the weapon outside the definition of an automated weapons system? In other words, would the mindless click of a keyboard button by a human after the system's activation lead the system to fall outside the automated weapons systems framework and thus, the framework containing prohibitions and regulations, including the need for meaningful human control, would not be applicable to that weapon system at all?

That interpretation would be not only completely counter-intuitive but more importantly, it would be very dangerous.

Indeed, a number of weapons companies are priding themselves on developing autonomous weapons with the "minimum level of human input necessary". Such systems claim to fall outside the definition of an automated weapons system because they require a human input (however small) after the system is activated. It is apparent from analysis of the vast range of weapons systems incorporating autonomy, that almost all of them allow a human to engage with the system with a "nominal human input" after the system's activation. Despite being "nominal", weapons designers and

manufacturers are able to avoid the system being labelled as an autonomous weapons system by suggesting that an intervention can be made after the system's activation, thereby taking it out of the scope of autonomous weapons systems.

Our submission attempts to problematize this issue and close this loophole by introducing the concept of "nominal human input" and to generate substantive engagement by States and other stakeholders with this area of thought.

We define a "nominal human input" as an input performed by a human after the system's activation and during the autonomous process, but that does not materially affect the process. A human input will not materially affect the autonomous process if it does not bring to bear any wider information to inform decisions to select and engage a target with force. In other words, no further human moral and legal reflection is occurring during that human input. These "nominal human inputs" are made at a place and time far removed from where the system executes force, and without the human giving proper consideration to the risks of breaches under international law taking place. The human input is thus "mindless" – its effect being the same as if the autonomous process had occurred without it.

We must adopt an appropriate definition of autonomous weapons systems that enables these systems to be brought under the scope of potential prohibitions and regulations. Ultimately, this requires clarity that a "nominal human input" does not amount to an "intervention" for the purpose of the otherwise sound definition that States are coalescing around, and if such an input is made, the system should still be considered an automated weapons system.

Further details on what is meant by a "nominal human input" is set out in this working paper, which the State of Palestine submits to the Secretary-General for his attention.

Executive summary

1. Autonomous weapons systems are systems that, upon activation by a human user(s), use the processing of sensor data to select and engage a target(s) with force without human intervention.
2. A nominal human input after the system's activation does not amount to a human intervention.
3. These systems pose a range of legal, ethical, humanitarian and security risks. To deal with these risks, both prohibitions and regulations are required.
4. Prohibitions are required on the development and use of autonomous weapons systems that:
   (a) Are designed or used to target humans directly;
   (b) Cannot be used with meaningful human control.
5. Meaningful human control requires that the automated weapons systems must meet all of the following requirements. They must be:
   - Predictable
   - Reliable
   - Understandable and explainable
   - Traceable
6. Regulations, including both positive obligations and limits, are required to ensure that automated weapons systems can be used with meaningful human control.

7. This combination of prohibitions and regulations should be in the form of an international legally binding instrument. Until such an instrument is adopted, a moratorium must be imposed on the development of automated weapons systems.

The full version of the submission is available at https://meetings.unoda.org.

B. European Union

[Original: English]
[25 May 2024]

Emerging technologies, notably artificial intelligence and autonomy in weapons systems, are reshaping the landscape of conflict and its impacts on global security. The European Union considers it imperative that we collectively address these challenges by establishing principles, international norms and regulations to ensure the responsible use of such technologies.

The European Union recognizes that artificial intelligence is both an enabling and a disruptive technology and that there are both potential opportunities and risks associated with the development and use of artificial intelligence in the military domain, including its implications for global security. The European Union encourages further engagement in international dialogue and cooperation to address the opportunities and challenges presented by artificial intelligence in the military domain. We support efforts in relevant forums to exchange best practices and foster a common understanding of the legal and ethical implications, and we welcome the valuable contributions of recent international and regional initiatives.

On risk mitigation and confidence-building measures, the European Union recognizes the critical role that data plays for artificial intelligence-based technologies. Social biases that have potential impact on emerging technologies, for example through gender bias in algorithms, should also be given due consideration. Tailored risk mitigation measures, including those across the life cycle, should be adopted and implemented.

The European Union maintains that 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 offers an appropriate framework for dealing with the issue of emerging technologies in the area of lethal autonomous weapons systems within the context of the objectives and purposes of the Convention. The European Union remains committed to pursuing its efforts in the Group of Governmental Experts on lethal autonomous weapons systems to fulfil the mandate and make progress on that issue, with a view to ensuring that the outcome reflects, inter alia, the necessity of compliance with international law, in particular international humanitarian law, taking into account relevant ethical considerations. Past achievements, including the 11 guiding principles, previous outcome documents, as well as already identified convergences, should serve as the basis for consensus proposals. The European Union emphasizes that human beings must make the decisions with regard to the use of lethal force, exert control over the lethal weapons systems that they use and remain accountable for decisions over the use of force in order to ensure compliance with international law, in particular international humanitarian law, also taking into account ethical considerations. Those who plan, decide upon and carry out an attack using a lethal autonomous weapon system must, therefore, ensure that the weapon system and the way it is used will preserve human beings' ability to make the necessary legal judgments, and thereby ensure compliance with international humanitarian law. Furthermore, human accountability must be

preserved at all times and across the entire life cycle of the weapons system and appropriate measures in this regard should be implemented.

The European Union recalls that States bear a fundamental responsibility to ensure that the development, production, deployment and use of emerging technologies in the area of lethal autonomous weapons systems are in compliance with international law, in particular international humanitarian law. In that regard, we support the so-called two-tier approach, with a distinction made between those weapon systems that cannot be used in accordance with international law, in particular international humanitarian law, which States should commit not to develop, produce or use, and systems that include autonomous features, requiring regulation to ensure compliance with international humanitarian law and other applicable international law.

As noted in General Assembly resolution 78/241 on lethal autonomous weapons systems, international and regional conferences and initiatives, including those involving States members of the European Union, have made important contributions, enriching international discussions on autonomous weapons systems.

Lastly, gender equality and the empowerment of women is an important horizontal priority for the European Union and we believe it is important to take into account a gender perspective, when discussing the issue of lethal autonomous weapons systems, given the nexus between gender equality and emerging technologies.

Annex II

Replies received from international and regional organizations, the International Committee of the Red Cross, civil society, the scientific community and industry[1]

A. International Committee of the Red Cross

[19 March 2024]

Summary

Full submission available at: https://www.icrc.org/en/document/autonomous-weapons-icrc-submits-recommendations-un-secretary-general.

The International Committee of the Red Cross (ICRC) submits its views to the United Nations Secretary-General, in accordance with General Assembly resolution 78/241.

The ICRC's assessment is that the unconstrained development and use of autonomous weapon systems (AWS) pose serious legal, ethical, and humanitarian concerns.[2]

Need for new, binding international law

While international humanitarian law (IHL) already regulates and constrains the design and use of AWS, States hold different views regarding the specific limits and requirements it imposes. Thus, the ICRC believes that new rules are urgently needed to provide legal certainty and stability, and to address wider humanitarian risks and fundamental ethical concerns.

Guiding principle: human control over the use of force and effects

IHL requires weapon users to be able to anticipate, control and limit the effects of weapons.[3]

While IHL obligations do not necessarily demand direct human control over the weapon itself at all stages of its use, they do require human control over the weapon's *effects* in the circumstances of a specific attack. This principle should underpin the drafting and interpretation of a legally binding instrument on AWS, even if "human control" is not explicitly included as a requirement. This calls for a combination of prohibitions and restrictions on the design of the weapon and on its operating parameters.

[1] In accordance with operative paragraph 3 of General Assembly resolution 78/241, the replies received from international and regional organizations, the International Committee of the Red Cross, civil society, the scientific community and industry are included in the original language received. The Secretary-General remains committed to multilingualism as a core value of the United Nations.

[2] ICRC position paper on autonomous weapon systems, May 2021: https://www.icrc.org/en/document/icrc-position-autonomous-weapon-systems; Joint Call by the United Nations Secretary-General and the President of the ICRC, October 2023: https://www.icrc.org/en/document/joint-call-un-and-icrc-establish-prohibitions-and-restrictions-autonomous-weapons-systems; ICRC commentary on the guiding principles of the CCW GGE, 2020: https://documents.unoda.org/wp-content/uploads/2020/07/20200716-ICRC.pdf.

[3] E.g., the rule on proportionality requires weapon users to be able to 'anticipate' effects in the form of military advantage, and the prohibition against indiscriminate attack requires weapon effects to be capable of being 'limited' (Additional Protocol I, Art. 51(4 and 5(b); Customary IHL Rules 12 and 14).

Preamble

The legal instrument could include preambular paragraphs: reaffirming the need for compliance with existing legal frameworks; acknowledging the range of concerns raised by AWS; reaffirming the need to continue codification and progressive development of IHL; and recalling the protection afforded by the "Martens clause."4

Definitions

The instrument should contain an unambiguous definition covering the general category of AWS to which the whole instrument applies. Within that category, certain types of AWS will be subject to specific prohibitions (see next section).

"Autonomous weapon system" means a weapon system that is designed to select and engage one or more targets without the need for human intervention after activation.

This understanding – shared by the ICRC, many States and other actors is not based on a specific technology, but rather on the role of humans in the process of target selection and application of force. Such a functional and technology-neutral approach to the characterization of AWS is essential to ensure that new rules remain relevant in the face of technological developments.

"Without the need for human intervention" could be defined as meaning that, after initial activation by a human, the application of force is triggered in response to information from the environment received through sensors, and on the basis of a generalized "target profile."5 "Human intervention", for these purposes, should be understood as excluding human inputs that do not materially affect the autonomous functions of target selection or engagement.

Definitions of other concepts including "military objective", "self-destruction mechanism" and "self-deactivating" could be incorporated from existing international agreements.[6]

Prohibitions

Unpredictable AWS

The instrument should provide that it is prohibited in all circumstances to develop, produce, otherwise acquire, stockpile or retain, or transfer, directly or indirectly to anyone, or to use any AWS that is designed or of a nature, or used in such a manner that does not allow a human user to both (1) understand, predict and explain how the AWS will function in any normal or expected circumstances of use, in particular what circumstances or conditions will trigger the system to apply force, and (2) predict and limit the effects of the AWS in all such circumstances as required by IHL.

Users of AWS must be able to, with a reasonable degree of certainty, predict the effects of that weapon, in order to determine whether it can be directed at a specific military objective and take steps to limit those predicted effects, as required by IHL. This entails the ability to understand the nature and functioning of the AWS' sensors, the definition of its target profile and the potential effects in the circumstances of use, including any risk of error or malfunction.

[4] E.g., in Additional Protocol I, Art. 1.

[5] The concept of a "target profile" has been referred to in the GGE, e.g., 2019 Report CCW/GGE.1/2019/3, and could be further defined in an instrument.

[6] E.g., Additional Protocol I, Art. 52(2); CCW Amended Protocol II; Convention on Cluster Munitions.

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[6] E.g., Additional Protocol I, Art. 52(2); CCW Amended Protocol II; Convention on Cluster Munitions.

a comprehensive overview of key considerations from industry, scientific, state, and civil society perspectives to aid in the formulation of an international treaty governing autonomous weapons.

Ethical Considerations

One of the foremost concerns regarding AWS is the ethical implications of delegating life-and-death decisions to machines. Ethical considerations include the potential loss of human control over lethal force and the challenge of ensuring that AWS operate within the bounds of international humanitarian law (IHL). Autonomous weapons must adhere to principles of distinction, proportionality, and necessity, yet their ability to make nuanced judgments akin to human operators remains questionable.

Legal Implications

The integration of AWS into military arsenals necessitates a robust legal framework. Existing laws, such as the Geneva Conventions, must be examined to determine their applicability to autonomous systems. Additionally, the legal accountability for actions taken by AWS poses a complex issue. The lack of clear attribution for unlawful acts could undermine the enforcement of IHL and erode trust in the international legal system. Establishing clear guidelines for the development, deployment, and use of AWS, along with mechanisms for accountability, is crucial.

Security Concerns

From a security standpoint, the deployment of AWS could trigger an arms race, with nations striving to outpace each other in developing increasingly advanced systems. This escalation could destabilize global security and increase the likelihood of conflicts. Furthermore, the risk of AWS being hacked or malfunctioning poses a significant threat. Ensuring robust cybersecurity measures and fail-safes are in place is essential to mitigate these risks.

Industry Perspectives

The defense industry plays a pivotal role in the development of AWS, driving innovation and technological advancements. However, it also bears a responsibility to ensure that these technologies are developed ethically and safely. Industry stakeholders must engage in transparent and accountable practices, adhering to international standards and norms. Collaborative efforts between industry, governments, and international bodies are necessary to establish guidelines and best practices for AWS development.

Scientific Insights

Scientists and researchers contribute critical insights into the capabilities and limitations of AWS. Ongoing research must focus on enhancing the reliability and predictability of autonomous systems, ensuring they can operate within ethical and legal boundaries. Interdisciplinary research, combining expertise from artificial intelligence, robotics, law, and ethics, is essential to address the multifaceted challenges posed by AWS.

State Perspectives

States have a crucial role in shaping the international regulatory framework for AWS. National governments must engage in multilateral dialogues to harmonize their positions and develop a cohesive approach to AWS governance. This includes committing to transparency in the development and deployment of AWS, as well as

supporting international efforts to establish binding legal instruments. States should also invest in research and development to ensure their defense capabilities are ethically and legally sound.

Civil Society Engagement

Civil society organizations (CSOs) offer invaluable perspectives on the humanitarian and ethical dimensions of AWS. CSOs can serve as watchdogs, advocating for stringent regulations and monitoring compliance. Their involvement ensures that the voices of affected populations are heard, and that human rights considerations are central to the discourse. Collaborative efforts between CSOs, governments, and industry are essential to develop a holistic approach to AWS governance.

Recommendations

1. **Establish Clear Definitions and Boundaries:** Develop internationally agreed-upon definitions of AWS and establish clear boundaries for their development and use.

2. **Implement Robust Legal Frameworks**: Ensure that AWS are integrated into existing legal frameworks, with clear guidelines for accountability and compliance with IHL.

3. **Promote Transparency and Accountability:** Encourage transparency in the development and deployment of AWS, with mechanisms for accountability and oversight.

4. **Foster International Cooperation:** Strengthen multilateral dialogues and cooperation to develop cohesive and harmonized approaches to AWS governance.

5. **Enhance Cybersecurity Measures:** Prioritize cybersecurity to protect AWS from hacking and malfunctions, ensuring their safe and reliable operation.

6. **Encourage Interdisciplinary Research:** Support interdisciplinary research to address the ethical, legal, and technical challenges posed by AWS.

7. **Engage Civil Society:** Involve civil society in the discourse to ensure that humanitarian and ethical considerations are prioritized.

8. **Prevent Arms Race:** Implement measures to prevent an arms race and promote the responsible development and deployment of AWS.

The development of an autonomous weapons treaty is a critical step in ensuring that the advancement of military technology adheres to ethical, legal, and security standards. By incorporating insights from industry, scientists, states, and civil society, the international community can develop a comprehensive and effective regulatory framework for AWS. Collaborative efforts and robust dialogue are essential to address the multifaceted challenges posed by autonomous weapons and to safeguard global peace and security.

Amnesty International

[24 April 2024]

This submission highlights the intractable challenges related to the use of AWS in law enforcement contexts in relation to compliance with international human rights law (IHRL) and standards on the use of force. For Amnesty International, AWS are weapons systems that detect and apply force to a target based on sensor inputs, rather than an immediate human command.

International human rights law/standards

The use of AWS in law enforcement threatens to undermine the right to life, liberty and security of person, the right to be free from torture and other cruel, inhuman or degrading treatment or punishment, and the right to freedom of peaceful assembly, among other rights. It would also be incompatible with the key international standards related to the use of force and law enforcement practice: the UN Basic Principles on the Use of Force and Firearms (BPUFF) and the UN Code of Conduct for Law Enforcement Officials (CCLEO).9 The use of AWS – whether lethal or less lethal – undermines the principles of human rights-compliant law enforcement, which are based on close, positive and proactive human relationships between law enforcement officers and the publics they serve.

Human agency Human agency and judgement are required for the lawful use force under IHRL law and standards. The decision to use force, whether lethal or less lethal, can only be made by a human being and human rights law "places a strong emphasis on human reasoning and interaction".10 According to BPUFF, human abilities to communicate, de-escalate, persuade and negotiate are central strategies for avoiding or minimizing the use of force. The decision to deploy intentional lethal force comes at an extremely high threshold, and is especially nuanced and complex, taking into account emotional, motivational, psychological and logistical factors to assess the imminence of a threat to life and limb.11 AWS cannot be used to replace indispensable human judgement in the decision to use force; and would not be able to operate in a way that seeks to minimize harm, prevent the loss of life or assess whether the necessity and proportionality of lethal force is still justified at a given moment.

Accountability The use of force without meaningful human control could create an "accountability vacuum".12 This derives from the fact that international human rights law binds states and individuals – not machines - and seeks to hold them to account, and the difficulties in law of ascribing human responsibility when using machines operating outside of meaningful human control.13 The use of AWS would weaken the ability of a law enforcement officer or their superiors to make judgements about individual responsibility for the unlawful use of force and to take appropriate precautions to prevent further violations – one element of the provision of remedy for harm suffered.

[9] UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (UN Basic Principles), adopted on 7 September 1990; UN Code of Conduct for Law Enforcement Officials (UN Code of Conduct), adopted on 17 December 1979 by General Assembly resolution 34/169.

[10] OHCHR, Presentation made at the informal expert meeting organized by the state parties to the Convention on Certain Conventional Weapons 13–16 May 2014, Geneva, Switzerland by Christof Heyns, Professor of human rights law, University of Pretoria United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions, 13 May 2014, www.ohchr.org/en/statements/2014/07/presentation-made-informal-expert-meeting-organized-state-parties-convention; see also UK Parliamentary Committee, Professor Thompson Chengeta – Written Evidence (AIW0021), https://committees.parliament.uk/writtenevidence/120291/html/.

[1] UN Basic Principles, Principles 9 and 20.

[1] Christof Heyns, "Human Rights and the use of Autonomous Weapons Systems (AWS) During

[1] Domestic Law Enforcement, Human Rights Quarterly", Vol. 38, No. 2, May 2016, p. 366.

[23] Interim report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, A/65/321, 23 August 2010, para. 33

Dignity

The question of dignity is core to IHRL. The Universal Declaration on Human Rights and the International Covenant on Civil and Political Rights recognise that human rights are derived from the "inherent dignity" of all.14 The Special Rapporteur on extrajudicial, summary or arbitrary executions has argued that the concept of dignity is inextricably linked to the right to life as "it is the value of life that makes it worth protecting".15 The African Charter on Human and Peoples' Rights General Comment 3 on the right to life "proceeds from an understanding that the Charter envisages the protection not only of life in a narrow sense, but of dignified life".16 In relation to law enforcement, Article 2 of the CCLEO states that law enforcement officers "shall respect and protect human dignity and maintain and uphold the human rights of all persons."

Bias/discrimination One of the dangers in the development of AWS is the already well-developed use of biometric data in law enforcement. Many police forces have developed largescale databases linking biometric data to other personal data, including criminal justice system records.17 It would be a short step for law enforcement to feed this data into an AWS in order to target criminal suspects. The use of biometric markers to identify targets carries enormous risks. The Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression has noted that facial recognition can lead to profiling on ethnicity, race, national origin, gender and other characteristics, which are often the basis for unlawful discrimination.18

The need for a legally binding instrument to prohibit and regulate AWS

To clarify and strengthen existing international humanitarian and human rights law as it relates to growing autonomy in weapon systems used in both military and law enforcement contexts, Amnesty International advocates for the creation of a legally binding instrument to prohibit some types of AWS and regulate others. Such an instrument would:

- prohibit the development, production, use of, and trade in systems which by their nature cannot be used with meaningful human control over the use of force;
- prohibit "anti-personnel AWS" – that is systems that are designed to be triggered by the presence of humans or that use human characteristics for target profiles;

14 Human Rights Watch, Shaking the Foundations: The Human Rights Implications of Killer Robots, IV. Human Dignity, www.hrw.org/report/2014/05/12/shaking-foundations/human-rights-implications-killer-robots

15 OHCHR, Presentation made at the informal expert meeting organized by the state parties to the Convention on Certain Conventional Weapons 13–16 May 2014, Geneva.

16 African Commission on Human And Peoples' Rights, General Comment No. 3 On The African Charter On Human And Peoples' Rights: The Right To Life (Article 4), Adopted During the 57th Ordinary Session Of The African Commission on Human and Peoples' Rights held from 4 to 18 November 2015 in Banjul, (3), https://achpr.au.int/en/node/851

17 For example, Amnesty International, *Automated Apartheid: How facial recognition fragments, segregates and controls Palestinians in the OPT*, 2 May 2023, (Index Number: MDE 15/6701/2023), www.amnesty.org/en/documents/mde15/6701/2023/en/; Amnesty International, Ban the Scan, banthescan.amnesty.org/

18 Surveillance and human rights: Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression to the UN Human Rights Council, UN General Assembly, A/HRC/41/35, 28 May 2019, para. 12: https://www.undocs.org/Home/Mobile?FinalSymbol=A%2FHRC%2F41%2F35&Language=E&DeviceType=Desktop&LangRequested=False

- regulate the use of all other autonomous weapons systems;
- and include a positive obligation to maintain meaningful human control over the use of force.

Arms Control Association

[24 May 2024]

In Resolution 78/241, the General Assembly expressed its concern, *inter alia*, about the "impact of autonomous weapon systems on global security and regional and international stability, including the risk of an emerging arms race [and] lowering the threshold for conflict and proliferation."

The Arms Control Association shares these concerns about the impact of AWS on international peace and stability. For more than fifty years, the ACA has worked to promote effective measures to reduce nuclear risks through national self-restraint, diplomatic engagement, bilateral and multilateral arms control, nonproliferation, and disarmament, and other forms of international regulation.

Notwithstanding the ACA's primary focus on reducing the dangers posed by nuclear weapons and achieving full nuclear disarmament, we believe that the deployment of autonomous weapons systems and automated battlefield command-and-control (C2) systems pose significant risks to strategic stability, and therefore require strict regulation and oversight. Two ongoing developments, we believe, are of particular concern: the integration of autonomy with nuclear command, control, and communications (NC3) systems, and the use of conventionally armed AWS to target and destabilize nuclear forces.

Threats to Strategic Stability Between Nuclear-Armed States:

The major powers are automating their battlefield C2 systems and equipping them with algorithms for calculating enemy moves and intentions, selecting the optimal countermoves, and dispatching attack orders directly to friendly units for implementation—all with ever-diminishing human oversight. Research by a number of analysts suggests that in future conflicts among the major powers, such systems will contribute to and increase the risk of mutually reinforcing escalatory moves, potentially igniting accidental or inadvertent nuclear escalation.19

Although none of the nuclear powers are thought to be extending this type of software to autonomously manage their nuclear forces, many states see a potential for and are likely already developing AI algorithms to assist discrete components of their nuclear early warning and launch systems, for example with the interpretation of possible enemy missile launches.20 It is essential that AI software used to support these applications remain physically disconnected from nuclear launch authority to prevent any possibility of an unintended AI-triggered nuclear exchange.

[19] See Eric Schmidt, et al., "Final Report of the National Security Commission on Artificial Intelligence," March 2021, https://cybercemetery.unt.edu/nscai/20211005220330/https://www.nscai.gov/, and Michael T. Klare, "Assessing the Dangers: Emerging Military Technologies and Nuclear (In)Stability," Arms Control Association Report, February 2023, https://www.armscontrol.org/sites/default/files/files/Reports/ACA_Report_EmergingTech_digital_0.pdf.

[20] Alice Saltini, "AI and Nuclear Command, Control and Communications: P5 Perspectives," Report, European Leadership Network, Nov. 2023, https://www.europeanleadershipnetwork.org/wp-content/uploads/2023/11/AVC-Final-Report_online-version.pdf, pp. 16-17.

Meanwhile, concern is growing that conventionally armed AWS, in combination with advanced, AI-enhanced autonomous intelligence and reconnaissance systems, might contribute to accidental or unintended nuclear escalation by creating the impression that an attacker is conducting a disarming counterforce strike, aimed at eliminating or degrading the target state's nuclear retaliatory capabilities.

Of particular concern is the potential of loitering AWS to reveal the location of elusive nuclear retaliatory forces, such as mobile ICBMs or ballistic missile submarines.21 The fear that an AI-controlled AWS swarm could uncover the locations of a nuclear-armed state's submerged submarines or road-mobile ICBMs could prompt that state to place its weapons on a higher state of alert in a crisis and possibly trigger their unintended or accidental use.

Retaining Human Control

The Arms Control Association strongly adheres to the principle that the decision to use nuclear weapons must always remain the responsibility of a human being, and that such decisions conform with the Laws of War and particularly International Humanitarian Law, which rules out the employment of nuclear weapons particularly in response to nonnuclear threats. The profound legal, ethical, and humanitarian ramifications of any nuclear weapons employment—potentially extinguishing the lives of millions of people and rendering the planet uninhabitable—demand that humans, and never machines, bear the responsibility and moral culpability for their use.

Starting from this premise, and in recognition of the risks of escalation described above, we also believe that any fully autonomous weapons systems or automated battlefield C2 systems operating outside of continuous human supervision when in combat should be prohibited under binding international law and that all other lethal weapons systems featuring autonomy be regulated in order to ensure compliance with international humanitarian law, including by insisting on human responsibility and accountability.

Recommended Actions

In accordance with these basic principles, the Arms Control Association offers these additional recommendations to the Secretary General and the General Assembly:

1. Mindful that the use or threat of nuclear weapons has been deemed "inadmissible" and contrary to international law and the Treaty on the Prohibition on Nuclear Weapons, *theUN General Assemblyshould callon all nuclear-armed states tocommit—eitherthrough coordinated actionor in abinding agreement—to retain human control over any decision to use nuclear weapons and to insert automated, failsafe "tripwires" in advanced command-and-control systems todisallow action resulting innuclear weaponsemployment without human approval* .

Ideally, the nuclear weapons states should themselves take steps toward creating an international norm that recognizes and affirms this principle by issuing unilateral statements that decisions involving nuclear use will always be reserved for human beings. A more ambitious but more effective measure would be a multilateral statement by the P5 nuclear-weapons states that jointly commits to the same norm.

To give effect to this norm, the nuclear weapons states should integrate technical tripwires in all deployed C2 systems that would automatically prevent escalation to

[21] James S. Johnson, "Artificial Intelligence: A Threat to Strategic Stability," *Strategic Studies Quarterly*, Vol. 14, No. 1 (Spring 2020), pp. 20-22.

nuclear weapons use without human intervention. Critically, this would also mean ensuring that all AI-enabled C2 systems for conventional military operations are carefully and deliberately prohibited from giving instructions to nuclear weapons systems.

2. *TheUN General Assembly should call upon on allstates to committo retaining uninterrupted human control over any AWS potentially involved in strategic counterforce missions and to disallow such weapons from falling under the control of AI-enableddecision-support systems that could authorize counterforce missions withouthuman oversight .*

Such commitments are urgently needed because unauthorized, accidental strikes on nuclear forces by loitering autonomous strike systems could give rise to false warning of an incoming strategic attack. Likewise, unauthorized conventional strikes with strategic implications could be undertaken by an AWS strike force that is given erroneous orders by an AI-enabled decision-support system.

To prevent this category of accidental escalation, states should ensure that forces assigned to conventional counterforce missions with strategic implications remain under human control at all times and forego integration with AI systems altogether.

The UN General Assembly should convene an expert body to assess the types and roles of AI algorithms that are used in nuclear command and control systems and the dangers these could pose. This body should also suggest possible restrictions on the use of AI in nuclear C3 systems and whether there are certain roles within NC3 systems that should never be assigned to algorithms.

Given the rapid pace of research into new AI models and the lack of existing norms and understandings between nuclear powers about their application, the United Nations could play a key role in convening experts to track the technical evolution of these models.

Article 36

[8 May 2024]

Article 36 has worked extensively on the issue of autonomous weapons – including framing the requirement for meaningful human control and promoting the need for a structure of international legal regulation that includes both prohibitions and positive obligations.

This submission only highlights key points that we consider significant at this stage of the process.

We should recognise autonomous weapons systems as referring to 'systems' or 'processes', rather than 'objects'.

Discussions of this issue often talk about 'autonomous weapons' as concrete, unified physical 'objects' – that is to say, as physical objects that share a recognisable set of characteristics. However, the defining characteristics of autonomous weapons systems are the tied to the relationship of human users to processes of decision-making.

Autonomous weapons systems may function through distinct and widely dispersed physical assets, all of which *might also* function in ways that would not constitute an autonomous weapons system.

Rules therefore need to be focused on human understanding and control over individual attacks and on how such systems are used. There will still be unified

physical systems that need to be subject to these rules, but the starting point should be to regulate human understanding and control of the 'process'.

AI is not a necessary characteristic of autonomous weapons, but it raises distinct challenges.

AI is one of the technical drivers that is making the issue of autonomous weapons systems particularly pressing. However, it is the relationship of human operator(s) to certain decision-making processes that is the defining characteristic, not the technology that is involved.

It is possible to have autonomous weapons systems that do not employ AI and we should not define the boundaries of this issue in relation to AI. However, AI does provide distinct challenges. AI may make it more difficult for the users of systems to have a practical understanding of how their systems work and so to adequately predict outcomes from their use. In certain roles, AI might serve to embed bias from training datasets into the functioning of weapon systems – which is a particular challenge in relation to weapon systems that would target people, or specific groups of people.

A new legal instrument could be short - establishing key overarching rules that provide a structure for evaluating technological developments in the future.

A legal instrument on this issue should focus on the key general rules that promote human dignity and meaningful human control. Rules should include:

- A prohibition on using AWS to directly target people (anti-personnel systems).
- Positive obligations to ensure meaningful human control, including requirements that:
  - Users sufficiently understand AWS they intend to use, including the conditions that would trigger an application of force by the system;
  - Users sufficiently evaluate the context where the system would be used; and
  - Users sufficiently limit the duration and area of system functioning in order to meaningfully apply existing legal rules.
- A prohibition on systems that cannot be used in accordance with these positive obligations, and so are likely unpredictable and incompatible with the necessary human control.

Such a legal structure can then provide a framework under which specific cases can be addressed.

This must be a future orientated instrument against which new technological structures are evaluated as they are developed (including through weapon review processes). Sharing good practices on assessment processes would be valuable multilateral work once the legal instrument has been established.

Regulating autonomous weapons is an important opportunity to limit the negative potential of AI without curbing its wider positive potential.

Adopting this legal treaty should be recognised as a critical action to prevent negative effects from AI in the world. The legal treaty would establish guardrails that prevent the development and adoption of AI functions in some critical roles that undermine human control and human dignity in the use of force. As such, it points to one potential mode for regulating AI more broadly which is to limit its scope of use in specific roles and manifestations. The key to that regulatory mode is not to regulate

the AI directly (which is too amorphous) but to establish the obligations for human understanding and action.

Current 'defensive systems' (missile defence systems etc) should not be prohibited, but *should* fall within a legal instrument and be used in accordance with its positive obligations (this is in line with current practice).

Some states have raised concerns that 'defensive' systems should not fall within the scope of consideration of discussions regarding autonomous weapons. The types of 'defensive' systems driving these concerns are broadly 'anti-missile' systems that use sensors and computer-directed guns to detect and apply force to incoming weapons (such as missiles, rockets and mortars).

These systems fall within the scope of the consideration because they use sensors to determine specifically where and when force will occur in response to matching data from the environment against a generalised target-profile. However, such systems would not be considered at risk of prohibition under a future instrument because:

A. they can be used with meaningful human control, appropriate human judgement etc. The users of such systems can have an effective understanding of how these systems function, including what will trigger an application of force by the system and the location and duration of system functioning can be specifically controlled by the human operator.

B. they do not target 'people' directly.

Given this analysis, we do not see that anti-missile systems could prohibited under the two-tier approach.

A prohibition on systems that would target people directly should be a critical moral and societal priority.

The ethical and moral concerns with respect to autonomous weapons are most critical in relation to systems that would target people directly. Allowing systems to be used to harm people on the basis of machine processing is dehumanising and should be considered incompatible with requirements of human dignity. Such systems would also be fraught with legal risks.

Claiming that systems could somehow distinguish combatants from civilians would be a transference to machine functioning of determinations that should be made by a human commander. Furthermore, such mechanisms would likely neglect the obligation to protect soldiers *hors de combat* and may be liable to problems of racial, age and gender bias if built on certain AI processes.

We have an opportunity to prevent the adoption of autonomous systems that target people. The working presumption for future negotiations should be that systems targeting people are unacceptable.

A legal instrument should be developed through an inclusive multilateral process that is open to all states but that cannot be blocked by any one country.

It is urgent to start negotiations and that process needs to start in a forum that can bring in the views of diverse stakeholders and that is open to all states to participate (if they wish) on equal terms. It is not prudent to insist that discussions should only take place in forums where militarised states are consistently allowed to prevent the majority from moving forwards.

Energising international humanitarian law and international commitment to protect civilians requires action in a framework that has the potential to reflect to will

of the majority. This issue is too fundamentally important for society to continue to remain constrained by procedural exploitation.

Asociación TEDIC, Amnistía Internacional Paraguay, Centro de Estudios Heñói, CODEHUPY, Fundación Vencer y Semillas para la Democracia

[18 April 2024]

Las organizaciones no gubernamentales paraguayas abajo firmantes, comprometidas con la promoción de una cultura de paz, con los derechos humanos y firmes contra toda forma de deshumanización, señalamos cuanto sigue:

Los sistemas de armas de destrucción autónoma (SADA) son un tema de creciente preocupación en el ámbito internacional, ya que plantean serias cuestiones éticas, legales y de seguridad. Las máquinas están reemplazando a los humanos en la aplicación de la fuerza con consecuencias impredecibles y devastadoras para la humanidad. Estos sistemas, también conocidos como “armas letales autónomas” o “robots asesinos”, son sistemas de armas que están diseñados para seleccionar y atacar objetivos sin intervención humana directa una vez que han sido activados. Utilizan inteligencia artificial (IA) y algoritmos de toma de decisiones para identificar y atacar objetivos.

Es importante reconocer que antes de crear regulaciones, es necesario realizar una investigación exhaustiva sobre los sistemas de armas autónomas, sus capacidades, implicaciones éticas, riesgos y posibles consecuencias. Esto necesita involucrar a expertos en diversas disciplinas, incluidos científicos, ingenieros, juristas, filósofos, expertos en ética y representantes de la sociedad civil.

En algunos países del sur global, donde ni siquiera tenemos regulación en materia de protección de datos personales22, afectados además por el avance permanente de grupos vinculados al crimen organizado trasnacional y grupos violentos paramilitares, el despliegue de este tipo de tecnologías plantea riesgos serios para asegurar una gobernanza global de este tipo de sistemas, porque los pisos de conocimiento de los Estados son distintos.

Por eso es esencial una regulación internacional para salvaguardarnos contra los riesgos éticos, legales y de seguridad que plantean los sistemas de armas autónomos. Exigir un control humano significativo y contrarrestar la deshumanización digital, que garantice la responsabilidad y la rendición de cuentas, en cualquier uso de la fuerza, es de suma importancia. La regulación debe basarse en principios éticos sólidos que protejan los derechos humanos, minimicen el sufrimiento innecesario y preserven la dignidad humana.

En el contexto de los países del sur global, hay varias implicaciones y preocupaciones específicas sobre los sistemas de armas de destrucción autónoma:

1. **Desigualdad tecnológica:** Los países del sur global enfrentan desafíos para desarrollar o adquirir tecnología sobre armas autónomas debido a limitaciones financieras, de recursos humanos y tecnológicas. Esto podría crear una brecha tecnológica entre los países desarrollados y en desarrollo, lo que podría aumentar la dependencia de estos últimos en tecnologías militares importadas.

[22] En el caso paraguayo, la Coalición de Datos Personales viene luchando hace años por la adopción de una ley integral de protección de datos personales. https://www.datospersonales.org.py/comunicado-de-la-coalicion-de-datos-personales-en-respuesta-a-las-publicaciones-y-declaraciones-hechas-en-medios-periodisticos-sobre-el-proyecto-de-ley-de-proteccion-de-datos-personales/

2. **Aumento de la brecha de poder:** La proliferación desigual de SADA podría exacerbar las disparidades en el poder militar entre los países del sur global y las potencias mundiales. Esto podría tener implicaciones en términos de seguridad regional y global, así como en la capacidad de los países del Sur Global para proteger sus intereses nacionales.

3. **Falta de regulación:** Existe una falta de regulación internacional sólida sobre el desarrollo y el despliegue de armas autónomas. Esto plantea preocupaciones sobre el uso indiscriminado o inapropiado de tales sistemas, especialmente en conflictos en los que los países del Sur Global podrían estar involucrados. La falta de regulación también puede exacerbar la carrera armamentística y aumentar las tensiones regionales.

4. **Impacto humanitario:** Los sistemas de armas autónomas plantean serias preocupaciones sobre el cumplimiento del derecho internacional humanitario y los principios de proporcionalidad y distinción en el conflicto armado. Sin la supervisión humana adecuada, existe el riesgo de que estos sistemas ataquen a civiles o infraestructuras civiles de manera indiscriminada, lo que podría resultar en un aumento de las víctimas civiles y daños colaterales.

5. **Dinámicas geopolíticas:** La proliferación de sistemas de armas autónomas podría exacerbar las tensiones geopolíticas y aumentar la posibilidad de conflictos en regiones donde los recursos son escasos o las disputas territoriales son comunes. Los países del sur global podrían enfrentarse a una mayor presión para adquirir y desarrollar tales tecnologías como medida de disuasión o para mantener el equilibrio de poder regional. La falta de transparencia en el desarrollo y despliegue de tales sistemas podría aumentar la desconfianza entre los países y aumentar el riesgo de escalada militar.

6. **Transparencia y Divulgación:** Debería existir un requisito de transparencia y divulgación por parte de los estados y las organizaciones que desarrollen o utilicen SADA. Esto podría implicar la divulgación de información sobre el desarrollo, despliegue y operación de estos sistemas, así como la realización de evaluaciones de impacto ético y legal como momento previo a la implementación de este tipo de sistemas.

7. **Cooperación Internacional:** La cooperación internacional es esencial para abordar eficazmente los desafíos asociados con los SADA. Los estados deben trabajar juntos en la elaboración y aplicación de regulaciones, así como en la promoción de normas y estándares internacionales para mitigar los riesgos asociados con estos sistemas.

Abordar estas preocupaciones requerirá una cooperación internacional sólida y un compromiso con la ética y los derechos humanos en el desarrollo y uso de tecnologías militares avanzadas.

Como organizaciones de la sociedad civil,

- Creemos en la dignidad inherente de todas las personas.
- Creemos en la igualdad y el derecho a controlar nuestras propias identidades libres de estructuras de discriminación por motivos de raza, género, capacidad, sexualidad, estatus socioeconómico y otras etiquetas.
- Respetamos la diversidad de individuos y comunidades, y creemos que esta diversidad no debe reducirse a etiquetas fijas y valores fijos adscritos, sino que debe informar y desafiar activamente nuestro espacio ético compartido.

- Enfatizamos que es importante generar reconocimiento de que somos individual y colectivamente responsables de desarrollar y dar forma a las tecnologías que enmarcan la interacción entre nosotros.
- Creemos en la búsqueda de soluciones no violentas a los problemas y en el uso de la cooperación, la negociación y el activismo para construir las respuestas sociales que se necesitan. Envisionamos un mundo en el que la tecnología se
- desarrolla y utiliza para promover la paz, la justicia, los derechos humanos, la igualdad y el respeto a la ley.
- Asumimos la responsabilidad de cómo nuestras elecciones con respecto a la tecnología cambian las relaciones entre nosotros, individual y colectivamente.
- Promovemos la ley como un proceso social, creado por personas, para personas, y que requiere el compromiso social para garantizar que funcione para ayudar a los vulnerables, no a los que ya son poderosos. Promovemos el empoderamiento
- de las personas como autores y controladores de la tecnología y nos resistimos a la mecanización de nuestras relaciones entre nosotros, como individuos y a través de estructuras políticas.

Por lo tanto,

- **ALENTAMOS** al Estado Paraguayo a negociar un instrumento internacional vinculante sobre sistemas de armas autónomas que rechace la automatización de la matanza y garantice un control humano significativo sobre el uso de la fuerza.
- **INSTAMOS** a la activación de procesos internos dentro del Estado Paraguayo que justamente permitan un mayor grado de desarrollo y entendimiento institucional sobre los límites y desafíos de las tecnologías digitales para diversos fines, incluido aquellos relacionados a la seguridad interna y externa, y la necesidad base de una ley integral de protección de datos personales.
- **HACEMOS** un llamamiento a los Estados de todo el mundo para que alienten a los gobiernos a iniciar negociaciones sobre un tratado internacional sobre sistemas de armas autónomas.

El posicionamiento favorable de los países ayudará a salvaguardar contra los riesgos éticos, legales y humanitarios que plantea la autonomía en los sistemas de armas y promoverá un mundo más pacífico ahora y para las generaciones venideras.

Center for AI and Digital Policy

[25 May 2024]

We write on behalf of the Center for AI and Digital Policy (CAIDP), an independent global non-profit research organization based in Washington, DC, established to promote a better society – fairer, more just – a world where technology promotes broad social inclusion based on fundamental rights, democratic institutions, and the rule of law. CAIDP serves as AI policy expert to the Council of Europe Committee on AI, the OECD, the European Parliament and UNESCO.

In our input to the U.N. Interim Report, "Governing for Humanity,"[23] we urged U.N. members to commence negotiations on an international treaty to regulate autonomous weapons systems, prohibit LAWS, establish stringent safeguards against

[23] CAIDP Statement, *UN Interim Report, UN Interim Report "Governing for Humanity"* (30 Mar, 2024).

the integration of AI-enabled autonomous systems with weapons of mass destruction, and enshrine the principle of human responsibility for the use of lethal force.

Our overarching recommendations under 78/241 are as follows:

The U.N. General Assembly must pass a resolution to initiate the process of negotiatingandadoptinganinternational legallybinding treaty tobanLAWS. This treaty would preserve human responsibility and accountability for any use of lethal force, and enshrine rigorous safeguards prohibiting the integration of AI-enabled autonomous systems with weapons of mass.

Human Rights:

Conflicts in Ukraine and Gaza show the extreme risks to human rights and security posed by the use of AI in warfare. Resolution 78/241 affirms that international law applies to autonomous weapons systems, particularly the U.N. Charter, international humanitarian law, and international human rights law.

In 2020 Roadmap for Digital Cooperation, the U.N. Secretary-General stated that "Digital technologies provide new means to advocate, defend and exercise human rights, but they can also be used to suppress, limit and violate human rights," noting with emphasis lethal autonomous weapons and facial recognition."24

Concerns over killer robots also arose at the 75th U.N. Assembly.25 Later, at the 2022 UN General Assembly, 70 countries endorsed a joint statement:

"We are committed to upholding and strengthening compliance with International Law and International Humanitarian Law, including through maintaining human responsibility and accountability in the use of force."26

Furthermore, UN Secretary-General and President of the ICRC jointly called on States to

"**establish specific prohibitions and restrictions on autonomous weapon systems**, to shield present and future generations from the consequences of their use. In the current security landscape, setting clear international red lines will benefit all States."27

Safety:

Stuart Russell warns that "loitering" AI missile systems can have both autonomous and remotely operated modes, making it difficult to know whether a human or the machine carried out any given attack. 28 Further, a single individual can

[24] UN Secretary General, Report – Roadmap for Digital Cooperation (Jun 2020), https://www.un.org/en/content/digital-cooperationroadmap/assets/pdf/Roadmap_for_Digital_Cooperation_EN.pdf); see also UN Secretary General, The Highest Aspiration - A Call to Action for Human Rights (2020) https://www.un.org/sg/sites/www.un.org.sg/files/atoms/files/The_Highest_Asperation_A_Call_To_Action_For_Human_Right_English.pdf).

[25] Stop Killer Robots, 75th UN Assembly (Oct. 30, 2020), https://www.stopkillerrobots.org/2020/10/un-diplomacy/.

[26] United Nations (UN) General Assembly, First Committee, Joint Statement on Lethal Autonomous Weapons Systems First Committee, 77th United Nations General Assembly Thematic Debate – Conventional Weapons (Oct. 21, 2022), https://estatements.unmeetings.org/estatements/11.0010/20221021/A1jJ8bNfWGlL/KLw9WYcSnnAm_en.pdf.

[27] Joint call by the United Nations Secretary-General and the President of the International Committee of the Red Cross for States to establish new prohibitions and restrictions on Autonomous Weapon Systems (Oct 5, 2023) https://www.icrc.org/en/document/joint-call-un-and-icrc-establish-prohibitions-and-restrictions-autonomous-weapons-systems.

[28] Stuart Russell, "AI Weapons: Russia's War in Ukraine Shows Why the World Must Enact a Ban," *Nature* 614 (2023): 620-623. doi: 10.1038/d41586-023-00511-5. Loitering systems such as the Shahed, Kargu, Israel's Harpy drone, Russia's Lancet missile, and the Chinese Ziyan Blowfish A3.

launch an unlimited number of weapons. This type of weaponry should be classified as weapons of mass destruction.

Waging war through autonomous weapons will not protect military lives.

New AI-based weapons systems are probabilistic, introducing a degree of uncertainty. It remains unclear whether there is meaningful human control of targeting decisions.[29] Further, these systems can be hacked, increasing the likelihood of accidents and preventable escalation of conflict. Professor Lucy Suchman highlights that the "automation of data analysis under the sign of AI can only serve to exacerbate military operations that are at once discriminatory, in their reliance on profiling and other techniques of prejudicial classification."30

We urge adoption of fundamental obligations for AI systems set out in the Universal Guidelines for AI: **Obligations of Accountability** refers to ongoing need to assess the risks during design, development, and implementation. **Termination Obligation**31 presumes systems must remain within human control. If that is no longer possible, the system should be terminated. **Obligations of Public Safety** requires institutions assess public safety risks that arise from deploying AI systems and implement safety controls.

Ethics:

Algorithms are incapable of determining what is legal or ethical. The principle of human responsibility and accountability must be preserved. "Human life would be devalued if robots take life-or-death decisions, raising moral and justice concerns"32

In 2023, the U.N. Secretary-General's New Agenda for Peace called for the prohibition of LAWS. UN has a clear mandate to unite all stakeholders around the collective mitigation of long-term global risks. **Voluntary commitments are insufficient and provide no restraint.**

In "Killer Robots,33" Robert Sparrow warns that conditions for just wars cannot be met by autonomous weapons systems and that it "would be unethical to deploy such systems in warfare."

"The same pressures that are pushing for the deployment of military robots in the first place also push for them to be given control over which targets to attack and when to open fire. Indeed, as AI technology improves, a human operator may prove not merely redundant but positively disadvantageous in such systems […] time available to make survival critical decisions will often be less than the time required for a human being to make them."34

Legal:

The main components of a U.N. legally binding instrument should be proportionality, human oversight, human responsibility, risk assessment, and mitigation measures should be among the main components of the Treaty.

CAIDP's annual AI & Democratic Values Index (AIDV) highlights strong support among democratic nations for limits on LAWS. AIDV Index notes "one of

[29] CAIDP Statement, On the Occasion of the 75th Anniversary of the Universal Declaration of Human Rights (Dec 10, 2023).
[30] Lucy Suchman, "Algorithmic warfare and the reinvention of accuracy," *Critical Studies on Security*, 8:2, (2020): 175-187, DOI: 10.1080/21624887.2020.1760587.
3 Ibid.
1 Russell (2023).
3 Robert Sparrow, "Killer Robots," *Journal of Applied Philosophy*, Vol 24, No.1, (2007): 62–77.
2 Sparrow (2007).
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the first AI applications to focus the attention of global policymakers was the use of AI for warfare." 35 More than 60 countries signed the "Political Declaration on Responsible Military Use of AI and Autonomy," noting "military use of AI capabilities needs to be accountable, including through such use during military operations within a responsible human chain of command and control."36

Civil Affairs Institute

[20 May 2024]

Introduction: The advancement and deployment of autonomous weapon systems (AWS) in conflicts present critical legal, ethical, humanitarian, and security challenges. It is essential that the international community adopts a legally binding framework to regulate these systems. This document consolidates key perspectives and recommendations for the Secretary-General's report.

The Russian invasion of Ukraine in February 2022 has significantly influenced the landscape of modern warfare, with both sides utilizing drones extensively. This conflict has accelerated the development of potential autonomous weapons, highlighting the urgent need for international regulation to prevent further escalation and ensure compliance with humanitarian principles.

The context of the war in Ukraine is crucial for the way forward for autonomous weapons in Europe and the world. There is a need for global awareness and attention to the potential temptation to use artificial intelligence in military solutions, currently unregulated by international law.

Legal and Ethical Concerns:

1. Meaningful Human Control: AWS should be designed to ensure that humans retain significant control over all decisions involving the use of force. This includes human operators making crucial decisions regarding targeting, engagement, and the context in which force is applied. Systems that do not allow for such control should be banned.
2. Accountability: AWS pose significant challenges in attributing responsibility for unlawful actions. Legal frameworks must ensure clear accountability mechanisms for violations of international law, preventing an accountability gap that undermines justice and human rights.
3. Human Dignity: Delegating life-and-death decisions to machines undermines human dignity and violates ethical norms. Machines lack the capacity for moral judgment and compassion, which are essential in making decisions about the use of lethal force.

Ethical Context and Asimov's Laws:

The deployment of AWS contradicts the ethical principles outlined by Isaac Asimov in his laws of robotics, particularly the first law, which states that a robot may not harm a human being or, through inaction, allow a human being to come to harm. Implementing AWS, which can potentially cause harm autonomously, starkly contrasts these ethical guidelines and poses severe moral dilemmas.

[3] CAIDP, AI and Democratic Values Index (2023), https://www.caidp.org/reports/aidv-2023.
[5] U.S. Department of State, "Political Declaration on Responsible Military Use of Artificial
[3] Intelligence and Autonomy," Bureau of Arms Control, Deterrence, and Stability (Nov 9, 2023),
[6] https://www.state.gov/political-declaration-on-responsible-military-use-of-artificial-intelligence-and-autonomy/.

Humanitarian and Security Risks:

1. Civilian Harm: AWS pose a high risk of harm to civilians due to their inability to reliably distinguish between combatants and non-combatants. This increases the potential for unlawful killings and excessive force, violating principles of international humanitarian law (IHL).
2. Proliferation: The ease of replication and deployment of AWS raises concerns about their proliferation, particularly to non-state actors and regimes with poor human rights records. This could destabilize regions and escalate conflicts. Arms
3. Race: The development of AWS could spur an arms race, leading to increased global instability and lowering the threshold for entering conflicts. The rapid, autonomous decision-making capabilities of AWS could exacerbate crises, making conflicts more volatile and harder to control.

Prohibitions and Regulations:

1. Two-Tier Approach: A comprehensive treaty should combine prohibitions on certain AWS and regulations on others to ensure they operate under meaningful human control. Specifically:

    o Prohibitions: Ban AWS that autonomously select and engage targets without meaningful human intervention, especially those targeting humans directly.

    o Regulations: Ensure AWS that are not prohibited are strictly controlled through design, testing, and operational procedures that guarantee compliance with IHL and human rights standards.

Human Rights Implications:
1. Right to Life: AWS must comply with the right not to be arbitrarily deprived of life, ensuring that force is used only when necessary, proportionate, and as a last resort. The absence of human judgment in AWS challenges compliance with these principles.

2. Non-Discrimination: AWS must be free from algorithmic biases that could lead to discriminatory practices, particularly against marginalized groups. Strong measures are needed to eliminate biases in data and decision-making processes.

Conclusion: The adoption of a legally binding instrument on AWS is urgent to address the myriad challenges these systems pose. The international community must act decisively to regulate AWS, ensuring the protection of human rights and maintaining meaningful human control over the use of lethal force.

ECPAT Guatemala, Perú por el Desarme, the Feminist AI Research Network - Latin America Chapter, Anderson Henao and Jesús Martínez

[25 April 2024]

This is a summary of a document that emerged from a collaborative effort with experts who are members of ECPAT Guatemala (María Eugenia Villarreal); Perú por el Desarme (Gisela Luján); the Feminist AI Research Network - Latin America Chapter (Paola Ricaurte, Mexico/Ecuador, Mariana Díaz and Wanda Muñoz, Mexico); and Anderson Henao (Colombia), Jesús Martínez (El Salvador), experts in the rights of persons with disabilities and international humanitarian law.

The purpose of this summary is to encourage further reflection on both the national and international levels regarding the challenges inherent to autonomous weapons systems (AWS), underlining the urgent need to begin negotiations to establish a binding legal framework in a truly inclusive and representative forum. The full, original text in Spanish with references can be found here.

Our report consists of two sections: 1) Challenges and concerns with respect to AWS from humanitarian, legal, and ethical perspectives; and 2) Ways to address these challenges.

1. Challenges and concerns with respect to autonomous weapons systems

1.1 Autonomous weapons will have a disproportionate impact on groups and populations with marginalised identities and characteristics, particularly women, Afro-descendant/racialised persons, indigenous/native peoples, children, and persons with disabilities, among others.

- There are several examples from the civilian sector that show that not only do emerging technologies pose risks, but that they have already caused damage and violated human rights.
- The use of these technologies in weaponry will likely cause disproportionate damage to the aforementioned populations.
- Understanding the difficulties and the differentiated negative impact of artificial intelligence systems is critical to analysing AWS, since these are the types of problems that could be replicated with the use of AI and emerging technologies in the military sector.
- Additionally, it is important to consider the risk of transferring autonomous technologies to forces of law and order, which could contribute to racial profiling in surveillance, and even to political repression.

1.2 Autonomous weapons will increase the barriers to accessing justice and compensation for victims of violations of human rights and International Humanitarian Law.

- The characteristics of AWS —including those related to the lack of predictability and explainability of emerging technologies and to applications of artificial intelligence, among others— will further hinder accountability, reparations, compensation, and more generally, access to justice, particularly for marginalized groups already face difficulties in this area, and are the most affected by AI bias.
- Remote war already has a disproportionate impact on certain groups. Not knowing when or where an attack will occur nor who might be a target is affecting different groups in different ways, and those effects are exacerbated in persons with a combination of marginalised identities and characteristics.

1.3 Autonomy in weapons systems is increasing and is already being used, a case in point being Israel in Gaza.

- Emerging technologies are already having a specific negative and differentiated impact in conflict zones. Similarly, autonomy in targeting and attack decisions is increasing.
- The most recent and flagrant case is unfolding in the context of the destruction of Gaza by Israel37.

[37] *Report of the Special Rapporteur on the situation of human rights in the Palestinian territories occupied since 1967, Francesca Albanese*: *Anatomy of a Genocide:* UN Doc. A/HRC/55/73

- During the first months of the campaign, the Israeli army used 25,000 tons of explosives on countless buildings, many of which were identified using artificial intelligence. What is more, the Israeli government's use of AI-driven technology has led to attacks against 11,000 targets in Gaza since the beginning of the most recent conflict on October 7, 2023.
- Two highly troubling examples of AI-driven technology are the Habsora ("Gospel") and Lavender systems, which use AI and automation to identify and generate targets en masse.

2. Ways of addressing the challenges and concerns of autonomous weapons systems

2.1 International Humanitarian Law and International Human Rights Law apply to autonomous weapons systems (AWS), and a legally binding instrument (LBI) specifically addressing autonomy in weapons systems is needed.

- Currently, there is no legally binding international framework specific to such systems that ensures meaningful human control over the use of force. This is a serious legal vacuum for two reasons: a) It allows the development and use of weapons with autonomy in critical functions like targeting and engaging, and b) It hampers victims (affected persons, families, and communities) from seeking accountability, guarantees of non-repetition, and compensation for damages.
- From our perspective, the only credible way to address autonomy in weapons systems is through adopting a new LBI. The fundamental goal would be to regulate the autonomy of weapons systems in keeping with International Human Rights Law, International Humanitarian Law, and International Criminal Law.

2.2 Characteristics of the legally binding instrument needed to respond to the challenges of AWS.

- A LBI on AWS must include clear prohibitions and regulations, aim to maintain meaningful human control over force, and include effective implementation, monitoring, and accountability measures.
- This regulatory instrument must prohibit those weapons systems that: a) would delegate targeting and attack decisions to autonomous functions; b) would target human beings and civilian infrastructure; and c) would profile humans as targets.
- Regulations must refer to autonomy in other functions. Said instrument must
- recognize the differentiated and disproportionate impact that these weapons would have on different population groups.

2.3 Characteristics of the forum where said instrument should be negotiated.

- United Nations General Assembly (UNGA) Resolution A/C.1/78/L.56 is clear evidence of the majority opinion —146 States— on the "urgent need for the international community to address the challenges and concerns raised by autonomous weapons systems".
- This majority voice could only make itself heard in a democratic and participatory space such as the UNGA.
- However, this has not been possible in the CCW —where the topic of AWS has been addressed for more than a decade— among other factors, because that forum allows the exercise of a veto under disguise of consensus.

(Advance unedited version), 25 March 2024.

- It is necessary to shift the deliberations on AWS to other forums, particularly the UNGA, whose rules facilitate more equal participation of a greater number of countries.
- Recent regional meetings (Costa Rica, Trinidad and Tobago, the Philippines, Sierra Leone) show that it is possible to make progress in inclusive forums, and that it is important to create spaces that truly allow, reflect, and value diverse perspectives.
- Furthermore, it is essential that all forums on AWS take specific measures to ensure the meaningful, free, and informed participation of civil society in all its diversity, particularly organisations representative of marginalised groups. It is
- necessary to advocate the inclusion of military and defence topics in UN work on artificial intelligence and other technologies, and in the framework of other Conventions on Human Rights and regional bodies.

Concluding thoughts

Delaying the start of negotiations for a legally binding instrument on autonomous weapons systems, ensuring human control over significant force use and prohibiting systems attacking humans, only benefits highly militarized countries or military industries continuing to develop, test, and deploy such technologies without regulation.

We consider it unacceptable that a minority of countries can obstruct the start of these negotiations, which already harm those affected by increased autonomy in these weapons, as seen in Gaza.

Future of Life Institute

[23 May 2024]

The Future of Life Institute (FLI) is a global nonprofit working primarily on the governance of emerging technology. The organisation is the UN Secretary-General civil society co-champion for Artificial Intelligence under the UN's Digital Roadmap and is best known for developing the Asilomar AI principles. FLI has long promoted governance of autonomous weapons systems (AWS) since the organisation's founding. FLI is recently most known for having published an open letter, signed by over a thousand leading AI researchers, that sparked a global public debate on the development of advanced artificial intelligence.

Autonomous weapons systems are ethically wrong: machines and algorithms should not make life and death decisions. It is unclear who can be held accountable for potential war crimes, extrajudicial killings, and unlawful use. AWS present tremendous global security risks: they raise the risk of unintended escalation and flash wars and lower the threshold for war. They can proliferate in the wrong hands. They could be used as weapons of mass destruction (swarms), for targeted killings, and can create instability leading to an increased likelihood of nuclear weapons being used.

Over 115 states explicitly back new binding international law. FLI strongly supports the UN Secretary-General and International Committee of the Red Cross' (ICRC) urgent call for states to adopt a legal treaty to prohibit and regulate autonomous weapons systems by 2026. We call upon states to commence treaty negotiations as soon as possible.

FLI, in line with the ICRC's recommendations for a legally binding instrument, supports a two-tier approach, including:

- Prohibitions on unpredictable autonomous weapons systems and anti-personnel autonomous weapons systems.
- Positive obligations towards all other autonomous weapons to ensure the maintenance of meaningful human control, including measures such as:
    - o Restricting targets of the AWS to only those which are military objectives by nature.
    - o Limiting the location where, time that and situation in which the AWS is operating, including to avoid concentrations of civilians or civilian objects.
    - o Limiting the number of engagements that the AWS can undertake.
    - o Ensuring, to the maximum extent feasible, the ability for a human user to effectively supervise, and to, in a timely manner, intervene, and, where appropriate, deactivate operation of the AWS.

Geneva Centre for Security Policy

[21 May 2024]

1. Global conflicts are accelerating the development of LAWS, with potentially severe strategic consequences

The past 10 years have brought little by way of international regulatory frameworks on Lethal autonomous weapon systems (LAWS) but have brought us increasingly close to their full realisation. As of today, the technology for a weapon to track, select, and engage a target autonomously after the point of activation, with no further human intervention, already exists.38 Whether or not current highly autonomous and AI enabled weapon capabilities neatly fit within an agreed upon definition of "LAWS", or whether or not every stage of the weapon's cycle was completely fully autonomously without human intervention should not detract from the reality that increasingly autonomous weapon systems (with and without AI) are already on today's battlefields, and are raising many of the legal, ethical, and security concerns posed by LAWS.39

Technological advancements in this space are furthermore being accelerated by a worsening global security environment and the ensuing technological competition it generates. Unfortunately, LAWS are not only technologically possible today, but the opportunities for their use are also multiplying. The battlefields of Ukraine and Gaza are for example both increasing the interest in, and fielding of, autonomous capabilities as well as raising many of the legal and ethical concerns linked to autonomy on the battlefield, posing questions over automation bias, human control and agency over the use of force.40

[38] O'Neill, Paul, Cranny-Evans, Sam, Ashbridge, Sarah. "Assessing Autonomous Weapons as a Proliferation Risk: The Future has Not Been Written." *Royal United Services Institute.* February 2024. https://static.rusi.org/future-laws-occasional-paper-feb-2024.pdf.

[39] Rickli, Jean-Marc, Mantellassi, Federico. "The War in Ukraine: Reality Check for Emerging Technologies and the Future of Warfare." *Geneva Centre for Security Policy.* Geneva Paper No. 34. April 2024. https://dam.gcsp.ch/files/doc/geneva-paper-34-24.

[40] Renic, Niel, Schwarz, Elke. "Crimes of Dispassion: Autonomous Weapons and the Moral Challenge of Systematic Killing." *Ethics and International Affairs.* Vol 37 (3). 2023, pp. 321-343. https://doi.org/10.1017/S0892679423000291; Davies, Harry, McKernan, Bethan, Sabbagh, Dan. "'The Gospel': How Israel uses AI to select bombing targets in Gaza." *The Guardian.* December 1, 2023. https://www.theguardian.com/world/2023/dec/01/the-gospel-how-israel-uses-ai-to-select-bombing-targets.

The proliferation of such capabilities and their – mostly dual-use – enabling technologies has resulted in a fundamentally changed strategic environment compared to when international discussions began in 2014, worsening the consequences of inaction with respect to the regulation of LAWS. A wider array of state and non-state actors are now capable of developing and deploying increasingly autonomous capabilities, and increasingly willing to do so. Absent regulation, and a global governance framework, the current strategic environment will continue to incentivise and accelerate the development and deployment of such weapon systems, leaving an increasingly small space for regulation.

The question of human control

2.

It has become a well-established norm that human control is a necessary component of both LAWS' ethical and safety dimensions, and of their legal compliance, especially with regards to IHL.41 However, lack of agreement persists behind what is meant by "human control", what it looks like in practice, and what amounts to sufficient levels of it. This lack of clarity is one of the biggest challenges to building effective regulatory frameworks and an important area to elucidate for the ethical, safe, and legally compliant development and deployment of autonomy on battlefields.

The expressed intent by states to ensure human control over LAWS and their effects, could however run counter to the desire to accelerate the tempo of military operations and to increasingly rely on complex algorithms to enable the various functions of LAWS.42 Indeed, research has repeatedly shown that humans have a tendency to offload cognitive and moral loads to highly autonomous machines, especially in times of high stress, cognitive workload and compressed timelines.43 It is therefore not unreasonable to envision a near-future where humans can no longer realistically maintain the contextual understanding, cognitive and physical abilities necessary for meaningful control of weapon systems.44 As states increasingly turn to complex AI systems to enable LAWS, the capacity for humans to be meaningfully engaged will increasingly be challenged.

It is primordial for states to define the processes, rules, as well as technical requirements, which would enable effective human control over LAWS. This should include a clarification as to what restrictions in design, capabilities, and operational parameters this would inevitably entail, ensuring states cannot resort to instances of so-called "nominal human control". *In fine*, this would allow for the maintaining of moral and ethical agency over LAWS and ensure their safe, legally compliant, development and use.

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41 Report of the 2023 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, 24 May 2023, GGE.1/2023/2, https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/CCW_GGE1_2023_2_Advance_version.pdf.

42 Scharre, Paul. "The Perilous Coming Age of AI Warfare." *Foreign Affairs.* February 29, 2024. https://www.foreignaffairs.com/ukraine/perilous-coming-age-ai-warfare?check_logged_in=1.

43 Schwarz, Elke. "The (im)possibility of meaningful human control for lethal autonomous weapon systems." *Humanitarian Law and Policy.* August 29, 2018, https://blogs.icrc.org/law-and-policy/2018/08/29/im-possibility-meaningful-human-control-lethal-autonomous-weapon-systems/; Johnson, James. "Automating the OODA Loop in the Age of Intelligent Machines: Reaffirming the Role of Humans in Command-and Control Decision-making in the Digital Age", Defence Studies, Vol. 23(1), 2023, pp.43-67, https://doi.org/10.1080/14702436.2022.2102486.

44 Schwarz, Elke. 2018.

3. The way forward

The most realistic way of delivering on the UNSG and ICRC president's call to achieve a legally binding document on LAWS by 2026 is through the Group of Governmental Experts (GGE) created by the High Contracting Parties to the Convention on Certain Conventional Weapons (CCW). While consensus requirements have somewhat impeded the work of the group thus far, the group's convergence towards the so-called "two-tier approach" offers the most realistic chance of achieving a legally binding prohibition in the relatively near future.

Alongside the work of the GGE, states must continue to speak, exchange, and pronounce on the broader issue of the use of artificial intelligence in the military domain. Dialogue at the regional, plurilateral, and bilateral level about how humans can remain in control of weapon systems will be important confidence building measures and help in the developing of codes of conduct and guardrails. The UN should support these endeavours, for example through its regional disarmament centres, acting as bridge to the other discussions on AI governance, helping to bring across ideas relevant to the disarmament and international security community.

Resolution 78/241 creates the possibility of a new track on LAWS. If the GGE fails to reach consensus on a legally binding instrument, then it is likely that a large majority of states will support starting negotiations in the General Assembly. Creating a parallel process now, whilst the GGE is still working, is unlikely to achieve the desired outcome of a legally binding prohibition ratified by all the major states. For now, the UNSG could consider recommending an annual First Committee thematic session devoted to the military use of AI. He could also consider recommending an eighth cluster for First Committee, entitled 'The use of artificial intelligence in the military domain'. This would allow states to bring other resolutions on the topic, as the issue is broader than just LAWS.

Human Rights Watch

[6 May 2024]

Human Rights Watch appreciates the opportunity to submit its views and recommendations for consideration by the United Nations secretary-general in response to Resolution 78/241 on "Lethal autonomous weapons systems" adopted by the UN General Assembly on 22 December 2023.

I. Background Human Rights Watch is an international nongovernmental organization (NGO) that conducts research and advocacy to uphold human dignity and promote human rights and international human rights law across the globe. In October 2012, Human Rights Watch co-founded the Campaign to Stop Killer Robots, which advocates for the negotiation and adoption of an international treaty to prohibit and restrict autonomous weapons systems.

II. Challenges and Concerns Raised by Autonomous Weapons Systems

This submission is based on and informed by our years of research and advocacy on this issue. Since 2012, Human Rights Watch has published more than two dozen reports on autonomous weapons systems, most in conjunction with the International Human Rights Clinic (IHRC) at Harvard Law School.

In November 2012, Human Rights Watch and IHRC released "Losing Humanity: The Case against Killer Robots," the first major civil society report to examine the dangers of removing human control from the use of force. This report –

and later ones – found that allowing machines to select and attack targets without further human intervention would be incompatible with fundamental provisions of international humanitarian law, including the principles of distinction and proportionality.45

Human Rights Watch and IHRC have detailed the significant hurdles to assigning personal accountability to the actions undertaken by autonomous weapons systems under both criminal and civil law.

Autonomous weapons systems would also contravene basic principles of humanity and the dictates of public conscience established by the Martens Clause under international humanitarian law.

Autonomous weapons systems raise serious concerns under international human rights law because they are likely to be used in law enforcement operations as well as situations of armed conflict. They raise concerns under the foundational rights to life and to remedy.

Autonomous weapons systems would undermine the principle of dignity, a legal and moral concept, which implies that everyone has a worth deserving of respect. As inanimate objects, machines cannot comprehend or understand the value of human life or the significance of its loss. Allowing them to make life-and-death determinations thus strips people who are being targeted of their human dignity. In the process of determining whom to kill, autonomous weapons systems boil human targets down to data points.

Security concerns include the risk of an arms race, the threat of autonomous weapons systems reaching the hands of states or non-state actors with no regard for international law, and a lowering of the threshold to war. Because autonomous weapons systems would have the power to make complex determinations in less structured environments, their speed could lead armed conflicts to spiral rapidly out of control.

III. Ways to Address the Challenges and Concerns Raised by Autonomous Weapons Systems

A Legally Binding Instrument

Human Rights Watch calls for the urgent negotiation and adoption of a legally binding instrument to prohibit and regulate autonomous weapons systems. Clear, strong, and global rules are essential. Only new international law will suffice to deal with the dangers raised by autonomous weapons systems.

A legally binding instrument should be accompanied by national legislation and other measures to implement and enforce the treaty's provisions at the domestic level.

Essential Treaty Elements

Human Rights Watch, IHRC, and others have outlined the essential elements for an international treaty on autonomous weapons systems, following precent provided in previous disarmament treaties, international human rights instruments, and international humanitarian law, which all offer models for the proposed provisions.46

[45] Please see our full submission for links to relevant reports by HRW and IHRC: https://www.hrw.org/news/2024/05/06/submission-united-nations-secretary-general-autonomous-weapons-systems.

[46] HRW and IHRC, *New Weapons, Proven Precedent: Elements of and Models for a Treaty on Killer Robots*, October 20, 2020, https://www.hrw.org/report/2020/10/20/new-weapons-proven-precedent/elements-and-models-treaty-killer-robots.

A legally binding instrument should apply to all weapons systems that select and engage targets based on sensor processing, rather than human inputs. While the treaty's restrictions will focus on a narrower group of systems, this broad scope will help future-proof the treaty and ensure that no systems escape review.

The new treaty should include: 1) a general obligation to maintain meaningful human control over the use of force; 2) prohibit weapons systems that autonomously select and engage targets and by their nature pose fundamental moral and legal problems; and 3) include specific positive obligations that aim to ensure that meaningful human control is maintained in the use of all other systems that select and engage targets.

The concept of meaningful human control is fundamental to such an instrument because most of the concerns arising from autonomous weapons systems are attributable to the lack of such human control. The concept of meaningful human control should comprise a combination of components, such as, but not necessarily limited to: 1) Decision-making components, for example, the ability to understand how the system works; 2) Technological components, including predictability and reliability, and 3) Operational components, notably restrictions on time and space in which the system operates.

A new treaty should prohibit the development, production, and use of systems that inherently lack meaningful human control over the use of force. It should also prohibit autonomous weapons systems that target people in order to prevent the use of weapons systems that strip people of their dignity, dehumanize the use of force, or lead to discrimination. It should cover weapons that always rely on data, like weight, heat, or sound, to select human targets. These prohibitions would help protect civilians and other non-combatants in armed conflict, and reduce infringements of human rights during law enforcement operations. They should apply "under any circumstances" to ensure that the provisions cover times of peace and war.

The Way Forward

In terms of negotiating fora, the Convention on Conventional Weapons (CCW) has run its course after providing a forum for useful discussions and the development of support for a legally binding instrument over the years. It is time to step outside of that forum to one that can aim higher, move faster, and be more inclusive of countries that are not party to the CCW as well as of international organizations and civil society. Disarmament precedent shows that stand-alone and UN General Assembly-initiated processes are viable options in which committed, like-minded states, in partnership with other stakeholders, can produce strong treaties in 15 months or less.

The world is approaching a tipping point on this topic as support for negotiating a legally binding instrument on autonomous weapons systems reaches unprecedented levels.47 The Stop Killer Robots campaign's Automated Decision Research project identifies more than 110 countries that have expressed their desire through national and group statements for a new international treaty on autonomous weapons systems.48

Human Rights Watch affirms our strong commitment to work with urgency and with all interested stakeholders for an international legal instrument to ban and regulate autonomous weapons systems.

[47] More than 1,000 representatives from 144 countries and international organizations, industry, academia, and civil society attended the largest international conference ever held on autonomous weapons systems in Vienna on April 29-30. See the chair's summary: https://www.bmeia.gv.at/fileadmin/user_upload/Zentrale/Aussenpolitik/Abruestung/AWS_2024/Chair_s_Summary.pdf.

[48] Automated Decision Research, https://automatedresearch.org/state-positions/.

International Committee for Robot Arms Control

[24 May 2024]

The International Committee for Robot Arms Control (ICRAC) values the opportunity to submit its views to the United Nations Secretary-General with respect to Resolution 78/241 on Lethal Autonomous Weapon Systems (AWS). Founded in 2009, ICRAC is an international committee of experts in robotics technology, artificial intelligence, robot ethics, international relations, international security, arms control, international humanitarian law, international human rights law, and philosophy of technology. We have published extensively on the ethical, legal, technical, and security challenges of AWS, on the question of meaningful human control, and on military escalation at speed. Based on our expertise, we are particularly concerned that military robotic systems will lead to more frequent, less restrained, and less accountable armed conflict. In light of these risks, we call for an international treaty to prohibit and restrict AWS.

We note the threat that AWS pose to compliance with international humanitarian law as well as international human rights, particularly the right to life and the human right to dignity. We thus support calls for a legally-binding instrument to prohibit and restrict the use of AWS, urging the Secretary-General to initiate a forum within the UN General Assembly that can include all States, cover autonomy and automation in the use of all weapons, and address international humanitarian law as well as human rights concerns.

Scope

In accordance with the International Committee of the Red Cross (ICRC), we understand an AWS as one that, potentially after initial activation or launch by a human, selects targets based on sensor data and engages targets without human intervention. We endorse the recommendations of the ICRC for a two-tiered approach that prohibits unpredictable systems and systems that explicitly target humans, while strictly regulating the use of autonomy in all other systems for the command, control, and engagement of lethal force. This includes restrictions on the time, space, scope, and scale of operations of such systems, as well as the types of targets and situations in which they may be used. In particular, we strongly agree that the only permissible targets of such systems should be military objects by nature, and never civilian or dual-use targets, which should always require human judgment.

More discussion is needed on the appropriate forms and regulation of the human-machine interaction in complex command-and-control systems. As computers and AI collect and automatically analyze more and more data, greater clarity is needed on what constitutes meaningful human control in the context of automated target generation/identification and how to ensure respect and responsibility for international law when such systems are used.

Key Challenges to Global Peace and Security

- Uncontrolled Escalation and Missed Opportunities for De-escalation and Diplomacy

The technical characteristics of AWS pose a considerable risk in enabling uncontrolled escalation at speed. Escalation from crisis to war, or escalating a conflict to a higher level of violence, could come about by erroneous indications of attack or a simple sensor or computer error. Mutual interaction between the control programs could not be tested in advance. The outcome of this interaction would be intrinsically unpredictable, and fast escalation is possible and likely. Unpredictable systems will give leaders false impressions of their capabilities, leading to overconfidence or

encouraging preemptive attacks. Moreover, automated attacks, responses, and escalations will make it more difficult for leaders to interpret the intentions, decisions, and actions of their adversaries, and will limit their options for response. The overall effect will be to close off avenues and opportunities to avoid conflicts, to de-escalate conflicts, and to find means to end hostilities.

- Moral responsibility

No machine, computer, or algorithm is capable of recognizing a human as a human being, nor can it respect humans as inherent bearers of rights and dignity. A machine cannot even understand what it means to be in a state of war, much less what it means to have, or to end, a human life. Decisions to end human life must be made by humans in order to be morally justifiable. These are responsibilities of unavoidable moral weight that cannot be delegated to machines or satisfied by the mere inclusion of humans in the writing of computer programs. While accountability for the deployment of lethal force is a necessary condition for moral responsibility in war, accountability alone is not sufficient for moral responsibility. This also requires the recognition of the human, respect for the human right to life and dignity, and reflection upon the value of life and justifications for the use of violent force.

- Meaningful Human Control

Much hinges on the degree to which AWS can be *meaningfully* controlled by humans. Scientific scholarship on human psychology suggests that humans experience automation bias, a condition that cognitively hinders their ability to develop sufficient contextual understanding to intervene in fully autonomous systems that operate at speed. In order to safeguard *meaningful* human control (not merely functional control) over AI-enabled AWS, those involved in operating or deciding to deploy AWS should have full contextual and situational awareness of the target area at the time of a specific attack. They must also be able to perceive and react to changes or unanticipated situations that arise; ensure active and deliberate participation in the action; have sufficient training and understanding of the system and its likely actions; have adequate time for meaningful control and have the means and knowledge required for a rapid suspension of an action. For many AWS this is not possible. Meaningful human control is fundamental to the laws of war and the ethics of war.

Moving Forward: A Treaty to Prohibit and Regulate the Use of AWS

We support calls from States, as well as the UN Secretary-General and the President of the ICRC, for an international legally-binding treaty prohibiting and regulating the use of AWS.

Such a treaty would obligate States to adhere to prohibitions and regulatory limitations for AWS. Codes of conduct and political declarations are not enough for systems that pose such grave risks to global peace and security. The treaty must apply to the automated control of all weapons, requiring meaningful human control in compliance with substantive regulations for the use of force in all cases. It should apply to all military uses of AWS and systems that generate or select targets, as well as to all police, border security, and other civilian applications that automate the use of force.

The treaty should prohibit AWS that are ethically or legally unacceptable, such as systems whose operation or effects cannot be sufficiently understood, predicted, or explained; AWS that cannot be used with meaningful human control; and AWS designed to target human beings.

The treaty should include positive obligations for States to use AWS that are permitted only within the bounds of clearly stipulated regulations that ensure adherence to international human rights and the key principles of international

humanitarian law. We believe that an emerging norm around meaningful human control can be articulated and codified through a treaty negotiation in a process that includes all States, civil society, and industry and technical experts. We urge the Secretary-General to advance the creation of such a forum within the General Assembly and look forward to offering our expertise to those discussions.

InterAgency Institute

[25 May 2024]

Introduction

The InterAgency Institute is a digital think-tank focused on global security and local development with a human-centered approach. We have advocated for a treaty banning Autonomous Weapons Systems for over three years. Created by academics from the Global South, it has members with diverse backgrounds in 7 countries, mainly in Brazil, Portugal and Angola.

Appreciating the opportunity to submit this report addressing aspects related to the issues contained in operative paragraph 2 of A/RES/78/241, the Institute hopes to stress the need to create new standards for the prohibition and regulation of Autonomous Weapons Systems (AWS), as well as to point to the socio-technical dimension of the problem[49].

Below we list and develop the four main aspects related to AWS that we believe should be taken into account by the Secretary-General's Report.

1. Humanitarian Aspects

The existing obligations of International Humanitarian Law and the International Human Rights System should only serve as an *ad hoc* framework, since no treaty specifically regulates the matter. The new technological paradigm renders the current obligations of international law insufficient in regulating autonomous weapons because many aspects concerning autonomous weapons, such as automation replacing the use of force by human beings, were not part of reality when the main treaties of international humanitarian law were formulated. The possibility of automation in the critical functions of anti-personnel weapons facilitates war crimes, genocide and crimes against humanity, while also making it difficult to attribute responsibility for these crimes.

2. Security Aspects

The proliferation of autonomous weapons has unpredictable consequences for armed conflict. Despite this, externalities have already been identified, such as increasing the asymmetry of armed conflicts, reducing the necessary threshold for violence and the potential for non-state actors to possess these weapons and their uncontrolled proliferation.

The bigger the distance separating the operator and the machine, the more probable the use of violence[50]. In autonomous weapons, those who develop and train the model cannot know what consequences, or actions, the model will follow after being launched. The possibility of autonomy in critical functions reduces the capacity of control by a human supervisor. This means that, even with the possibility of human

[49] The present text was adapted from a *Policy Brief* in Portuguese published by the InterAgency Institute in March 2024.

[50] Galliott, J. (2016). War 2.0: Drones, Distance and Death. International Journal of Technoethics, 7(2), 61-76.doi.org/10.4018/IJT.2016070104.

intervention, the possibility of automating these functions entails security risks and the violation of international humanitarian law; not only because of the possibility of biases in the algorithm, but also because of the aforementioned distance between the person who creates the algorithm (and does not know what implications it will have in the real world) and the deliberate use of these algorithms to persecute people based on their phenotype, gender or clothing.

3. Technologic Aspects

Machine Learning (ML) uses input data to train a model to recognize patterns and thus make predictions a human would not be able to51. ML can be: supervised; semi-supervised; or unsupervised. Supervision concerns the labeling of the data entered during training. Another important division is that of dynamic (or online) and static (or offline) models: while dynamic models are trained frequently (or continuously), static models are trained before use52. The externalities of using ML to create target selection algorithms are not restricted to just one of the models, but cut across the different categories. The possibility of training these models with labels that correspond to people can deepen social biases, which means that the technological aspect and the ethical aspect cannot be dissociated. While it is important to highlight that online and unsupervised models exacerbate the social dimensions of the risks identified, they can also occur in offline and supervised models.

4. Ethical Perspective

Technology is not neutral. Technology sorts and ranks scenarios, based on the possibilities of action that it offers, shaping its context, regardless of how they are used53. Digitalization reinforces the tendency to make cost-benefit (utility) analyzes to determine an act's morality, accentuating the tendency of optimizing procedures54. In the context of military technologies, this utilitarianism can come with the trade-off of increasing death-tolls and violations of IHL principles. Despite algorithms seeming objective and neutral are built according to arbitrarily established criteria for the desired result, reinforcing biases55.

Digital dehumanization is the act of reducing human beings to data, then used to make up decisions/actions that negatively affect their lives56. This is a central part of the implications that such weapons have for international security.

Conclusion

A legally binding instrument is urgently needed to regulate autonomous weapons. Anti-personnel weapons capable of automating critical functions (aiming and firing) must be banned. At the core of this debate are the activities - involving decision-making or not - we want to delegate to machines. Concluding discussions on the regulation of autonomous weapons is a step towards ensuring a future in which technology serves to advance global peace and security, while respecting human rights and human dignity. An international treaty banning weapons that operate

[51] Google Developers. (n.d.). Machine Learning Glossary. Available at: https://developers.google.com/machine-learning/glossary.
[5] Ibid.
[2] Miller, B. (2021). Is technology value-neutral? Science, Technology, & Human Values, 46(1), 53-
[5] 80. doi.org/10.1177/0162243919900965.
[54] MUL (2024). Week 2: The Ethics of (Digital) Technologies. QMUL Short Courses. Retrieved from https://qmul.ac.uk/shorts/week-2-the-ethics-of-digital-technologies/.
[55] O'Neil, C. (2016). Weapons of math destruction: How big data increases inequality and threatens democracy. Crown.
[56] Stop Killer Robots. (n.d.). Digital Dehumanisation. Available at: https://www.stopkillerrobots.org/stop-killer- robots/digital-dehumanisation/

without human control by 2026, as suggested by the United Nations and the International Committee of the Red Cross, is a crucial step in this direction.

International Physicians for the Prevention of Nuclear War

[24 May 2024]

We welcome the UN Secretary-General's initiative to address the challenges related to lethal autonomous weapons systems and the role of humans in the use of force. Because of our expertise on the catastrophic humanitarian impacts of nuclear weapons, IPPNW is particularly concerned with the danger of nuclear escalation arising from the use of artificial intelligence (AI) and machine autonomy in nuclear command and control.

IPPNW is profoundly alarmed by both the growing risk of the use of nuclear weapons, whether by accident, design or miscalculation, and the simultaneous rapid development and deployment of advanced AI systems in the defense sector. The integration of AI and automation into nuclear command and control would mark a new era of exponential risk to humankind.

We underscore the warnings of experts in the field that an AI arms race is already underway. According to Connor Leahy57, "Whoever has the least humans in the loop, they can act the fastest…giving more and more to the machines, until one day we're just not in control anymore. It's a race to the bottom. There can be no winner – and the only loser is humanity."

We recall the incident in 1983 when one man, Soviet Lieutenant Colonel Stanislav Petrov, refused to respond to a false warning of an incoming US ICBM58. Within a few fateful minutes, he intervened and, exercising his discretion, broke with "launch on attack" protocol. His reasoned judgment likely saved human civilization.

Almost 80 years into the nuclear era, we have survived not because of wise leaders, sound military doctrine, or infallible technology but because of luck. Recent events have laid bare how incredibly dangerous it is to gamble the future of the world on a hope for indefinite good luck.

An even more dangerous future may be fast approaching. If human agency is removed from nuclear command and control, then the fate of humanity will rest with self-taught machines that will make the snap decision whether to launch on warning.

Turning control of nuclear weapons over to autonomous AI is irresponsible madness. We therefore support efforts to regulate, through national legislation and binding multilateral agreements, the development, deployment and use of AI and autonomous weapons systems in nuclear weapons command and control. As we work toward the universalization of the Treaty on the Prohibition of Nuclear Weapons (TPNW), and the complete abolition of nuclear weapons, it is crucial that humans maintain control over the use of nuclear weapons. The international community must begin the processes of building a permanent firewall between AI and nuclear weapons.

[57] Co-founder and CEO of Conjecture, an AI startup working on controlling AI systems. BBC News. 2 May 2024.
[58] Stanislav Petrov, 'The Man Who Saved The World,' Dies At 77. NPR 18 September 2017.

Latin America and the Caribbean Human Security Network, Fundación para la Paz y la Democracia, Technology and Community, Centro de Estudios Politica Internacional, Universidad de Buenos Aires

[24 May 2024]

This document outlines the views of SEHLAC on the main risks and concerns of autonomous weapons systems in Latin America and the Caribbean, as well as the solutions to address them. SEHLAC is an organization that works for the transformation of regulations, public policies, and practices to implement and strengthen International Humanitarian Law (IHL), International Human Rights Law (IHRL), and Humanitarian Disarmament in the Latin American and Caribbean region.

The members of our network have participated in international discussions on autonomous weapons over the past ten years, seeking to understand the relationship between these emerging weapons and the human security issues affecting the region.

Risks and concerns about autonomous weapons

While there is no consensual definition of what an autonomous weapon is, SEHLAC aligns with the proposal of the International Committee of the Red Cross and defines it as a weapon system that can select and attack a target without significant human intervention.

"Significant" implies that a human must be the actual determiner of the critical functions of targeting and firing. Since a person is not the one making the critical decisions, these weapons are in opposition to the main element of IHL and IHRL: humanity. No element of these international frameworks can be applied to a weapon that makes the decision to take a human life on its own.

Why the concern about the region?

Latin America and the Caribbean is a diverse region that shares cultural, ethnic, and social elements, but also faces common challenges, such as inequality, poverty, corruption, and lack of state presence, as well as others inherited from a colonial past, such as systematic discrimination against historically marginalized groups.

This complexity has manifested in serious security problems, which have resulted in years of social conflicts and, in some countries, armed conflicts, as well as in the promotion of legal and illegal arms development.

The security problems affecting the region today would be directly related to the possible use of autonomous weapons.

Autonomous weapons would facilitate the perpetration of various types of violence in the region:

1. In Latin America, the upward trend of contract killings is worrying. *Sicariato* - paying to have someone killed - is gaining ground in the region and costs vary according to the complexity of the crime. The introduction of autonomous weapons would expand this practice, making contract killings more accessible and quicker. Also, achieving justice would be nearly impossible because these weapon systems' nature makes tracing the perpetrators extremely difficult.

2. Drug trafficking, as the axis of most of the violence that occurs in the region59, could be favored by these weapons as these systems would facilitate the surveillance of drug production laboratories, as well as transit and protection of export routes.

3. Wars between gangs and/or armed groups outside the law are another phenomenon of violence in countries such as Haiti, Guatemala, El Salvador, Honduras, Mexico, Colombia, Ecuador, and Brazil, among others. The ease and cost-effectiveness of using autonomous weapons would cause this violence to spread to areas and countries where it is still precarious or non-existent, enabling criminal networks to expand their power and influence.

4. Using autonomous weapons as personal and private property protection, or even as a means of combating rural and urban crime, could lead to massacres and indiscriminate killings, as these weapons would use force against any person or object deemed a potential enemy.

5. Using autonomous weapons for state repression would facilitate systematic violation of human, civil, and social rights of anyone opposing the government, making it harder for victims to seek justice due to the technology's lack of traceable responsibility and accountability. This, in turn, would encourage impunity and further undermine confidence in law enforcement institutions. 6. It should be noted that the use of autonomous weapons could increase differentiated impact of violence, mainly on women, people with diverse identities, racialized individuals, and indigenous peoples, among others.

In addition to the dangers posed by autonomous weapons, it is also crucial to address the concern about indiscriminate use of biometric data, both private and public, without adequate treatment and, in some countries, without personal data protection60.

The lack of explicit regulations that enable or restrict use of these technologies and the misuse of personal data create serious risks, as public security decisions are made without significant human oversight, compromising Human Rights. The situation is already observed and begins public discussion with the implementation of mass surveillance technologies in Latin America and the world, leading to litigation in several cases to protect civil liberties.61,62. Therefore, it is not only necessary to prohibit these technologies, but also to advance towards stricter regulations that protect privacy and personal data of individuals.

[59] De México a Ecuador y de Costa Rica a Uruguay: la violencia del narcotráfico se extiende en América Latina [From Mexico to Ecuador and from Costa Rica to Uruguay: drug trafficking violence spreads across Latin America], José Denis Cruz, January 21st 2024, https://www.newtral.es/violencia-narcotrafico-america-latina/20240121/.

[60] Sequera Buzarquis, M., Carrillo, E. y Gómez Berniga, L. (2022). Deudas, desafíos y conquistas en la intersección de los derechos humanos e internet [Debts, challenges, and achievements at the intersection of human rights and the internet]. En Codehupy (Ed.), Derechos Humanos en Paraguay 2022 (313-328). Asunción, Paraguay: Codehupy.

[61] AlSur (2021). Reconocimiento facial en América Latina: tendencias en la implementación de una tecnología perversa [Facial recognition in Latin America: trends in the implementation of a perverse technology]. https://www.alsur.lat/reporte/reconocimiento-facial-en-america-latina-tendencias-en-implementacion-una-tecnologia.

[62] Access Now (2021). Tecnología de vigilancia en América Latina: hecha en el exterior, utilizada en casa [Surveillance technology in Latin America: made abroad, used at home]. https://www.accessnow.org/tecnologia-de-vigilancia-en-america-latina/.

How to avoid a humanitarian catastrophe caused by the development and proliferation of autonomous weapons systems?

The only possible way to avoid the damage caused by autonomous weapons systems is to prohibit those systems that select and attack targets without significant human intervention.

At this point, it is essential to emphasize that autonomous weapons are not a specific category of weapons per se. Any type of weapon, from a small drone to a nuclear missile launcher, could potentially be equipped with autonomous capabilities, meaning that the control system can make crucial decisions without requiring human intervention.

It is important to make this point because any negotiation process that makes possible the existence of a new multilateral instrument with prohibitions and regulations must be carried out considering that it will apply to autonomous systems applicable to any type of weapon. Thus, these discussions must establish the level of human intervention in target identification and execution of the shot, ensuring that in no scenario is an algorithm the one deciding whom to shoot.

Final thoughts

It is important for States to honor the commitments made in the Belén Communiqué and other regional agreements and declarations that call for urgent negotiation of a legally binding instrument on autonomous weapons systems.

States must act decisively and with political will to address the humanitarian threat posed by autonomous weapons systems. The time for action is now!

Norwegian People's Aid and Mines Action Canada

[24 May 2024]

Mines Action Canada (MAC) and Norwegian People's Aid (NPA) appreciate the opportunity to input in response to Resolution 78/241. As members of the Stop Killer Robots (SKR) campaign, we align ourselves with the submission by SKR, but would like to make a contribution in our own capacity.

Our contribution focuses on autonomous weapon systems that target people and makes an analogy to the work on prohibiting anti-personnel landmines. Both MAC and NPA have worked for decades on reducing the suffering caused by anti-personnel landmines and ensuring the implementation and universalization of the Anti-Personnel Mine Ban Convention (APMBC). We have seen first-hand the impact of anti-personnel weapons that are activated by the victim.

Autonomous weapon systems that target humans should be prohibited

As part of a legally binding instrument with prohibitions and regulations, anti-personnel autonomous systems should fall within the category of prohibitions. There are well-developed moral, legal, and ethical arguments for why such weapon systems would be unacceptable, made for example by SKR, the ICRC and others. Anti-personnel autonomous weapon systems represent extreme forms of digital dehumanization, challenging our common human dignity. Such systems are a threat to soldiers and civilians alike, questioning core IHL principles such as distinction, as well as risking direct and systematic humanitarian harm to civilians.

We argue that states have already developed laws and norms on weapon systems targeting people through the negotiation, adoption and implementation of the APMBC. States have, in policy and practice, recognized that victim-activated

weapons with an anti-personnel target profile, such as anti-personnel landmines, are particularly problematic.

We would like to encourage states to be reminded about this when developing new law to control autonomy in weapon systems.

We note that many states have agreed to a prohibition specifically on anti-personnel landmines, in contrast to anti-vehicle mines, which are not subject to a ban treaty but are regulated. The difference in target profile made a significant difference to states negotiating the APMBC, which to us illustrates that specifically targeting humans should be a distinct concern when it comes to autonomous weapon systems as well.

We also note a certain reluctance among states to use weapons systems that could target and fire on people automatically in their autonomous modes. While such systems exist and can be applied, there seems to be an existing taboo on leaving life- and death decisions to machines, with states limiting, in practice, their current development and use of such systems. This reluctance may derive from legal considerations and the deliberate application of some basic principles of IHL, or ethical considerations – both of which also need to inform the negotiation of a legally binding instrument on autonomous weapon systems.

Like anti-personnel landmines, autonomous weapons systems cannot account for the potential shifts between combatant and civilian status. Autonomous weapons systems programmed to target a specific sensor profile will be unable to assess if the target is in the process of surrendering, ill, injured or otherwise hors de combat. The transient nature of combatant status is incompatible with weapons that target people based on static criteria such as weight for anti-personnel landmines or other sensor data for autonomous weapons systems.

Though it has been raised in discussions, we have seen no good evidence that it would be technologically feasible for current or future weapons systems to consistently and effectively integrate indications of changes in combatant status into their sensing and calculation processes, and plenty of expert opinion that it would not. In any case, distinguishing between civilians and combatants is a task for deliberative decision making by humans, who are responsible for applying the law: as states have long recognised, legal decisions cannot be left to a machine.

A human combatant will always have the possibility to refrain from using force, even though it would be legal under IHL. On the other hand, an autonomous weapon system would not make any deliberations beyond those programmed into it. A landmine is as crude as it is brutal: it does not see the difference between a combatant, a civilian or an animal. Machines, regardless of their future sophistication, will not share our understanding of what is human, and will only sense the world in a cold and inhumane fashion.

IHL compliance is not the only consideration when we call for a prohibition on autonomous weapons targeting humans. Rejecting the automation of killing in war is important for profound ethical reasons and will have significance also into the civilian domain.

Therefore, autonomous weapon systems should not be allowed to target people.

As the principle of banning anti-personnel landmines shows, more control over the use of force matters and preserves lives and dignity. As an international community, we should opt for more control, not less.

The way to safeguard human control over the use of force is by starting negotiations on a new legally binding instrument that prohibits autonomous weapons systems that are ethically or legally unacceptable, such as those that target personnel,

and regulates the use of all other autonomous weapons systems through positive obligations to ensure meaningful human control.

PAX

[23 May 2024]

The urgent need for a treaty on autonomous weapons

Increasingly we are seeing weapons systems with autonomous functions being developed and used in ongoing conflicts. This is extremely concerning in the absence of clear rules and limits that specifically apply to these weapons. Especially as developers and users are pushing the limits of what is acceptable under legal and ethical norms. This demonstrates the urgent need to develop a legal instrument related to autonomous weapons. A treaty should prohibit fundamentally unacceptable autonomous weapons systems, and regulate the use of other autonomous weapons systems. Meaningful human control over the use of force should be a central element of a treaty. This means the human user must be able to make a legal and moral judgement regarding the effects of an attack, as well as being accountable for any violations of legal and moral norms. To ensure this the human user should be able to sufficiently predict the effects of an attack, in order to make a legal and ethical judgement. The human user should also be able to explain the actions of the weapons system and the human role after an engagement has taken place. This is essential to ensure accountability. Based on certain positive obligations can be developed. These could include that the user should be able to:

- Have a functional understanding of how the weapons system works, specifically what will trigger an application of force.
- Have sufficient understanding of the context where the weapons system will be deployed. For example, being aware of the presence of civilians and civilian structures. Limit the functioning of the weapon system. For example they should
- be able to
  limit the duration and geographical area of operation and the type of targets than can be engaged.

Following from this, autonomous weapons systems that cannot be used in line with these obligations should be prohibited. Furthermore autonomous weapons systems that target people must be prohibited. There is a risk of protected persons being targeted when autonomous weapons systems are used, as peoples' status under the law is fluid. Using target profiles that can trigger an application force, based on predetermined simplified representations of people is dehumanizing. Also algorithm bias could increase the risk of reinforcing existing structures of inequality.

Due to the serious legal, ethical, security and humanitarian concerns related to autonomous weapons, the negotiation of a legally binding instrument on autonomous weapons systems should start in 2024 and be finalized as soon as possible. This should happen in the forum that is most likely to be ambitious and successful in developing a treaty. Currently the General Assembly in New York seems to be the best forum to ensure this. At the same time, it is useful to continue dialogue in all appropriate multilateral fora as they can be mutually reinforcing.

We are at a crucial moment in the history of humanity. We need to do all we can to retain human control over the use of force and prevent digital dehumanisation, for ourselves as well as future generations. The time is now.

Peace Movement Aotearoa and Stop Killer Robots Aotearoa New Zealand

[25 May 2024]

Peace Movement Aotearoa and Stop Killer Robots Aotearoa New Zealand welcome the opportunity to contribute our views to the UN Secretary-General's report. Our submission briefly outlines our involvement in this issue, and has three sections summarising our position on: a) the urgent need for a new international instrument; b) key focuses of a new international instrument; and c) scope of a new international instrument. The points below are based on discussions with our member and supporting groups about the content of this submission.

Introduction

Peace Movement Aotearoa is the national networking peace organisation in Aotearoa New Zealand, established in 1981 and registered as an Incorporated Society in 1982. Our purpose is networking and providing information and resources on peace, humanitarian disarmament, human rights and social issues; and we have extensive national networks of member and supporting groups and individuals. We are a founding member of the Stop Killer Robots campaign and coordinate the national Stop Killer Robots Aotearoa New Zealand (SKRANZ) campaign.

SKRANZ was launched in April 2013 to support the global campaign, with a specific national focus on urging New Zealand to take national action to prohibit the development, production and use of autonomous weapon systems in New Zealand; and to take international action to support negotiations on a new treaty to prohibit autonomy in weapon systems.

(a) A new international instrument on autonomy in weapon systems is urgently needed

It has been clear for some years now that rapidly developing technological advances in the use of force and increasing autonomy in weapon systems towards fully autonomous weapon systems pose an unprecedented threat both to humanity and to the foundations of international human rights and humanitarian law, which are based on respect for human life and dignity, protection of humanity in times of oppression and armed conflict, and human responsibility and accountability for harm.

The serious ethical, humanitarian, legal, and security concerns posed by these developments have been discussed for more than a decade within United Nations bodies - including the Human Rights Council, meetings related to the Convention on Certain Conventional Weapons and in the UN General Assembly - as well as in regional and national governmental and non-governmental forums.

Even as these discussions have taken place, some states have increasingly incorporated autonomy into military use of force with disastrous consequences for civilian populations, in ways that many would argue have already resulted in violations of international law. It is apparent that the absence of specific international law on autonomy in weapon systems, and with differing interpretation by some states as to how existing law applies to new technological developments, the risk of proliferation of ever more dangerous and uncontrollable weapon systems is increasing rapidly.

The need for urgency for new international law has recently been highlighted again by military use of AI, for example, Israel's use of AI-powered target suggestion systems in Gaza to make high explosive strikes on numerous targets possible in a short time frame, resulting in indiscriminate slaughter of civilians and systematic

destruction of life-sustaining infrastructure. The reality of digital dehumanisation with catastrophic consequences is now very evident, as is the increasing tendency towards the development and use of autonomous weapon systems that will remove any remaining vestige of humanity from war.

A new international instrument on autonomy in weapon systems is necessary to clarify and strengthen existing law, and is already long overdue. The instrument must include both prohibitions and regulations, as outlined below.

Negotiations on a new instrument must begin without any further delay, in a multilateral forum where states can come together to work constructively free from the threat of veto, where the voices of those whose lives have already been impacted by increasing autonomy in weapon systems can be heard, and where UN agencies, the International Committee of the Red Cross (ICRC), and NGOs are active participants.

(b) Key focuses of a new international instrument

While much of the work around autonomous weapon systems has focused on the issue of meaningful human control over the use of force, it is our view that the key underlying ethical imperative is preventing machines using sensors and digital code from targeting and / or attacking humans. A prohibition on autonomy in weapons systems that are designed or used to target human beings must be the starting point.

Meaningful human control over the use of force does have an ethical component of course, but it is also a practical and legal means to ensure accountability for any autonomy in weapon systems that breach the key dictates of humanitarian law.

(c) Scope of a new international instrument

It is our view that it is not necessary for a new international instrument to prohibit or regulate specific weapons, partly because it would rapidly become outdated and also because it is not specific weapons that are the problem. Instead, it should include overarching rules to establish a framework for evaluating current and future technological developments, while promoting increased compliance with international human rights and humanitarian law.

Such overarching rules would prohibit autonomous weapon systems that are designed or used to target humans, and lay out specific obligations to ensure meaningful human control over other systems: for example, that the human operator/s understand the capabilities and limitations of the system, are able to fully evaluate the context in which the system will be used, and are making mindful firing decisions rather than assuming the technology is accurate - this would act to regulate autonomy in weapon systems. It would be useful to specify that decisions made by states on their assessment of new or altered weapon systems that incorporate autonomous features or functions must be transparent.

We referred above to a recent example of military use of AI, which suggests that the scope of a new international instrument must be wider than only prohibiting fully autonomous weapon systems, that is, weapon systems that make target selection and attack decisions based on the processing of data from sensor inputs autonomously without any human involvement beyond the initial activation. It is increasingly apparent that there is a spectrum of harmful military use of autonomy, ranging from target decision support systems (as some have described systems such as Lavender), data-based targeting systems, generation of target lists by algorithm or AI, sensor-based targeting systems, through to weapon systems that combine these elements and incorporate varying degrees of machine learning to make target selection decisions and attack autonomously.

We note last year's Joint Call by the UN Secretary-General and ICRC President stated *"The autonomous targeting of humans by machines is a moral line that we must not cross"*63, yet that appears to have already happened.

It is therefore our view that a new instrument must cover systems that automate significant decision making in weapons systems, such as target generation, force deployment, and engagement, as well as autonomous weapon systems.

Finally, although we have referred in this submission to military use of autonomy in weapon systems, prohibitions and regulations in a new international instrument must also apply to all coercive agencies of the state, including those used for policing and internal security, for border control, in corrections facilities and in places of detention.

Peace Union of Finland, Finnish Peace Committee, Committee of 100, Technology for Life, Women for Peace, and the Union Of Conscientious Objectors

[24 May 2024]

Finnish civil society organizations Peace Union of Finland, Finnish Peace Committee, Committee of 100, Technology for Life, Women for Peace, and the Union Of Conscientious Objectors appreciate the opportunity to submit our views to the United Nations Secretary-General in response to Resolution 78/241, entitled "Lethal Autonomous Weapons Systems". As members of the international Stop Killer Robots64 network, we are committed to advocating for a new international law on autonomy in weapons systems.

This submission provides a summary of our views on this issue, highlights some specific humanitarian, ethical, and security challenges related to autonomous weapons systems, and outlines ways to address these concerns through a legally binding instrument.

Ethical concerns

Increasing autonomy in weapons systems means that machines are beginning to replace decision making of humans in the use of force. Machines are incapable of making complex ethical evaluations or understanding the value of human life. A machine does not understand that it is killing, and therefore life and death decisions should never be delegated to machines.

As artificial intelligence develops, systems become increasingly difficult to understand or to predict. Humans can't influence the rapid decisions executed by a machine. Moreover, who would be responsible for a possible war crime committed by an autonomous weapon system? Holding a human responsible for the actions of a weapon system they can't adequately control would be problematic, leaving victims and their loved ones without satisfactory explanation or justice in cases of grave injustice. Concerns posed by a lack of responsibility or accountability for violations of law must not be accepted or ignored.

[63] Joint call by the United Nations Secretary-General and the President of the International Committee of the Red Cross for States to establish new prohibitions and restrictions on Autonomous Weapon Systems, 5 October 2023

[64] Stop Killer Robots is a coalition of more than 250 non-governmental organizations and academic partners working across 70 countries towards an international treaty on autonomous weapons systems that ensures meaningful human control over the use of force and rejects the automation of killing.

Security concerns

The development and proliferation of autonomous weapons systems pose significant threats to global security and stability. The pursuit of keeping up with advancing military technology will likely result in or trigger a destabilizing arms race. The accelerating arms race increases the likelihood of conflicts and endangers international security. In the worst case scenario, an escalation of the autonomous arms race might lead them to be equipped with nuclear warheads, when the decision to annihilate the world would be left to a machine. This risk of escalation must not be ignored.

The deployment of autonomous weapons systems is likely to lower the threshold to go to war. When risks to human soldiers are perceived to be lower, states may become less inclined to seek political solutions. This would make armed conflicts more widespread and increase civilian casualties, suffering and displacement. It also escalates the problems associated with remote warfare.

The rapid speed and subsequent errors from autonomous decision-making, as well as the weapon's malfunction could increase the risk of conflict escalation, or lead to other unpredictable consequences. Artificial intelligence, for instance, can generate incorrect and potentially harmful information or detect things that are not within their range, leading to unexpected outcomes. In life-or-death situations, the necessary system testing to correct these errors would equate to dangerous human experimentation. AWS are vulnerable to hacking and can be manipulated to turn on friendly forces or behave in other undesirable ways. Risk of misuse and hacking would also pose an existential threat to every human being.

A legally binding treaty is crucial for ensuring a future for humanity

There is an urgent need for the regulation of autonomous weapons systems due to the accelerated advancements in artificial intelligence and increasing autonomy within these systems. Their ability to operate without human control and responsibility raises significant concerns that demand urgent action from the international community. To address these concerns, it is imperative to establish a legally binding international treaty that regulates the development, deployment and use of autonomous weapons systems.

There is growing international support for new rules regulating autonomous weapons systems.[65] We align ourselves with the view advocating for the implementation of the treaty and want to address the threat posed by the development of autonomous weapons systems. A common approach, often referred to as the two-tier approach[66], suggests that a treaty should prohibit autonomous weapons systems that are deemed ethically and legally unacceptable. All autonomous weapons systems should be subject to regulation through positive obligations to ensure meaningful human control over the use of force.

[65] In addition to numerous scientists, tech workers, religious leaders, and members of civil society, the majority of states support the negotiation of a legally binding instrument. See: https://automatedresearch.org/state-positions/

[66] There is wide agreement that a normative framework on AWS should combine prohibitions and regulations. We align ourselves with a view that AWS that would target people, and cannot be used with meaningful human control are deemed ethically and legally unacceptable, and therefore should be prohibited. Positive obligations should ensure that all other AWS are used in line with legal and ethical norms.

We need to act now

Time is running out; artificial intelligence is advancing at an increasing pace, and its military applications are spreading across all branches of weaponry. A treaty banning and regulating autonomous weapons systems would draw a red line for governments and companies as to what is acceptable and what is not.

We need a treaty even if not all states decide to join it. Global instability and the ambitions of a handful of militarized states already investing in the development of autonomous technologies shouldn't dictate our future, or decrease states' willingness to mitigate the serious risks posed by autonomous weapons systems.

The prohibition of autonomous weapon systems should not be left outside the considerations within the broader regulation of artificial intelligence. We must ensure that militaristic objectives or arms industry interests do not dictate AI development, but rather that it happens democratically and with respect for human rights. It is imperative that we draw the line now, before automated decision-making leads to automated killing.

PEAC Institute

[8 February 2024]

In response to the request from Ms. Nakamitsu for comment regarding Resolution 78/241 "Lethal autonomous weapons systems", I offer this opinion based on working from 2002 to 2013 for the city of Hiroshima and Mayors for Peace, the campaigning NGO of Hiroshima and Nagasaki. For six years I was chairman of the Hiroshima Peace Culture Foundation, Hiroshima's organization managing peace programs and international relations.

What the UN decides regarding autonomous weapons systems is irrelevant. As with nuclear weapons, the problem is not the weapons. The problem is the mindset, the attitudes and thinking behind the weapons. The UN was created to prevent war. It has been unable to do that for all the reasons you know much better than I. However, we are entering an extremely dangerous, possibly lethal time in human history.

White people in the Global North have been dominating the Earth and its resources for five hundred years. Now, the US and Europe are rapidly weakening while China and Asia, including Russia, are growing stronger. Whether the society comprises chickens, chimpanzees, or humans, shifts in dominance hierarchies usually involve violence.

Right now, we are witnessing many of the phenomena that preceded World Wars One and Two. The tensions are greatly intensified by a wide array of completely catastrophic weapon systems, by dwindling resources, by escalating independence movements, and by existential threats to Earth's ability to sustain us.

In this context, the violent competition among the US, Europe, China, Russia, Asia, etc. is the problem. Who wins is irrelevant. As long as the competition remains violent and potentially terminal, humanity will remain utterly unable to respond to any of the global threats we face. The only competition that can possibly affect the outcome, that is, enhance the chances of Homo sapiens surviving into the next century, is the competition between war and peace.

The UN's mandate is to resolve all conflict through dialogue, discussion, negotiation, treaties, and the pursuit of solutions that are based on truth and that benefit and satisfy all parties. From this point of view, the UN should not trouble itself with the details of weapons or weapon systems. The UN should focus intently and with determination on the propensity of certain UN members to ignore the

fundamental meaning, purpose, and function of the UN. The UN needs to stand up for the peaceful resolution of conflict. The UN also needs to stand up for international law, expressing intense criticism and using every tool at its disposal to fight rogue nations and other lawless elements, including members of the Security Council.

Humanity desperately needs the UN to prevent war. That means we need the UN to stand up for international law and for itself as the proper, international forum for the resolution of ALL international conflict. War and violence of any sort for any reason are beyond the pale, and any people, nation, or organization that resorts to violence is a rogue committing a crime against humanity. Until the UN accepts its duty to confront and forcefully oppose inter- or intra-state violence, the UN and international law itself amount to lipstick on a pig.

The elimination of war is the goal, but nuclear weapons are the place to start. No one wants a nuclear war. The case against nuclear weapons is extremely easy to make, and nuclear weapons are the easiest global problem we face. Nine countries could solve this problem in less than a month if they put their minds to it. A campaign against nuclear weapons would be relatively easy, and when humanity decides to set aside its doomsday machines, it will be taking a giant step toward cooperating for survival. Once humanity decides to cooperate for survival, peace culture is just around the corner. The keys are: 1) identify the selfish, violent enemies of humanity who refuse to abide by Article VI of the NPT and 2) spend millions of dollars informing the global public exactly who is stealing what from them, what the culture of perpetual war is doing to them, what the constant threat of annihilation is doing to them, and what nuclear weapons will actually do to them if anyone is stupid enough to start a nuclear war.

Unfortunately, this process will require the UN to identify and defeat its most powerful enemies, and doing that will be the fight of the century. As evidenced by the recent withdrawal of funding from UNRWA, a genuine effort to eliminate nuclear weapons will put the very existence of the UN at risk. This battle can only be won by communicating loudly and effectively through the media to the global public, and that will require millions of dollars spent year after year on telling the people the truth with the expectation that they will choose universal health and wellbeing over nuclear war and total environmental collapse. The battle will be dangerous and difficult. The UN might go bankrupt and fail for lack of funding, but if humanity fails to abandon violence as a legitimate method of conflict resolution, our species will soon be extinct.

Project Ploughshares

[24 May 2024]

Project Ploughshares, a Canadian peace research institute, has focused advocacy and research efforts on the issue of autonomous weapons for the past nine years. While there have been rapid technological advancements in artificial intelligence (AI) and robotics and these technologies are now being used in conflict zones, international governance frameworks have not kept pace. At the same time, growing geopolitical competition is increasing the likelihood of deployment of technologies that are not ready for complex and dynamic settings; such use could have far-reaching implications for civilians. What is needed now to address the growing use of emerging technologies in warfare is a legally binding instrument on autonomous weapons.

Such an instrument must be future-proofed to respond to evolving—even revolutionary/transformative—uses of technology. In our view, it is crucial that this governance mechanism operates on two tiers: prohibiting certain uses and providing restrictions based on risk categorizations.

This submission does not indicate all the factors that states should take into account in developing this recommended instrument. Instead, we would like to raise several concise key points that address the crucial need to ensure human control over targeting of humans, and protect civilian infrastructure and the environment needed to sustain human life.

- A clear prohibition should be placed on antipersonnel weapons and on autonomy in weapons of mass destruction (WMD), such as nuclear weapons. While WMDs are already prohibited by existing agreements, addressing technological advancements enabling autonomy in their functioning requires further bolstering.
- States should develop categories of risk and concurrent levels of restriction. For example, a high-risk category would be one that impacts the health and safety of civilians. Included in this category would be systems that are less lethal but still capable of immobilizing or causing reverberating effects on civilians and the environment. Moderate-risk systems would be regulated to ensure the transparency of their functioning. Low-risk systems could involve voluntary best practices. The proposed instrument should be based on meaningful/necessary human
- control over weapons systems. Demonstrable human control in time and space is required for all high-risk systems; human control over moderate- and low-risk systems must be clear. Systems that cannot meet the human control requirements of the appropriate risk category should be prohibited. Decision-support systems or target-generation systems can be suitably addressed by ensuring that targeting decisions are subjected to an evaluation of appropriate accountability. The instrument should provide the foundation that will support more regulation
- at various levels, and therefore should focus on crucial aspects necessarily addressed at the global level. A toolkit of governance mechanisms can and will follow such instruments. States already have other forums at which to exchange best practices and voluntary measures. The aim of this new instrument is to provide the necessary legal commitments on human accountability and human-decision-making. A forum that allows all states parties to participate and includes civil society is
- critical to address the risks posed by these weapon systems.

Without a global regulatory framework and specific prohibitions on certain autonomous systems, it seems inevitable that ever more autonomous systems will soon be developed and employed by many states and become readily available to nonstate armed groups, posing an unacceptable risk to global stability. Countries need to begin serious negotiations immediately to avoid these consequences.

Protection

[24 May 2024]

تتشرف منظمة الحماية من الألأسلحة وآثارها بتقديم رأيها كمنظمة مجتمع مدني حول أنظمة الألأسلحة ذاتية /التشغيل إلى الأمين العام للأمم المتحدة وفقا لقرار الجمعية العامة للأمم المتحدة رقم 24178.

منظمة الحماية من الألأسلحة و آ ثارها هي منظمة فرنسية تأسست عام 2003 وتعمل في مجال نزع السلاح الإنساني حيث تركز مجال عملها جغرافيا على الشرق الألأوسط وشمال أ فريقيا، وهي عضو لجنة القيادة بحملة منع الروبوتات القاتلة التي تستمد منها وتشاركها الرؤية في هذه المساهمة. ومن ضمن أهدافها حظر وتنظيم عمل الألأسلحة ذاتية التشغيل وضمان وجود السيطرة البشرية عليها عبر اعتماد صك دولي ملزم حولها.

الحاجة الملحة إلى قواعد دولية ملزمة جديدة

بعد مرور أكثر من عقد على التفات ال ليات الألأممية الدولية لخطر الألأسلحة ذاتية التشغيل وبدء النقاش حولها وتمدده، ثبت أ ن التوصل إلى صك ملزم قانونا هو السبيل الفعال الوحيد لعلاج التحديات والمخاوف

الإلإنسانية والقانونية والألأمنية والألأخلاقية الناجمة عن أ نظمة الألأسلحة ذاتية التشغيل، حيث إ ن الاعتماد على القوانين الحالية ليس كافيا في الوقت الراهن ولن يكون كافيا بتاتا في المستقبل، وهذا ما أ ثبتته نقاشات الدول والخبراء غير الحكوميين في مجلس حقوق الإلإ نسان واتفاقية حظر الألأسلحة التقليدية، ما جعل الحاجة ملحة إلى قواعد محددة وقانون واضح يضمن بوضوح حماية الإلإنسانية.

المجموعات المسلحة من غير الدول

كما أ ثبتت النزاعات المسلحة الحديثة خصوصا في الشرق الألأوسط وشمال أ فريقيا سهولة حصول المجموعات المسلحة من غير الدول على تكنولوجيا الألأسلحة بدرجات متفاوتة تكنولوجيا)اليمن نموذجا(ما ساهم في تهديد الملاحة الدولية ومعها السلم والألأ من الدوليين. وحصول هذه الجماعات على أسلحة ذاتية التشغيل أيا ما كانت درجتها يعني تهديد شديد بكوارث لالا يمكن علالاجها، بينما عدم وجود هكذا سلالاح من الألأساس يجنب العالم ويلالات هو في غنى عنها.

الغالبية تدعم التحرك قدما

يزداد الدعم وراء الدعوة إلى إبرام صك ملزم يوميا وفي كل محفل ذات صلة، فال ن هناك أكثر من 115 دولة تؤيد ذلك منهم 19 دولة من الشرق الألأوسط وشمال أ فريقيا وأعضاء في جامعة الدول العربية

وعقدت عدة اجتماعات إقليمية حول الألأسلحة ذاتية التشغيل في أمريكا الجنوبية وجنوب شرق آ سيا والمحيط الهاد ئ و أ فريقيا و أ وروبا، كما أصدرت العديد من الدول بيانات إقليمية تلتزم فيها بالعمل من أجل التوصل إلى ذلك الصك.

ودعت اللجنة الدولية للصليب الألأحمر والألأمين العام للألأمم المتحدة إ لى التفاوض على صك ملزم بحلول عام 2026 ، وهي الدعوة التي نؤيدها بشدة.

ويدعم ذلك أيضا آلالاف العلماء والعاملين والقادة في مجال تكنولوجيا الروبوتات والذكاء الالاصطناعي والزعماء الدينيون والبرلمانيون، ومجموعة واسعة من منظمات المجتمع المدني، والرأي العام في جميع أنحاء العالم.

البدء في المفاوضات

يجب على جميع الدول وأصحاب المصلحة الملتزمين إنسانيا و أ خلالاقيا بالتوصل الى صك ملزم أن يعملوا الألأ مس قبل غدا معا بروح الشراكة الحقيقية العابرة إ قليميا وأن يتخذوا خطوات ملموسة نحو بدء المفاوضات.

ولالا بد من التفاوض على الصك في منتدى يضم كافة الدول والمجتمع المدني، حيث لالا يمكن للقلة غير الراغبة في ذلك الصك عرقلة التقدم من خلالال حق النقض، أو قواعد الإجماع اللذين يساء استخدامهما كما في اتفاقية الألأسلحة التقليدية التي لالا يمكن إحراز تقدم فيها.

وكما يخبرنا التاريخ والواقع العملي للالاتفاقيات ذات الصلة بنزع السلالاح الإلإنساني التي تم تبنيها، فإن إنشاء ولالاية تفاوضية بشأن صك ملزم من خلالال الجمعية العامة للألأمم المتحدة هو أفضل فرصة للمضي قدما وتحقيق هكذا صك.

وخلالال العقد الماضي ونتيجة المناقشات المتعددة في عدة منديات ومنها اتفاقية الألأ سلحة التقليدية، فان هناك فهم واسع النطاق بين الدول حول المقصود بأنظمة الألأسلحة ذاتية التشغيل، كما والحاجة إلى نهج " ثنائي " للحظر والالالتزامات الإلإيجابية لتنظيمها بشكل فعال، والذي يمكن البناء عليه للالاتفاق على صك ملزم قانونا.

معاهدة فعالة بشأن أنظمة الألأسلحة ذاتية التشغيل

مجال الالاتفاقية

إ ن فهمنا لألأنظمة الألأسلحة ذاتية التشغيل كأعضاء في حملة منع الروبوتات القاتلة هي أ نها تلك التي ترصد وتطبق القوة على الهدف بناء على معالجة البيانات من مدخلالات أجهزة الالاستشعار . ففي هذه الألأنظمة، بعد التنشيط من قبل مستخدم بشري، هناك فترة من الوقت يمكن فيها للسلالاح تطبيق القوة على الهدف دون موافقة بشرية مباشرة، ويتم تحديد الهدف المحدد الذي سيتم مهاجمته، والوقت والمكان المحددين للهجوم، من خلالال معالجة أجهزة الالاستشعار، وليس البشر.

لذا يجب أن يشمل صك أنظمة الألأسلحة ذاتية التشغيل جميع الألأنظمة التي تقع ضمن هذا النطاق، حيث تتبع مخاوفنا من الألأتمتة التي تعمل بها هذه الألأنظمة . كما تتمثل مخاوفنا الرئيسية في اندثار السيطرة البشرية على استخدام القوة ـ ـ ـ الألأمر الذي يثير مخاوف قانونية وأخلالاقية وإنسانية وأمنية خطيرة ـ ـ ـ فضلالا عن عدم القبول أخلالاقيا بتزايد القتل اللي والتجريد من الإلإنسانية رقميا.

مركزية الدور البشري

يجب أن يكون الدور البشري هو العنصر الألأ ساسي في الإلإطار التنظيمي، حيث يجب أن يكون ضمان السيطرة البشرية ذات المغزى أساسا للمعاهدة.

بناء من الحظر والتنظيم

حيث ينبغي أن يحظر الصك أنظمة الألأسلحة ذاتية التشغيل غير المقبولة أخلاقيا أو قانونيا وعلى رأسها تلك التي تفتقد السيطرة البشرية . كما ينبغي تنظيم استخدام جميع أنظمة الألأسلحة ذاتية التشغيل الألأخرى من خلالال التزامات إيجابية لضمان بقائها تحت سيطرة بشرية حقيقية.

يجب أن تخضع أنظمة الألأسلحة ذاتية التشغيل غير المحظورة لالالتزامات إيجابية بشأن التصميم والتطوير والالاستخدام لضمان السيطرة البشرية ذات المغزى

تتطلب السيطرة البشرية ذات المغزى أن يتمكن الشخص من إصدار حكم أخلاقي وقانوني على آثار الهجوم، والوفاء بالتزامه بتطبيق القانون، ويعني كذلك أن هناك مستخدما بشريا مس ؤ ول أخلاقيا وقانونيا عن آثار الهجوم.

ولذلك، ينبغي للالالتزامات الإلإيجابية للمعاهدة أن تضمن قدرة المستخدم البشري على توقع آثار الهجوم بشكل كاف، وأنه بعد وقوع الهجوم، ينبغي له أن يفهم آثاره ويكون قادرا على تفسيرها .

ولتحقيق مثل هذه السيطرة ذات المغزى يجب:

أن يكون المستخدم قادرا على الحصول على فهم وظيفي كاف لكيفية عمل النظام.

أن يكون المستخدم قادرا على الفهم الكافي للسياق الذي سيتم فيه نشر نظام الألأسلحة، وكيف سيعمل في تلك البيئة.

أن يكون المستخدم قادرا على الحد من عمل نظام الألأسلحة في الزمان والمكان.

يجب حظر أنظمة الألأسلحة ذاتية التشغيل التي لالا يمكن التحكم البشري فيها بشكل ذات مغزى

يجب حظر الألأنظمة التي لالا يمكن استخدامها بحكم تكوينها التقني أو بيئة استخدامها أ و أن المستخدم غير قادر على تلبية المتطلبات المذكورة أعلالاه بما يتماشى مع المعايير القانونية والألأخلالاقية، ومن شأنها أن تثير تساؤلالات حول الجهة المسؤولة قانونيا وأخلالاقيا عن أي انتهاكات للقانون .

يجب حظر أنظمة الألأسلحة ذاتية التشغيل التي تستهدف البشر

وحتى لو تم استخدامها مع سيطرة بشرية ذات معنى، فإننا نعتبر مثل هذه الألأنظمة غير مقبولة لألأنها تحول الناس إلى مجرد أشياء، وهو ما يمثل إهانة شديدة للكرامة الإلإنسانية.

فأنظمة الألأسلحة ذاتية التشغيل التي تستهدف البشر تثير المخاوف الألأخلالاقية الألأساسية، وتمثل نموذج صارخ على التجريد الرقمي من الإلإ نسانية للضحايا المدنيين والعسكريين على حد سواء.

علينا العمل الألأمس وليس ال ن وقبل غدا

بالإلإضافة للكوارث الإلإنسانية والقانونية والألأخلالاقية لألأنظمة الألأسلحة ذاتية التشغيل، فإن استخدامها خارج نطاق النزاع المسلح، مثل مراقبة الحدود وحفظ الألأمن، من شأنه أن يزيد انتهاكات القانون الدولي لحقوق الإلإنسان والحريات.

إن التطورات في تكنولوجيا الألأسلحة والألأحداث التي تشهدها الصراعات في جميع أنحاء العالم تظهر الحاجة الملحة إلى العمل . وقد أ ظهرت برامج تطوير الألأسلحة من قبل دول مثل روسيا والولالايات المتحدة وإسرائيل وإيران أن الدول تتنافس بالفعل على التميز العسكري من خلالال هذه التقنيات، مع ما يصاحب ذلك من مخاطر جسيمة على السلم والألأمن العالميين .

وتظهر التقارير الألأخيرة عن استخدام إسرائيل لألأنظمة دعم القرار في غزة، رغم كونها ليست أنظمة أسلحة ذاتية التشغيل، كيف يمكن أن يؤدي السعي إلى السرعة من خلالال الذكاء الالاصطناعي، وتآكل السيطرة البشرية ذات المغزى، وتحويل الألأشخاص لنقاط بيانات، الى إحداث أضرار إنسانية مدمرة للمدنيين يستحيل جبرها .

SafeGround

[25 May 2024]

Secretary-General, in relation to resolution 78/241 "Lethal autonomous weapon systems" adopted by the UN General Assembly on 22 December 2023. The resolution requests the Secretary-General to seek views of countries and other stakeholders on "ways to address the related challenges and concerns raised[d] from humanitarian, legal, security, technological and ethical perspective and on the role of humans in the use of force," posed by autonomous weapons.

SafeGround works to reduce harms of legacy and emerging weapons through outreach and education in Australia and the Pacific and finds it essential autonomous weapons are regulated through new international law to ensure the international community responds to these concerns. This submission highlights the moral, legal and humanitarian imperatives and briefly discusses national, regional and international security considerations. The submission then presents how a legally binding instrument addresses these concerns, including outlining elements such as specific prohibitions and obligations.

(1) Our concerns of autonomous weapons systems: moral, legal, humanitarian imperatives

SafeGround first formed as part of the International Campaign to Ban Landmines, advocating a ban on anti-personnel landmines which are indiscriminate and abhorrent. Autonomous weapons, particularly used against humans, have been called 'morally repugnant' by the UN Secretary-General and would not comply with IHL's three core principles of distinction, proportionality and precaution. Human judgement is essential in applying IHL and the challenges to IHL compliance are one reason why new international law should be adopted to strengthen existing understandings and set new precedents based on legal and moral concerns.

The delegation of the decision over life and death to machines is a key moral risk raised by autonomous weapons. This would cross a moral red line and, along with digital dehumanisation and concerns such as human dignity and bias present an imperative against targeting humans with autonomous weapons.

Furthermore, autonomous weapons pose new humanitarian risks, already increasing autonomy is transforming how wars are fought, and AI-enabled targeting systems used in Gaza are facilitating unprecedented speed and scale of killing. There is a humanitarian need to ensure meaningful human control is maintained over the use of any weapons systems.

(2) Security considerations

Autonomous weapons pose an acceleration of conflict and higher risk of escalation. The proliferation of these weapons, especially if unregulated, and without requirements for meaningful human control will be destabilising. The Indo-Pacific region, for instance, has complex security dynamics and tensions and maintaining meaningful human control over autonomous weapons is important to manage these security risks. Autonomous weapons have implications for arms racing and regulation is an important mechanism for establishing guardrails and delineating what is and is not acceptable.

Based on historical trends, there is also a danger of these weapons proliferating globally, being used by non-state actors, in conflict and for other criminal activities. Misuse by non-state actors, for drug trafficking, illegal fishing, and political unrest, is particularly concerning for our region. These risks are heightened for Pacific small

island developing countries, many of which have no military or only small peacekeeping forces.

Autonomous weapons systems also have environmental security risks. The use of landmines, cluster munitions, chemical, biological and nuclear weapons have had hazardous consequences for the natural world and security of impacted communities. Autonomous weapons systems could exacerbate environmental degradation by reducing human oversight when selecting and engaging targets. While the energy cost of training and operating AWS is not fully known, studies indicate that the carbon footprint of AI technologies could substantially contribute to climate change. SafeGround finds it crucial to promote the responsible development and use of any weapons system that takes into account the environmental security impacts.

(3) Addressing concerns through a legally binding instrument.

SafeGround calls for the establishment of a legally binding instrument on autonomous weapons to address the legal, moral, humanitarian and security concerns. New international law is essential to establish new international norms, moral precedents, andlegal clarity.

i. Prohibitions

To addressthese challenges, we call for the prohibition of certain autonomous weapons

- Prohibitions on weapons systems that target people
- Prohibitions on weapons systems that cannot be used with meaningful human control

ii. Regulations

Autonomous weapons should also be regulated to ensure those not prohibited are effectivelycontrolled through obligations related to;

- Understanding the system's functioning
- Limiting target types, context of use
- Limiting the duration, area, scope, and scale of operating

Beyond new legal rules, these limits may also include common policy standards and good practice guidance, which can be complementary and mutually reinforcing. Specific considerations should be made as to how regulatory responses can address proliferation to non-state actors, dual-use and environmental concerns and risks.

We are grateful for the opportunity to share our views and recommendations on addressing issues of autonomous weapons from a regional and civil society perspective. We must take this opportunity to take collective action with urgency, to respond effectively to this challenge to our shared humanity.

Stop Killer Robots

[20 May 2024]

The Stop Killer Robots campaign welcomes the opportunity to submit our views to the United Nations Secretary-General in response to Resolution 78/241. Established in 2012, we are a coalition of more than 250 non-governmental organisations and academic partners working across 70 countries.[67] Towards our

[67] See www.stopkillerrobots.org/about-us and www.stopkillerorobts.org/a-global-push/member-organisations

vision and goals,68 we are calling on states to adopt an international treaty on autonomous weapons systems that ensures meaningful human control over the use of force and rejects the automation of killing.

New rules are needed:

After ten years of international discussions, a legally binding instrument is the only effective way to start to address the humanitarian, legal, security, technological and ethical challenges and concerns that autonomous weapons systems raise. Relying on existing law alone will not be sufficient. The contributions of states and non-governmental experts to discussions have decisively demonstrated this. Specific rules and legal clarity are needed to draw clear lines to protect humanity.

There is now a critical mass of support:

Around the world, momentum continues to build behind the call for a treaty.

- More than 115 states now support a legally binding instrument.69 States have
- issued regional communiques committing to work for a treaty, and convened crucial international and regional conferences in Austria, Costa Rica, Luxembourg, Trinidad and Tobago, the Philippines, and Sierra Leone. The
- International Committee of the Red Cross and the United Nations Secretary-General have jointly called on states to negotiate a treaty by 2026, which we strongly support. Thousands of scientists, tech workers, and leaders in robotics
- technology and AI, as well as religious leaders, parliamentarians, a wide range of civil society organisations, and public opinion in countries across the globe also support a treaty.70

Negotiations can and must start:

All states and stakeholders that are committed to achieving a treaty must now work together in a spirit of genuine, cross-regional partnership and take concrete steps towards starting negotiations.

- A treaty must be negotiated in a forum that is inclusive of all states and civil society, and where progress cannot be blocked through veto, consensus rules, or their misuse. Because not all states parties to the Convention on Conventional
- Weapons (CCW) wish to negotiate a treaty, progress cannot be made on this in that forum.
- Establishing a negotiating mandate for a treaty through the United Nations General Assembly, as soon as possible, represents the best opportunity to move forward. From work in the CCW, there is now a broad understanding amongst
- states of what autonomous weapons systems are, and that a “two-tier” approach of prohibitions and positive obligations is required to effectively regulate them. This can be built on to agree a legally binding instrument.

6 See www.stopkillerrobots.org/vision-and-values/
8 See https://automatedresearch.org/state-positions/
6 See https://www.stopkillerrobots.org/a-global-push/a-shared-movement/ and
9 https://www.stopkillerrobots.org/the-story-so-far/
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An effective treaty on autonomous weapons systems

Scope:

Stop Killer Robots understands autonomous weapons systems to be those that detect and apply force to a target based on the processing of data from sensor inputs. In these systems, after activation by a human user, there is a period of time where the weapon system can apply force to a target without direct human approval. The specific object to be attacked, and the exact time and place of the attack, are determined by sensor processing, not humans.

- A treaty on autonomous weapons systems must include all systems that fall within this scope. Our concerns arise from the automated process by which such systems function. Our key concerns are at the erosion of human control over the use of force – which raises serious legal, ethical, humanitarian, and security concerns – as well as the ethical unacceptability of increasingly automated killing and digital dehumanisation.

The centrality of the role of humans:

The human role must be the central element of a regulatory framework. Ensuring meaningful human control must be a core purpose of a treaty.

A structure of prohibitions and positive obligations:

A treaty should prohibit autonomous weapons systems that are ethically or legally unacceptable. The use of all other autonomous weapons systems should be regulated through positive obligations to ensure they remain under meaningful human control.

Autonomous weapons systems that are not prohibited must be subject to positive obligations on design, development, and use to ensure meaningful human control:

Meaningful human control requires that a person can make a moral and legal judgement on the effects of an attack, and fulfil their obligation to apply the law. It also means there is a human user who is morally, and legally, responsible for the effects of an attack.

A treaty's positive obligations should therefore ensure that a human user is able to sufficiently anticipate the effects of an attack, and that after an attack has taken place they should understand and be able to explain its effects. To achieve such meaningful control, among other requirements:

- The user should be able to have a sufficient functional understanding of how a system works.
- Systems should be predictable and reliable.
- The user should be able to have sufficient understanding of the context where the weapons system will be deployed, and how it will function in that environment.
- The user must be able to limit the functioning of the weapon system in time and space.

Autonomous weapons systems that cannot be used with meaningful human control must be prohibited: Systems whose technical configuration or environment of use means the user is not able to meet the requirements above could not be used in line with legal and ethical norms, and would raise questions about who was legally and morally responsible for any violations of the law. They must be prohibited.

Autonomous weapons systems that target people must be prohibited:

Even if used with meaningful human control, we consider such systems unacceptable because they reduce people to objects, which is an affront to human dignity.

- Autonomous weapons systems targeting people raise the most fundamental ethical concerns. They represent an extreme example of digital dehumanisation, for civilian and military victims alike.
- Racialized and historically marginalised populations are disproportionately harmed by automated decision-making processes – for example, because biases in our societies are reproduced in data used to train algorithms. Autonomous weapons systems targeting people run the risk of biased technologies making determinations related to life and death. This must be prevented through a categorical prohibition.

The need for action now

Autonomous weapons systems change the relationship between people and technology. They disempower, disconnect, and dislocate humans in the use of force. The use of autonomous weapons systems beyond armed conflict, for example in border control and policing, would, furthermore, undermine international human rights law and freedoms.

Developments in weapons technology and events in conflicts around the world are already showing the urgent need for action. National programmes for weapons development by countries such as Russia and the US show countries are already competing for military advantage through these technologies, with grave risks for global peace and security. Recent reports of the use of decision-support systems by Israel in Gaza, though not autonomous weapons systems, show how the quest for speed through AI, the erosion of meaningful human control, and the reduction of people to data points can contribute to devastating humanitarian harm to civilians.71

It is vital that states negotiate a treaty to start drawing clear lines for humanity now.

Stop Killer Robots Youth Network

[21 May 2024]

The Stop Killer Robots Youth Network welcomes the opportunity to submit recommendations for consideration by the United Nations Secretary-General in response to Resolution 78/241 on “Lethal autonomous weapons systems”. This is a summary, find our full submission, including a list of signatories, here.

We interviewed young people from around the world to learn about their views on autonomous weapons and what their impacts would mean for young people today and in the future - their words and perspectives are reflected throughout this submission.

“The existence of autonomous weapons would mean we would be more disconnected with humanity.” - Sophie, 16, USA/Tajikistan/Tanzania

As a global youth network working to secure a future free of automated killing, we advocate for the creation of a new treaty on autonomous weapons systems (AWS) — in particular, we insist on a total prohibition of anti-personnel autonomous weapons as we wish to build a world without such dehumanising weapons. While

[71] See https://www.stopkillerrobots.org/news/use-of-lavender-data-processing-system-in-gaza/.

youth will inevitably face the risks of new weapons technologies, we remain underrepresented in the decision-making process and are often sidelined in forums that shape our interests. With escalating conflicts and the rapid deployment of new weapons technologies around the world, there is an urgent need to reinvest in international law as a measure to build trust and achieve sustainable peace and security. *"I worry about autonomous weapons causing harm without human control, leading to more conflicts." - Jefferson, 25, Ghana* Youth are disproportionately affected by armed conflicts. In 2022, one in six children were living in armed conflict72 and must continue to live with the horrendous consequences of these events73. Children can be direct or indirect victims of attacks from means and methods that are not intended to be used on children74. In addition, critical infrastructures necessary for the development of children and youth are being destroyed or disrupted in current armed conflicts75, sometimes intentionally. As the means and methods of warfare have evolved over time, recently, with the evolution of automated decision-making in acts of war, civilians have been increasingly impacted by these new means and methods76. In Gaza, where artificial intelligence systems have allegedly been used to identify targets, 40% of civilian casualties have been children77. With this in mind, we, as youth, are progressively apprehensive about the development of AWS. Since 1945, generations have grown up under the fear of being killed by nuclear weapons. Let us safeguard future generations from growing under the fear of being killed by AWS. *"If a human makes a mistake, there would be consequences for them. But, a killer robot, well, nothing will happen." - Juline, 16, Belgium* Current conflicts have significantly strained youth confidence in international governance, fostering a sense of disillusionment and frustration. The continuous disregard for international law and human rights and a perceived lack of consequences for such actions have left many feeling hopeless and without adequate international representation or protection. *"Conflicts in recent years are escalating rapidly as never before, and this can be attributed in part to the misuse and proliferation of advanced technology and development of increasingly lethal weapons systems." - Maria, 23, Lebanon*

Vulnerable young people in conflict zones, who often bear the brunt of these incidents, find themselves in a particularly precarious position, with limited involvement in the creation of the conflicts that unfold around them. However, the prevailing trends of marginalisation and discrimination against vulnerable youth are likely to worsen with the advent of an autonomous weapons arms race.

[72] ICRC, *Childhood in Rubble : The Humanitarian Consequence of Urban Warfare for Children*, p. 7, Geneva, May 2023.
[7] Save the Children, *Children in Conflicts*, https://data.stopwaronchildren.org/.
[3] ICRC, *Childhood in Rubble : The Humanitarian Consequence of Urban Warfare for Children*,
[7] pp. 26-27.
[4][5] UNICEF, *Water Under Fire Volume 3, Attacks on water and sanitation services in armed conflicts and the* impact *on children*, New York, 2021. Global Coalition to Protect Education from Attack, *Attacks on Education and Military Use of Education Facilities in Ukraine in 2022*, February 2023.
[7] ICBL — CMC, *Landmine monitor 2023*, Geneva, November 2023, p.55.
[6] United Nations, *Two Thirds of Gaza War Dead are Women and Children, Briefer Says, as*
[7] *Security Council Debates Their Plights*, 22 November 2023,
[7] https://press.un.org/en/2023/sc15503.doc.htm.

"Just the fact that you even think about creating these kinds of weapons is a problem." - Daniela, 26, Italy

Should international discussions continue to stall, a new catastrophic arms race may very well be underway. Autonomous weapons systems are a looming disaster in a world increasingly losing its sense of shared humanity. The UN stands at a pivotal moment with both an opportunity and an obligation to ensure that these detrimental trends do not persist unchecked. Ultimately, young people will bear the brunt of inaction, both now and in the future.

Weapons systems with varying levels of autonomy78 are already impacting the lives of those impacted by armed conflict79 — these weapons are no longer a future problem. Countries are racing ahead to field these capabilities and in reality, we are only a few software updates away from machines making life-and-death decisions80. We are already witnessing the problematic effects of automated decision making and artificial intelligence resulting in ethical issues, including digital dehumanisation, and a lack of compliance with international humanitarian law.

"Young people like me should be able to live in a world free from the fear of being turned into numbers and data." - Hevelyn, 24, Brazil

Planet Earth and its inhabitants are precious, we must all invest our time and energy to protect them. Technology should be used to promote peace and human rights, not for the creation of dehumanising weapons. What if we could create Autonomous Demining Systems to help communities impacted by landmines? The Anti-Personnel Mine Ban Convention should be a source of inspiration for us at this moment – 25 years ago, the international community agreed upon the ban of anti-personnel landmines, an inhumane weapon which also had disproportionate impacts on children and future generations81.

We urge states and leaders to act now, to stop the development of AWS and other means aimed at killing and dehumanising people. We have the unique opportunity to act before catastrophe occurs.

"Reaching a treaty on autonomous weapons would signify the beginning of a new era for international cooperation and disarmament" - Valeria, 22, Costa Rica

Using the UN and international law as a beacon of hope, we look to global institutions to advocate for justice and protect the most vulnerable among us. We rely on global leaders to uphold ethical standards, emphasizing the imperative of meaningful human control over weapons.

"A comprehensive treaty would mean that the voices of those who are and would be most affected by these weapons were heard and were taken seriously. It would reinvigorate my trust in the international multilateral system." - Deborah, 28, Sweden

78 Automated Decision Research, Autonomous weapon and digital dehumanisation, November 2022, p.3.

79 +972 Magazine, *'Lavender': The AI machine directing Israel's bombing spree in Gaza*, 3 April 2024.

80 Automated Decision Research, "Weapons systems", automatedresearch.org, n.d. https://automatedresearch.org/weapons-systems/.

81 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, Preamble, 18 September 1997.

Sustainable Peace and Development Organization

[25 May 2024]

Sustainable Peace and Development Organization (SPADO) welcomes the opportunity to submit views to the United Nations Secretary-General in response to Resolution 78/241. SPADO is a civil society organization based in Pakistan and is a member of the Campaign to Stop Killer Robots.82 The organization has actively and productively participated in the discussions on LAWS at the CCW and other such forums. We are committed to raise awareness and advocate for a legally binding instrument on autonomous weapons keeping in view its ethical, humanitarian, moral, legal and security concerns.

The submission outlines our views on the serious and unimaginable implications of autonomous weapons in the context of preserving our shared humanity, global peace and security, accountability and transparency and the urgency to initiate negotiations for a legally binding instrument that prohibit and regulate autonomous weapons without further delay.

Preserving our Shared Humanity:

The debate over killer robots extends far beyond mere questions of national security or ethical principles; it speaks to the very essence of our shared humanity. Allowing machines to arbitrate who lives and who dies risks dismantling the fundamental foundations of our society, relegating empathy and compassion to mere trace of our past. The development of lethal autonomous weapons contradicts the ethical principles and teachings of all faiths which call for compassion, human judgment, and the preservation of life. The development and use of LAWS will lead to actions that contravene the moral values and principles enshrined in our faiths as one human family. This is a question of our shared humanity, which is at stake and that of the preservation of human dignity.

Pope Francis has urged world leaders to establish an international treaty regulating AI, and warned against relying on machines to make moral and ethical decisions that should be left to humans. The most dangerous risk, however, lies in the military development of autonomous weapons. Pope Francis argued that the technology could never be “morally responsible subjects” and warned it could fall into the wrong hands and wreak havoc – potentially killing innocent citizens and upending democracies.83

Global Peace and Security:

We have to look at the issue of autonomous weapons more broadly in the context of global peace and our shared humanity. If one country for instance develops and deploy autonomous weapons then it is for sure that other states will follow and a new arms race in the area of LAWS will emerge. The race will not stop and most probably the Non-State Actors will be in a position to develop and deploy such weapons if not in the near future but for sure in future. Such an arms race will be uncontrollable and unimaginable. We believe that prevention is better than cure and today, we have the time to prevent such an unethical arms race. The arms race will be like the COVID-19 Pandemic, which originated from one location and then affected the whole global

[82] Stop Killer Robots is a coalition of more than 250 non-governmental organizations and academic partners working across 70 countries towards an international treaty on autonomous weapons systems that ensures meaningful human control over the use of force and rejects the automation of killing.

[83] See https://www.theregister.com/2023/12/15/pope_francis_ai_treaty/.

community irrespective of race and region whether developed, developing or under developed. Now is the time to stop the future pandemic of LAWS.

The world has already become quite polarized where there is a lack of trust and mutual respect and understanding among states. The brutal wars are underway where parties to the conflict are using every form of lethal force. We are witnessing humanitarian catastrophe and the killing of innocent civilians including women and children on daily basis. In the midst of these conflicts certain states are increasingly investing in autonomous weapons and it is unclear to what extent such weapons have been deployed or used. If the use of such weapons becomes more evident than the already started race in the area of LAWS will become so fast, which will be uncontrollable. Such proliferation will be having catastrophic impacts on the international peace and security.

Accountability and Transparency:

The arguments that the use of autonomous weapons to protect civilians, target legitimate military objects and protect the armed forces raise many fundamental questions and concerns such as how will one limit the scope of the use autonomous weapons and how an autonomous weapon will be capable to identify that the target is legitimate and not a civilian object. There are higher chances that the use of such weapons will proliferate quickly and will raise many ethical and moral concerns, which will compromise the question of human dignity. Autonomous robots would lack human judgment and the ability to understand context. As a result, autonomous weapons would not meet the requirements of the laws of war. Replacing human troops with machines could make the decision to go to war easier, which would shift the burden of armed conflict further onto civilians. There are greater chances that antipersonnel autonomous weapons with deadly effects can be used by individuals against individuals based on their DNAs, facial recognition, biometric data etc. where it will be extremely difficult to find who developed and deployed such weapons.

Urgency is Needed:

States have been discussing the issue of LAWS for more than 10 years in the CCW where a large majority of member states were hoping that the discussions will lead to prohibitions and regulations of autonomous weapons. The global civil society, academia, tech experts, faith leaders and international organizations have been warning and showing their concerns related to the threats of autonomous weapons and asking for taking urgent steps towards a legally binding treaty. However, despite the large majority of states in favor of a legally binding treaty, the discussions didn't culminate into legal prohibitions and regulations on autonomous weapons.

The resolution of Austria on autonomous weapons at the UN General Assembly and the regional conferences in Latin America, Africa and Asia have provided an opportunity to the United Nations to carry forward the discussions into concrete outcomes leading to a legally binding treaty. We believe that the Secretary General New Agenda for Peace is the best way forward to build trust, solidarity and universality, which has also proposed to conclude a legally binding treaty on autonomous weapons by 2026. SPADO is of the view that the current wars and conflicts across the world demand the United Nations to take immediate steps to build consensus among states and initiate the negotiations of a legally binding treaty on autonomous weapons.

In conclusion, we would like to emphasize that there is a dire need to collectively utilize our human wisdom and don't just focus our attention about the present status and scenario of autonomous weapons but to imagine a devastating future scenario of automated killings where no one will be safe when such weapons

will proliferate. States have the responsibility to act now as it will then be too late to stop autonomous weapons, which will eliminate human dignity, the value of life and the moral and ethical values, which the global community possess.

Women's International League for Peace and Freedom

[20 May 2024]

Pursuant to UN General Assembly resolution 78/241, WILPF is offering these concerns and recommendations to the UN Secretary-General's report on autonomous weapon systems (AWS). More in-depth analysis can be found in Reaching Critical Will's papers on AWS.

International peace and security

The use of force has already become too disengaged from human involvement, through the useofarmed dronesandweapons operatingwith artificial intelligence (AI) or autonomous features. AWS ... violence ... Algorithms create a perfect killing machine, stripped of empathy, conscience, emotion, judgement, or understanding of human life. AWS would not hesitate to act; they would not take into account extenuating circumstances, nor challenge their deployment or operational mandate. They would simply do as they have been programmed to do—and if this includes massacring everyone in a city, they will do so without hesitation.

AW risk lowering the threshold for war. They present a perception of "low risk" and "low cost" to the military deploying the weapon. This perception increases the scope for the deployment of weapons into situations and to carry out tasks that might otherwise not be considered possible. Having an amoral algorithm determine when to use force means that we will likely see more conflict and killing, not less.

As seen with armed drones, remote-controlled weapons have made war less "costly" to the user of the weapon. Operators do not face immediate retaliation for acts of violence. While this is attractive to militaries that do not have to risk the lives of their soldiers, it *raises* the cost of war for everyone else. AWS would likely be unleashed upon populations that might not be able to detect their imminent attack and might have no equivalent means with which to fight back. Thus the burden of risk and harm is pushed onto the rest of the world.

War profiteering and global asymmetries

New weapons lead to new war profiteering. The production and proliferation of weapons means profits for corporate CEOs and shareholders. Corporations will be seeking to make money from the development and use of these weapons, and high-tech countries will use autonomous weapons to oppress and occupy others. **Countries of the Global South may not be the ones to develop and use AWS, buttheywilllikely become thebattlegrounds for thetestingand deploymentof these weapons.** It will be the rich countries using these weapons against the poor—and the rich within countries using it against their own poor, through policing and internal oppression.

Human rights abuses

Existing military and policing technologies that use AI devalue and dehumanise people, and lead to violations of human rights and international law. AWS will exacerbate this further.

AWS could be programmed to commit acts of sexual violence. Some people who support the development of killer robots have argued that these weapons will be better than human soldiers because they will not rape. But just as sexual violence in conflict is ordered by states and by armed groups using human soldiers, an AWS could be programmed to rape. It is also important to consider the broader culture of rape in relation to weapons and war. Sexual violence is used as a weapon in conflict, and the risk of this kind of violence is also heightened during and after conflict. War destabilises communities and exacerbates already existing gender inequalities and oppression of women, LGBTQ+ people, and others who do not conform to societies' gender norms.

AWS will also facilitate gender-based violence, including against men, by exacerbating policies and practice that count all cisgendered men as militants. In armed conflict, civilian men are often targeted (or counted in casualty recordings) as militants only because they are men of a certain age. Exacting harm on the basis of sex or gender constitutes gender-based violence. This erodes the protection that civilians should be afforded in conflict and violates many human rights, including the right to life and due process. It also has broader implications in the reinforcement of gender norms. Assuming all military-age men to be potential or actual militants entrenches the idea that men are violent. This devalues men's lives and increases the vulnerability of men, exacerbating other risks adult civilian men face such as forced recruitment, arbitrary detention, and summary execution.

As can be seen by Israel's use of AI technologies that generate target lists (Lavender) and target locations (Go Daddy), as well as the use of predictive policing software and border biometric systems in the United States and other countries, AI-enabled technology lends itself to this kind of gender-based violence. Reportedly, the only human checks on Lavender's kill lists are to ensure the targets are men.

Autonomous and AI technologies in weapon systems will further enable police and militaries to target people based solely on their gender, appearance, location, or behaviours, defining whole categories of people asmilitants, terrorists, orcriminals without any due process. AWS could also bedeliberately programmedto target people based on gender, race, socioeconomic status, (dis)ability, and sexual orientation. Just as AWS will lower the threshold for armed conflict, they will also lower the threshold for state violence against people. Police forces will be able to send machines to violently suppress protests and to repress certain categories of people, exacerbating discrimination.

In addition, data sets and the training with this data will cause bias. Parameters, boundaries, labels, and thresholds selected in the design phase necessarily exclude and include. This both creates bias and replicates existing bias within data and social structures. We already see examples in related technologies. Facial recognition software struggles to recognise people of colour; voice recognition struggles to respond to women's voices or non-North American accents; images of anyone standing in a kitchen are labeled as women; people's bail is denied because a program deemed a woman of colour more likely to reoffend than a white woman; trans people are surveilled on the basis of the clothing they wear. If such biases are left unchecked, there will be no counteracting human intervention.

Recommendations

The best solution is a **legally binding international treaty to prohibit the development, production, and use of AWS**.

Technology companies, tech workers, scientists, engineers, academics, and others involved in developing AI or robotics should pledge to never contribute to the development ofAWS.

Financial institutions such as banks and pension funds should pledge not to invest money in the development or manufacture of autonomous weapon systems.

States, civil society groups, activists, tech workers, and others should also work to prevent AI-enabled technologies from being used by militaries and police forces. It is not justAWS that are problematic, but the overall automationofviolence, as well as sensor-derived target detection, algorithmic bias and software-generated kill lists. These must not be normalised, they must be prevented.

AWS are a product of an arms race that derives from the global system of militarism and war profiteering. This system fuels armed conflict and armed violence, human rights abuses, and other violations of international law. It is therefore important to not just ban AWS, but to dismantle the structures of state violence as a whole.

Virtual Planet Africa, Women's International League for Peace and Freedom Zimbabwe and Cultural Youth Movement Education Foundation

[16 May 2024]

Autonomous weapons systems present risks and concerns to the security of states and communities, particularly in the Global South.

We support the creation of a legally-binding instrument that considers (a) meaningful human control as an integral and intrinsic concept, (b) risk assessment and mitigation, (c) clarification of international humanitarian law (IHL) requirements for AWS, (d) transparency and confidence building measures (TCBM), (e) prohibitions and regulations, (f) regulations on autonomous arms trade, and (g) consideration of AWS challenges in other international law frameworks.

B. Meaningful Human Control

Meaningful human control of systems refers to the making of critical decisions by humans, contextualisation, and rationalisation by a human(s) operator in the application of force. All systems that can make critical decisions on the use of force without meaningful human oversight should be banned.

C. Risks and Mitigation Measures

AWS pose several risks, challenges, and concerns. AWS that can result in excessive or superfluous injury to civilians and civilian objects should not be developed, distributed, or used. Targeting civilian objects like hospitals, schools, inter alia using AWS should be prohibited.

AWS have a high risk of being accessed and used by armed non-state actors. A legally-binding instrument on AWS should consider ways of safeguarding developing states, and would ensure that armed non-state actors do not easily access AWS. This would be done through building a robust framework for the regulation and restriction on the development and trade in AWS.

Algorithmic bias is also a major concern for AWS especially for people in the Global South. AWS are only as good as the data used to train them. The risks of cultural, social, and identity bias presented by AWS can have adverse effects. The proposed legally-binding instrument should include clear and strong measures to ensure that algorithmic bias relating to gender, sex, race, ethnicity, age, class, language, location, and other identity categories can be eliminated before a system is deployed. Protocols should be put in place for the prosecution and punishment for

developers and users of AWS with algorithmic bias and that make mistakes based on algorithmic bias.

System failure and possible manipulation by malicious actors is another key concern. Our approach values the control of systems by human operators at all levels in a system's cycle, and machine failure, hacking, or reprogramming by malicious actors can lead to loss of control.

D. International Humanitarian Law

The International Court of Justice Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons opined that all types of weapons, whether from the past or in the future, are governed by IHL. Guiding Principle (a) of the GGE on LAWS affirmed that IHL "continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems." Although IHL is just a bare minimum requirement, the development, distribution, and use of AWS should ensure that AWS fulfil the 'cardinal principles' of IHL;

Distinction: AWS should not target civilians and civilian objects. We suggest the expansion of the interpretation of this principle in the context of AWS to prohibit the targeting of human targets by AWS.

Proportionality: AWS must not cause excessive, superfluous, and unnecessary injury in relation to anticipated military advantage anticipated. To avoid the killing of those deemed as *hors de combat* by AWS, we suggest that AWS should not be used to target or against humans.

Precaution: proper precautions must be made before deployment of AWS to ensure that they do not attack civilians and civilian objects, they do not contain algorithmic bias, they will not cause unnecessary damage/injury, and that they will not disregard humanitarian needs in the use of force.

E. Transparency and Confidence Building Measures (TCBM)

Transparency and Confidence Building Measures (TCBM) should be put in place to ensure that AWS do not lead to an arms race, unintended conflicts, and misconceptions about AWS. These should include Article 36 reviews of weapons, transparent risk assessments at all levels, information sharing and exchange, internationally agreed review processes and procedures, national obligations for safety and risk mitigation, national and regional ethical standards, periodic reports on military expenditure on AWS for all states, and the creation of an oversight body.

F. Prohibitions and Regulations

In line with the 'two-tier' approach, the following AWS should be **prohibited**: systems that

- operate without meaningful human control,
- with unpredictable or unexplainable actions and outcomes,
- that cannot distinguish between civilians, civilian objects, and military objects/targets,
- cause unnecessary or superfluous injuries,
- cannot fulfil the requirements of international law, especially IHL,
- cannot be terminated by a human user once deployed,
- contain algorithmic bias and other harmful identity-based risks,

- can learn and change decisions, parameters, or goals after deployment, and
- target humans directly without the input of a human operator.

The following positive obligations should be put in place as regulations:

- Limits should be put in place on the geographical and mission-based operation of AWS,
- The types and nature of targets shall be limited,
- Human supervision must be ensured at all stages of the weapon's lifecycle,
- Mandatory obligations for training of personnel shall be put in place before a system is used,
- The duration and scale of AWS operations must not be unlimited,
- Clear chains of command and responsibility shall be outlined,
- Frameworks for the prosecution and punishment of individuals, entities, or states who misuse or develop prohibited systems must be established before systems are deployed,
- AWS must be traceable, and
- Human users must be able to terminate AWS at any and all times.

G. AWS Trade and Distribution

The trade and distribution of AWS must be strictly regulated. In addition to the provisions of the Arms Trade Treaty, clear regulations must be put in place to ensure that AWS do not fall into the wrong hands.

States and companies that develop AWS should not be allowed to test them in active combat zones in fragile communities. Security assistance for fragile states and states with high levels of insecurity should only be done with AWS whose effects, effectiveness, and efficacy has already been tested elsewhere. States should not use security assistance as an excuse to test AWS. This should be put in place to ensure the safety and dignity of vulnerable communities.

Industry developers of AWS must have clear guidelines on the development and distribution obligations they have. AWS should be sold only to state parties and reputable registered companies. Rules to prosecute developers who sell to armed non-state actors and terrorist groups shall be put in place.

AWS shall be sold only to, and used only in, states with existing national ethical guidelines and standards to govern the development, testing, trade, and use of AWS. These ethical guidelines and standards must be in line with the proposed international legally binding instrument.

H. Other International Law Provisions

International Human Rights Law, International Criminal Law and other Codes of Conduct shall also guide and support the proposed legally binding instrument.