

## VOL.9 NO.4

14 August 2021

TIME FOR ACTION  
**JOIN  
#TEAMHUMAN**



### IN THIS ISSUE:

- |    |  |    |   |
|----|--|----|---|
| 1  | Editorial: Disrupting denialism              | 30 | Human-machine interaction   |
| 4  | Political interest + public opposition grows | 33 | Weapon reviews  |
| 5  | Organisation of work                         | 41 | Risk mitigation   |
| 8  | General considerations                       | 44 | Operational aspects   |
| 13 | Characteristics                              | 48 | Incendiary weapons: Testing the CCW's humanitarian purpose and future viability |
| 17 | Possible considerations                      |    |   |
| 24 | Application of international law             |    |   |



Reaching Critical Will

[www.reachingcriticalwill.org](http://www.reachingcriticalwill.org)



[www.wilpf.org](http://www.wilpf.org)

# EDITORIAL: DISRUPTING DENIALISM

Ray Acheson | Women's International League for Peace and Freedom

During the second week of its work, the Group of Governmental Experts (GGE) reviewed the **Chair's paper** containing draft elements on possible recommendations for a normative and operational framework (NOF) on autonomous weapon systems (AWS). The group petered out at the end, holding mostly informal discussions on its final day that were not available via webcast and that seemed to mostly consist of bickering over process. Despite this, the discussions this past week were useful in developing concrete positions on possible elements for the framework, which has been on the GGE's mandate to develop since 2019.

While the title of the paper—"draft elements on possible recommendations"—is far removed from the negotiation of an actual NOF, it was structured in such a way as to provide helpful guidance on what an NOF could eventually look like. This gave participants an opportunity to discuss what elements would be needed in an agreement on AWS, and what more needs to be discussed to get there.

Of course, in keeping with their ongoing objections to doing any work on this portfolio outside of reiterating previously agreed language, a handful of states that are actively pursuing the development of AWS did not care for this approach. They would have preferred to work on a draft report to the CCW Review Conference that merely reiterated the **eleven guiding principles** adopted in 2019 and perhaps restated the agreement reached even earlier that international law applies to AWS.

Fortunately, they were not able to disrupt discussions on the Chair's paper too much, and most delegations engaged thoughtfully in crafting recommended elements for an NOF. This offers an important lesson to the GGE moving forward: to get substantive work done, concerned states must forge ahead and not allow those that deny the risks and challenges posed by AWS to prevent the action that is urgently needed to protect humanity and international law.

## Deny, defer, derail, disrupt

"Denialism strenuously demands a dialogue as a wedge to open 'debate' where there is none, as a tactic to derail and disrupt," **notes** historian Sean Carleton. "That's the strategy. Engagement, in varying ways, can be essential—but so too is non-engagement."

The tactic of denialism has been on full display the past two weeks of this GGE session, as well as in all its previous meetings. One recent example is the attempt to deny the implications of algorithmic bias for weapon systems.

A growing number of states acknowledge the risks of algorithmic bias and see the dangers this poses for human life and dignity if deployed in weapon systems. Therefore, the Chair included an element on bias in his paper, which acknowledges that "algorithm-based programming relies on data sets that can perpetuate or amplify social biases, including gender and racial bias, and thus have implications for compliance with international law."

Argentina, Austria, Brazil, Chile, Ireland, Mexico, Palestine, Panama, Peru, Philippines, South Africa, Switzerland, Venezuela, the International Committee of the Red Cross (ICRC), and Campaign to Stop Killer Robots (CSKR) supported this provision.

In addition, last week Austria, Brazil, Chile, Costa Rica, El Salvador, Holy See, Ireland, Luxembourg, Mexico, New Zealand, Palestine, Panama, Peru, Philippines, Sierra Leone, Uruguay, the CSKR, and Red de Seguridad Humana para América Latina y el Caribe (SEHLAC) raised concerns about gender, racial, and other biases that can be perpetuated through algorithms and thus must be considered in any regulations of AWS.

The issue has been raised during side events and in written submissions to the GGE in the past. The Women's International League for Peace and

Freedom has published [papers offering feminist perspectives on AWS](#), which among other things provide analysis of racial and gender biases that may be perpetuated and turn lethal when incorporated into weapon systems. The Campaign to Stop Killer Robots has published papers about [gender](#) and [racism](#) in respect to AWS, and has set up web pages with additional resources on [gender](#) and [racism](#), too. The United Nations Institute for Disarmament Research has published a [report](#) on algorithmic bias and weaponisation. Tech workers have long [warned](#) that the application of such technologies to weapons will have grave impacts.

Beyond these resources directly related to AWS, there are scores of studies and media reports about racial and gender bias in technology that are relevant to our discussions in the GGE. Wanda Muñoz of SEHLAC helpfully [compiled](#) some of these into a Twitter thread for delegates. The [Algorithmic Justice League](#) is also a great place to start digging into the social harms of artificial intelligence.

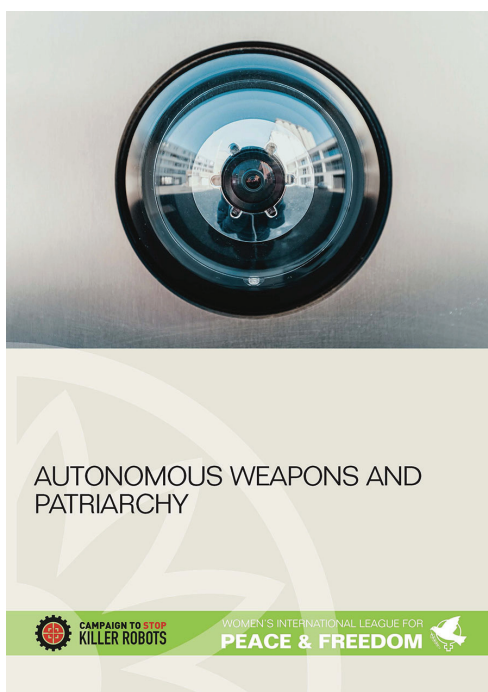
As Panama pointed out, these harms are not abstract or theoretical. We know that algorithms, artificial intelligence, and machine-learning systems reproduce implicit bias—and can be programmed intentionally with discriminatory parameters. We have seen the harms this has caused in policing, migration “enforcement,” biometrics, and more. And as Palestine noted,

while victims of data bias in other spheres may be able to seek justice for the harms against them, there will be no justice for someone who has been targeted with lethal force due to data bias.

There is thus already a lot of information, real world experience, and careful consideration of this issue. As Brazil, Chile, and Mexico warned, “After so much study and proof of the risks shown by ethicists, technological experts, philosophers, and other experts, maybe the George Orwell scenario ... is for those who discard these risks and challenges that have been proven without a doubt.”

Yet some delegations opposed the inclusion of bias in the paper, including India, Russia, and the United States. Their basic argument is that there is not information on this and that it requires further discussion in the GGE; India also argued that if programmed “correctly,” datasets can “remove any biases”. Others, such as Australia, Finland, France, Japan, Netherlands, Sweden, and United Kingdom were slightly more cautious, suggesting that there may be concerns about data bias in some circumstances, but more study is necessary. They urged changes to the Chair’s paper to reflect their hedging on this issue.

This continued denial of a problem, and subsequent deferment of action on it, is classic denialist strategy. It’s meant to buy time while the states





developing these weapons forge ahead before they are constrained by international regulations and norms. The contradictions between the position that “more information is needed” while weapons development continues apace was not lost on those supporting urgent action. Palestine, for example, asked if those waiting for “more studies” or “further discussion” will impose a moratorium on the development of autonomous weapons until new studies are available.

Denialism (and its contradictions) isn't just related to the question of bias but to all the risks posed by AWS. This is reflected in one of the basic contradictory assertions by these governments: that AWS do not yet exist, so we can't know if they have risks, thus they cannot be prohibited; but we know for sure that they have real, non-hypothetical benefits, so we should develop them.

This smoke-and-mirrors deflection is part of the denialist strategy, and it's also employed to disrupt the process for taking action against AWS, such as through the negotiation of a legally binding instrument. These states deny the problem and the solution—and they even deny stronger mandates or new mechanisms to help advance discussions.

Even France expressed frustration with the contradictions of certain states, noting that the Russian delegation both calls for information and says we can't reach agreement on certain things because there hasn't been enough discussion, and yet also opposes establishing new mechanisms that could bring that information into the GGE for discussion!

### **Yielding to the requirements of humanity**

Which brings us back to the core issue: figuring out how to make progress despite the stalling tactics of AWS developers. Consensus, as described in last week's editorial, is a problem here. But, as delegates demonstrated this past week, we can advance the issue even over the objections of the denialists. But there may only be so far states can get within the CCW, or any other consensus-based forum. Given that various nuclear-armed states have managed to block any progress in the Conference on Disarmament for more than twenty

years, it's very clear the extent to which they can derail processes and disrupt the collective good.

It's thus up to the majority to disrupt their ability to disrupt. This could involve taking the autonomous weapon issue outside of the CCW to a forum where states aren't given vetoes. Other weapon systems have been banned in the UN General Assembly and through stand-alone processes. A lot of governments see the CCW as being the most appropriate forum, but what does that mean if the forum does not permit the desired action from being undertaken? If we cannot start—and conclude—negotiations, if we cannot negotiate in good faith—meaning without the will of the majority being taken hostage by a handful of states—and if we cannot secure an agreement that protects humanity, how is the CCW “appropriate” for anything at all? If its high contracting parties prevent it from fulfilling its own mandate to prohibit and restrict weapons, the work to uphold its goals and objectives must be taken up elsewhere.

If the GGE can agree to a negotiating mandate at the CCW Review Conference in December, that is one thing. But simply extending the mandate, or establishing new committees or groups of experts, is insufficient. It's time to disrupt the status quo, as those behind the Mine Ban Treaty, Convention on Cluster Munitions, and Treaty on the Prohibition of Nuclear Weapons did, by forging new international law and norms against weapons that cross moral, ethical, and legal lines. Even if those developing AWS reject these efforts, normative stigmatisation and prohibition will have an impact. Political, legal, ethical, moral, and technical lines can be drawn that impact industry guidelines, economic incentives, and international law alike.

This is important for all governments to consider as the GGE continues its work in September and December, and as the CCW Review Conference meets in December. As laid out in the [Declaration of St. Petersburg of 1868](#) and reiterated by the ICRC this week, it is a requirement that states, fix limits at which “the necessities of war ought to yield to requirements of humanity.” It's past time for states to live up to this obligation and prohibit AWS through a legally binding instrument.

# POLITICAL INTEREST + PUBLIC OPPOSITION GROWS

Mary Wareham | Human Rights Watch

After years of costly and inconclusive CCW deliberations on killer robots, political interest is growing in reaching a credible outcome to the fundamental concerns raised by removing human control from the use of force. The CCW is on notice that it must deliver by the December 2021 Review Conference.

Austria's Minister of Foreign Affairs Schallenberg is one political leader convinced of the need for a much stronger result. Austria has invited interested states and civil society to a virtual meeting on 15–16 September to discuss how to spur the CCW on to a successful and substantive outcome by the Review Conference. Schallenberg wants states to “act now, before the survival of civilians in a conflict zone is determined by an algorithm and before all constraints laid down in international humanitarian law become redundant and decisions are taken by killer-robots without any human control or ethical concerns.”

New Zealand's Minister for Disarmament and Arms Control, Phil Twyford, is another political leader keen to see progress on killer robots concerns. During this meeting, Twyford convened a Dialogue on Autonomous Weapons and Human Control at the New Zealand Parliament to draw attention to the issue and need for stronger action. He told the event that “we need the CCW to rise to the challenge before it” as “the possibility of machines making life and death decisions challenges our fundamental values and beliefs.”

The New Zealand government is undertaking extensive consultations as part of its policy development process, including a public opinion survey by Colmar Brunton of 2,000 people. The 2021 survey found that—at 72 per cent—“the vast majority of New Zealanders oppose the use of autonomous weapons systems.”

Across all demographic groups (based on gender, age, ethnicity, geographic location, income, or educational attainment), more New Zealanders oppose killer robots than support them. Women

are far more likely than men to oppose the use of autonomous weapon systems (81 per cent, compared to 62 per cent).

According to the 2021 New Zealand survey, the top concern with autonomous weapon systems is that they would be subject to technical failures (60 per cent). Just over half are worried that such weapons cross a moral line because machines should not be allowed to kill (53 per cent). Lack of accountability is another major concern (52 per cent).

New Zealand's survey asked questions similar to ones used by Ipsos in previous surveys of public views on killer robots. When compared to a 2020 Ipsos of 28 countries, the new survey puts New Zealand third in terms of public objections, behind only Sweden (76 per cent) and Turkey (73 per cent).

New Zealand's survey is only the latest to deliver similar findings: public opposition to killer robots is firm and not dissipating. There's a visceral reaction against allowing machines to kill people.

Throughout this GGE, states have flagged public expectations as a major driver to produce a credible result. In its group statement, Peru warned the Review Conference not to fall short of a meaningful outcome as it must respond to mounting expectations of public opinion.

As the Holy See noted, growing public awareness is a driving force in the development of new law. Given this, the most appropriate multilateral response to the killer robots conundrum is for the CCW's Review Conference to agree to a negotiating mandate with the goal of adopting a new protocol to address concerns over lethal autonomous weapons systems.

# ORGANISATION OF WORK

Katrin Geyer | Women's International League for Peace and Freedom

This week's GGE meeting saw discussion around the format and style of the Chair's paper, sequence of agenda items, how to include and advance from consensual language, confirmation of outstanding meeting dates for 2021, and an outline of next steps, amongst others.

## Format and style of the Chair's paper

While Argentina, Australia, the Netherlands, Palestine, the Philippines, Peru, and the United States (US) welcomed the **first version** of the Chair's paper, a few states expressed their concerns about its format.

India said it couldn't engage with the Chair's paper in its original form, arguing that the paper is a reflection of the Chair's vision of the outcome of the GGE, a vision which isn't shared by a number of delegations, including India. India argued that the paper appeared like a draft treaty text, thereby "siding" with those in favour of a legally binding instrument (LBI). India argued it was important to bridge the divide between those calling for a LBI and those calling for consensus recommendations and further continuation of discussions for the clarification of recommendations for an operational and normative framework (NOF). The Republic of Korea (ROK) also expressed confusion about the form of the paper. Israel argued that large parts of the paper are inconsistent with the GGE's mandate.

In response to India, Palestine said it isn't helpful to characterise the Group as being made up of two strands: of those wanting an LBI on the one hand, and those supporting consensus recommendations on the other hand. This would suggest that those in favour of an LBI don't want consensus.

Brazil argued that the opposition to the form and status of the Chair's paper, coming especially from those opposing an LBI, seem to be prejudging the outcome of the GGE's deliberations. Brazil said that the first draft of the Chair's paper read to them as a political declaration. Similarly, to Pakistan, it read like a resolution or a political declaration. Palestine

and the Philippines asserted that it wasn't helpful to focus on form rather than substance, as form can be adjusted as needed. Austria and Pakistan made similar remarks.

The Chair clarified that the intention of the paper was to initiate discussions to narrow down possible recommendations that will eventually be included in the report to be presented to the Sixth Review Conference of the CCW, but that his paper is not a draft report.

The US said that the Chair's paper provides excellent opportunity to get into substance and to address consensus recommendations, while leaving formal aspects to a later stage. Brazil and Peru made similar observations.

A few states, including Brazil, the Philippines, the Netherlands, Austria, Palestine, Pakistan, Sri Lanka, Switzerland, Australia, and Sweden offered general observations or specific comments with respect to the different sections of the Chair's first paper. These are reflected under the respective thematic articles in this report.

Austria said it was unfortunate that procedural discussions on the paper prevent the Group from engaging in substance.

The Netherlands said it might be necessary to revise the paper's form to ensure substantive progress. France also suggested to transform the paper to make it compatible with agenda item 6. India supported this.

The Chair re-drafted the paper by changing the headings of a few sections, so as to reflect a more conventional structure for a draft report. In the Chair's **second version**, "Introduction" is now "General considerations;" "Definitions and characteristics" is now "Characterisation;" and "General commitments" is now "Possible considerations," while the rest of section headings remained the same. The redrafted paper served as basis for discussion for the rest of the week.

The Philippines said it would have preferred the original style but in the spirit of compromise, engaged in the revised new draft. Argentina also would have preferred the initial document. India expressed its sincere appreciation to the Chair for accommodating its concerns.

### **Agenda items**

A few states kept expressing concern under which agenda item the Chair's paper should be discussed.

India said that if the Chair tabled his paper under agenda item 5, the first draft of the Chair's paper wouldn't have been an issue, but that agenda item 6 implies that delegations are to express their views regarding the draft report. Similarly, Israel said that the Chair's paper isn't the draft report but a draft report should be discussed under agenda item 6.

The Philippines, Peru, Sri Lanka, and Argentina stressed that the Chair's draft paper keeps with agenda item 6. The Philippines argued that it allows to explore, in a more substantive manner, possible options for the draft report. Russia also said that it doesn't see the Chair's paper as a draft report, but as reflecting a set of proposals but that these proposals would require extremely diligent work and additions to align it with the Group's mandate. Switzerland, the United Kingdom (UK), Ireland, and Australia stated that it's clear to them that the Chair's paper isn't a draft report.

China expressed concern that the agenda of the meeting wasn't communicated beforehand, and that it didn't know a Chair's paper would be distributed. It stressed that there was not enough time for all parties to study the paper. Similarly, Turkey said the Chair's paper should have been distributed at the end of July to get sufficient inputs, and that not all countries had the opportunity to bring experts to the meeting.

### **Agreed language vs. new language**

A few states expressed concern at the addition of new, non-consensual language in the Chair's paper. The US clarified that while it wants to formulate additional language, it was concerned at re-opening agreed language that can erode

some of the foundations already laid. Japan, India, and Poland echoed this. The US urged those delegations wanting to change language to explain in detail their reasoning, and to go beyond the argument that "the context has changed," which isn't clear to the US. Similarly, the Netherlands said that the paper introduces additional obligations. China urged the Chair to use consensus language, instead of using "controversial and immature" language.

The Philippines recalled Chile's remarks that agreed language is the lowest common denominator. It argued that beyond the agreed upon General Principles (GPs), there has been substantive evolution of the discourse in the GGE through working papers, commentaries, and interactive discussion under agenda item 5. It stressed that the upcoming CCW Review Conference means that timing is tight, and it's time to shift gears. Similarly, Pakistan stressed that the GGE is not bound to past tools and elements, and underlined that the GGE's mandate is to further elaborate and come up with recommendations. Pakistan said that there's a significant number of delegations and other stakeholders expressing the desire to move forward. It said that previously agreed language should not be discarded but the GGE should assess if the language is still responsive to current points and new concerns raised.

The Chair explained that while he knows the value of agreed language, he also said that in an evolving context, it is possible to improve consensus language.

The US suggested that the next draft of the Chair's paper could indicate when previously agreed language is used and which language is new, which would make it easier to guide states' attention. Israel, Japan, and Australia welcomed this. Japan also said it is necessary to distinguish what is the *acquis* and what isn't *acquis* and that otherwise, the GGE would run the risk of jeopardising past agreements. Poland echoed this.

### **Chair's guiding questions**

The first reading of the Chair's paper was completed Thursday. The Chair suggested to have

a second reading of the text, and come back on a few key issues that were discussed during the past two weeks to get more clarity. To that end, the Chair circulated a list of **guiding questions** ahead of the meeting revisiting some of the issues on characterisations, human-machine interaction/human control, and ethics. He stressed that if states needed more time to consider the questions, states could submit written comments throughout the intersessional period.

Brazil, Chile, and Mexico welcomed the questions as well-devised and thought provoking but proposed to address them in the September session. Pakistan, the UK, and the US also welcomed the questions. The US said the Chair's questions are a valuable way to focus on some of the issues in greater detail, and was ready to engage on them.

Russia argued that the list of questions take the GGE back to agenda item 5. It said that the proposed questions do not enjoy consensus, and expressed confusion about the utility of these questions under agenda item 6.

The Chair clarified that he would like to use the extra time to clarify the positions of delegations discussed in this meeting, as continuation of discussing the Chair's paper.

Brazil, Chile, and Mexico suggested that the final day of debate shouldn't be structured around the questions as this might create an unequal debate, reflecting poorly on the rich discussions of the past two weeks. Pakistan made similar observations, noting that there are other important areas that should also be considered in more detail.

Brazil, Chile, and Mexico would have preferred to discuss language for the possible options for recommendations to the Review Conference on the final day. The UK and Russia proposed to either revert back to substantive discussions under

agenda item 5 or to continue with agenda item 6 to help prepare the next draft of the Chair's paper. The UK preferred the latter option. France said it was open to these suggestions, and proposed to consider suspending the session to continue in an informal discussion.

Russia proposed to instead discuss issues already agreed upon in the **2019 GGE report**, including paragraphs 18(b) and 18(c); paragraphs 20(a) and 20(b), as well as paragraphs 22 and 22(b), and paragraph 24(b).

### **Draft report**

India requested the Chair circulate a draft report based on the GGE's discussions so to give experts sufficient time to review the report until the next session. It said receiving the report at the next meeting only won't allow for sufficient time for experts in capital. The Philippines made a statement in support of this. The Chair indicated he would circulate a draft report in due course.

### **Next steps**

The Chair invited states to submit written comments either using the Chair's guiding questions or any other aspect they would like to cover, to be addressed in the GGE's September session. To be able to circulate a revised Chair's paper on time for the September meeting, the Chair called on states to submit any written comments by 10 September 2021. The Chair will send a revised Chair's paper one week ahead of the September session. The September session will follow similar organisation of work as this session, addressing agenda items 5 and 6.

In informal consultations, the GGE agreed on the following remaining meeting dates for 2021: 24 September–1 October (6 days), and 2 December–8 December (5 days).



# GENERAL CONSIDERATIONS

Katrin Geyer | Women's International League for Peace and Freedom

Section 0 of the [Chair's paper](#) sets out various general considerations and makes references to the applicability of ethical perspectives and international human rights law (IHRL) to autonomous weapon systems (AWS). It seeks to reflect perspectives that acknowledge the risks of AWS to comply with international humanitarian law (IHL), including bias, as well as possible areas where AWS can be used in compliance with international law.

## Overarching comments on section 0

Brazil, Chile, and Mexico noted that the section would benefit from the description of an AWS, namely “weapons which have incorporated features or functionality posing unique challenges and risks that sets them apart from all other weapons previously regulated.” Similarly, Pakistan argued that the text should spell out the uniqueness of AWS and their multifaceted challenges, which is the rationale for states’ work on this for the past eight years. Sri Lanka also said the introduction should stress the urgency of this issue.

Switzerland said that the human dimension in the context of AWS is at the core of the GGE’s work, and should be reflected as such in this section. Argentina, Austria, Brazil, Bulgaria, Chile, Ireland, Mexico, Peru, Sweden, South Africa, and Uruguay made similar remarks. The Netherlands would like to see Austria’s proposal on the subject in writing.

The United States (US) said it wasn’t sure about the utility of a section like this, depending also on the ultimate form this document may take. The US said it might be useful to recall the GGE’s mandate, as well as previous GGE reports.

France said this section should refer to the Guiding Principles (GPs) adopted in 2019, which should serve as basis for clarification and development of a future operational framework. Sweden and Peru made similar remarks. South Africa said that a reference should be included that notes that

agreed GPs are not exhaustive and may be further developed, elaborated, and refined. Pakistan and Chile made similar observations. Chile stressed that the GPs were the minimum guidelines, and said that it didn’t oppose including them but that they should be reflected in their true scope. Austria said it was concerned at cherry picking different GPs, and would prefer a general reference to the GPs, rather than specific GPs throughout the paper, including in this section. The US specified that it’s important for substance endorsed by high contracting parties not to be changed, and ideally to be reflected in its entirety, since changing them could effectively be changing substance. It agreed with other delegations that GPs are just a starting point, and that the GGE should further elaborate on substance.

Germany said that some elements drafted in the section “Application of international law” could be well be represented in the section of “General considerations,” such as ideas expressed in GP(a)—which reads: “The potential use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems must be conducted in accordance with applicable international law, in particular IHL and its requirements and principles, including inter alia distinction, proportionality and precautions in attack.” Sweden agreed with this, such as applicability of IL and IHL.

Russia said that in previous reports, the term “ethical perspectives” was used instead of “ethical considerations” and suggested sticking with the former terminology throughout. Austria, Ireland, Uruguay, and Venezuela said that it’s important that ethical considerations be retained in this entire section, while Austria stressed this could be further developed, and streamlined with other international efforts.

India said it would like to see the term “lethal” AWS in the document throughout, in accordance with the GGE’s mandate.

## Title

Current language: *General considerations*

Iraq suggested the title to be “General commitments” instead of “General considerations”.

## Section 0(1)

Current language: *Recall 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.*

India suggested deletion of this paragraph as it didn't see its value. Russia made similar comments, and argued that the language wasn't in line with existing practice for drafting GGE reports. Russia said this year's report should include a reference to the views of the group as a whole.

## Section 0(1)bis

Israel proposed a new paragraph in line with GP(k): “The CCW 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, which seeks to strike a balance between military necessity and humanitarian considerations.”

## Section 0(2)

Current language: *Recognize the potential risks and challenges posed by emerging technologies in the area of lethal autonomous weapons systems, including in ensuring respect for the principles of international humanitarian law and of international human rights law as well as for ethical considerations and in the maintenance of international peace and security.*

Russia argued there is no consensus on this topic, and noted that the word “recognise” was used prematurely. ROK suggested replacing “recognise” with “note,” since in the GP's chapeau, potential challenges were “noted” rather than “recognised”. China supported this.

Brazil, Chile, and Mexico suggested deleting “potential” to recognise risks and challenges related to AWS. Pakistan, Palestine, Panama, the Philippines, and Venezuela agreed. Brazil, Chile, and Mexico added that emerging technologies raise new ethical, legal, and humanitarian questions about how power is understood and utilised in the use of force. Sri Lanka supported a stronger emphasis on risks. Brazil, Chile, and Mexico argued that after so much study and proof of the risks shown by ethicists, tech experts, philosophers, and others, risks and challenges cannot be discarded.

India advocated to retain “potential”. Since LAWS don't yet exist, risks can only be potential. Russia made similar remarks, while Israel, the United Kingdom (UK), the US said that “risks” should be deleted from this paragraph.

Russia said that reference to impacts on “international peace and security” is premature since no agreement has been reached on this topic. In contrast, Peru noted that military policies involving the use of technology could undermine the climate of peace and security, including through changes in the balance of military power. The Philippines also prefers retention of this reference, as technical diffusion could create a new strategic terrain that the international rules-based order may not be equipped to govern, and which may widen inequities.

The Campaign to Stop Killer Robots (CSKR), Ireland, the Philippines, Panama, Switzerland, South Africa, and Sri Lanka also welcomed the inclusion of ethical considerations. The Philippines reminded the GGE of the chapeau of the GPs which asserts that “relevant ethical perspectives” should guide the GGE's work, and that ethical perspectives are given equal weight to international law in the GPs. Portugal and the Holy See also made reference to the chapeau in this respect.

Australia, China, India, ROK, the UK, and the US also suggested deletion of “ethical considerations”. The UK and Australia argued that ethical concerns are already incorporated into IHL.

Argentina, Austria, Brazil, Chile, Ireland, Norway, Mexico, the Philippines, Panama, Portugal, South

Africa, Sri Lanka, Uruguay, and CSKR welcomed the inclusion of IHRL. The Philippines reminded that human rights considerations have been discussed among states parties predating the GGE, during discussions in 2014 and 2015. Ireland made similar remarks. The Holy See warned against a false dichotomy between IHL and IHRL, as both are founded on the conviction of the universal and inherent dignity of every human, as found in the UN Declaration on Human Rights. Venezuela welcomed the Holy See's remarks. Sri Lanka said IHRL is important since AWS could also be used in law enforcement. The Philippines and Panama also argued that international jurisprudence establishes application of IHRL in armed conflict. Panama stressed that certain fundamental rights must be respected in all circumstances, including in armed conflict such as the right to life, freedom from torture, slavery, as well ill treatment.

Russia would like to see the reference to IHRL dropped, arguing that it exceeds the framework of the GGE and was not included in the 2018 and 2019 GGE reports. Australia, China, India, Israel, ROK, and the US made similar remarks.

Austria, Netherlands, Portugal, Venezuela, and Ireland recommended inclusion of international law, and Austria suggested to include examples of IHL principles.

### Section 0(3)

Current language: *Recognize also the potential for emerging technologies in the area of lethal autonomous weapons systems to be used in upholding compliance with international humanitarian law and other applicable international legal obligations, including by increasing the accuracy of weapons systems.*

Brazil, Chile and Mexico argued that paragraphs 2 and 3 suggest a false equivalence between risks and benefits, and said that benefits, argued for by proponents, are speculative. Palestine and Pakistan agreed.

The Netherlands did not agree, and said that benefits of AWS should be stated more explicitly. France and ROK also argued that this paragraph should include the term "benefits". Argentina

wasn't sure if "benefits" is an appropriate word since there is no group consensus regarding the possible beneficial nature of AWS for IHL.

The Philippines acknowledged that this point was made by some delegations but argued that the paragraph should qualify that these applications must be within an acceptable degree of meaningful human control. It acknowledged that there may be some benefits but that it's crucial to clearly reflect the appropriate balance. It suggested specific wording to recognise that advanced technologies may contribute to ensuring compliance with IHL and other applicable international legal obligations, especially regarding accuracy, but bearing in mind that the risks outweigh these potential benefits. Uruguay and Peru supported the Philippines' proposal.

Bulgaria said that more in-depth deliberations on the challenges and benefits are needed to find a balance between them. Similarly, Sweden noted that the paper should have a balanced approach between potential risks and challenges, and potential advantages and benefits. France and Australia made similar remarks.

Brazil, Chile, and Mexico said that this paragraph would be better placed in the IHL section.

Cuba and Venezuela said they would prefer to see this paragraph deleted.

ROK and China suggested replacing "recognise" with "note".

Russia suggested to replace "potential" with "capability," arguing that it is already established that highly autonomous systems can help to better uphold IHL. Russia and the US would like to see reference to GP(h) in this paragraph: "Consideration should be given to the use of emerging technologies in the area of lethal autonomous weapons systems in upholding compliance with IHL and other applicable international legal obligations."

Similarly, India called for retention of this paragraph in line with existing GPs.

## Section 0(4)

Current language: *Acknowledge that algorithm-based programming relies on data sets that can perpetuate or amplify social biases, including gender and racial bias, and thus have implications for compliance with international law.*

Argentina, Austria, Brazil, Chile, Ireland, Mexico, Palestine, Panama, Peru, the Philippines, South Africa, Switzerland, Venezuela, the International Committee of the Red Cross (ICRC), and CSKR welcomed the inclusion of bias in the draft. Ireland specifically welcomed the inclusion of gender bias, noting that lots of research exists already on this.

Panama explained that technologies are the result of societies and societies' interests, therefore influencing technologies' design. When algorithms learn, they incorporate already existing biases, thereby reproducing the implicit biases in humans, including around national origin, ethnicity, gender, and race. Panama argued that incorporating these biases into AWS would subject certain people to greater danger. Argentina made similar remarks, citing a wealth of literature and studies conducted on the risk of discrimination posed by the use of automatic data processing algorithms and techniques. Palestine and the Philippines also said there is rich literature to support this, with Palestine adding that there is ample evidence from the civilian world how technology has enabled discrimination. It stressed that there won't be justice for somebody wrongly targeted on the basis of algorithmic bias.

In contrast, India said that this paragraph sheds a negative light on algorithm-based programming, and said that with the right data sets, social, gender and racial biases can be removed. Similarly, France said there could be a more positive way of addressing algorithms, including under "risk mitigation measures" so to imply that algorithms aren't always biased. In a similar vein, the Netherlands said the paragraph was very deterministic, and said that biases may happen but that it's not a certainty, and therefore should be reflected as such. Finland observed that it should acknowledge that software systems are always algorithm based, but not all forms are driven by bias.

Russia argued the GGE hasn't discussed possible errors in datasets, let alone biases with respect to gender, race, or social issues, and said this paragraph was premature. The US made similar arguments, and further argued that social biases may not be relevant in many instances, and the paragraph's relevance may be limited. Israel supported this. The UK noted that while it doesn't want to undermine the importance of data bias, the thinking on this isn't consolidated yet, and that the wording should change in light of absence of agreement. Australia said that while it sees challenges with datasets and data science, there are also potential benefits, and suggested deletion if no consensus language can be found.

Switzerland suggested to re-phrase this paragraph into a positive obligation, to read that algorithms shouldn't include biases. It said that it doesn't deny that there could be biases but that this is an area where there is a need for further studies and research. Ireland said it was open to making this a positive obligation. The Netherlands said it would like to see Switzerland's proposal in writing.

Japan said that this paragraph relies on paragraph 20(a) from the 2019 report: "Under the same agenda item, the Group considered a range of aspects, described in detail in the Chair's summary, including the following aspects that may benefit from additional clarification or review: (a) Possible bias in the data sets used in algorithm-based programming relevant to emerging technologies in the area of lethal autonomous weapons systems." Japan therefore suggested to include, after "acknowledge that" the following: "the benefits of conducting additional clarification or review," and to then continue with the rest of the sentence.

Pakistan said this paragraph should be moved to the section on IHL.

## Section 0(5)

Current language: *Avoid hampering progress in or access to peaceful uses of technologies, taking into account the dual use nature of the technology underlying intelligent autonomous technologies.*

Brazil, Chile, and Mexico suggested deleting "intelligent" to avoid anthropomorphism.



Argentina, Ireland, Panama, Pakistan, Peru, and the Philippines agreed.

Austria suggested replacing “peaceful uses of technology” with “civilian uses of technology”.

India opposed this proposal, arguing that intelligent autonomous technologies are already being used by military forces for military applications, and so cannot be restricted only to civilian fields. Russia agreed.

Russia proposed hybrid language between the 2017 report that used the phrase “civilian research and development” and GP(j), which talks about “peaceful use” of intelligent autonomous technology. The US said that this paragraph should stick to the wording of GP(j): “Discussions and any potential policy measures taken within the context of the CCW should not hamper progress in or access to peaceful uses of intelligent autonomous technologies.” Israel echoed this.

### Section 0(6)

*Current language: Affirm the need to clarify, consider and develop aspects of the normative and operational framework on emerging technologies in the area of lethal autonomous weapons systems.*

Brazil, Chile, and Mexico suggested that this paragraph include two specific ideas, namely that AWS pose specific risks and challenges as previously outlined, and that after eight years of debate, there exists sufficient understanding. They said that this paragraph should reflect that the future work of the GGE will focus on developing said framework in the following manner: “In pursuance of its mandate, having clarified and considered aspects of the normative and operational framework on emerging technology in the area of LAWS, the GGE will focus its future work on developing aspects of said framework.” Peru, the Philippines, and Pakistan supported this.

Pakistan also urged to drop the term “to clarify and consider,” and said it was time to move forward to develop aspects of the normative and operational framework (NOF). Argentina, El Salvador, and Uruguay suggested to clearly specify the Group’s mandate, and to make this paragraph 2. Peru and

the Philippines also said this paragraph could be moved to another part of the paper.

Russia said that this paragraph reflects only a small part of the tasks for the GGE, distorting the GGE’s mandate, and argued that at this point, there isn’t full understanding of states’ positions concerning the future mandate of the GGE. Similarly, the US said that the paragraph should align more with the language of the mandate.

### Section 0(7)

*Current language: Affirm that such a framework must strike a balance between military necessity, humanitarian imperatives and ethical consideration.*

Switzerland argued that this paragraph seems to partially contradict GPs talking about military necessities. Switzerland said that ethical considerations are important, but should be dealt with in a separate sentence or phrase. Bulgaria, France, Ireland, Netherlands, and Sri Lanka supported this. Specifically, Austria and Peru supported inclusion of “ethical considerations” in this paragraph but said it would also be comfortable moving it to paragraph 8. Brazil, Chile, and Mexico agreed to move this to paragraph 8.

Japan said that the new language is a meaningful change and may provoke lengthy discussions in the GGE.

The Netherlands said it wasn’t comfortable introducing ethical considerations into the IHL balance of military necessity and humanitarian considerations. Russia agreed with India that “imperative” and “ethical” should be deleted in this paragraph. China, Israel, and ROK also want to see “ethical considerations” deleted, while Israel and Bulgaria said to change “considerations” to “imperatives”.

The US and Japan suggested revising this paragraph to reflect GP(k): “The CCW offers an appropriate framework for dealing with the issue of emerging tech in the area of LAWS within the context of the objects and purposes of the Convention, which strikes to seek a balance between military necessity and humanitarian considerations.”

The US further said it would like to see convergence between these two concepts, as such convergence underlines many rules of IHL. The UK suggested emphasising the primacy of IHL in this paragraph.

### Section 0(8)

Current language: *Reaffirm that in cases not covered by the Convention and its annexed Protocols or by other international agreements, the civilian population and the combatants shall at all times remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience.*

The UK said that the Marten's Clause should be specifically acknowledged.

Brazil, Chile, and Mexico welcomed the reflection of the Marten's Clause but said this reference should be moved to the international law section of the

paper. Pakistan also said this paragraph should be moved to the section on IHL. The US made similar comments.

India suggested deleting this paragraph, as it doesn't see its value as it recalls general principles that are already well understood.

Russia noted that this paragraph deviates slightly from the 2019 GGE report, paragraph 17(g), and suggested using that agreed upon language instead: "In cases involving weapons systems based on emerging technologies in the area of lethal autonomous weapons systems not covered by the CCW and its annexed Protocols or by other international agreements, the civilian population and the combatants shall at all times remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience." The US made the same proposal.

## CHARACTERISATIONS

Jillian Rafferty | Women's International League for Peace and Freedom

Section 1 of the **Chair's paper** provides a suggested framework for characterising autonomous weapons systems (AWS). In general, the section approaches this task by suggesting a broad characterisation of AWS in general, and then identifying potential categories of AWS. The chair noted that this approach aimed to bridge the debate from the previous week, between those who advocated for a very clear, technical and/or legal definition of AWS, on one hand, and those who felt the group already shared a broad understanding of AWS and would be hindered by more granular debate, on the other hand.

### Overarching comments on section 1

Several participants, including Russia, praised the Chair's approach for its sensibility, arguing that a "working definition" of AWS would prove superior, at least at this stage, to a single definition. The Philippines, in reference to its paper endorsed by

a group of ten states, agreed, arguing that lethal AWS cannot be encapsulated by a single definition. Venezuela echoed these arguments, noting that a single definition, while useful, should not be a prerequisite to the group advancing its work; Brazil, Chile, and Mexico agreed. New Zealand likewise noted the utility in using a working definition to help give the GGE's work direction.

Ireland likewise praised the Chair's characterisation approach, noting its concern that a fixed definition would not stand the test of time given the rapid development of technology. In addition, Ireland supported taking a functional approach to characterising AWS, focusing on technology and the human element, intertwined with compliance with international humanitarian law (IHL). Portugal and the International Committee for Robot Arms Control (ICRAC) echoed Ireland's support for taking a functional approach to characterisation of AWS.

Israel agreed that a functional approach to characterisation may be practical—but noted its concern that the text of Section 1 reads like a draft definition instead.

Other participants, including China, expressed their view that defining and characterising AWS still requires comprehensive and in-depth discussion. China, in particular, raised concerns that the characterisation of AWS included in Section 1 might not have sufficient basis in science and in objective standards. India also noted its concern with the characterisation exercise, noting that stopping there would oversimplify the GGE's necessary task of developing a comprehensive and universal definition of AWS.

Several participants, including China, Turkey, France, the Republic of Korea (ROK), Japan, and Israel, objected to Section 1's use of the term "autonomous weapons system," rather than "lethal autonomous weapons system," given the wording of the GGE's mandate. Japan also specifically noted the potential value of specifically non-lethal AWS and sought to ensure they were not lumped together with the GGE's discussion of lethal AWS.

Others, including Argentina and the Campaign to Stop Killer Robots (CSKR), argued that the word "lethal" should not be added, as AWS need not be lethal to be used in violation of international law, including international humanitarian law (IHL) and international human rights law (IHRL). Chile, speaking on behalf of Brazil and Mexico, agreed, noting that lethality isn't a criterion under IHL and thus is superfluous. Germany agreed, arguing that lethality has to do with how a weapon is used rather than the weapon itself, and that continuing to use the term "lethal" creates more problems than it solves. Austria echoed Germany's point. This issue also came up in discussion on other sections of the paper.

Turkey suggested that the report should only focus on fully autonomous weapons systems, arguing that the differentiation made in the draft paper was superfluous.

Russia suggested the deletion of all of Section 1, arguing that there had been insufficient expert-level discussion on characterisations

and definitions during the GGE's discussion of agenda item 5b. In particular, Russia pointed to the [2019 GGE report](#)'s discussion of self-adaptation, predictability, explicability, reliability, possibility of interference, possibility to choose and change goals and tasks, adaptation to different conditions, and self-activation, suggesting that the GGE revisit its discussion of characterisation and centre that discussion on those concepts.

Japan echoed Russia's argument that concepts raised in the 2019 GGE report as areas of further discussion had not yet been fully exhausted and could therefore benefit from additional clarification or review.

Like Russia, the United States (US) questioned whether Section 1 should be included in the paper at all and recommended at least the further development of an explanation of the characteristics of AWS.

### Section 1(a)

Current language: *Autonomous weapons systems are weapon systems that, once activated, can select and apply force against targets without direct human supervision or control.*

Several participants, including Cuba and Palestine, suggested rewording paragraph a to define AWS as weapons systems that, once activated, "can perform critical functions including selecting and applying force to targets," rather than just the targeting functions. Others, including Panama, Venezuela, Argentina, and Costa Rica, agreed to support this proposal. The Philippines echoed this proposal as well.

The Philippines noted that "engage" should be added after "select". Argentina, Costa Rica, and Peru agreed with the Philippines, as did the US.

Brazil, Chile, and Mexico suggested more detailed language for paragraph a, particularly in refining critical functions. They suggested that AWS are weapon systems (WS) with autonomy (meaning a level of independent decision-making capacity and action to operate without human control in its critical functions, by selecting and attacking military objectives, including human targets and

objects), that are AI-enabled (meaning the AWS uses artificial intelligence technology to perform those critical functions), and that have limited or no human control (such that the AWS operates fully or partially independently of human control in exercising those critical functions). Pakistan echoed the group's points.

France suggested replacing "direct human supervision" with "permanent human involvement," in an attempt to clarify the concept of autonomy.

Israel likewise objected to the use of the term "human command and control" throughout Section 1, arguing that the paper should revert to consensus language from prior reports, such as "human machine interaction" or "human involvement."

Portugal raised concern over the use of "and"—i.e., "select and apply force"—as autonomy may be present in just some functions of a WS.

The US objected to the formulation of paragraph a and suggested it be reframed to discuss autonomy as a characteristic that may be applied to weapons systems—i.e., "A weapons system may be characterised as autonomous if..."

ROK noted that perhaps the notion of applying force to targets could stand in for the concept of "lethality" to ensure the document is in line with the group's mandate, but suggested this was an area for further legal examination. Switzerland echoed this point, suggesting that paragraph a reference AWS that apply force—therefore, weapons that have the capability to be lethal, without having to achieve lethal effects in each attack.

Switzerland suggested clarifying paragraph a. In particular, Switzerland suggested that the paragraph explicitly exclude certain weapons, such as mines or cluster munitions, that deploy their effects against targets without human presence; this could be clarified by characterising AWS as weapons based on a combination of sensors and computer algorithms.

The US raised its concern that homing munitions would be included in this definition of AWS and argued that such inclusion would be unjustified.

## Section 1(b)

Current language: *Fully autonomous weapons systems are autonomous weapon systems that are designed to operate outside of any framework of human command and control.*

Several participants, including Palestine, were wary of the phrase "that are designed to operate outside of any framework of human command and control," noting the potential that no weapons would fall within that category. The CSKR echoed this concern. Palestine suggested that the phrase be replaced with "that inherently lack meaningful human control." Panama, the Philippines, Venezuela, Costa Rica, Peru, and the CSKR supported this proposal.

India objected to the use of the phrase "human ... control" in paragraphs b and c, arguing that "human control" has yet to be clearly defined or understood. The Republic of Korea (ROK) echoed this concern. The US, too, objected to the phrase "without direct human supervision or control," arguing that there is no common understanding of that concept.

Brazil, Chile, and Mexico echoed concerns over the insufficiency of the term "human ... control" in paragraphs b and c. The group proposed new language, merging the two paragraphs together to acknowledge: AWS fall on a spectrum of autonomy; autonomy can be applied to one or more critical functions or to all critical functions; autonomy that allows for operation that is partially or fully independent of human control over critical functions is central. Ireland noted its openness to this proposal. Pakistan echoed the group's point that autonomy is a spectrum and should be presented as such.

On a related note, Switzerland suggested it would be more useful to talk about a clear and effective system of human command and control, particularly given the ongoing discussions on how to understand "human control". Ireland also noted its interest in this proposal.

As in other paragraphs, India objected to the use of the phrase "human ... control" in paragraphs b and c, arguing that "human control" has yet to be



clearly defined or understood. ROK echoed this concern.

The United Kingdom (UK) likewise echoed the concern that “human control,” “meaningful human control,” and “sufficient human control” are not yet sufficiently understood and that the GGE would benefit from greater clarity on those terms, but also noted that those terms are developed in subsequent sections of the Chair’s paper.

As with paragraph a, the Philippines noted that “engage” should be added after “select”.

France praised the Chair’s distinction between fully and partially autonomous weapons, in line with earlier suggestions by France, and argued that the central question in characterising AWS must be if the systems could ever be compliant with IHL—systems France would characterise as “partially autonomous—or if, on the other hand, the systems are fundamentally incompatible with IHL—systems France would characterise as “fully autonomous”. Germany echoed these points. Ireland also voiced its support for this distinction.

In addition, France argued for more granular language in describing what constitutes a fully AWS, suggesting that the characterisation focus on the AWS’s ability to carry out tasks in complex environments and to set goals for itself beyond its initial programming and without human approval.

Canada noted its support for distinguishing between fully and partially autonomous weapons, arguing that fully autonomous WS should be understood as unacceptable, while partially autonomous WS may be acceptable, so long as IHL is respected, the human element is preserved, the environment is taken into account, risks are mitigated, and responsibility lies with the operators of the WS.

Netherlands noted its position that fully AWS are those not operating under meaningful human control and argued for the importance of clearly elaborating that term.

The US objected to the suggestion to characterise fully autonomous weapons as inherently unlawful, arguing that states need more time to consider

this newly proposed distinction between partially and fully autonomous weapons. Though the US distinguishes between autonomous and semi-autonomous weapons, it believes that both are lawful when used within the confines of IHL. And, despite its own distinction between autonomous and semi-autonomous weapons, the US argued strongly against using the terms “partially AWS” and “fully AWS” in this paper, suggesting that the terms themselves are superfluous and the substance of the distinction would be better conveyed without the terms.

India also objected to the distinction between fully and partially AWS, arguing that the distinction is subjective and poorly developed. Australia also expressed its wariness with the distinction, arguing that taking a binary approach to degrees of autonomy may not prove useful, as degrees of autonomy in a WS do not necessarily indicate whether that system is compliant with IHL.

ROK expressed a different hesitation with the distinction between partially and fully autonomous weapons. Though the ROK agreed that the distinction appeared to be helpful in framing the GGE’s discussion, it questioned the practical and operational utility of the distinction, arguing that the degree of autonomy may be not a realistic criterion in assessing AWS given the rapid changes in autonomous technologies and our limited understanding of those technologies.

### Section 1(c)

Current language: *Partially autonomous weapons systems are autonomous weapon systems that are designed to operate within a framework of human command and control.*

As with paragraph b, several participants, including Palestine, expressed concern about the phrase “that are designed to operate within a framework of human command and control.” Palestine suggested replacing the phrase with “that are designed to operate with some degree of meaningful human control.” The Philippines, Argentina, and Costa Rica supported this proposal.

Also as with paragraph b, Switzerland suggested it would be more useful to talk about a clear and

effective system of human command and control, particularly given the ongoing discussions on how to understand “human control.”

Cuba suggested adding “including drones” to the end of paragraph c. Venezuela echoed Cuba’s proposal, and Panama noted its openness to this proposal.

France objected to Cuba’s suggesting, insisting that drones are not within the GGE’s mandate.

In addition, France proposed a more granular definition of partially AWS, suggesting that the characterisation focus on AWS that integrate automation and software and to which a military commander can assign the computation and execution of tasks, such as identification, classification, and engagement within temporal and spatial limits, and which include technical safeguards to prevent failures, misuse, etc.

## Section 1(d)

Current language: *Weapons systems that incorporate autonomy only into functions other than to select and apply force against targets are not autonomous weapons systems.*

Numerous states, including Cuba, Palestine, Panama, and Argentina, advocated for the deletion of paragraph d, noting that the paragraph is superfluous. Venezuela likewise argued for the deletion of the paragraph, suggesting it added confusion rather than clarification. Brazil, Chile, and Mexico agreed that the paragraph as written introduced confusion rather than clarity, and suggested its deletion or further modification. The US agreed that paragraph d seems unnecessary.

# POSSIBLE CONSIDERATIONS

Ray Acheson | Women’s International League for Peace and Freedom

Section 2 of the [Chair’s paper](#) offers draft elements that could be considered as commitments in a normative and operational framework (NOF) on autonomous weapon systems (AWS). These are based on the two-tiered approach suggested by several delegations, under which the NOF would include prohibitions on some systems, restrictions on others, and positive obligations to ensure human control (HC) over weapon systems (WS) and compliance with international humanitarian law (IHL).

While a few states refuted the legitimacy of the entire section, arguing there is no consensus in the GGE for prohibitions or restrictions on AWS, most participants engaged with the text to recommend modifications, additions, and enhancements. Overall, the vast majority of participants are clearly keen to begin this type of work on flushing out parameters for a NOF, especially one that is legally binding, in order to prevent human suffering and violations of international law (IL).

## Overarching comments on section 2

A few delegations commented on the title and the nature of section 2:

Australia, Netherlands, and Republic of Korea (ROK) complained that while the section of this title has changed to “possible considerations” the content is still really “general commitments” as labelled in the original draft.

On the other hand, Argentina, Iraq, Palestine, Philippines, and Uruguay urged the title of the section be changed back to “commitments,” given strong support by majority of participants for concrete action.

Israel and Russia called for section 2 to be deleted entirely, arguing that it contains prohibitions and restrictions to which they have not agreed. Russia said if states want to prohibit AWS, they can do so nationally.

The United States (US) agreed with deleting section 2 and suggested moving its substantive points to section 3. It also agreed it is concerned with the definitions of AWS becoming a foundation for prohibition. Australia also said it cannot accept any language on a ban or prohibition.

Brazil, Mexico, and Chile argued that questioning sections like this is an attempt to establish a false debate, noting this is about draft elements not final recommendations. They also noted that national prohibitions are not sufficient for dealing with AWS and reminded that the purposes of the Convention on Certain Conventional Weapons include ending arms races, building confidence among states, codifying IL in relation to armed conflict, and contributing to general and complete disarmament—all of which are fundamental for interpreting the mandate of the GGE.

Palestine wholly rejected the argument that new legal prohibitions are outside the GGE's mandate, noting that formulating regulations is a necessary component of formulating an NOF. Cuba agreed.

Austria said it is flexible on form of commitments as long as they live up to the expectation of results-oriented work, arguing that if the GGE only uses agreed language it will be difficult to justify extending its mandate after all this time. Cuba and Uruguay agreed. The Non-Aligned Movement, in its closing remarks, reiterated that the GGE must receive a strengthened mandate and said there is an urgent need to pursue a legally binding instrument on AWS.

Some delegations commented on the relationship between sections 1 and 2:

Japan said characterisations of WS should be decoupled from the possible considerations. In contrast, Austria, Pakistan, Switzerland, and United Kingdom (UK) said characterisations and the possible considerations are intrinsically linked.

In this context, Germany said the term “lethal” in relation to AWS is problematic because lethality is not inherent to the weapon itself, it is in the mode of its application. Austria, Iraq, Ireland, and Palestine agreed, with Palestine noting that even a chair can be lethal if used in an aggressive way.

France urged ensuring that the interrelationship between sections 1 and 2 does not limit technological development or deployment of partially AWS.

ROK said it is difficult to make comments on section 2 without knowing if or how section 1 will be revised.

There was also some discussion on the structure of section 2:

Switzerland suggested developing a chapeau for section 2 that references meaningful human control (MHC) as requisite for ensuring compliance with IHL and ethical considerations. Brazil, Chile, and Mexico supported this.

Algeria, Austria, France, Germany, Ireland, New Zealand, Philippines, Switzerland, the International Committee of the Red Cross (ICRC), and the Campaign to Stop Killer Robots (CSKR) support the two-tiered approach to AWS reflected in section 2, which outlines prohibitions on some systems and restrictions on others.

Japan said it appreciates the two-tiered approach to AWS, but it still has concerns with this approach.

Norway, in its closing remarks, argued that the terms “fully” and “partially” stand in the way of consensus because full autonomy is interpreted differently by various states. However, it agrees with the suggestion to elaborate norms that regulate AWS and to this end supports a mandate for the GGE to continue to clarify and regulate AWS with a view to establishing a new instrument. What kind of instrument does not need to be settled now, it said, but the norms developed need to be given a higher status than conclusions in a GGE report.

## Section 2(a)

Current language: *Not to develop, produce, acquire, deploy or use fully autonomous weapons systems.*

Iraq and Switzerland said they support 2(a). In its closing remarks, Norway argued this commitment is corollary to ensuring AWS always remain under some form of HC to ensure compliance with IHL, thus it would support a recommendation that

clearly states the impermissibility of such AWS. It said since it's probably true that no responsible state would ever produce or use a weapon it cannot control, then it should be a simple matter to form our agreement on this point that they should not be produced or used.

Brazil, Mexico, and Chile suggested adding at the end of the sentence: "which are WS with autonomy across all critical functions and operate independently from HC or decision making."

Cuba suggested adding "possess" to the list of prohibited acts. Algeria, Pakistan, Palestine, Panama, Venezuela, and ICRC supported this.

Philippines suggested adding "transfer" to the list of prohibited acts. Argentina, Panama, Venezuela, and ICRC supported this.

ICRC suggested adding "design" to the list of prohibited acts.

New Zealand said it is too early in process to only suggest we prevent the development, production, acquisition, and deployment of fully AWS and noted that if we're prohibiting the use of other types of systems, such as partially AWS that do not meet the standards we set, we should also prohibit their development, production, acquisition, and deployment. Ireland and Palestine agreed.

ICRC said that all AWS that carry high risk of violation of IL or that are morally unacceptable are prohibited; and all others restricted. This commitment should exclude those AWS that contravene existing IHL and should clarify that AWS that pose issues related to predictability, understandability, and explainability should be ruled out. WS must not choose a specific target or a time or location of attack.

Philippines suggested 2(a) be reformulated to have one paragraph for prohibitions, one for regulation, and one for transparency-related obligations. It would include the following commitments: Not to develop, produce, acquire, develop, or transfer the following: i. Fully AWS; ii. Any type of AWS if it is of a nature to ... (the current 2(b) language); iii. Current text of 2(c); iv. Any types of AWS that are primarily designed to kill humans.

Argentina, Palestine, and Panama supported this restructuring. ICRC and CSKR supported adding a prohibition against anti-personnel AWS.

Philippines' suggested commitment on transparency would read: "Ensure transparency regarding all aspects of the development and possible acquisition of AWS as well as processes for reviewing these WS in accordance with the Martens Clause." Palestine and Panama supported this.

ROK is not convinced that the degree of autonomy can be a realistic criterion for prohibiting, limiting, or regulating WS, taking into account rapidly changing technology.

Austria suggested 2(a) focus on the relation between humans and machines.

UK said the word "fully" should be removed and this point should be reframed to focus on characteristics that require core IHL requirements to be fulfilled, which may be set out in section 1.

France said it can't support removing the distinction between fully AWS and partially AWS, because the spectrum of autonomy has limits that should not be transcended.

CSKR argued that the characterisation of a fully AWS currently provided in section 1 is too weak, which undermines this prohibition in section 2.

India argued that since there is no agreement on characterisations of AWS, 2(a) needs to be deleted. Russia agreed there is no consensus that any AWS should be banned.

US suggested combining 2(a) and 2(b) into a single paragraph on the basis of [Guiding Principle \(b\)](#), which reads: "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."

Austria argued that the mere reaffirmation that IL applies to AWS, which was already reaffirmed in 2018, is not sufficient to live up to the expectations of progress.



## Section 2(b)

Current language: *Not to use any type of autonomous weapons system if it is of a nature to cause superfluous injury or unnecessary suffering, or if it is inherently indiscriminate, or is otherwise incapable of being used in accordance with the requirements and principles of international humanitarian law.*

Switzerland said it supports 2(b) as logical and requisite. Netherlands agreed this is well established. ROK said it is positive about this paragraph but without knowing how the characteristics section will be elaborated, it might make comments later.

Ireland said it welcomes in the intention of 2(b), but in the context of an NOF it will need careful legal analysis to assess its consistency with existing IHL. Ireland noted that IHL already prohibits use of indiscriminate weapons and must not be renegotiated.

Pakistan said 2(b) needs further elaboration from an IHL perspective, including effects of WS.

UK argued this paragraph is superfluous because it is a reiteration of IHL, which applies to all weapons. Russia argued it is redundant with section 4d on weapon reviews.

Philippines argued the prohibitions should not be limited to the bounds of IHL but also by other international law and ethical considerations. It suggested the AWS described here be prohibited under its suggested reformulation for 2(a).

ICRC recommended this paragraph reference the principles of humanity and dictates of public conscience.

Brazil, Mexico, and Chile suggested replacing “inherently indiscriminate” with “cannot be directed at a specific military objective.” They also suggested adding at the end: “has effects that can’t be limited as required by IHL.” Further, they recommended adding commitments against the use of any type of AWS that: can’t be controlled by humans; has programming that might remove HC over CFs; can’t be sufficiently understood, predicted, and explained in terms of its

performance and effects; and precludes attribution of state and individual legal responsibility for the consequences of its use.

France suggested that to reflect the distinction between fully AWS and partially AWS, 2(b) could refer to positive obligations regarding partially AWS.

Since Israel suggested deleting section 2, it recommended moving 2(b) to another section of the report and changing its formulation to match paragraph 17(h) of the [2019 GGE report](#), which reads: “A weapons system based on emerging technologies in the area of lethal autonomous weapons systems, must not be used if it is of a nature to cause superfluous injury or unnecessary suffering, or if it is inherently indiscriminate, or is otherwise incapable of being used in accordance with the requirements and principles of IHL.”

India and US supported changing 2(b) to match paragraph 17(h) of the 2019 GGE report.

Japan also supported changing 2(b) to match paragraph 17(h) of the 2019 GGE report, though to avoid linking definitions with prohibitions and restrictions, it wants to put the sentence in more general terms, i.e. “Not to use any type of WS based on emerging tech in the area of LAWS if it is of nature to cause superfluous injury...” with the rest remaining the same.

## Section 2(c)

Current language: *Not to use any type of autonomous weapons system that cannot, to a sufficiently high degree of reliability or predictability, perform their functions in accordance with the intention of a human operator and commander to comply with the requirements and principles of international humanitarian law.*

Switzerland said it supports 2(c) as logical and requisite. Ireland welcomed 2(c) as a useful way to link use of AWS to intentions of human commander.

UK suggested rephrasing 2(c) to give it a positive stance, i.e. “To ensure compliance with IHL, an AWS must ....”

China complained that the terms used in 2(c) are not sufficiently defined. It questioned what degree of reliability or predictability would be considered sufficiently high. ROK similarly argued that all WS possess certain degrees of unpredictability and called for further discussions before jumping into “hasty conclusions”. Japan, Netherlands, and US agreed these terms need more consideration, with US arguing that the GGE shouldn’t develop new standards and figure out what they mean later. India agreed there is no clarity on these concepts or on the concept of partially AWS.

Pakistan argued that predictability, sufficiency, and intent are problematic concepts for drafting rules. It noted that predictability doesn’t guarantee compliance with IHL and doesn’t account for real world scenarios. Intent is not constant and can’t be relied upon for predictability either.

Germany responded to these concerns by arguing that because the regulation of AWS needs to be context dependent, it is not possible to explain these concepts of reliability or predictability in a very specific manner for specific type of weapon. This is the same, Germany noted, with IHL, which contains abstract principles and norms that we all accept without asking what they mean. We all understand it would be impossible to establish language on any kind of specific situation a priori, because reality will always be different than anticipated. For example, a decision on what unnecessary suffering and superfluous injury means has to be made on the basis of a value judgement, taking into account range of factors in any given situation. Palestine agreed with Germany’s comments.

CSKR agreed that the functional formulations provided in 2(b), regarding systems that cannot be used with MHC, would provide a better basis for characterising certain systems that should be prohibited.

Japan said it can’t go along with 2(c) as worded.

## Section 2(d)

Current language: *To maintain sufficient human control over partially autonomous weapons. Toward this end, such weapons should be regulated through:*

*(i) Limits on the types of target, such as constraining them to objects that are military objectives by nature;*

*(ii) Limits on the duration, geographical scope and scale of use, including to enable human judgement and control in relation to a specific attack;*

*(iii) Requirements for human-machine interaction, notably to ensure effective human supervision, and timely intervention and deactivation.*

Most participants welcomed 2(d)’s obligations and commitments, though a few delegations objected to this framing:

- UK argued that the limits set out in 2(d) are inappropriate, as is the notion of regulation. It asserted that these limits impose restrictions that go beyond IHL compliance and would skew the nature of decisions commanders make.
- US said 2(d) should be revised or deleted, arguing that it is premature to consider limits on weapon use that create new standards beyond IHL.
- Japan said it can’t go along with 2(d) as currently worded, arguing that further work is needed to build understandings on the role of operational constraints such as target profiles, timeframe, scope of movement over an area and operational environment.

## Chapeau

US rejected the use of the term HC and said human-machine interaction (HMI) should be used instead.

Algeria supported retaining the concept of HC. Argentina, Brazil, Chile, Iraq, Mexico, Pakistan, Palestine, Panama, Philippines, Uruguay, and CSKR suggested using “meaningful” instead of “sufficient” in relation to HC.

Philippines also said it should be clear that perpetual retention of MHC is required; it proposed the first sentence read: “To maintain MHC over all other AWS throughout their lifecycles.” Argentina and Palestine supported this.

Switzerland said the chapeau should clarify the aim of maintaining sufficient HC and thus should add at the end: “to ensure conformity with IHL and to satisfy ethical considerations.” Austria supported this suggestion.

ICRC recommended specifying that sufficient HC is to be measured by legal, ethical, and humanitarian requirements.

Switzerland also suggested the chapeau refer to controlling the use of partially AWS and not just controlling them in general.

Philippines said there is no need for the qualifier “partially” before AWS in this paragraph and it should instead refer to “all other AWS”. Brazil, Chile, Mexico, Palestine, and Panama supported this.

Brazil, Chile, Mexico, Palestine, Panama, and Philippines suggested adding “systems” after autonomous weapons in this section, for consistency.

France suggested adding the word “measures” after “through” in the chapeau’s second sentence.

Venezuela said any measure to ensure HC can also cover the stages of programming, design, development, and deployment in compliance with international law.

Netherlands said the scope of the limits in 2(d) are meant to ensure HC, but these limits are context specific, which could be better reflected in the text.

India argued the chapeau of 2(d) has no connection with subpoints i, ii, iii.

### **2(d)(i)**

Ireland said 2(d)(i) is redundant with IHL.

Switzerland argued that the characterisation of military objectives in 2(d)(i) is too restrictive, asserting that non-military objectives can be transformed into military objectives if they “make an effective contribution to military action.” Therefore Switzerland suggested changing the wording to: “limits on the types of targets

depending on the environment in which weapons are deployed to ensure targets can be clearly detected as military objectives.” Netherlands agreed with Switzerland’s comments, arguing that one consequence of limiting targets to military objectives is that actors could misuse civilian infrastructure to avoid being targeted.

In contrast, a number of participants said this subpoint is not strong enough:

- New Zealand said it unclear about the implications of 2(d)(i), which sets the bar too low, especially given that lawful targets can only ever be military objectives.
- France agreed 2(d)(i) should specify that civilians and civilian objects should not be subject to attacks. It suggested rephrasing the subpoint to read: “Limits on types of targets to ensure respect of IHL, which most importantly requires distinction between civilian populations and military objectives.”
- Argentina agreed that targets not of a military nature cannot be targets even if they are used to support military objectives. It noted that as a signatory to the Safe Schools Declaration, it cannot support any text that could be interpreted as running counter to the aim of protecting civilian objects from attack.
- Austria supported these proposals and also suggested adding: “depending on the environment in which the WS is deployed, to ensure targets can be detected as military targets.”
- ICRC supported a commitment to limit attacks to those that are military objectives by nature, arguing that while there are ways targets can become military targets, limiting targets that may be pursued would significantly help reduce humanitarian risks and violations of IHL. Military objectives by nature include missiles, tanks, etc., which tend to be fairly distinct in terms of technological signature, as opposed to civilian objects that might be used by militaries. So this will help reduce “false positives” and be more stable in their legal characterisation as lawful targets.

### 2(d)(ii)

China asked what the standards of design are for WS in reference to limits on duration, geographic scope, and enabling human judgement. If these concepts aren't clear, it argued, it would be difficult to implement these suggestions. India agreed these concepts are too abstract and need further work.

Germany's response to the concerns about defining concepts in relation 2(c) also apply here. Netherlands agreed with Germany's response in the context of 2(d) and said that requirements for HMI are dependent on the WS, the context, and the target, so getting specific would not be future proof or exhaustive.

Switzerland suggested adding "reasonable" after "enable" and proposed using "an attack" instead of "a specific attack"—i.e.: "Limits on the duration, geographical scope and scale of use, including to enable reasonable human judgement and control in relation to an attack."

Ireland suggested adding that spatial and temporal limits are in place to also ensure legal assessments remain valid at the execution phase.

### 2(d)(iii)

Cuba suggested adding to the end of 2(d)(iii): "including a failsafe deactivation mechanism." Panama and Venezuela supported this.

France suggested deleting the rest of the sentence after "requirements for human-machine interaction."

China asked what the difference is between HMI and effective human supervision in 2(d)(iii), and if the term human supervision recognises the "human out-of-the-loop" concept.

Switzerland advised against using the term "human supervision" here and suggested using "human judgement" instead, as it is already found in GGE documents. Austria supported this and said it should be further complemented by a reference to MHC. Iraq suggested using HC instead of human supervision.

### Additional commitments

Cuba suggested adding subpoint 2(d)(ii)bis that reads: "Limits on the situation of use such as constraining them to situations where civilians or civilian objects are not present." Panama, Philippines, Venezuela, and ICRC agreed with this proposal.

Brazil, Chile, and Mexico suggest adding other positive obligations in 2(d), notably:

- "A human agent shall be fully aware and approve any decision on determining the operational context through a sufficient level of situational awareness;" and
- "A human agent shall take the necessary precautions during the conduct of operations to ensure that a WS is not able to change mission parameters without human validation."

CSKR recommended strengthening the list of regulations by recognising that "understandability" or "explicability" of a WS is needed if an operator is to use that system responsibly and with sufficient control. This is similar to what ICRC suggested in 2(a).





# APPLICATION OF INTERNATIONAL LAW

Jillian Rafferty | Women's International League for Peace and Freedom

Section 3 of the [Chair's paper](#) sets out key principles and practices for the Group of Governmental Experts (GGE) to affirm and/or recommend how international law, in particular international humanitarian law (IHL), applies in the context of autonomous weapons systems (AWS). In general, the section enjoyed broad support from participants, who recognised its importance and centrality to the work of the GGE. Participants diverged on whether the section should stick strictly to previously agreed language or whether it should seek to build on that language, as well as on the section's references to branches of international law other than IHL, such as international human rights law (IHRL) and international criminal law (ICL).

## Overarching comments on section 3

Several participants praised this section of the report. In particular, Switzerland noted that the section reflects the substantial progress made in this area with a view to the future. China and India also noted the importance of the GGE's consensus that IHL applies to AWS.

The United Kingdom (UK) noted the centrality of IHL to the GGE's work and argued that this section should be seen as a major pillar of the group's work. France, Portugal, the United States (US), and Sweden echoed this sentiment.

Russia called for the paper to directly reflect language already agreed upon in prior GGE outputs and provided detailed suggestions paragraph-by-paragraph. China and India noted their general agreement with Russia's position in this regard. The US argued for paragraphs based on previously agreed language, supplemented by additional paragraphs with new areas of convergence, arguing that such a separation would avoid undermining past agreements. Japan praised Russia's careful comparison of this draft paper to prior GGE outputs and requested that the Chair provide his rationale for deviations from agreed language wherever they appear.

Other participants, including Austria, noted their disappointment with those who argued for sticking purely to previously agreed language, particularly given the need to further clarify how IHL is applicable, as this section aims to do. Portugal, the Philippines, Peru, and Ireland echoed this point. Germany and Red de Seguridad Humana para América Latina y el Caribe (SEHLAC) also noted the opportunity to build on the important consensus reached in the [Guiding Principles \(GPs\)](#).

The US noted that there were additional areas of consensus the GGE had already reached on this topic that were not reflected in the draft paper that the paper would benefit from including, such as a discussion on the use of feasible precautions to reduce expected harms to civilians and civilian objects.

The US reiterated its suggestion from the prior week to include broad language that, under domestic and international law, an individual remains responsible for their conduct in violation of IHL. The US also noted its preference that the GGE endorse proposals for specific accountability practices regarding an operational chain of command, military law and discipline, establishing and using procedures for incident reporting of violations, conducting assessments or other reviews of such incidents, and disciplinary and punitive measures as appropriate. In addition, the US suggested the GGE endorse a range of practices to promote accountability, including rigorous training, establishing procedures and doctrines applicable to the use of each weapons system, refraining from unauthorized uses or modifications of those weapons systems, etc.

Russia suggested that text throughout section 3 be modified to use the phrase "weapons systems based on emerging technologies in the area of lethal autonomous weapons systems" rather than "autonomous weapons systems" or other formulations, in order to retain consistency across the report and with the GGE's mandate. China and India agreed with Russia on this point.

Austria noted that IHRL is integral to addressing AWS. Austria argued that human rights, the principle of humanity, and the dictates of public conscience together reflect an effort to prevent the uncontrollable dehumanisation of armed conflict and thus should be reflected in this section.

China argued that, despite the consensus that IHL applies to AWS, other questions—including whether existing IHL is sufficient and how to guarantee human responsibility and accountability—still face diverging views and thus should be part of the GGE's follow-up work.

Portugal echoed China's sentiment, arguing that there is insufficient agreement on what rules and branches of international law apply to emerging technology in the area of lethal AWS. Portugal reiterated its proposal for a new mechanism within the GGE to systematically study applicable law.

India expressed its view that the existing IHL framework is adequate to regulate all weapons, including emerging technologies in the area of lethal AWS. Israel agreed. The Philippines disagreed, noting that the full application of IHL does not imply that IHL is a sufficient framework for regulating AWS as it currently stands.

Cuba suggested that the paper incorporate a new paragraph, following paragraph 1, in which high contracting parties note the need to regulate AWS and look forward to progressing toward legally binding provisions for addressing the humanitarian and international security challenges posed by AWS. Panama supported Cuba's proposal, but noted the paragraph might better fit elsewhere. Austria noted its interest in Cuba's proposal.

India objected to this proposal, arguing that it would be premature to call for a new legally binding instrument when the GGE has not reached consensus on its necessity—and giving the ongoing debate over whether existing IHL is sufficient to regulate AWS. Australia likewise noted that it could not, at this stage, support language calling for a legally binding instrument.

Brazil, Chile, and Mexico suggested adding a new paragraph to Section 3 to reflect states' responsibility to prosecute and punish crimes

under international law, and to ensure that there are means to conduct effective investigations, prosecution, and punishment for violations carried out during the use of AWS to ensure state and individual responsibility and to prevent an accountability gap.

Japan suggested adding a paragraph to the end of section 3 to reflect recommended areas of future work, including further clarification on how IHL principles apply to AWS by considering possible relevant military applications.

Austria suggested broadening the title of the section to simply read "International Law". Pakistan noted its openness to this suggestion.

Brazil, Chile, and Mexico suggested that the title should better reflect the GGE's work to both apply and develop international law. Peru and Argentina supported this suggestion. Pakistan noted its openness to this suggestion, as well.

USA argued that, because the Convention on Conventional Weapons (CCW) focuses on IHL, this paper should as well and suggested changing the title of the section to "Application of International Humanitarian Law." The Republic of Korea (ROK) noted its openness to this suggestion.

### Section 3(1)

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

New Zealand suggested adding a reference to the doctrine of state responsibility under international law. Panama and the Netherlands supported this proposal.

Austria suggested replacing "International law, including the Charter" with "High contracting parties affirm that international law, in particular the Charter."

Russia suggested that paragraph 1 is an interpretation of language included in the GPs, in

particular GP(a). Russia argued that interpreting the language of the GPs is unnecessary and suggested reformulating paragraph 1 directly reflects GP(a): “International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems.” The US, ROK, and Israel also noted that this text problematically deviates from the text of GP(a).

China suggested deleting references in paragraph 1 to IHRL and ICL, arguing that those are not clearly within the GGE’s mandate. India echoed this suggestion.

Panama strongly opposed China’s suggestion, arguing that a reference to IHRL is vital, as IHL and IHRL operate in a complementary way during armed conflict. Panama noted its confusion with states that seem to deny the applicability of IHRL and ICL to AWS. The Philippines, Austria, Peru, Argentina, and Sri Lanka agreed with Panama and noted growing convergence on this point.

The Netherlands echoed Panama, recalling that IHRL’s applicability does not cease during armed conflict. In addition, the Netherlands argued that IHRL is pivotal because weapons can be used in situations in which IHL does not apply.

The UK recognised that other fields of law apply to this work in addition to IHL, but suggested removing the word “fully” from this paragraph to avoid confusion, arguing that ICL, for example, exceeds weapons-related concerns.

France argued that the main aim of paragraph 1 must be to guarantee that the development and use of weapons systems, including partially autonomous weapons systems, remains in line with IHL norms and suggested streamlining paragraph 1 to reflect that priority.

### Section 3(2)

Current language: *Potential use of autonomous weapons systems must be conducted in accordance with applicable international law, in particular international humanitarian law and its requirements and principles, including inter alia distinction, proportionality and precautions in attack. Such*

*requirements must be applied through a chain of responsible command and control by the human operators and commanders.*

New Zealand questioned the clarify of the phrase “international humanitarian law and its requirements and principles,” and suggested referring singularly to IHL instead. The International Committee for the Red Cross (ICRC) echoed this suggestion, noting that such phrases could be better streamlined so long as they make clear that the requirements and principles are legally binding. Peru and Ireland echoed these suggestions, proposing replacing “requirements and principles” with “obligations.” On a related note, Austria suggested changing “Such requirements” to “Such requirements and principles” to be consistent with the prior sentence.

Brazil, Chile, and Mexico suggested changing “responsible command” to “responsible human command”.

The ICRC suggested that paragraph 2 clarify that persons need not be identified only as operators or commanders to bear legal obligations and responsibility under IHL.

Russia suggested that the first sentence of paragraph 2 is a reproduction of paragraph 17(a) of the 2019 GGE report, except the 2019 GGE report uses slightly different language to discuss AWS. Russia thus suggested bringing the first sentence of paragraph 2 in line with the language of paragraph 17(a): “The potential use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems must be conducted in accordance with applicable international law, in particular IHL and its requirements and principles, including inter alia distinction, proportionality and precautions in attack.”

Russia similarly argued that the second sentence of paragraph 2 is an interpretation of paragraph 17(d) of the 2019 GGE report and suggested bringing the second sentence in line with the text of that report using the following language: “such requirements and principles must be applied through a chain of responsible command and control by the human operators and commanders

who use weapons systems based on emerging technologies in the area of lethal autonomous weapons systems.”

Similarly, the US argued for replacing the text in paragraph 2 with the language from the 2019 GGE report to save time and trouble negotiating new language. In addition, the US argued that human control is not, itself, a requirement under IHL, but simply one means to meet IHL requirements where feasible.

Switzerland proposed reformulating paragraph 2. First, it suggested replacing “such requirements,” which may be read as referring only to IHL’s requirements, with “obligations under international law, in particular IHL.” Second, it suggested replacing the phrase “must be applied” with “must be implemented.” Panama supported this proposal, as did Pakistan and Brazil, Chile, and Mexico.

Austria noted that focusing only on the potential use of AWS is insufficient, and the paragraph should therefore be reworded to account for the development of AWS. Palestine, Peru, Pakistan, South Africa, and Ireland echoed this point.

### Section 3(3)

Current language: *International humanitarian law imposes obligations on States, parties to armed conflict and individuals, not machines.*

Switzerland voiced its support for paragraph 3.

Cuba suggested modifying the paragraph by adding, at the end, a reference to high contracting parties’ recognition of the need for meaningful human control, in order to ensure that the legal obligations on the conduct of hostilities cannot be transferred to a machine, a computer programme, or a weapons system. Panama, Austria, Palestine, Peru, and Argentina supported this suggestion.

Austria suggested adding the phrase “High contracting parties reaffirm that” to the beginning of paragraph 3, as these obligations are not new. Argentina supported this suggestion.

Russia praised this paragraph for directly reproducing the language of paragraph 17(b) of the

2019 GGE report and suggested this language be left as is.

India suggested deleting “and individuals, not machines” from paragraph 3. Ireland opposed India’s suggestion, noting that “not machines” reflects consensus language agreed in 2019.

Austria also opposed India’s suggestion. The UK proposed deleting only “not machines,” as it is a matter of international law that accountability and responsibility cannot be divested.

In addition, the UK noted that states have the responsibility to ensure there is a suitable national-level accountability system. As such, the UK noted its support for an unequivocal statement on the nature of accountability.

Israel suggested adding to paragraph 3 a reference to GP(i) on the non-anthropomorphising of AWS.

### Section 3(4)

Current language: *States, parties to armed conflict and individuals remain at all times responsible for adhering to their obligations under applicable international law, including international humanitarian law.*

Switzerland voiced its support for paragraph 4.

Russia noted that paragraph 4 reproduces the first sentence of paragraph 17(c) of the 2019 GGE report but suggested the paragraph be modified to include the rest of 17(c), which reads: “States must also ensure individual responsibility for the employment of means or methods of warfare involving the potential use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems in accordance with their obligations under IHL.”

The US echoed this suggestion.

### Section 3(5)

Current language: *Human accountability and responsibility must be maintained throughout the entire life-cycle of weapons systems, including with respect to decisions on the use of weapons systems,*

*since human accountability and responsibility cannot be transferred to machines.*

Switzerland voiced its support for paragraph 5.

Russia suggested that paragraph 5 be modified to use the phrase “weapons systems based on emerging technologies in the area of lethal autonomous weapons systems” to retain consistency across the report and with the GGE’s mandate. Austria and Pakistan supported this suggestion.

Australia proposed altered language for paragraph 5, so that the first phrase reads: “High contracting parties agree that human responsibility and accountability must be achieved through controlled measures applied during the course of the entire life-cycle of weapons systems.”

Israel noted that paragraph 5 borrows from GP(b) and argued for retaining this language: “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.”

### **Section 3(6)**

Current language: *Humans must at all times remain accountable in accordance with applicable international law for decisions on the use of force as well as for the development, deployment and use of autonomous weapons systems, including through the operation of such systems within a responsible chain of human command and control.*

Switzerland voiced its support for paragraph 6.

Russia noted that paragraph 6 seems to draw from several prior published sources, including GP (d), paragraph 23(a) of the 2019 GGE report, and paragraph 23(e) of the [2018 GGE report](#). Russia suggested new language to merge those three.

Australia proposed altered language for paragraph 6, so that it refers to the need for human direction in decisions on the use of force, including with AWS, achieved through a robust system of control.

### **Section 3(7)**

Current language: *Comprehensive, context-based human judgement is essential in order to ensure that the potential use of autonomous weapons systems is in compliance with international law, and in particular international humanitarian law.*

Switzerland voiced its support for paragraph 7, as did the UK. France and Portugal noted the importance of the human commander and of retaining sufficient human control to guarantee compliance with IHL.

Brazil, Chile, and Mexico suggested changing “human judgment” to “human control and judgment.”

The International Committee for the Red Cross (ICRC) noted the centrality of human judgment and human control.

New Zealand suggested that the language of paragraph 7 was insufficiently precise, leaving ambiguous what type or nature of human judgment the text is referring to.

France suggested deleting the phrase “context-based” from paragraph 7. In addition, France proposed replacing “is in compliance” with “remains in compliance.”

Israel suggested removing the word “comprehensive” as its meaning is unclear.

In contrast, the Philippines argued for the retention of the whole phrase “comprehensive, context-based judgment,” noting it is an improvement from language used in the 2019 GGE report.

In addition, the Philippines suggested adding references to IHRL and ICL in this paragraph. Argentina echoed this proposal.

Russia noted that paragraph 7 largely reproduces paragraph 17(e) of the 2019 GGE report but fails to use the term “weapons systems based on emerging technologies in the area of lethal autonomous weapons systems,” and thus suggested reintroduction of that phrase. Russia



also suggested reverting to the 2019 GGE report's phrasing – simply “human judgment”—rather than the draft paper's language—“comprehensive, context-based human judgment.”

The US echoed Russia's suggestion and proposed new language focused on human judgment based on considering all information available at the time that is relevant to fulfilling IHL obligations, including the circumstances of a weapons system's use.

### Section 3(8)

Current language: *States must ensure accountability for lethal action by any weapon system used by the State's forces in armed conflict in accordance with applicable international law, in particular international humanitarian law.*

Switzerland noted its concern that this paragraph may be read to imply that weapon systems take their own actions and proposed focusing instead on the actions taken by members of armed forces and on the results of using any weapon systems. In addition, Switzerland suggested focusing on the responsibility that must be assigned for all illegal actions—not only those giving rise to lethal consequences—and thus suggested eliminating the word “lethal”. Panama, the Philippines, Palestine, Peru, and Argentina supported the Swiss proposal, noting its consistency with IHL, IHRL, and ICL. Brazil, Chile, and Mexico agreed, suggesting replacing “lethal action” with “any wrongful actions”—a suggestion that Argentina echoed. Austria also echoed the Swiss proposal and suggested adding “and responsibility” following “accountability,” and suggested adding “and international criminal law” to the end of para 8.

Likewise, New Zealand suggested removing the word “lethal” from paragraph 8, given that an action need not be lethal to breach international law. Iraq, the Philippines, Palestine, Ireland, Peru, South Africa, the ICRC, and SEHLAC echoed this suggestion.

ROK and Israel opposed New Zealand's suggestion and argued instead that “lethal” must be included throughout Section 3 to ensure the text remains in line with the GGE's mandate.

Israel suggested replacing “accountability for lethal action by any weapon system” with “accountability for any violation of the law involving lethal autonomous weapons systems.”

The Philippines suggested adding references to IHRL and ICL in this paragraph. Palestine and Argentina echoed this proposal.

Russia noted that paragraph 8 reproduces the second sentence of paragraph 16(c) of the 2019 GGE report but suggested the paragraph be modified to include the rest of 16(c). Russia argued that doing so would ensure that the paper fully reflects understandings reached in prior years.

India suggested deleting paragraph 8 entirely, arguing that it goes beyond the subject of lethal autonomous weapons systems and refers to any weapons systems.

Portugal argued that “State's forces” should be replaced by “any combatant under the state's effective control,” to bring the language of paragraph 8 more in line with legal requirements. The German Institute for International and Security Affairs supported Portugal's proposal. On a related note, the ICRC reminded participants that states must investigate all war crimes—not only those committed by their own forces.



# HUMAN-MACHINE INTERACTION

Katrin Geyer | Women's International League for Peace and Freedom

Section 4 of the [Chair's paper](#) on human-machine interaction (HMI) seeks to identify key components of human control of autonomous weapon systems (AWS), and speaks to the required degree of human control (HC) across the lifecycle of a weapon system to ensure compliance with international humanitarian law (IHL). The vast majority of states welcomed this section, but there were divergent views about terminology, and the type and degree of HC.

## Overarching comments on section 4

The Republic of Korea (ROK) said that while the title of this section is HMI, the first two paragraphs refer to HC, while the last two refer to HMI. It said it would like to see a clearer link between these two concepts. Brazil, Chile, and Mexico said that HC is separate from HMI, and that it's important not to conflate the two. They said that HMI is a type of human involvement in a system, not an example of HC, and that considering HMI scenarios can elicit which kind of control would be needed.

Israel wants to see "lethal" before "AWS" included throughout this section, in line with the GGE's mandate. Turkey suggested to reference "emerging technologies in the area of LAWS" in every relevant area of the text in this section.

## Section 4(1)

Current language: *As referred to in Section 2, paragraph 1 (d) above, sufficient human control requires that:*

Argentina, Costa Rica, Sri Lanka, Panama, Peru, the Philippines, and the Campaign to Stop Killer Robots (CSKR) said they would like to see sufficient human control (SHC) replaced with meaningful human control (MHC). South Africa explained that meaningful or "effective" HC that HC cannot be compromised, and will satisfy legal and ethical requirements. Norway also said that MHC was imperative, but said that if MHC does not gain consensus, then can support other formulations

that reflect the view that machines be subordinate to a human operator.

Israel suggested using "human involvement," in line with the 2016 GGE report, as the term HC is under controversy. Similarly, the US also said that the term SHC hasn't gained consensus and that this term could raise more questions than it answers. Japan and Australia made similar observations but Australia said it was ready to work with other delegations to find a compromise on the wording.

The Philippines explained that human judgement refers more to the thought process, rather than actions, while "human intervention" is the flip side of "judgement". It argued that "control" encapsulates both spectrums and implies the power and authority to guide or manage weapons in connection with exercising influence and restraint. It further argued that legal language has always a degree of subjectivity. For example, in criminal law there is a doctrine of "command responsibility," which uses the term "effective" that is subjective, but it's enough to allow the law to be applied in different contexts. It said that over time practice and jurisprudence provides clarity. Venezuela agreed, and said that HC is the best expression to ensure that the requirements of international law are complied with.

Russia and India suggested deletion of this chapeau as it is premature to use the language proposed. Russia said that neither MHC or SHC are concepts that fall under international law, and argued they are fraught with the risk of politicising discussions. Russia argued that defining the degree of meaningfulness of HC would be a value judgement and entirely subjective. Israel wants the reference to section 2 deleted as it wants to see section 2 removed.

Brazil, Chile, and Mexico offered a few criteria of HC, including: the ability for human operators to intervene, suspend, abort, and to deactivate; human supervision that requires qualitative human judgment; human retention of legal principles; and

the ability to understand and explain what a system is doing, and why, amongst others.

The United Kingdom (UK) said the paper should acknowledge that HC is “complex, dynamic, multi-dimensional, and situation dependent.”

Switzerland said that the different terms used to describe HMI aren’t the most important, but rather to define when and where human presence is necessary.

#### **Section 4(1)(a)**

Current language: *Humans make informed, conscious decisions about the use of weapons.*

India said this is new language and wondered where it was taken from.

Russia proposed to add at the end: “systems based on emerging technology in the area of LAWS.”

Bulgaria suggested to add at the end of the sentence “based on a complex assessment of conflict environment and military objectives to be achieved.”

Israel suggested to replace “about the use of weapons” with “regarding LAWS in the life cycle of a weapon system.”

France suggested to remove “conscious”.

Peru suggested to add, after “the use of,” “any methods or means of warfare, including AWS.”

#### **Section 4(1)(b)**

Current language: *Humans have sufficient information to ensure that force is used in accordance with the requirements of international law, given what they know about the target, the weapon, and the context in which the weapon is deployed.*

Cuba suggested adding at the end of this sentence: “and they can take necessary precautions during the conduct of operations to ensure that a weapon system is not able to change mission parameters without human validation.”

Israel suggested replacing “that force is used” with “that LAWS is used”.

Germany said that the element of sufficient “understanding” should be added as crucial component to predict behavior of a weapon system, and said that something to this effect should be added to the chair’s paper as a bis paragraph.

Panama, the Philippines, and Peru suggested adding “potential” before “target,” while Israel proposed to change it to “targets”. The International Committee of the Red Cross (ICRC) explained that an autonomous weapon user can only have information about “potential” targets because users must have sufficient information about them in terms of quality, quantity, and timeliness to enable them to fulfil their international law obligations.

Switzerland made a textual suggestion to specify what information was necessary, and preferred deleting “the requirements of”.

India said this paragraph was acceptable, even if it needed rewording.

Sri Lanka said this paragraph was too subjective, and would appreciate clarification.

Russia proposed some stylistic changes to this paragraph to read: “Humans have information to ensure that weapon systems based on emerging technology in the area LAWS are used in accordance with the requirements of international law, given what they know about the target, weapon system, and context in which the weapon system is deployed.”

#### **Section 4(1)bis**

Cuba suggested to add a new paragraph: “Humans are certain on the reliability and predictability of the weapon system to identify, select and engage targets, per their instruction.”

Panama and Venezuela supported this, with Venezuela adding that these additions are aimed at ensuring humans taking all necessary precautions to ensure that weapon systems only operate after validation from humans.

Sri Lanka also said that “reliability” and “predictability” should be included in this section.

### Section 4(1)(c)

Current language: *The weapon is designed and tested in a realistic operational environment, and humans are properly trained, to ensure that the weapon is deployed in a judicious manner.*

Cuba suggested adding at the end: “considering the environmental limits in place; and allows for constant human supervision and ensures intervention where necessary.”

Russia suggested deleting “properly” and said it was unclear what “judicious manner” meant from a legal point of view. India agreed. Bulgaria, Panama, and Switzerland also had doubts about the term “judicious”. Russia proposed the following language instead: “the weapon system based on emerging technologies in the area of LAWS is designed and tested in a realistic operational environment and humans are trained to ensure that the weapon system is used in conformity with IHL.” Switzerland replacing it with: “to ensure weapons are deployed in a lawful manner.” Argentina and Bulgaria supported this.

Israel and Germany suggested placing “properly” ahead of “tested”. Germany proposed adding “including” after “tested”. France suggested deleting “realistic”.

### Section 4(2)

Current language: *Human control over the use of autonomous weapons systems can be exercised in various ways across the life-cycle of these weapon systems and through human-machine interaction.*

ROK said it could support this paragraph as is. Switzerland welcomed this paragraph but said that it would be good to clarify when HMI is relevant, and to add “at the time of use”.

Argentina, Costa Rica, Cuba, and Venezuela suggested replacing “can” with “must,” while Peru suggested “should” instead. Panama would be fine with either “must” or “should” but said it wants more robust language.

France said this paragraph could be deleted.

Sri Lanka said that sections 2 and 4 overlap, and suggested merging them by focusing on human control to read as follows: “human control over the use of AWS through HMI, which may take various forms and be implemented at various stages of the life cycles of a weapon, should ensure compliance with international law.”

Russia said this was an arbitrary interpretation of paragraph 21 of the [2019 GGE report](#), and suggested using it instead: “Human responsibility for the use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems can be exercised in various ways across the life- cycle of these weapon systems and through human-machine interaction.” Israel and the US made similar remarks. India and the US also said that the term “human control” hasn’t gained consensus.

### Section 4(3)

Current language: *The phases of the life-cycle of a weapon system include: political direction in the pre- development phase; research and development; testing, evaluation and certification; deployment, training, command and control; use and abort; post-use assessment.*

ROK said it could support this paragraph as is. Switzerland suggested replacing “use and abort” with “use and update,” and for the sentence to end on “decommissioning and liquidating”.

The Netherlands said that the phases of the cycle haven’t been exhaustively discussed, and that it was therefore better to add the phrasing “could” before “include”. Bulgaria agreed with this.

Russia wants to see this entire paragraph deleted as it doesn’t enjoy consensus. It said that language was taken from paragraph 23 of the [2018 GGE report](#), which wasn’t consensus-based. The language was a reflection of the Chair’s rainbow diagram but no consensus was achieved with regard to the different phases.

India and the US said this should be aligned with past consensus language.



## Section 4(4)

Current language: *Human-machine interaction, which may take various forms and be implemented at various stages of the life cycle of a weapon, should ensure that the potential use of autonomous weapons systems is in compliance with applicable international law, in particular international humanitarian law. In determining the quality and extent of human-machine interaction, a range of factors should be considered, including the operational context, and the characteristics and capabilities of the weapons system as a whole.*

ROK and India said they could support this paragraph as is. Russia said it was grateful that the Chair used Guiding Principle (c) for this paragraph.

The Philippines suggested replacing “should” with “must”. Panama supported this.

## Section 4(5)

Current language: *Identify good practices for human-machine interaction, including such practices identified in academic research or developed in industry, that can strengthen compliance with international humanitarian law when using autonomous weapons systems.*

Bulgaria, Switzerland, and Turkey welcomed this paragraph.

Russia welcomed this paragraph but suggested different language: “Good practices for human-machine interaction, including such practices identified in academic research or developed by industry, should be shared on a voluntary basis to strengthen compliance with IHL when using WS based on emerging technologies in the area of LAWS.”

India said this paragraph needed re-wording to reflect that good practices, which in its understanding have been used in the past, don’t exist yet for AWS.

Israel called for inclusion of “potentially” before “including such practices”.

France and Germany proposed setting up an advisory committee to regularly inform the CCW High Contracting Parties (HCPs) about emerging technologies in the area of LAWS. They proposed to add a recommendation at end of the paragraph to create such a committee in upcoming CCW Review Conference. Sweden supported this.

The ICRC said that language could be strengthened by clarifying that beyond “identifying” good practices, these should be actively considered and if appropriate, be applied and implemented.

# WEAPON REVIEWS

Allison Pytlak | Women’s International League for Peace and Freedom

Section 5 of the **Chair’s paper** focuses on weapon reviews, sometime referred to as legal reviews or national weapon reviews. International law—in particular, article 36 of the 1977 Additional Protocol (AP) I to the 1949 Geneva Conventions—creates an obligation on states to determine whether “in the study, development, acquisition or adoption of a new weapon, means or method of warfare” its use would “in some or all circumstances be prohibited by international law.” Such national weapon reviews have been an aspect of the GGE’s discussion on autonomous weapon systems (AWS)

since the outset, with some states having indicated in past meetings that national legal weapon reviews are sufficient to address the moral, ethical, and legal concerns about autonomous weapons.

Other states have pointed out that the somewhat patchy and largely non-transparent nature of most national weapon review mechanisms make them insufficient. Concerns have also been raised about the lack of clarity on the limits of autonomy within weapon systems, and that because there is currently no legal obligation against which states



can conduct reviews, it makes the standards and effectiveness of weapon reviews unclear and limited.

The Chair outlined in his introductory remarks that this section includes a combination of previously agreed language, in particular Guiding Principle (GP) (e)—which reads: “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”—as well as new language as proposed in the written contributions from states.

### Overarching comments on section 5

Several delegations commented on the section or topic as a whole. China said it is positive for countries to review new weapons in order to reduce harm to civilians and that most states, including China, already have relevant review and evaluation mechanisms. It noted, however, that AP I does not provide for uniform procedures which makes voluntary exchange important. China said this is why it has advocated for the negotiation of an additional protocol on AWS in the CCW framework, as based on an agreed definition of AWS.

India expressed that the framing of this section creates difficulties. Russia stated that individual and certain parts of the section don’t meet consensus and could be placed in a different section of the GGE’s 2021 final report instead, which will be devoted to results of discussions under agenda 5a.

Australia, Canada, Republic of Korea (ROK), United States (US), United Kingdom (UK), France, Netherlands, Bulgaria, Portugal, and Israel, among others, welcomed the section and/or spoke to the benefits of weapon reviews. Venezuela specified that while it sees weapon reviews as useful and necessary, voluntary measures cannot replace a legally binding instrument.

New Zealand said that it welcomed the section but urged that consideration be given to making reviews more robust in order to strengthen them. It

supports concrete proposals in that direction, citing work done by the International Committee of the Red Cross (ICRC).

Pakistan noted that weapon reviews could be an element of a normative framework and while useful, they are not sufficient on their own nor are they the only means to ensure compliance with legal obligations. They can be complementary, a point noted by Austria and New Zealand, but without a legal framework, such reviews do not have much utility. Similarly, the Campaign to Stop Killer Robots agreed that reviews are a positive means to promote accountability, but noted there is no clarity about the limits on autonomy in weapon systems and legal obligations are a necessary precondition for effective review processes.

Pakistan felt the section could be shrunk down into one or two recommendations and needs significant review.

Japan said it can go along with almost all of what is in the section, with some caveats. It reiterated its view on the importance of keeping to past agreed language.

Israel reiterated its preference to include the words “lethal” and “lethal autonomous” throughout the section. Argentina referred to the type of weapons under consideration in this section, stating its preference to use “autonomous weapon system” and leave off the “lethal”. Argentina noted that this was this spirit in which the GPs were agreed, and that the text of GP(e) refers to weapons in general.

Mexico, Chile, and Brazil jointly expressed concern about a gap in relation to assessing proportionality, which is context dependent and generally absent from weapon reviews, but would be relevant to new technology. Austria also acknowledged this.

Philippines stressed the importance of a multi-disciplinary review framework and urged states to consider the gender-differentiated effects of weapon systems that are under review.

Portugal observed that article 36 doesn’t stand alone as the only source for weapon reviews, and that the criteria states must look into as part of a weapon review come from broader international

law (IL) and customary international humanitarian law (IHL). It would appreciate this section being revised to reflect this.

### Section title and chapeau

Mexico, Chile, and Brazil jointly suggested changing the section title to “challenges to weapon reviews posed by AWS”. Austria said it would welcome if the title would reflect that weapon reviews are not only limited to new weapons but also “means and methods of warfare,” which could be more explicitly mentioned.

Austria also proposed creating a chapeau for the section, which would highlight some of the particular challenges posed by the potential characteristics of AWS and how they make weapon reviews particularly challenging: “In light of the particular nature of AWS based on emerging technologies in the area of LAWS, including complexities related to potential characteristics such as self-evolvement, self-learning, self-adaption, predictability, explainability, reliability, ability to be subject to intervention, ability to redefine or modify objectives or goals or otherwise adapt to the environment, and ability to self-initiate, weapon reviews are particularly challenging.” Austria noted the list of characteristics derive from paragraph 20(b) of the [2019 GGE report](#), but it is adding to this list “self-evolvement” and “self-learning”.

### Section 5(1)

Current language: *In accordance with the obligations of States 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.*

India stated that this paragraph gives the impression that the paragraph is about weapons in general, and not about AWS in particular. It suggested referring specifically to AWS throughout the section. Australia agreed with the reference being too broad and suggested adding the words “under AP I of the Geneva Conventions” in place of “international law”.

Russia noted this paragraph paraphrases AP I and provided an editorial correction in which the word “applicable” would be added before “international law,” for accuracy with the original text.

The US supports this paragraph but recommends using the exact language from GP(e).

Switzerland welcomed this paragraph as a reminder of what it sees as customary international law. It stressed the words “in some or all circumstances,” given that the nature of AWS is such that we must focus on the circumstances in which they are used (i.e. the type of targets, and the operational environment) and develop constraints and limits on their use.

### Section 5(2)

Current language: *Encourage all States that have not yet done so to join Additional Protocol I to the Geneva Conventions of 12 August 1949.*

China, India, Pakistan, US, Turkey, and Israel proposed deleting this paragraph, with most states acknowledging they are not party to AP I. Panama pointed out that many UN First Committee resolutions make similar calls for universalisation and to retain it. India responded to say that cannot accept this paragraph or such a reference anywhere in this section, or even in the forthcoming 2021 GGE final report. Austria said it would be good to reflect an encouragement to universalise the Geneva Conventions, a point supported by Portugal.

Australia suggested adding at the end of the paragraph: “or alternatively commence conducting weapon reviews in line with AP I as a matter of good practice.”

Russia has no major problems with including this if it meets consensus, including with states not party to AP I, but suggested a stylistic adjustment to bring it into conformity with how GGE reports usually read. Panama said it could be flexible and accept Russia’s proposed change.

Mexico, Chile, and Brazil jointly proposed deleting paragraphs 2 and 3. They suggested replacing them with a single paragraph: “Emerging

technologies in the area of AWS pose specific challenges to the weapon review process.”

### Section 5(3)

Current language: *Legal reviews of new weapons at the national level are a useful tool to assess nationally whether potential autonomous weapons systems would be prohibited by any rule of international law applicable to that State in all or some circumstances.*

Cuba proposed a paragraph 3bis: “The High Contracting Parties commit to adopting a precautionary approach and deny authorisation in cases where meaningful human control, compliance with IHL, operational behaviour, effects and predictability of the system cannot be ensured and/or sufficiently understood, as appropriate.” Panama, Argentina, Austria, and Venezuela supported this suggestion.

Australia would prefer for the text of this paragraph to be consistent with the title of the section by referring to “weapon reviews” rather than “legal reviews”.

Russia noted this paragraph is a variation of paragraph 17(a) of the 2019 GGE report—which reads: “The potential use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems must be conducted in accordance with applicable international law, in particular IHL and its requirements and principles, including inter alia distinction, proportionality and precautions in attack”—and that it should be modified to be brought into full alignment with the consensus language of the report, a point the US agreed with. Russia offered a textual suggestion in this regard.

The US also suggested re-writing it with consensus language but referenced 17(i) of the 2019 GGE report: “Legal reviews, at the national level, in the study, development, acquisition or adoption of a new weapon, means or method of warfare are a useful tool to assess nationally whether potential weapons systems based on emerging technologies in the area of lethal autonomous weapons systems would be prohibited by any rule of international law applicable to that State in all or some

circumstances. States are free to independently determine the means to conduct legal reviews although the voluntary exchange of best practices could be beneficial, bearing in mind national security considerations or commercial restrictions on proprietary information.”

Switzerland proposed adding a new sentence to the paragraph: “High Contracting Parties agree that in light of the complexity of AWS, the conduct of legal reviews of AWS is necessary for an implementation of international law in good faith.” It stressed that displaying good faith in terms of IHL means considering whether they can be used in accordance with IHL before they are deployed. Peru said it agrees with these suggestions; Mexico acknowledged it as well.

Pakistan felt that this paragraph is not really a recommendation but an expression of view and requires modification.

The ICRC reminded that the aim of reviews is not only to prevent use of weapons that would violate IHL in all circumstances but also to impose restrictions on weapons that would violate IHL in some circumstances.

### Section 5(4)

Current language: *The following elements of practice should be applied in the study, development, acquisition, or adoption of autonomous weapons systems:*

(a) *States should consider key challenges in the regulation and nature of the systems through a regular evaluation process based on a set of criteria relevant for autonomous weapons systems and applied across the life-cycle of a weapon system.*

(b) *A weapon system under modification should be reviewed to determine whether the modification poses any legal issues.*

(c) *New concepts for the employment of existing weapons should be reviewed, when such concepts differ significantly from the intended uses that were considered when those systems were previously reviewed.*

*(d) In considering whether a weapon with new autonomous features or functions is consistent with the prohibitions against weapons calculated to cause superfluous injury or against weapons that are inherently indiscriminate, it may be useful to compare the weapon to existing weapons not falling under these prohibitions.*

*(e) In light of the particular challenges of autonomous weapons systems, including potential for self-learning and associated unpredictability, weapons reviews must be conducted with a full understanding of the weapons' capabilities and limitations, and sufficient confidence about its effects in the expected circumstances of use.*

China, India, and Russia proposed deleting this paragraph. Pakistan called for it to be deleted or substantially modified, noting that it sets out a framework for reviewing these weapons without having agreed on what AWS are and how to ensure IHL compliance, among other questions.

India outlined specific concerns with the sub-section, giving paragraph 4(b) as an example, which refers to "weapon systems under modification." It suggested that adding "for the purposes of LAWS" to the end of 4b could help, and a similar amendment for 4(c). It said that 4d goes beyond the mandate of the GGE and that 4(e) only selectively picks some characteristics of LAWS.

Russia reminded that it is the prerogative of each state to carry out reviews and develop its own procedures, mechanisms, and standards because article 36 is not prescriptive in this way. It suggested deleting the paragraph fully but did make a suggestion for 4(d), if retained (see below).

Australia agreed with some of the concerns expressed regarding the sub-paragraphs and possibly deleting them. It also suggested a reformulation of the chapeau: "HCPs agreed to identifying elements of good practice, which may be applied in the study, development, acquisition, and adoption of AWS."

ROK said this paragraph is useful but to replace "should" with "can," which Netherlands and Israel supported.

The US welcomed this paragraph as a useful effort to articulate good practice in the area of weapon reviews. It recommended the chapeau indicate a sole focus on the legal dimension of weapon acquisition and development. Israel felt the chapeau could be omitted because it is inconsistent with the sub-paragraphs.

#### 5(4)(a)

Switzerland urged leaving out the last part of this sub-paragraph and offered a reformulation.

The UK would like for 4(a) and 4(b) to reflect that autonomy is a capability and a function, and not a system in itself, noting that within a system, different functions may be more or less autonomous than other functions.

The US said this is unclear and requires further discussion; Israel also felt it is unclear and should be deleted.

The ICRC highlighted that legal reviews may need to be conducted at an earlier stage of weapon development, in shorter intervals, or repeated more often than traditional technologies. This is because of the specificities of AWS, that rely on software in which functioning can change with updates and is susceptible to subtle changes in the operational environment over time, which in turn affect predictability and reliability, among other characteristics. This could be reflected in this sub-paragraph.

#### 5(4)(b)

Switzerland offered a reformulation with stronger language, noting that even minor changes in algorithms can have an impact on IHL compliance. This would read: "Weapon systems must be reviewed to determine whether the modified weapon system can be used in compliance with international law in all or under some circumstances."

The US appreciated inclusion of its own proposal here. It noted that the paragraph is consistent with and can be included alongside paragraph 23(c) of the 2018 GGE report, which reads: "Research and

development of autonomous technologies should not be restricted based on the sole rationale that such technologies could be used for weapons systems. At the same time, given the dual use nature of the underlying technologies in the area of lethal autonomous weapons systems, it is important to promote responsible innovation and use of such technologies.”

Argentina prefers to keep the language of 4(b) as is, because states can’t guarantee effectively that weapons comply with IHL through self-learning. Israel would prefer to modify this paragraph to match the 2018 language.

Palestine proposed replacing “should” with “must”.

#### 5(4)(c)

Switzerland fully supports this sub-paragraph and would like for it to be even stronger.

The US welcomed this sub-paragraph.

Panama noted there is a need to clarify the terminology being used (i.e. “employment”). It suggesting adding “manner of” ahead of “employment” and “may result in different effects” after the word “uses”. This was supported by the Philippines, Palestine, and Peru.

The ICRC understands “new concepts for employment” as referring to “method of use” and recommended clarifying that a new review must be conducted not only when a new method of use is significantly modified, but also when an existing weapon can be expected to result in a different humanitarian impact or pose different challenges for IHL.

Israel said that the word “concept” is too vague and requested replacing it with “operational context”. It further proposed replacing the second part of sentence (beginning with “...that were considered when...”) with “...that the authorisation of the system was based on.”

#### 5(4)(d)

Russia referred to its comments on Section 2 and in relation to paragraph 17(h) of the 2019 GGE

report, which reads: “A weapons system based on emerging technologies in the area of lethal autonomous weapons systems, must not be used if it is of a nature to cause superfluous injury or unnecessary suffering, or if it is inherently indiscriminate, or is otherwise incapable of being used in accordance with the requirements and principles of IHL.”. It said that if an understanding on this is reached, Russia proposes including the complete wording from 17(h) as a separate paragraph in the forthcoming 2021 GGE final report.

Switzerland and Palestine suggested adding “and unnecessary suffering” after “superfluous injury”.

The US welcomed this sub-paragraph.

Israel said that “new autonomous features or functions” is unclear and provided an alternative formulation.

#### 5(4)(e)

Panama suggesting adding “to meet legal, humanitarian, ethical, and operational requirements”. Argentina, Palestine, and Peru supported this.

Switzerland cautioned that the characteristics of self-learning do not necessarily lead to unpredictability of the weapon system as a whole, and that it is important to emphasise the risk of unpredictability. Legal experts must be able to count on the support of technical experts in their review work. France and the US made similar observations about unpredictability; France would like to see the term deleted. The US felt the term “must” is inapt.

Mexico, Chile, and Brazil jointly acknowledged the points raised by Switzerland about unpredictability but felt this should be reflected by taking a particularly precautionary approach when dealing with especially risky or unpredictable activities or objects.

Israel felt the first part of the sentence stigmatises autonomy. It proposed re-wording this sub-paragraph to read: “Weapon reviews should be conducted with sufficient understanding of



weapons capabilities and limitations in light of intended use and sufficient confidence about its effects in those circumstances.”

Mexico, Chile, and Brazil jointly proposed two new sub-paragraphs:

- 5(4)(f): “Undertaking assessments that allow for the understanding of AWS attributes and effects, in particular their design and characteristics, their technical performance, including in terms of reliability and predictability, and whether their foreseeable effects are capable of being limited to military objectives and control in time and space; their intended or expected use; the placement of adequate limits on tasks and types of targets, in particular there must be certainty that they are not prejudiced by technological or social biases and whether their employment in some or all circumstances would be prohibited under IHL and IL.” In this regard, these states highlighted that parameters for reviews would be important in order for all states to have common framework for ensuring and building confidence.
- 5(4)(g): “AWS reviews should adopt a precautionary approach and deny authorization when there might be less than full certainty of all of the characteristics listed in the paragraph above.”

### Section 5(5)

Current language: *Where feasible and appropriate, inter-disciplinary perspectives must be integrated in research and development of autonomous weapons systems, including through independent ethics reviews bearing in mind national security considerations and restrictions on commercial proprietary information.*

China proposed deleting this paragraph.

India said it is problematic and tries to mix several concepts into a single paragraph. It suggested discussing it more in order to come up with language that is acceptable to delegations.

Australia’s preference would be to delete the reference to ethics reviews because international humanitarian law (IHL) already covers ethical considerations.

Russia said it would be possible to approve this paragraph if it used the exact wording found in paragraph 23(b) of the 2018 GGE report, which reads: “Where feasible and appropriate, inter-disciplinary perspectives must be integrated in research and development, including through independent ethics reviews bearing in mind national security considerations and restrictions on commercial proprietary information.” The US agreed.

Switzerland reinforced the importance of including legal, military, and technical expertise alongside ethical considerations but reminded that reviews must be based on international law. It said this paragraph could be moved to the beginning or end of the section.

The ROK supports paragraph 5 because it captures paragraph 23(b) of the 2018 GGE final report.

Panama felt the paragraph is vague and would benefit from further clarification and specific reference to the Marten’s Clause. The Philippines, Peru, Argentina, and Portugal agreed.

New Zealand would like to understand this paragraph better and how it interacts with weapon reviews. ICRC invited states to clarify how the integration of interdisciplinary perspectives in research and development, and independent ethics reviews, relate to the legal review of weapons as required by article 36.

ICRC recalled that, the Marten’s Clause, as referenced in the preamble of the CCW, guards against the assumption that anything that is not prohibited is permitted. It ensures that technological developments are viewed in light of the continued applicability of the principles of humanity and the dictates of public conscience. Consideration must be given as to whether the acquisition, development, or use of AWS accords with these principles, which is particularly

important since the processes by which AWS function raise fundamental ethical concerns.

### Sections 5(6) and 5(7)

Current language: 6. *Encourage States to share, on a voluntary basis, information and good practice on the conduct of legal reviews.*

7. *Identify guidelines and good practices for militaries to consider using in conducting legal reviews of autonomous weapons systems.*

Most delegations addressed these two paragraphs together.

China proposed merging paragraphs 6 and 7 to read: “Urges states to share on voluntary basis, information, guidelines, and good practice in conducting reviews of weapon systems based on emerging technology in the area of LAWS”. New Zealand also said these could be merged to flow better. Russia said paragraph 7 is superfluous.

The UK commented that paragraphs 6 and 7 could be strengthened or more focused on the GGE’s mandate. It suggested an amendment: “The GGE considers that sharing of good practice and development of guidelines is a useful way for future GGE mandates to be shaped.” Text could also be included about independent expert groups reporting that could help translate technical knowledge into and understanding of the real-world impacts of autonomous weapon systems.

Similarly, the US supports paragraphs 6 and 7 but proposed relating them more closely to the GGE’s mandate of “emerging technology in the area of LAWS”. The US noted that these paragraphs set recommendations for future work, it would be better to compile or address them in a different section of the forthcoming 2021 GGE final report, about future work. The ROK is supportive of paragraph 6 but said it can go along with moving

paragraphs 6 and 7 to the section of the final report about future work.

India suggested limiting this paragraph to technology in the area of AWS. Russia suggested tweaking language to make it more neutral but said it doesn’t object to voluntary information exchange.

Panama, with support from Philippines, Argentina, Palestine, Peru, argued that states should go beyond identifying guidelines and good practices but also adopt and implement them. It suggested changing the text to reflect this and include the words “adopt and implement”. ICRC suggested strengthening paragraph 7 by mirroring the language of paragraph 1 of section 6 so that guidelines and good practices should not only be “identified” but also be “considered, adopted and implemented.”

New Zealand asked if there might be appetite among states to publish reviews and establish a central depository to collect and publish them.

Canada said that these paragraphs are helpful for moving work in this area forward and it encourages voluntary exchange of best practices. It welcomed paragraph 6 and noted it is important to compile good practices as suggested by paragraph 7. Netherlands supports sharing good practices but noted that not all information gathered is suitable for sharing for reasons of national security. Doing so, however, will contribute to the implementation of weapon reviews. Sweden welcomes measures to increase transparency, including information exchange about how states apply and implement article 36. Bulgaria sees merit in these activities.

Australia proposed replacing “commit” with “are encouraged” in paragraph 7. France proposed replacing “militaries” with “ministries of defense personnel” because civilians play a role in reviews, too.

## RISK MITIGATION

Allison Pytlak | Women's International League for Peace and Freedom

Section 6 of the [Chair's paper](#) is about risk mitigation. In his introductory remarks, the Chair outlined that while the title of this section is a new expression in the context of Group of Governmental Experts (GGE) discussions and reports, most of the section's content is based on agreed language. Paragraph 1 relates to Guiding Principle (GP)(f); paragraph 2 is from GP(g); and the remainder from other parts of the [2019 GGE report](#), which contain the GPs.

### Overarching comments on section 6

There were not many general comments about risk mitigation or the section as a whole. The United States (US) appreciated its inclusion but suggested that along with identifying risks, more could be done to mitigate these risks. It recommended this be highlighted as an area of future work for the GGE. It further suggested including new text that would highlight how emerging technology in the area of autonomous weapon systems (AWS) might be used to mitigate the risk of harm to civilians and achieve "balance," in its view, of the challenges to risk mitigation and benefits posed by novel technologies.

Netherlands noted that many aspects of this section are already covered in other sections of the Chair's paper, including paragraphs 2 and 3, which seem to be a reiteration of other obligations under international humanitarian law (IHL). It noted that the current phrasing in this paragraph would risk watering down those obligations, and generally encouraged more streamlining. India said this suggestion could help bring brevity to the paper.

Pakistan said that while it does not have an objection to discussing risk mitigation in principle, it wants to point out an "elephant in the room", which in its view is that the GGE has not been considering the military and security implications of AWS, including for global or regional stability. The GGE has rightly focused on interrelated legal, ethical, and normative aspects but, Pakistan noted, the consequences of not addressing those

risks go against the GGE's purpose. It proposed modifying the section's title to become "Alleviating international security concerns" and suggested the section could be reformulated as such but keep some elements of risk mitigation. It proposed three new paragraphs that are included at the end of this article.

Switzerland urged being careful in drafting these paragraphs, even while noting that this section makes it possible to specify and operationalise certain considerations from the 2019 GGE report. It urged being careful to not include in these measures anything based on aspects that are contained in existing obligations under IHL.

Philippines welcomed the section and said it is currently studying the proposed language while reflecting on comments from other delegations. Its support for this section is grounded in the [joint working paper](#) it submitted with other states, in particular its paragraphs 12 and 13. Peru felt it is an important section on a topic that has not been sufficiently addressed in past.

Uruguay recognised the link between this section and section 3, on international law.

### Section 6(1)

Current language: *When developing or acquiring autonomous weapons systems, consider, adopt and implement risk mitigation measures to ensure physical security and appropriate non-physical safeguards as well as to prevent acquisition by terrorists or other unauthorized recipients.*

Russia, US, India, and Israel suggested using the language of GP(f) in full, which reads: "When developing or acquiring new weapons systems based on emerging technologies in the area of lethal autonomous weapons systems, physical security, appropriate non-physical safeguards (including cybersecurity against hacking or data spoofing), the risk of acquisition by terrorist groups and the risk of proliferation should be considered."

The United Kingdom (UK) stated that this paragraph and paragraph 2(b) should reference cyber security. It noted that a number of delegations have raised concerns about unauthorised persons gaining control of systems and that this is not limited to physical security but also cyber security. Germany agreed with this, stating it is important that AWS are made safe against hacking, data spoofing, and other operations. France agreed and also called for a reference to the risk of piracy.

Germany proposed adding some new language to help untangle paragraphs 1 and 4, which it felt were becoming mixed up, noting that transfer control is different than safeguarding systems from misappropriation. It would replace “acquisition” with “appropriation” in paragraph 1. Switzerland supported this clarification.

France felt that paragraphs 1 and 2 could be joined to avoid repetition.

The Campaign to Stop Killer Robots cautioned against using references to “terrorist groups,” describing it as unnecessary political labelling. The Campaign suggested that “unauthorised recipients” functions adequately on its own.

## Section 6(2)

Current language: Risk assessments and mitigation measures should be part of the design, development, testing and deployment cycle of autonomous weapons systems.

Russia, US, India, suggested using GP(g) in full, which reads: “Risk assessments and mitigation measures should be part of the design, development, testing and deployment cycle of emerging technologies in any weapons systems.”

Switzerland welcomed the reassertion of GP(g) and other aspects of the 2019 GGE report, which remain valid and must not be weakened.

### 6(2)(a)

Current language: *Risk assessments should consider the risks, inter alia, of civilian casualties, as well as precautions to help minimize the risk of incidental loss of life, injuries to civilians and*

*damage to civilian objects must be considered. Other types of risks should be considered, as appropriate, including but not limited to the risk of unintended engagements, risk of loss of control of the system, risk of proliferation and risk of acquisition by terrorist groups.*

Russia noted that the language is drawn from paragraph 23(b) of the 2019 GGE final report, which reads: “Risk mitigation measures can include: rigorous testing and evaluation of

systems, legal reviews, readily understandable human-machine interfaces and controls,

training personnel, establishing doctrine and procedures, and circumscribing weapons use

through appropriate rules of engagement.” It does need to see any need to change this text and suggested taking it fully. The US, India, supported this suggestion. Palestine proposed adding “or other unauthorised recipients” to be consistent. Switzerland stressed that in accordance with IHL, we must constantly spare civilian populations, civilians, and civilian objects. Israel stated that the words “must be considered” seem redundant.

### 6(2)(b)

Current language: *Risk mitigation measures can include rigorous testing and evaluation of systems, legal reviews, readily understandable human-machine interfaces and controls, training personnel, establishing doctrine and procedures, and circumscribing weapons use through appropriate rules of engagement.*

Russia made the same point as for the above subparagraph. Palestine proposed replacing “can” with “should”.

## Section 6(3)

Current text: Where feasible and appropriate, verifiability and certification procedures covering all likely or intended use scenarios must be developed, the experience of applying such procedures should be shared bearing in mind national security considerations or commercial restrictions on proprietary information.

Russia noted that this paragraph is the same text as paragraph 23(b) of the [2018 GGE report](#), which reads: “Where feasible and appropriate, interdisciplinary perspectives must be integrated in research and development, including through independent ethics reviews bearing in mind national security considerations and restrictions on commercial proprietary information.” It would like to see it retained as is. India supported all of Russia’s suggestions to use agreed language.

#### Section 6(4)

Current language: *Prevent the transfer of autonomous weapons systems to unauthorized users, including through the adoption of national measures to regulate production, acquisitions and transfers.*

Russia said it felt this paragraph is superfluous and considerations of export control on such technologies should be discussed in the framework of relevant export control regimes. The US noted that the GGE has not had in-depth discussion about the transfer of emerging technology in the area of AWS. It shares the concern of many states about the misuse of technology by unauthorised entities but cannot accept this paragraph without further discussion, calling it premature to do so, a point supported by Israel.

India agreed with Russia’s comments and suggested deleting this paragraph until it can be discussed in more detail. However, India noted that a number of emerging technologies have already emerged and will be used in AWS. It questioned the feasibility of a ban on the transfer of technologies which are already so widely disseminated. India said that perhaps export control regimes could benefit from discussion of these aspects. The UK noted that existence of autonomy in a system does not immediately alter the agreed export controls a system faces. It suggested an amendment to reflect overall concern about proliferation and reaffirm the importance of export control regimes.

Germany has no problem with the language but would prefer to use “unauthorised recipients”.

Switzerland sees value in adding this paragraph as it operationalises considerations from GP(f) on

non-proliferation of AWS but noted that it is not complete and should be studied further.

Philippines and Peru supported retaining the paragraph.

France suggested using “illicit transfers” or “diversion” as more appropriate than the word “transfer” because the paragraph describes illicit transfers. France further suggested changing the end of the paragraph to include the words “and implementing appropriate measures at the international level” so as to go beyond adoption only of such measures as in the current formulation. Peru said France’s proposals deserve attention.

#### Additional proposed paragraphs

Argentina proposed adding a new paragraph to the end of the section: “Risk assessment and mitigation measures should not hamper progress in or access by the states to peaceful uses of autonomous technologies.” Argentina said that this language is a significant portion of the language agreed upon in GP(g), and that it’s necessary to ensure that new technology is accessible for peaceful purposes. Palestine, Peru, and Uruguay supported this paragraph.

Pakistan proposed three paragraphs (*check against delivery*):

1. “The development and use of LAWS poses serious threats to peace, security, and stability at the international and regional levels; exacerbates regional and international security dilemmas through arms races; lowers the thresholds for the use of force in armed conflict; undermines compliance of states with international humanitarian law. The proliferation, acquisition and use by terrorists, vulnerability of such systems to hacking and interference, unauthorized or unexplained incidents arising from computer anomalies or other technical malfunctions, as well as loss of control of the system, would further enhance the dangers surrounding LAWS in all their aspects.”

2. “In light of these unacceptable risks and the catastrophic consequences for global and regional



peace, security, and stability, recommends additional practical, realistic, and mutually reinforcing steps are necessary to diminishes these threats. Central to these steps should be focused deliberations on eliminating dangerous risks to regional as well as global peace, security and stability, thresholds to armed conflicts and armed races with a view to assessing the balance between military necessity and humanitarian considerations related to emerging technology in area of LAWS.”

3. “These steps would also contribute to alleviating the prospect of a conducive environment for negotiations on disarmament and engender a

positive impact on global as well as regional peace, security and stability.”

Palestine strongly recommend inclusion of a new paragraph: “Commit not to authorise the transfer of autonomous weapon systems in cases where HCPs have knowledge at the time of authorisation that the systems would be used in the commission of genocide, crimes against humanity, grave breaches of the Geneva Conventions of 1949, attacks directed against civilians or civilian objects protected as such, or other war crimes as defined by international agreements to which they are a party.”

## OPERATIONAL ASPECTS

Ray Acheson | Women’s International League for Peace and Freedom

Section 7 of the **Chair’s paper** caused some confusion, as participants approached the text differently. Some saw this section as part of the recommended elements for a normative and operational framework (NOF) on autonomous weapon systems (AWS), while others saw it relating to the Group of Governmental Experts (GGE)’s mandate or future work. The main debate took place not in relation to the two provisions in the paper, but to the Chair’s request for ideas for a possible follow-up mechanism to review national implementation of an NOF. Delegations put forward three proposals in response; the French-German proposal for the establishment of a technical experts group received the most attention, with Russia vociferously objecting to this approach and others seeking clarity on its parameters.

### Overarching comments on section 7

Russia said it does not understand the title of section 7, because there are operationalisation aspects in other sections of the Chair’s paper. It also said this title moves the GGE in the wrong direction.

New Zealand said it attaches particular importance to this section but is concerned that it focuses entirely on domestic implementation of an agreed

framework. New Zealand believes the value of national implementation depends on the ambitions and clarity of the NOF and is committed to establishing effective regulations and controls on AWS.

### Section 7(1)

Current language: *Adopt the appropriate legal, administrative and other measures.*

Cuba recommended adding at the end: “which will be further elaborated towards the adoption of a legally-binding instrument.”

India said the GGE needs to hold more discussions and reach consensus before it can adopt any measures.

Russia said that while some delegations want to use this section to talk about developing a legally binding protocol to the CCW, the discussion about options and alternatives is a separate discussion and should be covered in a separate part of the final report.

The Philippines countered that while there is no consensus yet on the operational elements, the current GGE mandate is to make recommendations

for an NOF. Further discussions can take place, which is why the Philippines and the other members of its cross-regional group want the GGE to be given a mandate to negotiate the institutionalisation of the NOF, including specific operational aspects to which High Contracting Parties (HCPs) should commit.

## Section 7(2)

Current language: *Exchange national policies, experiences and good practices on a voluntary basis.*

India argued this recommendation isn't necessary because it's covered elsewhere.

Russia argued this relates to a "totally different issue" and indicates a possible direction of work for the GGE in the future, which requires a separate discussion by HCPs. Russia said it's open to a voluntary exchange of national experience and practice. It also outlined other issues for further work, including examining international legal norms relevant to AWS, characteristics and basic functions of AWS, and effective application of AWS in the context of international humanitarian law (IHL).

The United States said this aspect is an excellent step to help HCPs operationalise or implement their commitments at the national level.

The Philippines supported this provision and noted the willingness of many countries to exchange best practice on voluntary basis. It also said it would be useful to encourage industries to mainstream codes of conduct through a network of practitioners that interfaces with policymakers, including those in legal, diplomatic, military, and security sectors. It argued this could help facilitate laws, policies, and regulations to enhance safeguards for intellectual property and for not undermining innovation. Philippines noted that states already dialogue with industry to consider policy implications of dual use technology; to incubate network we propose GGE mechanism like those under CCW amended protocol II and protocol V.

## Possible follow-up mechanism to review the national implementation of the framework

India said this is part of developing an NOF and shouldn't be included here. Other states made three proposals about possible "follow-up mechanisms," which garnered considerable debate.

### French-German proposal

France highlighted its proposal with Germany for the establishment of a group of independent technical experts drawn from industry, academia, and other fields to monitor developments in relevant technologies.

Russia argued this is not new idea, that it was put forward in 2019 and Russia rejected it then because it doesn't understand why the GGE would establish another expert group within itself, when the GGE's own mandate is to have expert discussions on emerging technologies in the area of AWS. It argued that it is impossible to examine these technologies from legal, military, and technical perspectives in an isolated manner, since they are intertwined, and the technology should be analysed in a comprehensive way.

France noted that Russia is "right and wrong" about what happened in 2019. France said back then it proposed creating within the GGE three streams or subgroups on legal, technical, and military matters; but its current proposal is not the same.

More broadly, France said it found Russia's remarks disturbing. France noted that its own delegation includes legal, military, and technical experts, and said it hoped the Russian delegation is not casting doubt on the French delegation's professionalism. France also highlighted the work it has done on ethical considerations and encouraged Russia to read its report, in which experts recommend that the GGE periodically update their views on relevant technology because it is advancing rapidly. While Russia says it's too soon to regulate AWS because we don't know enough, France pointed out, Russia now seems

to be saying that it's unnecessary to know. The purpose of the body recommended by France and Germany is not to substitute the GGE but to complement and inform it.

Russia responded to say it respects the French delegation's expertise and has read its ethics report, but it is still not convinced of the usefulness of establishing a technical experts group within the GGE. It argued the current GGE mandate and agenda cover all relevant issues in an integrated and interdisciplinary way, and asserted that a group that would only discuss technical aspects would detract from the main goal of this GGE and from the effectiveness of its work. It suggested that the next GGE mandate should be based on the current mandate, to understand where we are now, where we did good effective work in the past, and to use that to decide what should be done next.

Germany tried to clarify that the idea of the French-German proposal is not to establish a group parallel to the GGE, but to create a body that would still exist even if the GGE ceases its work—i.e. if it succeeds in negotiating a framework or instrument. The subject of the group would be emerging technologies relevant to AWS, the very nature of which requires constant review. Germany opposed linking the group of experts with the mandate of the GGE.

India said it sees merit in the French-German proposal and sought clarification on its parameters in relation to experiences with the Organisation on the Prohibition of Chemical Weapons (OPCW). That body has a standing advisory board, which is a permanent standing committee that sets up temporary working groups to address specific issues; it also as an open-ended working group that meets frequently on a specific issue (terrorism). India said if the proposal is for a standing committee, then confusion arises from how it will differ from the GGE. But if the proposal is for the committee to only address specific issues or challenges, which the GGE would assign to it, then India would support the proposal.

The United States said that since the GGE is a group of experts itself, it needs to understand better what independent experts would bring to the discussion that national delegations can't

bring themselves. It said HCPs need to understand what's missing so they can know what gaps need filling.

France welcomed the Indian delegation's examples of other bodies, and said the United States is correct about needing to understand the gaps. France explained that it is proposing this body because last week, participants of the GGE couldn't agree on risks or opportunities related to AWS because they don't have enough experience or expertise on algorithms, artificial intelligence, or robotics. The committee France and Germany are proposing would not replace the GGE, France said, but would be independent. It would have limited composition, perhaps 15 people, and include AI and IT experts, engineers, academics, and more.

The Philippines said it would be good to have independent experts input to the work of the GGE. However, this should not be without prejudice to a strengthened GGE mandate to negotiate an NOF. Further, the committee should have proper geographic representation and diversity.

Having heard further details from France, India noted that it and Switzerland tabled a [joint proposal](#) on the role of science and technology in the context of the CCW, and pointed out that these issues are relevant for all of the CCW's work and not just the GGE on AWS. Switzerland agreed that the "technological observation desk" proposed by it and India for the CCW might be applicable here, to have broader perspectives on technological developments.

Russia agreed with India and Switzerland that the French-German proposal sounds like their science and technology proposal for the CCW. Given this, Russia argued that this issue is outside the mandate of the GGE and said it should be taken up by the CCW Review Conference and its Preparatory Committee. It suggested not to take time away from the GGE's preparation of its report and instead to take the matter up at the CCW PrepCom in September.

In its closing remarks, Poland said it found the French-German proposal relevant, and suggested it be connected to the GGE mandate in the timeframe allocated to the GGE.

### Portugal's proposal

Portugal said the French-German proposal is compatible with its proposal for a follow-up mechanism, which is that the CCW mandate the GGE to produce a working paper (or other possible written output) on existing positive and negative obligations in relation to AWS and on good practices that are useful for implementing those obligations. Portugal explained this would aim to help clarify and develop an NOF and could be helpful in operationalising Guiding Principles (a), (d), and (e). It said this would not be a new group or only a group of legal experts. It would be convened by the Chair of the GGE, be open to all GGE participants, and operate without prejudice to the outcomes and recommendations of future GGEs, including positions on a legally binding instrument. Portugal argued this could be instrumental to concluding whether existing international law is sufficient, or whether or it requires modernisation or adaptation. Good practices could be shared on a voluntary basis by HCPs and other stakeholders, and independent experts could brief the follow-up mechanism, along with those on government delegations.

The United States said it read Portugal's submission with interest, which recognises there are things the CCW can do to promote national implementation of commitments.

India expressed concern with the term "follow-up mechanism" for Portugal's proposal, arguing

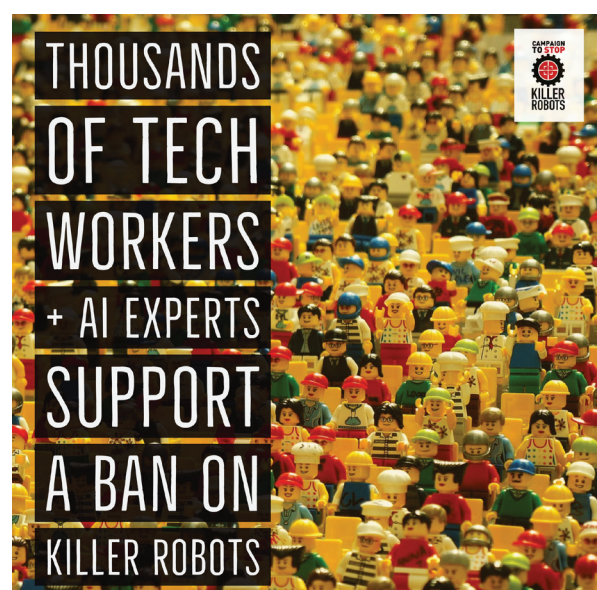
that follow-up mechanisms are established when something, i.e. the GGE, has concluded its work—but this hasn't happened yet.

Switzerland clarified that mechanisms are required as follow-up to an NOF. These mechanisms will depend on the NOF itself, which will be part of the future discussions. In this context, Switzerland noted that Portugal's proposal seems linked to the future mandate for the GGE, and in that case clarifies how progress should be made in the operationalisation of an NOF. It said this could be useful and deserves further study.

The Philippines said Portugal's proposal appears thoughtful and well-drafted, though more clarity is needed on how it would differ from the GGE, and how the working paper would differ from a GGE report or recommendations.

### Group of ten proposal

The Philippines highlighted the proposal by Argentina, Ecuador, El Salvador, Costa Rica, Palestine, Panama, Peru, Philippines, Sierra Leone, and Uruguay for a group of experts mechanism. It explained that while monitoring technological evolution and exchanging best practice are key to future-proofing our work, we should not spend energy on this yet. The mechanism the group of ten proposes would be set up in parallel with the negotiation of an NOF containing prohibitions and regulations on AWS—it would be part of the NOF package.





# INCENDIARY WEAPONS: TESTING THE CCW'S HUMANITARIAN PURPOSE AND FUTURE VIABILITY

Bonnie Docherty | Human Rights Watch and Harvard Law School's International Human Rights Clinic

As this week's Group of Governmental Experts meeting comes to a close, CCW states parties should turn their attention to incendiary weapons, which, along with autonomous weapons systems, should be the focus of the upcoming Review Conference.

A large number of states have called for dedicated time at the Review Conference to examine the effects of these cruel weapons and to assess the adequacy of Protocol III. The CCW's humanitarian purpose and its future viability both demand that their calls be heeded.

First, the Review Conference should address incendiary weapons because they inflict horrific immediate and long-term human suffering. As documented in the recent report from Human Rights Watch and Harvard Law School's International Human Rights Clinic, *"They Burn Through Everything": The Human Cost of Incendiary Weapons and the Limits of International Law*, incendiary weapons cause excruciating burns, which often penetrate to the bone, as well as respiratory and organ damage. Resulting scars restrict movement, and survivors often experience psychological trauma and socioeconomic exclusion as a result of their changed appearance and loss of ability to work.

Protocol III has not achieved its goal of protecting civilians from this harm, in part because of two loopholes. The Protocol excludes multipurpose munitions, such as those containing white phosphorus, which have incendiary effects but are not "primarily designed" to set fires or burn people. The Protocol also has weaker regulations for ground-launched incendiary weapons than for air-dropped ones. Closing these loopholes would not only bind states parties to stronger rules, but could also influence the conduct of states not party and non-state armed groups by strengthening the norms against incendiary weapons use.

Second, the Review Conference should hold substantive discussions about Protocol III because a failure to do so raises significant questions about the CCW itself. The 2016 Review Conference agreed to add Protocol III to the agenda of the annual meeting of high contracting parties, and that led to two years of constructive exchange. Although most states that spoke on the topic strongly supported preserving the agenda item, a small number blocked its inclusion on the 2019 and 2020 agenda.

The CCW was designed to be a dynamic instrument. Over the years, states parties have added five protocols, amended one, and amended the framework convention. But they have accomplished little since adopting Protocol V on Explosive Remnants of War in 2003. If states parties cannot agree to set aside time to review the adequacy of one of the treaty's existing protocols, particularly when its subject is known to cause grave humanitarian harm, the future of the CCW is uncertain.

To help revitalise the CCW, states parties should ensure that Protocol III is on the agenda of the 2021 Review Conference and hold substantive discussions on a matter of that is clearly within the mandate of the CCW and is of serious humanitarian concern.

*For more information, see fact sheets on the issue in [English](#), [French](#), and [Spanish](#).*



# 62% OPPOSE THE USE OF LETHAL AUTONOMOUS WEAPONS



62% OPPOSE

21% SUPPORT

17% NOT SURE

Q: HOW DO YOU FEEL ABOUT THE USE  
OF LETHAL AUTONOMOUS WEAPON  
SYSTEMS IN WAR?

Source: 2020 Ipsos poll surveying 28 countries



CAMPAIGN TO STOP  
KILLER ROBOTS

# CCW REPORT

Reaching Critical Will (RCW) is the disarmament programme of the Women's International League for Peace and Freedom (WILPF), the oldest feminist peace organisation in the world. RCW works for disarmament and the prohibition of many different weapon systems; confronting militarism and military spending; and exposing gendered aspects of the impact of weapons and disarmament processes with a feminist lens. RCW also monitors and analyses international disarmament processes, providing primary resources, reporting, and civil society coordination at various UN-related forums.



Reaching Critical Will

[www.reachingcriticalwill.org](http://www.reachingcriticalwill.org)



[www.wilpf.org](http://www.wilpf.org)

The *CCW Report* is produced by the Reaching Critical Will programme of the Women's International League for Peace and Freedom (WILPF). WILPF is a steering group member of the Campaign to Stop Killer Robots.

The views expressed in this publication are not necessarily those of WILPF or the Campaign to Stop Killer Robots.

## **CCW REPORT**

Vol. 9, No. 4

14 August 2021

Editor: Ray Acheson

Contact: [disarm@wilpf.org](mailto:disarm@wilpf.org)