

II. Intergovernmental efforts to address the challenges posed by autonomous weapon systems

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The legal, ethical and security challenges posed by autonomous weapon systems (AWS) have since 2014 been the subject of intergovernmental discussions within the framework of the 1981 Convention on Certain Conventional Weapons (CCW Convention) under the auspices of the United Nations.¹ Since 2017, the discussions have been led by an open-ended group of governmental experts (GGE). The GGE was initially mandated to ‘explore and agree on possible recommendations on options related to emerging technologies in the area of LAWS [lethal autonomous weapon systems]’.² After an amendment to its mandate in 2019, the GGE was also tasked with considering, clarifying and possibly further developing aspects of the relevant normative and operational framework.³ A central question that has divided the GGE from the start relates to the extent to which the existing normative and operational framework needs to be clarified and further developed. That is, whether the existing rules of international law provide a sufficiently clear regulatory framework or whether new (legally binding) rules, standards or best practices are required to address the challenges associated with the use of AWS.

Approaching the sixth review conference of the CCW Convention

After almost a decade of work, intergovernmental efforts to address the challenges posed by AWS reached a critical juncture in 2021. The year marked the end of the GGE’s current mandate, and the sixth review

¹ For a summary and other details 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 (CCW Convention or ‘Inhumane Weapons’ Convention) and its protocols see annex A, section I, in this volume. On earlier discussions on the regulation of lethal autonomous weapon systems (LAWS) see Anthony, I. and Holland, C., ‘The governance of autonomous weapon systems’, *SIPRI Yearbook 2014*, pp. 423–31; Davis, I. et al., ‘Humanitarian arms control regimes: Key developments in 2016’, *SIPRI Yearbook 2017*, pp. 559–61; Davis, I. and Verbruggen, M., ‘The Convention on Certain Conventional Weapons’, *SIPRI Yearbook 2018*, pp. 383–86; Boulanin, V., Davis, I. and Verbruggen, M., ‘The Convention on Certain Conventional Weapons and lethal autonomous weapon systems’, *SIPRI Yearbook 2019*, pp. 452–57; Peldán Carlsson, M. and Boulanin, V., ‘The group of governmental experts on lethal autonomous weapon systems’, *SIPRI Yearbook 2020*, pp. 502–12; and Bruun, L., ‘The group of governmental experts on lethal autonomous weapon systems’, *SIPRI Yearbook 2021*, pp. 518–24.

² Since 2017, the GGE’s mandate has run for terms of two years. CCW Convention, Fifth Review Conference, Report of the 2016 Informal Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS), CCW/CONFV/2, 10 June 2016, annex, para. 3. The GGE is ‘open-ended’ in the sense that it is open to participants from all CCW Convention states parties.

³ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Report of the 2019 session, CCW/GGE.1/2019/3, 25 Sep. 2019, para. 26(d).

conference (RevCon) of the CCW Convention was held in December (see section I). The RevCon, which takes place every five years, was seen as an important opportunity for the GGE to consolidate its work, potentially agree on political commitments and identify a direction for the way forward. Preparations for the RevCon, notably in terms of consolidating views in consensus recommendations, were therefore central to the GGE's work in 2021. After more than a year of Covid-19 pandemic-related disruptions, the GGE was able to resume physical meetings in 2021. It met in Geneva for a total of 20 days between August and December—the highest number of meeting days the GGE had ever had in one year. The group also met for an informal, virtual exchange in June and most delegations met at an informal working seminar in November organized by the French delegation. States and civil society groups also contributed to the discussion through written commentaries and oral statements.⁴ Several states did so jointly, reflecting old as well as new alliances (notably the newly established cross-regional Group of 13).⁵

As in previous years, the GGE's discussions in 2021 followed two tracks: one on substantial questions around legal, ethical and military aspects of the development and use of AWS, and the other on options related to the governance of AWS. This section summarizes key aspects discussed under both tracks and also considers the way forward. To reflect the emerging consensus that 'lethality' is not an intrinsic characteristic of AWS, this section adopts the broader term of 'autonomous weapon systems (AWS)', while noting that the GGE's work, so far, refers to 'lethal autonomous weapon systems (LAWS)' in line with its current mandate.

The legal, ethical and military challenges posed by AWS

Identifying and addressing the legal, ethical and military challenges associated with the development and use of AWS have been key aspects of the GGE's work since the formation of the group. While there are fundamentally different perceptions among delegations of the GGE as to the challenges posed by AWS, the group has managed to agree on some basic elements. The outline of this initial agreement is notably reflected in the GGE's 11 guiding

⁴ All commentaries and working papers can be found on the meeting website, UN Office for Disarmament Affairs, Meetings Place, <https://meetings.unoda.org/section/ccw-gge-2021_documents_14090/>.

⁵ The Group of 13 started as the Group of 6 in 2021 through an initiative by Costa Rica, Panama, Peru, the Philippines, Sierra Leone and Uruguay. It was later expanded to the Group of 10, then Group of 11 and finally Group of 13 by the end of 2021, with Argentina, Ecuador, El Salvador, Guatemala, Kazakhstan, Nigeria and Palestine joining the 6 original members.

principles as well as in past meeting outcome documents.⁶ The GGE's aim in 2021 was to turn the progress made into substantial recommendations to submit at the RevCon. To that end, the Chair of the GGE in 2021, Ambassador Marc Pecsteen de Buytswerve of Belgium, presented a paper for the GGE to consider during its meeting sessions.⁷ The chair's paper consolidated proposals made across several areas, and gave the GGE the opportunity to elaborate on substantial questions and expand areas of convergence. The central issues discussed by the GGE in 2021 included, but were not limited to, questions around the characterization of AWS, the application of international law, human-machine interaction (HMI), human responsibility and accountability, weapon reviews, and ethical considerations. Key aspects of the discussions are summarized in the following subsections.

The characterization of AWS

Questions on how to characterize AWS remained subject to debate in 2021. Many, but not all, delegations expressed that reaching a common understanding of the characteristics of AWS was an important step for the GGE to make progress, particularly for regulatory purposes.⁸ With this in mind, the GGE assessed two new characterizations in 2021. Inspired by a French-German proposal, the chair's paper suggested distinguishing between fully autonomous weapon systems (FAWS) and partially autonomous weapon systems (PAWS).⁹ This would set the basis for a regulatory delineation between weapon systems that are inherently unlawful and should be prohibited (i.e. FAWS) from those that may be lawful but subject to regulation (i.e. PAWS). However, the suggestion was questioned by several

⁶ The guiding principles establish, among other things, that international humanitarian law (IHL) applies to LAWS; that humans, not machines, remain responsible for the use of LAWS; and that various types and degrees of human-machine interaction are needed to ensure compliance with international law. CCW Convention, CCW/GGE.1/2019/3 (note 3), annex IV. Past meeting outcome documents include: CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Report of the 2017 session, CCW/GGE.1/2017/3, 22 Dec. 2017; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Report of the 2018 session, CCW/GGE.1/2018/3, 23 Oct. 2018.

⁷ The chair's paper was first circulated in an offline format. It was subject to a number of revisions from when it was first circulated in August until it was finally reviewed in December. An online version of a revised version from September is available on the Reaching Critical Will website. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Draft elements on possible consensus recommendations in relation to the clarification, consideration and development of aspects of the normative and operational framework on emerging technologies in the area of lethal autonomous weapons systems: Revised chair's paper', 20 Sep. 2021.

⁸ Some delegations, such as Chile, argued that discussions around characteristics could be shelved until the start of negotiations on a potential new treaty and that a lack of commonly agreed characteristics should not prevent the GGE from making progress. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Chile, 1st session of 2021, 2nd meeting, Audio recording, 3 Aug. 2021.

⁹ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Outline for a normative and operational framework on emerging technologies in the area of LAWS', Commentary by France and Germany, 2021; and CCW Convention, Revised chair's paper (note 7).

delegations. They doubted the regulatory feasibility of distinguishing between AWS based on levels of autonomy (see section III). The GGE also continued to discuss whether ‘lethality’ was a defining characteristic of AWS, and thereby whether the GGE’s mandate should extend to AWS as a whole or only to LAWS. A small group of states, including India, Israel and Russia, insisted that the ‘lethal’ qualifier was important and that ‘LAWS’ should remain the focus of the GGE.¹⁰ In contrast, the majority argued that the GGE should expand its focus to ‘AWS’, pointing, for example, to the fact that non-lethal AWS could also violate international humanitarian law (IHL).¹¹ Although discussions on characterization reached a new level of granularity in 2021, the issue remained an area of future work.

The application of international law to AWS

The GGE has established that international law, and in particular IHL, applies to LAWS.¹² However, questions on how IHL applies to AWS and what limits it places on them continued to divide the GGE in 2021, which had implications for the GGE’s ability to reach consensus recommendations on this issue. Several states and civil society groups—including Austria and Brazil as well as the International Committee of the Red Cross (ICRC)—argued that IHL compliance demands qualitative value judgements that cannot be delegated to machines and that this should be reflected in the consensus recommendations.¹³ Meanwhile, other delegations—including France, Japan, Russia and the United States—asserted that human involvement is not an explicit requirement in IHL and that delegating some tasks to machines

¹⁰ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Israel, 1st session of 2021, 6th meeting, Audio recording, 5 Aug. 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Russia, 2nd session of 2021, 5th meeting, Audio recording, 28 Sep. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by India, 2nd session of 2021, 6th meeting, Audio recording, 28 Sep. 2021.

¹¹ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Austria, Bulgaria, the International Committee of the Red Cross (ICRC), Portugal and Switzerland, 1st session of 2021, 3rd meeting, Audio recording, 4 Aug. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Palestine on behalf of the then Group of 10 (Argentina, Costa Rica, Ecuador, El Salvador, Palestine, Panama, Peru, the Philippines, Sierra Leone and Uruguay), 2nd session of 2021, 5th meeting, Audio recording, 28 Sep. 2021.

¹² Guiding Principle (a). CCW Convention, CCW/GGE.1/2019/3 (note 3), annex IV, para. (a).

¹³ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, ‘Joint submission on possible consensus recommendations in relation to the clarification, consideration and development of aspects of the normative and operational framework on emerging technologies in the area of lethal autonomous weapons systems’, Commentary by Austria, Brazil, Chile, Ireland, Luxembourg, Mexico and New Zealand, 2021; International Committee of the Red Cross (ICRC), ‘ICRC position on autonomous weapon systems’, 12 May 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the Holy See, 1st session of 2021, 1st meeting, Audio recording, 3 Aug. 2021.

may not only be lawful but also enhance compliance with IHL.¹⁴ As a means to ensure compliance with IHL, the GGE also discussed the possibility of limiting AWS to target only objectives that are military in nature and only objects, not humans. The proposed limits, which were put forward by the ICRC in particular, divided the GGE and did not reach consensus.¹⁵ In the light of the continuing lack of clarity around how to ensure compliance with IHL in relation to AWS, the GGE considered the value of creating a compendium that would map and clarify relevant rules of IHL applicable to AWS.¹⁶ Some delegations, however, raised concerns that a compendium could give the wrong impression that IHL was sufficient to address the challenges posed by AWS.¹⁷

As part of the GGE's discussions around IHL, the risk of bias was the subject of increased debate in 2021. Several delegations—such as the Group of 13 as well as Austria, and jointly Brazil, Chile and Mexico—expressed concern that targeting based on algorithms risks amplifying social bias, posing challenges to compliance with IHL, most notably the principle of distinction (between civilians and combatants).¹⁸ Others, such as Russia and the USA, argued that it was premature to include the risk of bias in the GGE's

¹⁴ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'US proposals', Commentary by the United States, 11 June 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Considerations for the report of the Group of Governmental Experts of the High Contracting Parties to the Convention on Certain Conventional Weapons on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems on the outcomes of the work undertaken in 2017–2021', Commentary by Russia, 2021 (unofficial translation); and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by France and Japan, 1st session of 2021, 1st meeting, Audio recording, 3 Aug. 2021.

¹⁵ The ICRC as well as Argentina, Palestine and the Philippines were among those in favour of imposing such limits. ICRC (note 13); CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Commentary of the Republic of the Philippines on the normative and operational framework in emerging technologies in the area of lethal autonomous weapon systems', Commentary by the Philippines, 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Argentina and Palestine, 1st session of 2021, 2nd meeting, Audio recording, 3 Aug. 2021.

France, the Netherlands and Switzerland were among the delegations that argued against the legal feasibility of the proposals. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by France, 2nd session of 2021, 6th meeting, Audio recording, 29 Sep. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by the Netherlands and Switzerland, 2nd session of 2021, 9th meeting, Audio recording, 30 Sep. 2021.

¹⁶ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Portugal and the United Kingdom, 3rd session of 2021, 4th meeting, Audio recording, 3 Dec. 2021.

¹⁷ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Palestine and the Philippines, 3rd session of 2021, 4th meeting, Audio recording, 3 Dec. 2021.

¹⁸ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Joint working paper', Commentary by Costa Rica, Panama, Peru, the Philippines, Sierra Leone and Uruguay, 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Austria, 1st session of 2021, 10th meeting, Audio recording, 9 Aug. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Joint statement by Brazil, Chile and Mexico, 2nd session of 2021, 3rd meeting, Audio recording, 27 Sep. 2021.

consensus recommendations, but that the issue could constitute an area of future work.¹⁹

Finally, the GGE considered the relevance of including other areas of international law, such as international human rights law (IHRL) and international criminal law (ICL), in its consensus recommendations. While several states and civil society groups argued in favour of doing so, no consensus was reached and IHL remained the primary focus of the GGE.²⁰

Human-machine interaction

The GGE has established that certain types and degrees of HMI are needed across the life cycle of AWS to ensure compliance with IHL.²¹ However, the challenge facing the GGE in 2021 was to identify concrete recommendations on what type and degree of HMI would be needed in all or some circumstances.

The GGE focused, in particular, on what measures would be needed for IHL compliance in the use phase of an AWS, but did not reach further consensus despite the concrete proposals submitted by the Chair.²² However, the GGE did agree on the importance, going forward, of identifying good practice for HMI to strengthen compliance with IHL. In their discussions on HMI, delegations returned to the question of whether IHL compliance requires humans to exercise ‘control’, ‘judgement’ or ‘involvement’ and what term the GGE’s recommendations should use. Although the majority argued that ‘human control’ is the appropriate standard, the term was not adopted as consensus language due to opposition from, among others, Canada, Israel and the USA.²³

¹⁹ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the USA, 1st session of 2021, 10th meeting, Audio recording, 9 Aug. 2021; and CCW Convention, Statement by Russia (note 10).

²⁰ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Amnesty International, the Philippines, Sri Lanka and the UK, 2nd session of 2021, 7th meeting, Audio recording, 29 Sep. 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Austria, Brazil, Chile, Cuba and Mexico, 2nd session of 2021, 8th meeting, Audio recording, 29 Sep. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, ‘Working paper to be submitted by the Bolivarian Republic of Venezuela on behalf of the Non-Aligned Movement (NAM) and other states parties to the Convention on Certain Conventional Weapons (CCW)’, Working paper submitted by Venezuela, 2021.

²¹ Guiding principle (c). CCW Convention, CCW/GGE.1/2019/3 (note 3), annex IV, para. (c).

²² See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Israel, Japan and the UK, 2nd session of 2021, 9th meeting, Audio recording, 30 Sep. 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Austria, 3rd session of 2021, 5th meeting, Audio recording, 6 Dec. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Peru on behalf of the then Group of 11 (Argentina, Costa Rica, Ecuador, El Salvador, Nigeria, Palestine, Panama, Peru, the Philippines, Sierra Leone and Uruguay), 3rd session of 2021, 5th meeting, Audio recording, 6 Dec. 2021.

²³ See e.g. CCW Convention, Statement by Israel (note 10); and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Canada, 2nd session of 2021, 5th meeting, Audio recording, 28 Sep. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the USA, 2nd session of 2021, 1st meeting, Audio recording, 24 Sep. 2021.

Human responsibility and accountability

In 2019 the GGE reached consensus that responsibility for decisions to use force involving AWS must be retained by humans as accountability cannot be transferred to machines.²⁴ Yet questions on how to ensure human responsibility and accountability in practice had remained largely unaddressed by the GGE. Deliberations reached a more granular level in 2021, however, as the GGE attempted to identify concrete recommendations to submit at the RevCon.²⁵ The GGE discussed different options and challenges related to holding, most notably, individuals and states accountable for potential violations of IHL in the development and use of AWS. Many delegations emphasized in particular the importance of ensuring a ‘responsible human chain of command and control’.²⁶ The discussions, nevertheless, revealed conceptual confusion and a lack of clarity around the different responsibility frameworks.²⁷ Although the consensus was that ensuring human responsibility and accountability is of key significance, the shared view was that further work and clarification were needed in this area.

Weapon reviews

It is well established in the GGE that weapon reviews are essential means to ensure compliance with IHL.²⁸ The inclusion of this aspect in the GGE’s consensus recommendations was therefore largely supported. The GGE agreed that AWS pose specific challenges for weapon reviews and that sharing of good practices related to the review process is beneficial.²⁹ The chair’s paper, however, gave rise to discussions on the extent to which reviews should be

²⁴ Guiding principles (b) and (d). CCW Convention, CCW/GGE.1/2019/3 (note 3), annex IV, paras (b) and (d).

²⁵ See e.g. CCW Convention, Commentary by Austria, Brazil, Chile, Ireland, Luxembourg, Mexico and New Zealand (note 13); CCW Convention, Commentary by the USA (note 14); CCW Convention, GGE on Emerging Technologies in the Area of LAWS, ‘Switzerland’s food for thought as requested by the Chair of the Group of Governmental Experts (GGE) on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems (LAWS) within the Convention on Certain Conventional Weapons (CCW)’, Commentary by Switzerland, 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the UK, 1st session of 2021, 3rd meeting, Audio recording, 4 Aug. 2021.

²⁶ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, ‘Discussion paper: Building on Chile’s proposed four elements of further work for the Convention on Certain Conventional Weapons (CCW) Group of Governmental Experts (GGE) on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems (LAWS)’, Commentary by Australia, Canada, Japan, the UK and the USA, 2021; and CCW Convention, Commentary by Austria, Brazil, Chile, Ireland, Luxembourg, Mexico and New Zealand (note 13).

²⁷ Some delegations pointed out, for instance, that the term ‘human responsibility’ used in the chair’s paper is not a legal term and suggested that more accurate terms would, among others, be ‘individual criminal responsibility’ or ‘individual accountability’. See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Austria and Cuba, 3rd session of 2021, 5th meeting, Audio recording, 6 Dec. 2021.

²⁸ Guiding Principle (e). CCW Convention, CCW/GGE.1/2019/3 (note 3), annex IV, para. (e).

²⁹ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, ‘Commonalities in national commentaries on guiding principles’, Working paper by the Chair, Sep. 2020, paras 13, 14 and 21(a); and CCW Convention, CCW/GGE.1/2019/3 (note 3), annex IV, para. 17(i).

subject to international standards or left to the discretion of states. India, for instance, stated that the chair's paper was overly prescriptive and stressed that weapon reviews are a national matter.³⁰

Ethical considerations

The ethical considerations posed by AWS, and how these should be addressed in the consensus recommendations, were the subject of increased attention in 2021. The issue was raised at a number of sessions by civil society groups and several states, including the Campaign to Stop Killer Robots, the Group of 13 and Austria.³¹ These delegations argued that targeting based on algorithms gives rise to fundamental ethical concerns, which should be reflected explicitly in the GGE's consensus recommendations. In contrast, the USA pointed out that, in some instances, AWS could improve rather than contravene ethical standards.³² This viewpoint was based on, among other things, the perceived benefits of accuracy and combat protection associated with the use of AWS. The GGE did not reach an agreement but recognized that further deliberations on ethical considerations remained an area for future work.

Options for addressing the challenges posed by AWS

A central component of the GGE's mandate was to recommend options related to the governance of AWS. This issue was considered of particular importance in 2021 as it connected to recommendations around what a future mandate potentially should aim to achieve. While most states' views on the matter remained unchanged, discussions in 2021 provided an opportunity for delegations to expand on their positions. Notably, arguments in favour of new, legally binding rules to address the challenges posed by AWS gained

³⁰ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by India, 2nd session of 2021, 9th meeting, Audio recording, 30 Sep. 2021.

³¹ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Austria, 1st session of 2021, 2nd meeting, Audio recording, 3 Aug. 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Elements for a future normative framework conducive to a legally binding instrument to address the ethical humanitarian and legal concerns posed by emerging technologies in the area of (lethal) autonomous weapons (LAWS)', Commentary by Brazil, Chile and Mexico, 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Ireland, 2nd session of 2021, 1st meeting, Audio recording, 24 Sep. 2021; CCW Convention, Working paper submitted by Venezuela (note 20); CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the Philippines on behalf of the then Group of 11 (Argentina, Costa Rica, Ecuador, El Salvador, Nigeria, Palestine, Panama, Peru, the Philippines, Sierra Leone and Uruguay), 3rd session of 2021, 3rd meeting, Audio recording, 3 Dec. 2021; ICRC (note 13); and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Recommendations on the normative and operational framework for autonomous weapon systems', Commentary by the Campaign to Stop Killer Robots, June 2021.

³² CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the USA, 2nd session of 2021, 11th meeting, Audio recording, 1 Oct. 2021.

further momentum in 2021. The ICRC, which has followed the debate since the beginning, joined a large number of delegations in recommending the adoption of legally binding rules on certain types and uses of AWS.³³ Despite the significance of the ICRC's announcement, several states (including many major military powers) repeated their warning against premature regulation, pointing to the potential humanitarian and military benefits associated with AWS.³⁴ According to this line of argument, positive obligations accompanied by clarification of existing law would be sufficient to address the challenges posed by AWS.³⁵ This view was endorsed by the USA, in particular, which in 2021 made great efforts to promote the idea of establishing a code of conduct.³⁶ Finally, a few delegations, most notably Russia, continued to oppose the creation of new norms or rules. Russia argued that existing IHL is sufficient to address the challenges posed by AWS.³⁷ The Russian delegation did, however, express support for the creation of non-binding instruments, such as a manual or a compendium.³⁸ While the various options outlined by the delegations are not necessarily mutually exclusive, the GGE remained divided in terms of what type and combination of measures would be adequate responses to the challenges posed by AWS.

Despite the continued divergence in this area among delegations, growing support emerged in 2021 for a so-called two-tier approach. Following a two-tier approach, a future normative framework would include both prohibitions and regulations. The pertaining challenge, however, would be to agree what

³³ ICRC (note 13). A large number of states and civil society groups have already recommended the need to adopt a legally binding instrument. These include: the 55 members of the African Union, Argentina, Austria, Brazil, the Campaign to Stop Killer Robots, Chile, China, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, The Holy See, Kazakhstan, Mexico, New Zealand, the Non-Aligned Movement, Pakistan, Palestine, Panama, Peru, the Philippines and Uruguay. In addition, UN Secretary-General António Guterres has expressed support for this view on several occasions.

³⁴ In varying degrees, these states include: Australia, France, India, Israel, Japan, the Republic of Korea, Russia, the UK, the USA and Turkey.

³⁵ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Written contributions on possible consensus recommendations in relation to the clarification, consideration and development of aspects of the normative and operational framework on emerging technologies in the area of lethal autonomous weapons systems', Commentary by the UK, June 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, 'Proposals for consensus in relation to the clarification, consideration and development of aspects of the normative and operational framework', Commentary by Portugal, June 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Israel, 3rd session of 2021, 4th meeting, Audio recording, 3 Dec. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Australia, 3rd session of 2021, 7th meeting, Audio recording, 7 Dec. 2021.

³⁶ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the USA, 3rd session of 2021, 7th meeting, Audio recording, 7 Dec. 2021.

³⁷ CCW Convention, Commentary by Russia (note 14).

³⁸ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Russia, 2nd session of 2021, 7th meeting, Audio recording, 29 Sep. 2021.

types of AWS should be subject to either prohibition or regulation.³⁹ In this regard, consensus seemed to emerge around two aspects: first, to regulate based on *how* AWS are used, rather than the level of autonomy; and second, to prohibit AWS that cannot be used in compliance with IHL.⁴⁰ The GGE also considered proposals to prohibit ‘inherently unpredictable’ AWS and AWS that cannot be used without ‘meaningful human control’.⁴¹ Even though the GGE did not manage to agree on the details of a two-tier approach, the framework could provide part of the GGE’s consensus recommendations.

Outlook

Failed attempts to agree on substantive consensus recommendations

After almost a decade of discussions within the forum of the CCW Convention, the GGE was expected to submit substantive consensus recommendations at the RevCon on the clarification and potential development of the normative and operational framework for AWS. This was also supposed to include recommendations for a future GGE mandate. In an attempt to make progress, the GGE Chair suggested taking a gradual approach at the RevCon. Under this approach, the GGE would (a) consolidate the progress made in a political declaration, and (b) adopt a new mandate that would work towards the adoption of an ‘instrument on the regulation of weapons systems’.⁴²

Most delegations engaged constructively with the Chair’s proposal, although they expressed diverging preferences on the content and scope of the political declaration and the instrument. Regarding the political declaration, which was based on the substantive elements of the chair’s paper, some delegations—including India, Turkey and the USA—argued that it was premature for the GGE to adopt a political declaration as currently

³⁹ E.g. as expressed in: CCW Convention, GGE on Emerging Technologies in the Area of LAWS, ‘Elements for possible consensus recommendations’, Commentary by Finland, June 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Switzerland, 2nd session of 2021, 5th meeting, Audio recording, 28 Sep. 2021.

⁴⁰ The USA, Austria, Ireland, Palestine and the Republic of Korea were among the majority of delegations in favour of regulating based on use. CCW Convention, Statement by the USA (note 23); CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by Austria and Ireland, 2nd session of 2021, 5th meeting, UN Web TV, 28 Sep. 2021; CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Palestine, 2nd session of 2021, 6th meeting, Audio recording, 28 Sep. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by the Republic of Korea, 2nd session of 2021, 7th meeting, Audio recording, 29 Sep. 2021.

⁴¹ See e.g. ICRC (note 13); CCW Convention, Commentary by Costa Rica, Panama, Peru, the Philippines, Sierra Leone and Uruguay (note 18); and CCW Convention, Commentary by the Campaign to Stop Killer Robots (note 31).

⁴² CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Draft report of the 2021 session, CCW/GGE.1/2021/CRP.xx, Nov. 2021, para. 55(b), (c).

drafted, as it was too far-reaching and did not reflect consensus language.⁴³ In their view, a political declaration should be based on past consensus, as reflected in, among other things, the GGE's guiding principles. Meanwhile, other delegations, such as Austria, Brazil, Chile, Ireland and Mexico, argued that a political declaration merely reflecting the guiding principles was not representative of the progress made over the past years and that it should be more ambitious.⁴⁴ The GGE also discussed the purpose of the political declaration. While some delegations were content with the adoption of a political declaration in itself, several others argued that it should serve only as an interim step to making more substantial progress—for example, as a step towards adopting a legally binding instrument.⁴⁵

With regard to the new mandate, the GGE largely supported the adoption of a more expansive mandate as proposed by the Chair. Several delegations argued that a new mandate should enable the GGE to negotiate a legally binding instrument.⁴⁶ Others, meanwhile, stressed that the mandate should not prejudice the outcome, raising concerns that use of the term 'instrument' suggested a preference for the adoption of a legally binding instrument.⁴⁷ Finally, a few delegations, most notably Russia, opposed the Chair's suggestion entirely and argued for the adoption of a roll-over mandate, meaning that the GGE would simply renew its mandate from 2019.⁴⁸

⁴³ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statements by India, Turkey and the USA, 3rd session of 2021, 1st meeting, Audio recording, 2 Dec. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Russia, 3rd session of 2021, 3rd meeting, Audio recording, 3 Dec. 2021.

⁴⁴ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Joint statements by Brazil, Mexico and Chile, and statements by Austria and Ireland, 3rd session of 2021, 1st meeting, Audio recording, 2 Dec. 2021.

⁴⁵ See e.g. CCW Convention, Joint statements by Brazil, Chile and Mexico, and statement by Ireland (note 44); and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Sierra Leone on behalf of the then Group of 11 (Argentina, Costa Rica, Ecuador, El Salvador, Nigeria, Palestine, Panama, Peru, the Philippines, Sierra Leone and Uruguay), 3rd session of 2021, 4th meeting, Audio recording, 3 Dec. 2021.

While not supporting a legally binding instrument, Switzerland and some other delegations argued that a political declaration should not be the final outcome. See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Switzerland, 3rd session of 2021, 1st meeting, Audio recording, 2 Dec. 2021.

⁴⁶ See e.g. CCW Convention, Joint statements by Brazil, Mexico and Chile (note 44), statement by Sierra Leone on behalf of the then Group of 11 (Argentina, Costa Rica, Ecuador, El Salvador, Nigeria, Palestine, Panama, Peru, the Philippines, Sierra Leone and Uruguay), and statement by the Campaign to Stop Killer Robots, 3rd session of 2021, 1st meeting, Audio recording, 2 Dec. 2021; and CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by Namibia on behalf of the African Group, 3rd session of 2021, 3rd meeting, Audio recording, 3 Dec. 2021.

⁴⁷ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the USA, 3rd session of 2021, 10th meeting, Audio recording, 8 Dec. 2021.

⁴⁸ See e.g. CCW Convention, Commentary by Russia (note 14); CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by India, 3rd session of 2021, 1st meeting, Audio recording, 2 Dec. 2021; and CCW Convention, Statement by Russia (note 43).

As a way forward, the Chair encouraged delegations to embrace ‘constructive ambiguity’ in the consensus recommendations.⁴⁹ However, the inflexibility exercised by some delegations prevented the GGE from reaching substantive agreement at its final meeting in December. In particular, Russia’s opposition was considered by many delegations to have been a significant obstacle to making substantial progress. By the end of the meeting, the GGE had managed to agree only on a few paragraphs, which reflected what was perceived as the absolute minimum and made no recommendations regarding a future mandate.⁵⁰ The substantial sections that were intended to form the basis of a political declaration were instead turned into a ‘Chairperson’s summary’ and therefore did not carry the same weight.⁵¹ Many delegations considered the lack of agreement on substantial recommendations as a significant failure that neither did justice to the progress made over the past years nor reflected the urgency of the issue.⁵²

New mandate, new divisions

Because the GGE failed to make recommendations regarding a new mandate, the future of discussions on AWS within the framework of the CCW Convention was left to be decided at the RevCon. However, thanks to informal consultations and political will, the GGE managed to agree on a compromise text for a future mandate, which was then adopted at the RevCon. Going forward, the GGE is mandated to ‘consider proposals and elaborate, by consensus, possible measures . . . related to the normative and operational framework on emerging technologies in the area of lethal autonomous weapon systems, building upon the recommendations and conclusions contained in the reports of the Group of Governmental Experts’.⁵³

The new mandate allocated 10 days for the GGE to meet in 2022, although most delegations expressed a preference for 15 or 20 days.

While reaching an agreement could be considered something of an achievement, the new mandate was significantly less ambitious than what the majority of delegations wanted and several expressed their deep disappointment with the outcome of the GGE’s work. It was a widely held view that a few states had misused their veto power and not practised the consensus-seeking

⁴⁹ See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the Chair, 3rd session of 2021, 10th meeting, Audio recording, 8 Dec. 2021.

⁵⁰ E.g. one of the paragraphs read as follows: ‘The Group considered different proposals on how to reflect the deliberations including possible conclusions and recommendations of the Group, but no consensus was reached.’ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Draft report of the 2021 session, CCW/GGE.1/2021/CRP.1, 8 Dec. 2021, para. 17.

⁵¹ CCW Convention, CCW/GGE.1/2021/CRP.1 (note 50), annex III.

⁵² See e.g. CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Statement by the Campaign to Stop Killer Robots, 3rd session of 2021, 10th meeting, 8 Dec. 2021.

⁵³ CCW Convention, Sixth Review Conference, Draft Final Document of the Sixth Review Conference, CCW/CONF.VI/11, Geneva, 13–17 Dec. 2021, 10 Jan. 2022, part III.

behaviour needed in a forum like the CCW Convention. For instance, in a rare joint statement, Austria, Belgium, Brazil, Chile, Finland, Germany, Ireland, Italy, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, South Africa, Sweden and Switzerland expressed their frustration with the process and noted that those who invoke a veto 'should do so responsibly and seldom, and only when all other avenues are exhausted'.⁵⁴

While discussions on AWS will continue within the framework of the CCW Convention in 2022, the culmination of events in December 2021 may feed concerns as to whether the CCW Convention remains the appropriate forum to address the challenges posed by AWS. Time will tell whether the GGE will be able to make satisfactory progress or whether the large group of states advocating a legally binding instrument will seek alternative paths for doing so outside the CCW Convention.

⁵⁴ CCW Convention, GGE on Emerging Technologies in the Area of LAWS, Joint statement by Austria, Belgium, Brazil, Chile, Finland, Germany, Ireland, Italy, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, South Africa, Sweden and Switzerland, 3rd session of 2021, 10th meeting, 8 Dec. 2021.