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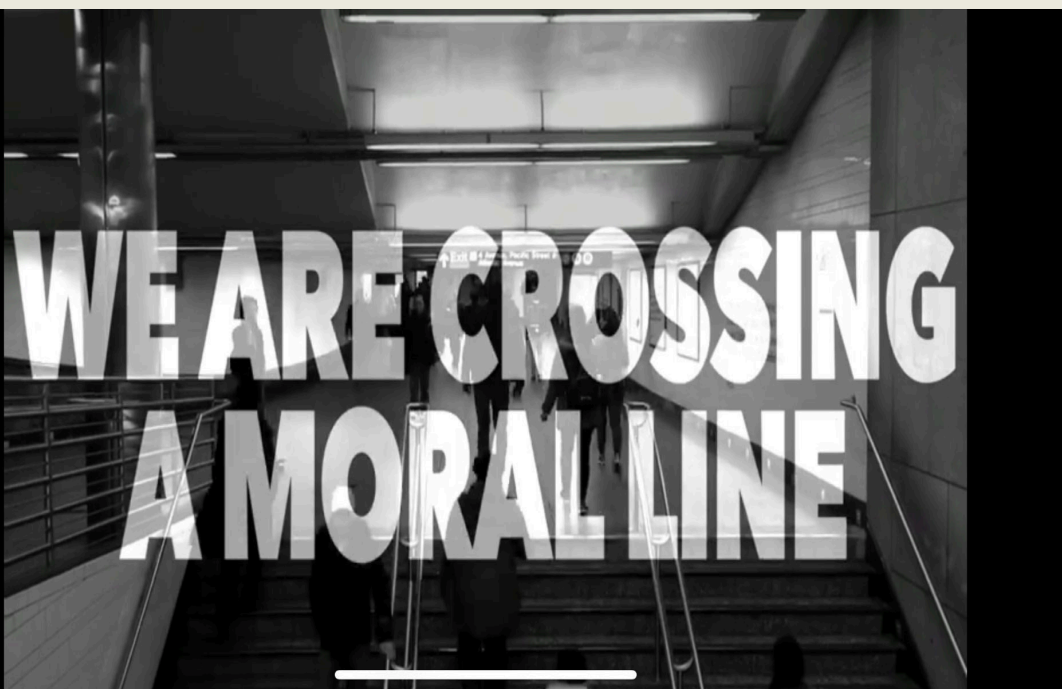


Image: Campaign to Stop Killer Robots

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DIPLOMATIC TALKS RECONVENE

Mary Wareham | Campaign to Stop Killer Robots

States convened at the United Nations in Geneva from 21-25 September for another Convention on Conventional Weapons (CCW) meeting on lethal autonomous weapons systems. The COVID-19 pandemic forced the postponement of meetings planned in the first half of 2020. This marked the first time that the CCW has held a physically distanced meeting as well as a virtual one that was broadcast in full on [UN Web TV](#).

Representatives from 56 states participated in [the meeting](#) chaired by Ljupcho Gjorgjinski of the Republic of North Macedonia, who also chaired the 2019 CCW talks on killer robots. The International Committee of the Red Cross and Campaign to Stop Killer Robots also attended.

The week-long meeting covered both substantive concerns and the way ahead. It showed how states still have many doubts, questions, and concerns about the sufficiency of existing international humanitarian law to address serious concerns raised by removing meaningful human control from the use of force.

No decisions were taken at the meeting, which heard proposals to negotiate a legally binding instrument or treaty, including from many of the [30 countries](#) that explicitly call for a ban on lethal autonomous weapons systems. China suggested emulating the CCW protocol that preemptively bans blinding lasers.

More than 65 CCW states parties have endorsed group statements calling for a legally-binding instrument to prohibit and restrict such weapons systems, including the Non Aligned Movement (NAM).

During the meeting, Iraq made a statement on behalf of the Arab states parties to the CCW, which called for a new treaty to prohibit and restrict lethal autonomous weapons systems, reiterated that other measures cannot replace the required legally binding instrument, and underscored the importance of maintaining human control over the critical functions of weapons. There are 12 Arab

states parties to the CCW include Algeria, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Morocco, Qatar, Saudi Arabia, State of Palestine, Tunisia, and the United Arab Emirates.

However, France, Israel, Netherlands, and the United States called moves to create a new treaty “premature” and suggested other measures that fall short of new international law. There were proposals for compilations of existing international humanitarian law, compendiums of best practices and political declarations. Some states sought more principles to guide CCW deliberations on killer robots, in addition to those agreed in 2018 and 2019.

The Campaign regards such measures as premature and better taken after new international law is adopted. In the Campaign’s view, the only credible and logical outcome to the talks is to launch negotiations of a new international treaty to ban fully autonomous weapons and retain meaningful human control over the use of force. If it is not possible to launch negotiations by the CCW Review Conference in December 2021, then another forum is needed to discuss content and achieve the treaty goal.

During this week’s meeting, almost all states agreed about the need to preserve meaningful human control over the use of force. Many have identified similar components of human control, called for a combination of prohibitions and positive obligations, and recommended prohibiting autonomous weapons systems that target humans or rely on machine learning.

The Campaign regards human control as fundamental to prevent the automation of killing. It welcomes the interest shown by many states in themes that parallel the [proposed essential treaty elements](#) outlined by the Campaign. Further substantive work is required to determine the type and extent of human control necessary to ensure compliance with applicable law and respond to ethical concerns.

The CCW talks began in 2014 and in 2016 were mandated “to explore and agree on possible recommendations on options” relating such weapons, which would select and engage targets without meaningful human control. States must strive to identify those options and provide recommendations on them by the end of 2021 at the latest.

During 2014-2019, an average of 90 states participated in eight CCW meetings held on lethal autonomous weapons systems. That included Russia, which was [notably absent](#) from the 2020 CCW meeting. In the lead-up, Russia expressed procedural concerns and suggested the planned meetings be postponed until 2021.

Fewer states attended this week’s meeting, most likely due to lack of time as registration opened only days before. These are the states that participated in-person and/or virtually in the CCW meeting: Algeria, Argentina, Australia, Austria,

Belgium, Bolivia, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Cuba, Ecuador, Egypt, El Salvador, Finland, France, Germany, Guatemala, Holy See, India, Iraq, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Lebanon, Mexico, Morocco, Netherlands, New Zealand, North Macedonia, Norway, Pakistan, Panama, Peru, Philippines, Portugal, Republic of Korea, Romania, Saudi Arabia, Slovakia, Spain, South Africa, Sri Lanka, Sweden, Switzerland, Turkey, United Kingdom, United States, Uruguay, and Venezuela. All are party to the Convention on Conventional Weapons with the exception of signatory Egypt.

Another CCW meeting on lethal autonomous weapons systems is due to be held on 2-6 November 2020, before the CCW’s annual meeting on 11-13 November.



SUMMARY OF THE MEETING

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

Disclaimer: *Reaching Critical Will is cognisant of the different and sometimes conflicting understandings of the terms autonomous weapon systems, fully autonomous weapon systems, emerging technologies in the area of lethal autonomous weapons systems, or lethal autonomous weapons systems, inter alia. For the sake of ease and brevity, we have always used the term "autonomous weapon systems" (AWS) in the below summary when referencing delegations' remarks although they may have used another term.*

Procedural issues

Meeting modalities

- The meeting's substantive discussions were at times disrupted by procedural concerns. At the outset of the meeting, some states, including Venezuela and Cuba were unclear about the content of the agenda to be adopted and the general structure of the meeting ahead.
- Others such as Cuba, Chile, Costa Rica, Panama, India, Venezuela, Egypt, Algeria, and South Africa expressed concern about the ad-hoc decision and lack of consensus on the format of this meeting. Some of them mentioned challenges to inclusivity due to digital divides and time zones, as well as lack of preparation, but all assured their flexibility in exceptional circumstances.
- Japan, Italy, Switzerland, Ecuador, Republic of Korea (ROK), and France expressed their full support to the process. After some back and forth, states agreed to adopt the same [agenda](#) that was used in 2019, with additional agenda item 5f) to focus on "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."

Proposed work streams

- To structure the GGE's work, the Chair solicited reactions to his proposal to establish three different informal work streams that would deepen discussions on legal, military, and technological aspects of AWS. After listening to participants' views, he announced that he will update the non-paper, keeping delegations' concerns in mind, and encouraged to send written feedback to his non-paper. He also informed that he'll organise informal meetings on procedural matters.
- France, the United Kingdom (UK), the United States (US), India, and Switzerland expressed support for the Chair's proposal. Italy said it was flexible about the format. Switzerland supported an informal format. France argued that it was the Chair's prerogative on the format of inter-sessional exchange.
- States such as Cuba, South Africa, Venezuela, Costa Rica, and Cuba opposed informal consultations on substantive issues, due to unequal conditions of smaller delegations, and concerns of lack of interpretation. China, the UK, Costa Rica, and Switzerland also emphasised the principle of inclusivity. France and Switzerland, among others, highlighted the importance of including experts in these meetings. Mines Action Canada (MAC) and Sehlac called on the High Contracting Parties (HCP) to the Convention on Certain Conventional Weapons (CCW) to safeguard civil society's inclusion in future work streams.
- Costa Rica and Ireland, amongst others, said that the timeframe until the next meeting in November is very short and might not allow for substantive exchange.
- France suggested that instead of having three parallel work streams, they could follow a sequence of technology, military, and then legal aspects. Switzerland and the UK supported this. Switzerland said there should be clarification about timeframe and expected outputs of the work streams

- Belgium preferred to have three work streams work in parallel, and to exchange regularly. Ireland, Brazil, Chile, and Mexico echoed this, expressing concern about siloeing discussions.
- MAC recommended to add a fourth work stream on moral or ethical concerns. The EU, Mexico, Chile, and Italy also encouraged bear in mind ethical considerations when developing the framework.
- Various states, including Austria and Pakistan, suggested to continue further exchange in writing as an alternative.
- Mexico expressed concern about the imbalances between parties in an armed conflict, and that a monopoly on development could represent “enormous potential for destruction” for population currently living in conflict-affected areas. Venezuela and Costa Rica made similar observations.
- Pakistan and Venezuela warned of a costly new arms race of AWS.
- Pakistan and Chile underscored the proliferation risks, with Pakistan noting that states currently developing AWS can't be complacent that they won't proliferate, as “monopolies don't last forever”.

Concerns about AWS

Ethical concerns

- Various participants, including Sri Lanka, Peru, Pakistan, South Africa, the International Committee of the Red Cross (ICRC), Ecuador, Costa Rica, and Argentina said that the development of AWS raises a host of ethical and moral concerns.
- Pakistan said that absence of human control in AWS lacking compassion and intuition would be unethical and would make war more inhumane. Cuba underscored that it's not ethical to consider the military advantage of an AWS if the war itself is inhumane.
- Various states, including Costa Rica, said that the use of targeting sensors raises additional moral, legal, and ethical concerns as there have been cases where targets were misidentified.
- The ICRC expressed concern at leaving life and death decisions to sensors and software. Cuba, Chile, France, Sri Lanka, and Mexico said that machines shouldn't decide on questions of life and death of humans.
- Japan said it would like to further discuss the risk of lowering the threshold of war if risks to military personnel could be reduced through the use of AWS. China said this concern was legitimate but without evidence difficult to confirm so further objective evaluation is needed.
- Cuba, Mexico, Venezuela, Pakistan, and Jordan said that AWS could be used by non-state actors.
- Pakistan said that additional concerns to secure arise from malfunctions, software failures, and jamming and spoofing.
- Mexico urged to also consider the possible impact of AWS on the “economic and social sphere.”

Data bias

- Austria, Pakistan, Japan, South Africa, and Belgium on behalf of eight states said that data bias should get more attention.
- Austria emphasised the issue of cultural bias.
- Ireland, and Belgium on behalf of eight states raised concerns about gender bias in AWS.

War, peace, and security

- Pakistan expressed concern that AWS would change warfare. It was also worried about the potential impact of AWS on international and regional stability and peace.

Human control

Central role of human control

- The vast majority of delegations focused on human control as central to human-machine

interaction and essential to compliance with international law and moral standards. The US disagreed with this. It said that it doesn't believe that the principle of the centrality of human control helps improve collective understanding of risks and "benefits" related to AWS and how technology can be used to reduce human suffering. It said the notion was "overly simplistic" and fails to capture human touchpoints throughout the life cycle to ensure compliance with international humanitarian law (IHL).

- Cuba said that it's a "total contradiction to talk about the degree of machine autonomy as including a degree of human control." It argued that if a weapon is autonomous there is no oversight, and if there is oversight at any point it is a semi-autonomous weapon.

Definition

- Brazil argued that only the concept of human "control" ensures responsibility and accountability. It explained that if the GGE discusses human "judgement" it also has to discuss human mis-judgment; if it discusses human "intent," it also needs to discuss unintended consequences, and argued that these terms were subjective. Human Rights Watch made similar remarks.
- Germany called for openness on the exact term.

Measures to ensure human control

- Mexico, Ireland, iPROW, and Switzerland stressed that human control on the use of force is not a singular event but a process.
- The UK said that the level of human control is dependent on the situation, distributed and extended across a life cycle, and not bound to one single moment in time.
- Germany observed that human control depends on the operational context and characteristics of a weapon system. Finland, Japan, Israel, Sweden, Spain, and the US made similar remarks.
- The ICRC, Italy, New Zealand, Austria, and many others called on the GGE to focus its

work to determine the type and degree of controls required to ensure compliance with applicable international law.

- Switzerland and Ireland noted that human control isn't an end in itself but crucial to overcome the accountability gap. The Netherlands and Belgium on behalf of eight states made similar remarks.
- Cuba said that human oversight does not relate to whether or not there is a button available to deactivate an attack, and neither does it relate to human control in designing software and whether or not the software can be accessed subsequently—but that whether human beings can or cannot confer on a machine the responsibility for the decision to use force.
- The ICRC further noted that "specific measures to ensure human control pertain to weapon parameters, the environment of use, and human-machine interaction." It said there is convergence of views of the types of measures that can ensure human control, "which include limits on tasks and target sets or profiles, temporal and spatial restrictions on the operation of the weapon, as well as requirements relating to human situational awareness, and intervention and deactivation capacities."
- Switzerland, Costa Rica, Italy, Argentina, the ICRC, and Mexico stressed the importance for the human operator to be able to intervene at all times to de-activate or override an AWS.
- Belgium on behalf of eight states asserted that compliance with IHL requires context-specific, value-based judgement, which cannot be substituted by machines.
- Human Rights Watch explained that there are three main components to human control that, while independently insufficient, if they work in tandem, they have the potential to enhance control. These are the decision-making components which gives humans the information and ability to make decisions about whether the use of force complies with legal rules and ethical principles, with an understanding of the system and the operational environment; technological components such as reliability

and predictability, and the ability for human intervention after activation; and operational components, with, inter alia, temporal and spatial limits, of what and where the weapon can be used and what it can target.

- Germany, India, France, the ICRC, and Austria agreed that spatial and temporal limits on weapon systems are crucial to ensure human control. Costa Rica added that other controls could relate to excluding areas with civilians.
- France and Germany proposed the following measures to ensure sufficient human control: ensuring that military capability development does not aim to remove humans from the decision-making process; ensuring that the human commander always remains responsible for decisions to deploy and use LAWS and that operators and commanders have sufficient training and information to understand the system; ensure that humans always define specific mission frameworks, including limitations in space, time, and determined objectives, and that no change in the mission framework is possible without human validation; and ensure that human-machine interaction guarantees that weapon systems remain subordinate to humans in charge of deploying and operating them.
- Spain, Argentina, and Sweden said AWS should be designed so that operators can understand the reasons why a system would suggest a certain course of action.
- Switzerland and Italy reiterated that each decision has to be under the authority of a human operator.
- Israel noted that persons involved should consider operational scenarios, and during development, humans must ensure that algorithms and technological capabilities make it suitable for use in these circumstances.
- India mentioned challenges of secure communication to human control.
- The United States said AWS “should effectuate the intent of commanders and operators to comply with IHL. In particular by avoiding unintended engagements in minimising harm to civilians and civilian objects,” drawn from “real world practice in human machine interaction”. It cited three categories of measures to ensure “effectuation” of intent: 1) AWS should perform as anticipated, ensured through verification and validation in testing and evaluation before building a system; 2) relevant personnel should understand how the system works; and 3) user-interfaces for AWS should be clear.



All phases of a lifecycle

- Germany, France, Cuba, Italy, Spain, Israel, the Netherlands, and Jordan said that it's important that human control is exercised at all stages of a weapon's life cycle.
- Israel noted that human judgement should be demonstrated within the development, acquisition, operational planning, and deployment of AWS, and that humans are always in charge to develop and acquire AWS, including research, development, programming, testing, and approval.
- Israel noted that human "judgement" is always an integral part of AWS, and will be applied throughout their life cycle.
- Switzerland wondered if human control can take place before the use of weapon.

Use of force/critical functions

- Argentina said that the final decision on use of force should remain with the human commander in charge.
- Austria said that meaningful human control over AWS has to be ensured, in particular when selecting and engaging targets to ensure compliance with IHL, and to respect dictates of public conscience.
- Spain said that an AWS engaging and selecting a target without a human in the loop implies that meaningful human control isn't secured anymore.
- The Arab Group, Italy, and Pakistan said that there is a need to maintain human control over the critical functions of AWS. India agreed and argued that these would include identification, selection, and engagement of targets.
- Austria asserted that targeting requires complex analysis with deeply human considerations, which cannot be transferred to algorithms.
- iPRAW said that human control applies to the whole life cycle but that design and all other steps are enablers to allow for human control during targeting and engagement.

- India said that the GGE should develop a common understanding on the role of operational constraints regarding target profile.
- Switzerland and Spain, amongst others, encouraged to further discuss parameters and limits in the selection and targeting of profiles.
- The ICRC also said that the types of target should be restricted, given the concerns of AWS against persons, for instance.
- Article 36 said that it seeks the key boundary line the targeting of people using sensor-based systems, which should be prohibited.

Characteristics of AWS

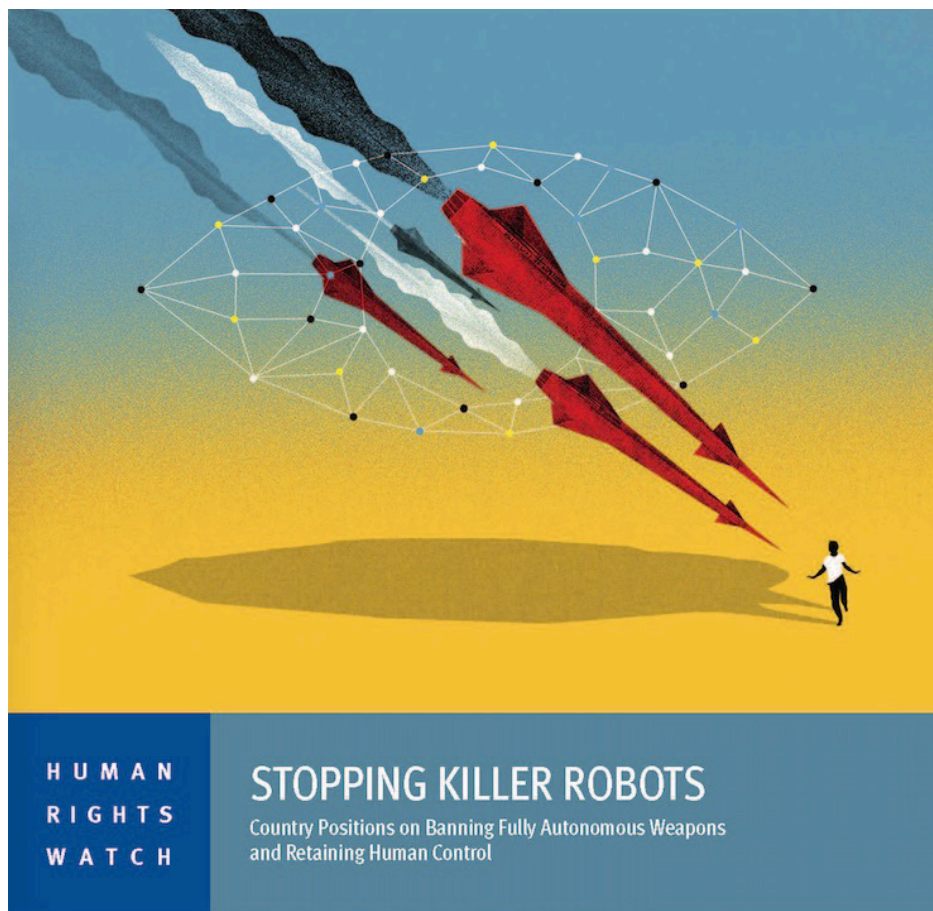
- The vast majority of delegations stressed the need to promote common understandings of characteristics of AWS. Pakistan said that finding common characterisation should not be an avenue for procrastination, and the GGE should prioritise moving ahead with this process and "shift gears." Ireland made similar remarks.
- The US said that the discussion on characteristics has been taken as far as needed, and that the GGE should now discuss how IHL applies, and how the human element is necessary.
- Pakistan said that weapons that can select and engage target, chose or change temporal scope without direct involvement of a human, should be characterised as AWS.
- Belgium recalled the characteristics presented in 2019 in its joint working paper with Luxembourg and Ireland. Mexico supported this.
- The US said that AWS should not be anthropomorphised, which could lead to legal and technical misunderstandings that could be detrimental to the efficacy of potential policy measures from a technical perspective, and to "misestimate machine capabilities from a legal perspective."

- China viewed the following as characteristics of AWS: lethal; fully autonomous with no human involvement or control; inability to terminate the system after launching it; indiscriminate killing; ability to evolve in interaction with the environment through self-learning. Argentina, South Africa, Costa Rica, and the ICRC also emphasised the latter point as a crucial characteristic.
- Japan noted that it hesitates to agree with the assertion made by some that a weapon system's self-learning function isn't compliant with IHL. It urged this should be further studied. The US agreed.
- Japan said that the characteristic of AWS of lethality is as important as autonomy, and argued that lethality is essential to consider how to formulate the rules for AWS, as it otherwise could be difficult to distinguish between offensive and defensive systems.
- China also said to consider different characteristics of weapon systems such as "defence" and offense to avoid "oversimplification." Similarly, Argentina asserted that there needs to be a distinction between offense and "defence," arguing that "defensive weapon systems" require greater flexibility when using autonomous functions, while offense requires an increase of human control, particularly in urban areas.
- France understands AWS to be systems to use lethal force without any meaningful human control throughout chain of command.
- The ROK suggested that autonomy, mobility, and power supply should be considered as they could bring critical differences to the level of lethality of AWS.
- Switzerland argued that the degree of lethality in a weapon system shouldn't be part of the key criteria but a focus on full respect for IHL, and that intention to cause death shouldn't be the defining criteria for the GGE's work. It concluded that an AWS might not cause physical death immediately but lead to injuries other than death. Mexico made similar observations, and Ireland, Brazil, and Germany supported this.
- Austria noted that lethality is not a concept in IHL since a weapon delivering lethal effects is legal under IHL, and that the essential consideration should be the level of autonomy.
- Switzerland said that systems designed to destroy property or objects could also have serious ramifications, including lethal secondary effects, and should be considered.
- Belgium further asserted that a normative framework on AWS should be approached from the assumption that AWS act unpredictably unless demonstrated otherwise.
- Switzerland suggested focusing on weapon systems that should never be developed, while asserting that autonomy is a question of degree.
- Austria and Germany, amongst others, mentioned the problem of the "black box" where a weapon system employs a cascade of algorithms that don't allow for the operator to explain or predict the operation of a weapon system as an important feature of an AWS.

Definition

- Pakistan, Egypt, the EU, and Brazil said that a simple working definition of AWS should be agreed upon as a matter of priority.
- Pakistan observed that this shouldn't be a political issue.
- Switzerland said that the GGE should avoid a definition which is too rigid and limited. The US agreed and said that it was unnecessary to adapt a specific working definition which would be prejudicial of any policy outcome.
- China said that if a "clear and rigorous" definition isn't reached, the GGE should seek consensus on technical characteristics of AWS.
- India said it was time to arrive at an "all-encompassing definition" to achieve progress, and that in the absence of a definition, states don't know what they're dealing with.
- Ireland noted that a legally binding definition would be counterproductive and create further divergence.

- The ICRC observed that a definition on AWS is more likely to be an outcome of GGE deliberations than a pre-requisite for its success. Germany, Pakistan, Cuba, Belgium, and the Netherlands made similar remarks.
- Austria encouraged participants to identify what is not acceptable rather than to find a definition of LAWS. Bulgaria supported this.
- The ICRC reiterated its understanding of AWS to be systems that “select and apply force to targets without human intervention. To varying degrees, the user of the weapon will know neither the specific target nor the exact timing and location of the attack that will result.”
- The US urged to understand better what delegations mean by the terms they are using, arguing, “some delegations may be using the same term to mean different things or even may be using different terms to mean the same thing.” The US explained how a weapon is used changes whether it is classified as autonomous or semi-autonomous.
- Cuba reminded that many treaties don’t have a definition for the areas they regulate.
- China suggested to emulate the blinding lasers protocol. MAC also reminded that CCW Protocol IV does not have a definition of a blinding laser weapon and explained that the lack of a definition didn’t prevent negotiations nor stop it from being an effective Protocol.



Report now available online in English and French at: www.stopkillerrobots.org.

International law

- Virtually all delegations reiterated that weapons with autonomous functions must comply with international law and international humanitarian law (IHL).
- Israel said that the law of armed conflict and IHL already apply to the development, deployment, and use of AWS. The Netherlands said that the development of fully autonomous weapons is incompatible with the existing normative framework.
- In referring to its national commentary on the GPs, Austria said that there are two dimensions to IL and IHL compliance: the legality of a weapon and the lawful use of a weapon. It explained that the degree of autonomy decides if the use of a weapon system is lawful. the legality and lawful use of a weapon system.
- Pakistan stressed that simply agreeing that international law applies to AWS isn't enough. It said the GGE needs to determine whether weapon systems can be programmed to ensure compliance with international law, and if yes, what the means are to do so. The US made similar remarks.
- Switzerland also supported for the GGE to collect and clarify relevant existing legal applications.
- Mexico also said that the applicability of IHL is not the question but whether the existing legal framework is enough to ensure sufficient human control over AWS.
- The US and UK argued that autonomy can improve understanding of operational environment, leading to greater situational awareness, increase reliability, and that it can be used for humanitarian objectives and decrease risks for civilians and combatants. The US and the UK called on states to share case studies on the use of autonomy in weapon systems which can help clarify how IHL applies.
- The US added that greater understandings on requirements of AWS to comply with IHL would improve the ability to conduct legal review weapons, to train personnel

to comply with actual requirements, and to apply principles of state and individual responsibility.

- Cuba reminded that there is a legal limitation for all states to the use of force, as enshrined in the UN Charter.
- Venezuela called on states that plan to produce AWS to provide negative security assurances to countries that don't have these weapon systems.

International humanitarian law

- Cuba and Sri Lanka noted that AWS are incompatible with IHL, especially with respect to the fundamental rules of distinction, proportionality, and precaution, and the principle of humanity.
- The ICRC also underscored that IHL principles call for context dependent evaluative decisions by human persons. Italy, New Zealand, and Belgium, amongst others, made similar remarks.
- India said that AWS can be made compliant with IHL and its fundamental principles during the development and design of AWS.
- Chile, the Philippines, Belgium, and New Zealand, and Mexico argued that the Marten's clause should also be taken into account when assessing AWS. Mexico specified that the Clause has been incorporated into many treaties and rulings. India said that it respects the Marten's Clause. France argued that the Marten's Clause is generic, and subject to diverging legal interpretations.
- Mexico, Belgium on behalf of eight states, and Austria said that the GGE needs to investigate further how the principles of humanity and public conscience are applied to AWS. South Africa also stressed that dictates of public conscience has to be respected.
- Spain said that ethical applications raise concerns about the selection of targets by AWS and requires comprehensive evaluation to ensure compliance with IHL principles of distinction and proportionality, amongst others.

International human rights law (IHRL)

- Costa Rica, Uruguay, Chile, Argentina, Mexico, the Arab Group, Portugal, Ecuador, Iraq, Belgium, on behalf of eight states, and Sri Lanka, amongst others said that international human rights law must be considered.
- Sri Lanka emphasised the importance given to the right to life and human dignity.
- Mexico reminded of reports on AWS presented to the Human Rights Council that are still valid, dealing with ethical issues of human dignity.
- Chile also said that following a legal evaluation of AWS, there still needs to be an ethical discussion about concerns of human dignity.

International criminal law

- Costa Rica, Switzerland, Chile, Belgium, Mexico, on behalf of eight states, and Portugal said that the GGE should also consider international criminal law in its work.
- Belgium on behalf of eight states added that rules of attribution and responsibility apply.
- Portugal acknowledged that the CCW makes no direct mention of international criminal law but that the deployment or use of AWS incompatible with international law would give rise to individual state responsibility.
- Portugal said that individual responsibility for the unlawful use of AWS could include actions or omissions amounting to the crime of genocide, for instance the targeted killing of members of a national, ethnic, racial or religious group; crimes against humanity, for example murder; or war crimes. These crimes are defined and punishable under the Rome Statue of the International Criminal Court.

Violations

- Iraq argued that delegating vital decision-making to machines would be a violation of relevant international law.

Distinction

- Costa Rica cautioned against multiple errors in algorithms and other systems, creating challenges for compliance with IHL. Chile and Venezuela also argued that algorithms in AWS present significant challenges to distinguish between combatants and non-combatants and military and civilian objects.

Proportionality

- Chile said that the principle of proportionality requires common sense and good faith in extremely complex situations, when assessing proportional damage when targeting military objects. Venezuela, iPRAW, and China also expressed concern about AWS being able to comply with proportionality requirements.
- The ICRC argued that a weapon user cannot assume that their legal assessment will remain valid. If a weapon by design precludes the user by foreseeing its effects, a weapon would be inherently indiscriminate and unlawful.

Precaution

- Chile said that precaution can't be assessed algorithmically. Sri Lanka made similar remarks.
- Austria said that AWS challenge the principle of precaution if humans cannot override a system and abort an operation.

Unpredictability

- Some states expressed concern about an AWS' ability to self-learn, including Austria, Costa Rica, Pakistan, noting this leads to unpredictability.
- The ICRC asserted that machine-learning systems are unpredictable in functioning, not transparent and difficult to verify, introduced by bias by design or the data used. It further argued that AWS make it inherently difficult for a human user to predict what specifically what will be struck, and when and where, because it is not a human that selects a target. The ICRC said that faithful implementation of IHL requires context dependent human

decisions based on legal assessments in light of circumstances of a specific attack.

- Costa Rica said that the unpredictability of the AWS due to changing environment in which they operate creates situations where these weapon systems pose serious risks for civilians and civilian objects. Costa Rica reminded that AWS are set of pre-programmed conditions based on proxy-indicators representing possible targets, which may not be applicable in changing contexts, which would produce high levels of uncertainty. The ICRC made similar observations.
- France argued that the assertion of AWS' unpredictability needs to be proven and tested. France and Japan further argued that states don't have an interest in developing unpredictable AWS which would backfire against themselves.

Responsibility and accountability

- The ICRC highlighted the risks of the diffusion for human responsibility through the use of AWS, and practical challenges in ensuring accountability for violations of IHL. China, Venezuela, Austria, Cuba, and Pakistan, amongst others, had similar concerns. Venezuela argued that states could use arguments based on the autonomous nature of weapon systems to shrug off responsibility of violations of IHL.
- Sri Lanka asked how accountability and criminal responsibility should be applied to a machine-to-machine interaction in form of robotic swarms.
- Brazil also suggested that it's hard to establish accountability for a violation of IHL if a human operator believed an AWS is accurate and precise but unexpectedly did cause humanitarian harm.
- Belgium, in its presentation of a joint commentary on behalf of eight states, and Argentina said that given that human responsibility and accountability cannot be transferred to machines, a normative and operational framework needs to ensure that human control is maintained.

- Japan, Costa Rica, Mexico, Austria, Bulgaria, and France reiterated this.
- The ICRC added that moral responsibility also cannot be transferred to a machine, and asserted that it is "humans not machines that interpret and implement law, and humans will be held accountable for any violations of IHL, which also means that the interpretation and application for international rules can't be substituted by machines or computer processes."
- The ICRC observed that there is convergence of views for the need to ensure human responsibility and accountability. France also said that there is no HCP that believes that human beings should not be held accountable for the use of AWS. The Netherlands affirmed that accountability always rests with the human commander.
- The Netherlands further argued that while the use of AWS may result in a "shift of accountability" within the chain of command and control, there is no accountability gap, and accountability remains with humans. Switzerland said that accountability of individuals and states needs to be guaranteed. Sweden made similar remarks.
- India said that human responsibility must be maintained across the entire life cycle of a weapon system, and that responsibility for development and deployment of AWS lies with the concerned state.
- Israel, Italy, and Finland also said that humans are always responsible for the use of AWS.
- Switzerland stressed that states must remain legally accountable under IHL for all acts carried out by persons that are members of their armed forces.
- Cuba said that ensuring the responsibility of the state establishes a clear chain of criminal and civil responsibility from programmers to manufacturers, operators, and the entire command chain.

Legal weapons review

- Japan, Switzerland, Bulgaria, Finland, and Belgium on behalf of eight states, underlined the importance of legal weapon reviews mandated under Article 36 of Additional Protocol I to the Geneva Conventions to ensure compliance with IHL.
- Italy, the EU, Israel, Sri Lanka, and Japan encouraged further exchange on implementation of national legal weapons reviews. Italy said that this would help to identify “good practices,” challenges, and possible related solutions.
- Belgium, in its presentation of a joint commentary on behalf of eight states, said that weapon reviews need to be conducted with a full understanding of a weapon system’s capabilities and limitations.
- Bulgaria observed that due to AWS’ ability for machine learning, new legal procedures and methods of testing would have to be introduced. Finland said that the review needs to be “critical and wide in scope”.
- The Philippines suggested to also look at safeguards to AWS in the private sector when conducting weapon reviews.
- Pakistan and Chile noted that legal weapon reviews are useful but not sufficient to address AWS.
- Austria said that responsibility lies within the state itself to determine if in a particular state’s point of view a weapon system would be compatible to be operated in line with existing legal norms, and in the absence of specific legal norms on AWS, could arrive at different standards. China and Sri Lanka had similar concerns.
- Chile and the Netherlands expressed concern at the low amount of states currently implementing legal weapon reviews.
- Brazil reiterated its proposal from one of its past working papers to establish focal points on weapon reviews for each country.



Photo: Japanese Campaign to Stop Killer Robots

Eleven guiding principles

- Virtually every delegation that took the floor welcomed the adoption of the GPs.
- Pakistan, Mexico, Venezuela, Belgium on behalf of eight states, and Chile said that the debate around the GPs is still evolving, and may be further developed or refined. Pakistan added that the GPs were only one component governing considerations of the GGE.
- Cuba, Chile, Ecuador, Ireland, Sri Lanka, Algeria, Peru, Portugal, Australia, the Campaign to Stop Killer Robots, and Switzerland noted that the GPs aren't an end in themselves.
- Chile noted that the eleven GPs are the lowest common denominator upon which the GGE managed to reach agreement after many years of negotiation. Portugal made similar remarks.
- Pakistan noted that the GPs can contribute to developing concrete policy recommendations, including a legally binding instrument. Egypt made similar remarks.
- Mexico, Chile, and Ecuador said that GPs can guide the GGE's work but do not have normative value.

Operationalisation of the GPs

- Switzerland said that the GPs should be operationalised at the national level.
- The ROK also noted that their operationalisation could be a practical and "pragmatic" next step. The UK made similar remarks.
- China encouraged to implement the GPs while taking specific national contexts into account. China said that implementation measures should include ethical declarations on the use of autonomy in weapon systems, codes of conducts, amongst others, to ensure better regulation of this technology.
- Pakistan and Egypt opposed for the GPs to be a separate framework intended for implementation or operationalisation at the national level.

- Chile and Ecuador said it was premature to speak about operationalisation of the GPs as they should guide the work of the GGE.
- Chile said it might run the risk of making the GPs and end in themselves.

Commonalities paper

- Ambassador Janis Karklins of Latvia, former chair of the 2020 GGE on LAWS, presented his non-paper "Commonalities in national commentaries on guiding principles". He said that he received 24 submissions but more than 100 countries shared their views as some submissions were from groups of countries. He expressed hope that the commentaries would be helpful to identify commonalities across state interpretation of the eleven GPs, and to progress the conversation.
- Almost all delegations that took the floor welcomed the commonalities paper. Switzerland welcomed the paper and encouraged the GGE to explore how to benefit from it. Austria said the paper helped to deepen thinking and discussion on AWS. Many called the exercise useful, including Brazil, South Africa, Switzerland, Japan, Netherlands, Pakistan, and Algeria.
- Chile, Ireland, Brazil, Pakistan, and Austria warned against focusing on national implementation and to maintain focus in the multilateral space. Cuba said it would have also been interesting to discuss how principles are operationalised at the international level.
- Austria said that states should discuss more specific questions rather than the GPs, and that the commentaries demonstrated there was misunderstanding on the GPs.
- Mexico said that because of the haste in which this paper was prepared, national commentaries should be further considered, and to continue compiling and analysing national documents.
- Austria also said that national papers should be read "with great devotion" to understand sensitive questions that countries have.

- Chile, Cuba, and Belgium agreed that there are many more commonalities than addressed in Ambassador Karklins' paper.
- Chile, South Africa, and others said that it was now important to discuss disagreements.

On the way forward

- Brazil, Chile, the Campaign to Stop Killer Robots, Sri Lanka, Sehlac, the ICRC, Costa Rica, and Pakistan expressed concern about the pace of technology outpacing the substance of the GGE's deliberations on this topic.

Normative and operational framework

- Pakistan, Iraq, Austria, Algeria, Colombia, Mexico, the Campaign to Stop Killer Robots, Argentina, Brazil, Ecuador, Jordan, Sri Lanka, Venezuela, the Arab Group, Chile, Peru, Chile, Costa Rica, and Cuba said they strongly favour the negotiation of a new legally binding instrument, stipulating prohibitions and regulations of AWS.
- The Campaign to Stop Killer Robots concluded that a new legally binding instrument is now widely regarded as the only effective way to deal with AWS.
- Human Rights Watch said that a new instrument should prohibit weapons systems that autonomously select and engage targets and are inherently morally and legally problematic. Those weapons would include those that lack meaningful human control due to machine learning and those that target humans based on target profiles.
- China, Sri Lanka, and the Philippines, and called for a legally binding instrument on AWS.
- Portugal asserted that depending on the GGE's outcome, HCP "might explore a new protocol to the CCW" at a later stage.
- Israel said that there's need for "prudent and incremental approach in response to interventions calling for pre-emptive ban in form of legally binding instrument, and that these calls "don't fit with the complexity of the subject matter at hand," calling the demands "counterproductive".
- France said that a preventive approach may lead to a situation where technology is given up which may be useful in the civilian area.
- India said that the GGE should not "prejudge" the outcome of future deliberations on the nature of a normative and operational framework. It opposed calls for a legally binding instrument calling for prohibitions of AWS.
- Japan, Switzerland, the Netherlands, and Australia also said that adopting a legally binding document would be premature.
- The ICRC argued that internationally agreed limits on autonomous weapon systems are needed, "whether in the form of new, legally binding rules, policy standards or best practices, to respond to the pressing humanitarian, legal and ethical concerns."
- The UK and Germany emphasised the need to share "good practices".
- Switzerland argued that working towards a political declaration would be most appropriate at the moment: it would provide platform to consolidate shared viewpoints, and it would help to launch specific work such as sharing of good practices, elaborating legal norms, amongst others.
- The Campaign to Stop Killer Robots recalled that in September 2019, the foreign ministers of France, Germany, and other countries endorsed a declaration on AWS. It acknowledged that political declarations certainly have merit, but in the case of AWS are insufficient.
- Pakistan, Costa Rica, Venezuela, Mexico, the Philippines, the Arab Group, and Brazil also said that other options for the way forward can be valuable, such as political declarations, codes of conduct, confidence-building measures, and other voluntary measures, but should not replace a legally binding instrument on AWS.
- Egypt and Pakistan said that placing a moratorium on developing and manufacturing AWS is essential.

- Mexico expressed interest in Brazil's proposal for a network of legal experts to identify gaps of legislative framework and discuss legal applications of AWS. Switzerland said it wasn't convinced that legal experts only could undertake this work. It said that further clarification is needed in terms of form and process of this proposal.
- Germany explained that the GGE should avoid deadlock over the nature and status of final outcome document, and should focus on substance instead, collecting consensual elements to guarantee IHL compatibility of all weapon systems.

GGE consensus recommendations on the normative and operational framework to the 2021 Review Conference

- Pakistan and Italy welcomed the Chair's approach in his non-paper to set the stage for the 2021 Review Conference (RevCon).
- Japan noted that the GGE shouldn't fall short of producing a meaningful outcome for the RevCon, in order to respond to the mounting expectation of the world public opinion which wants to see a meaningful outcome.
- Sehlac, the Campaign to Stop Killer Robots, and MAC echoed this.
- France affirmed that the GGE needs to deliver for the RevCon.
- Pakistan recommended having a "framework approach" to agenda item 5f) where the GGE should seek to condense discussions into thematic areas focused on IHL, human-machine interaction/human control, as well as ethical and security aspects. Pakistan proposed to look at recommendations as "two baskets," one with recommendations on the normative aspects, the other one with operative aspects, whereby the operative aspects flow from the normative, and each of these baskets would include military, legal, and technological aspects.
- South Africa said Pakistan's proposal was interesting. Mexico and Austria also welcomed the proposal, underscoring that the GGE should focus on recommendations.
- Chile said that after seven years, delegates have identified shared concerns and understandings that can serve as the foundation for the GGE's mandate. These are: 1) Warfare has historically inextricably been linked to technological developments; 2) The modernisation of technologies today differs from those faced previously due to its fast pace and democratisation, and low barriers to understanding and using technology; 3) the need for a clear set of rules to clarify the framework in which AWS operate, and to shed light on potential gray areas which could undermine international law; 4) IHL, international human rights law (IHRL), international criminal law, and the Marten's Clause apply fully to all weapon systems; 5) principles of humanity and the dictates of public conscience require states to ensure legal and ethical compliance of AWS; 6) states shall prohibit weapon systems that: make life and death decisions, that cannot be directed at a specific military targets, that cause superfluous injury or unnecessary suffering; have effects that can't be limited as required by IHL, that cannot be controlled by humans; and 7) human responsibility for the use of AWS and decisions over the use of force shall be maintained through a responsible chain of command and control. Chile mentioned various other points of convergence.
- Germany, the US, Mexico, Brazil, and the Philippines, amongst others said that Chile's outline how to move forward was very useful as a basis for future discussion.
- Finland, the UK, Belgium, Mexico, the Netherlands, and Switzerland said that human-machine interaction and/or human control should be at the core of a future framework. Article 36 also argued that determining meaningful human control necessary to ensure compliance with international law and ethical principles is at the core of the GGE's work.
- The US agreed with the Chair's proposal to focus on the "human element".
- Japan and France stressed that the GGE should focus future discussions on lethality of AWS.

- Italy, Ireland, Brazil, Chile, and South Africa addressed “the elephant not in the room,” referring to Russia’s absence throughout the week.
- Italy and Germany underscored the importance of an inclusive GGE process.
- Ireland said that it needs to be made feasible that the GGE’s report can be adopted at the Meeting of High Contracting Parties in November 2020. Brazil made similar remarks.
- Germany said that the GGE should base its work on the GPs, which “need to get teeth”. The US and Belgium supported this. Germany and others said that future work can be based on the wealth of material submitted to the GGE over the past years.
- China said that all states should take a practical approach to extend the GGE’s current mandate at the RevCon.
- MAC suggested further guiding questions for the Group’s work about data bias and inclusivity and if the HCP’s statements reflect the public conscience and political will of HCP’s citizens, amongst others.
- Sehlac said that the GGE should look at intersectionality and AWS, as the lives of marginalised people are at the frontline.

With thanks to Loes Van Bergen of PAX for support with monitoring.

AFRICA’S ROLE IN REGULATING AUTONOMOUS WEAPON SYSTEMS

Gugu Dube | Institute for Strategic Studies

Autonomous weapon systems (AWS), sometimes referred to as killer robots, select and engage targets without human intervention. This poses risks for civilians, raises ethical concerns, and challenges the application of international humanitarian law (IHL).

For over seven years, discussions have been taking place at the United Nations in Geneva on the development of autonomous weapons systems and whether new rules are needed. There is general agreement that human control is central to their use, but what other rules are needed and where should the line be drawn between ethics and effectiveness? Should a new treaty prohibit the development and use of these weapons?

On 23 September, the Institute for Security Studies (ISS) and the International Committee of the Red Cross jointly hosted an online seminar. The seminar, joined by 60 participants from around the world, explored these questions, paying particular attention to African perspectives on the types of responses needed.

The session was chaired by Professor Christof Heyns, Director, Institute for International and Comparative Law in Africa, University of Pretoria who opened the meeting.

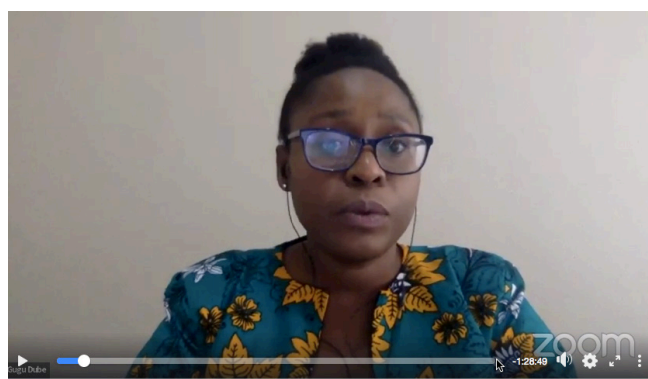
Gugu Dube, a researcher with the Complex Threats in Africa programme at the ISS in Pretoria stated that the rate at which autonomous weapons technologies are advancing is alarming and it highlights the urgent need for an effective multilateral response. Importantly, if these weapons violate IHL, there will be an accountability or responsibility gap: who will account for firing lethal autonomous weapons and who will bear the consequence? She said that it can be expected that any other responses that do not fall within the realm of IHL will not effectively stigmatise the use of fully autonomous weapons. Instead, the opposite will occur, namely a notion of free reign of use. “The threat of lethal automated weapons to African peace and security is real and a clear way forward is required. The current participation of African states in the UN international debate on these weapons is not impressive and we need to be more proactive,” said Dube in conclusion.

Maya Brehm, Legal Advisor, International Committee of the Red Cross (ICRC) spoke about ICRC's concerns. She outlined the ICRC's understanding of AWS as those that select and apply force to targets without human intervention based on a generalised target profile. The use of an autonomous weapon will not know specifically where and when a strike would take place. When AWSs are used in armed conflict, they must be used in compliance with IHL, as governing the conduct of hostilities. Brehm noted that although states hold different views, it is encouraging to see some convergence on key substantive elements particularly along the aspect of human control. Brehm noted the role African governments are playing in the policy debate on AWS and their contributions. "AWS are going to change the future of warfare, it is also the future of peace," she noted. Militaries at the forefront of developing and promoting autonomy tend to not be Africans. History shows that even if Africa may not be responsible for the development of these weapons systems, they will have far reaching consequences on the African continent. Brehm concluded by posing an important question: "Whose goals, interests and values do AWS serve?"

Mary Wareham, the Arms Advocacy Director at Human Rights Watch and the Coordinator of the Campaign to Stop Killer Robots indicated that half of the countries in the world have made a statement on their positions but more are expected to do so. Wareham emphasised that many more African states need to speak out on killer robots, rather than it being left as an issue for major powers to contend, because it is in the interest of these powers to develop AWS. She concluded by noting that it has been a challenge for African states at the Permanent Missions in Geneva to participate because there are other issues to deliberate on and not because there is lack of interest. Urging for a new treaty, she said, "We should consider what we can do about this because this issue is not about our generation only but for generations to come, and we are now at the forefront of autonomy. If we do not do the ground work now and have a new international treaty there will be consequences".

Oluwole Akinsanya, Nigeria Air Commodore (Rtd) pointed out that participation from Africa is not adequate. He said there were only a few interventions in the August 2019 Group of Governmental Experts (GGE) meeting on killer robots. Only four African states participated and only two made statements. Akinsanya said, "We need an African common position and engage the African Union on these issues. We also need to have more discussions on the matter because there is not enough knowledge on the continent on the issue and the devastating consequences that AWS pose."

The seminar was recorded and can be watched [here](#).



Africa's role in regulating autonomous weapons systems

Institute for Security Studies (ISS) was live.
23 September at 06:01 · G



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CCW REPORT

Reaching Critical Will (RCW) is the disarmament programme of the Women's International League for Peace and Freedom (WILPF), the oldest women's 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

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