

Convention on Certain Conventional Weapons (CCW)
Group of Governmental Experts on Lethal Autonomous Weapons Systems
25-29 March 2019, Geneva

Statement of the International Committee of the Red Cross (ICRC)

Agenda item 5(a) – An exploration of the potential challenges posed by emerging technologies in the area of lethal autonomous weapon systems to international humanitarian law

Thank you, Mr Chair, for bringing this element of our discussions to the fore, particularly in view of the historic link between the Convention on Certain Conventional Weapons and the fundamental rules of international humanitarian law.

In the ICRC's view, the challenges posed to IHL by autonomous weapon systems are inextricable from the issue of the human element in the use of force (which will be discussed this afternoon under agenda item 5(b)).

For the ICRC it is clear that the law is addressed to humans, and the relevant **legal obligations under international humanitarian law (IHL) – notably the rules of distinction, proportionality and precautions in attack – rest with those who plan, decide on, and carry out attacks.**

As many of the States who have spoken so far have pointed out, **it is humans, not machines, that comply with and implement the law**, and it is humans who will be held accountable for any violations of IHL. These legal obligations, and associated judgements, cannot be transferred to a machine, computer program, or weapon system.

As a result, **combatants will require a level of human control** over weapon systems and the use of force so that they can make **context-specific legal judgements in specific attacks.**

It is the loss of human control over the use of force inherent in the use of autonomy in the critical functions of weapon systems that poses a challenge to IHL, particularly the rules regulating the conduct of hostilities. Addressing this challenge necessitates a close examination of the rules to determine exactly what they require, whether existing law is sufficiently clear or **whether there is a need to clarify IHL or to develop new rules, or standards.**

For this reason, the ICRC welcomes the opportunity of this morning's session to speak about the rules of IHL that demand a level of human control. In this afternoon's session, we will discuss the key elements of human control required by IHL as we see them.

IHL rules demand context-based decisions

Mr Chair, the demands by IHL for context-specific legal judgments by those who plan and decide on attacks limits the degree of autonomy that is permitted under existing IHL. In other words, limitations on autonomy in the critical functions of weapon systems can be **deduced from existing IHL** rules.

The rules of distinction, proportionality and precautions require **complex assessments** based on the **circumstances prevailing** at the time of the decision to attack, but also during an attack.

For example, the rule on **distinction** refers to the obligations on parties to an armed conflict to always distinguish between civilians and civilian objects on the one hand, and military objectives on the other, and not to direct attacks against the former. Related is the prohibition on indiscriminate attacks.

Both of these rules demand that parties characterise as military objectives the person and/or objects at whom an attack is intended to be directed.

Such characterisations are, by their nature, **qualitative and variable**.

By way of illustration, the **definition of the term ‘military objective’** – set out in article 52(2) of Additional Protocol I – requires an assessment of whether the object by its nature, location, purpose or use ‘makes an effective contribution to military action and whose partial or total destruction, capture or neutralisation, in the circumstances ruling at the time, offers a definite military advantage’.

Assuming that an attack is planned to be directed at a lawful target, the rule of **proportionality** would prohibit such an attack where it may be expected to cause incidental harm that would be excessive compared to the concrete and direct military advantage anticipated.

The assessment of proportionality is generally measured against what a reasonable person would conclude in the circumstances, making use of available information.

This rule provides a further example of the qualitative and variable nature of the legal judgments required by IHL.

The obligation to take **feasible precautions** in attack relies on these same qualitative judgements, and generally requires those who plan or decide on attacks to take constant care to spare the civilian population, individual civilians and civilian objects, including when choosing between several possible targets, or when choosing their means and methods of warfare.

To conclude, Mr Chair, adherence to IHL rules of distinction, proportionality and precautions clearly requires **evaluative assessments** based on **knowledge of context**, including the environment of use and the expected effects of the weapon.

These context-based assessments **must be made by humans**. Military lawyers themselves reject the suggestion that the proportionality calculus, for example, can be **reduced to objective indicators**, insisting that their evaluations are **dependent on the circumstances** of particular situations and the **good faith** of military commanders.

Context-based decisions demand human control

It’s important to add, Mr Chair, that assessments of distinction, proportionality and precautions made by combatants must be **reasonably proximate in time** to the attack (or “strike”). Where these assessments form part of planning assumptions, these **assumptions must have continuing validity** until the execution of the attack in order to comply with IHL.

This mean that when using autonomous weapon systems commanders must retain a level of human control over weapon systems sufficient to allow them to make context-specific legal judgments in carrying out attacks in armed conflict.

In other words, they must retain a level of human control that is ‘meaningful’ (or ‘substantive’, ‘appropriate’, or ‘effective’, or ‘appropriate levels of human judgment’).

Human control at different stages

Keeping in mind the IHL requirements for context-based decisions made in reasonable proximity to the attack, and the human control that these requirements demand, we now wish to turn to the different forms that human control can take during the development, activation, and operation of an autonomous weapon system:

1. Development and testing ('development stage');
2. Decision by the commander, or operator, to activate the weapon system ('activation stage'); and
3. the operation of the weapon system during which it independently selects and attacks targets ('operation stage').

Human control at **all three stages**, in **design** (development stage) and in **use** (activation and operation stages), **is essential for compliance with IHL**. The International Panel on the Regulation of Autonomous Weapons (IPRAW) has reached similar conclusions on the need for "control by design" *and* "control in use".

Ensuring **human control in use**, at the activation and operation stages, **is the most important for compliance with IHL** rules on the conduct of hostilities. Human control in design, at the development stage, provides a means to set and test control measures that will ensure human control in use.

Human control at the development stage alone – control in design – **will not be sufficient to ensure compliance with IHL** in the use of an autonomous weapon system for attacks in armed conflict given the inherently variable and unpredictable nature of real-world operational environments.

Human control, and judgement, for compliance with IHL **must be proximate to the use of force in a specific attack, and cannot be substituted with software control**. In the view of the ICRC, concepts of "human control in the wider loop" and the use of autonomy to "effectuate the intention of commanders and the operators of weapons systems" do not adequately capture the requirement for human control under IHL.

Elements of human control

Mr Chair, having addressed the legal basis for human control, this afternoon we will discuss the three key and inter-related elements of human control as we see them, namely:

1. human supervision and the ability to interevent/deactivate
2. predictability and reliability, and
3. operational constraints.

To be clear, Mr Chair, and to repeat what we said at the outset of this intervention, the use of autonomous weapon systems brings a loss of human control that entails **serious risks for protected persons** in armed conflict (both civilians and combatants no longer fighting) and of **violations of IHL**.

This **unique characteristic of autonomous weapon systems, raises difficulties in the interpretation and application of IHL rules** and, ultimately, it raises the question of whether existing law is sufficiently clear or **whether there is a need to clarify IHL or to develop new rules, or standards**.

This is a question we will return to in this afternoon's session.