



ICRC

**Convention on Certain Conventional Weapons (CCW)
Group of Governmental Experts on Lethal Autonomous Weapons Systems
9–13 April 2018, Geneva**

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

Further consideration of the human element in the use of lethal force; aspects of human-machine interaction in the development, deployment and use of emerging technologies in the area of lethal autonomous weapons systems

(Additional remarks)

Mr Chair

Thank you for the opportunity to add further detail to the statement we made on this topic.

Legal basis of human control

The ICRC is clear that the law is addressed to humans, and the legal obligations under international humanitarian law rest with combatants who plan, decide upon, and carry out attacks.

Machines can never “apply” international humanitarian law, and responsibility and accountability for decisions to use force cannot be transferred to machines, computer programs or weapon systems.

Combatants will require a minimum level of human control over weapon systems with autonomy in their critical functions so that they can effectively make legal judgements – of distinction, proportionality and precautions – in specific attacks.

The requirement for human control will mean limits to lawful levels of autonomy under international humanitarian law.

Legal reviews

Mr Chair

The ICRC welcomes attention that this issue has brought to developing and improving legal review processes.

The ICRC calls on all States to establish a weapon review mechanism or consider strengthening existing mechanisms to ensure that any new weapons that are developed and acquired can comply with IHL in all foreseeable circumstances of their use.

When developing or acquiring new weapons, States must determine whether the employment of the new weapon, means or method of warfare would, in some or all circumstances, be prohibited by international law.

This is an obligation under article 36 of the First Additional Protocol to the 1949 Geneva Conventions.

But, in fact, all States have an interest in assessing the legality of new weapons, whether or not they are party to Additional Protocol I. Such assessments contribute to ensuring that the State's armed forces can conduct hostilities in accordance with that State's international obligations, and flows from the obligation to ensure respect for IHL under common article 1 to the Geneva Conventions.

A legal review must consider treaty and customary prohibitions and restrictions on specific weapons, as well as the general IHL rules applicable to all weapons, means and methods of warfare.

These include the rules aimed at protecting civilians from the indiscriminate effects of weapons and combatants from superfluous injury and unnecessary suffering.

Legal reviews can help to improve compliance with IHL for all weapons, in light of rapid technological developments.

But legal reviews of AWS are also likely to raise their own challenges.

As with all weapons, the lawfulness of a weapon with autonomy in its critical functions depends on its specific characteristics and intended use.

The ability to carry out such a review entails fully understanding the weapon's capabilities and foreseeing its effects, notably through verification and testing.

Since the commander or operator must make an assessment of the lawfulness of an attack using an autonomous weapon system at an earlier stage than if the selection and attack of targets were under direct human control, the legal review must demand a very high level of confidence that, once activated, the autonomous weapon system would predictably and reliably operate as intended. This raises unique challenges in ensuring that predictability and reliability are tested and verified for all foreseeable scenarios of use.

Predictability is the ability to "say or estimate that (a specified thing) will happen in the future or will be a consequence of something". Applied to an autonomous weapon system, predictability is knowledge of how it will function in any given circumstances of use, and the effects that will result. Reliability is "the quality of being trustworthy or performing consistently well". In this context, reliability is knowledge of how consistently the machine will function as intended—e.g., without failures or unintended effects.

Foreseeing such effects may become increasingly difficult if autonomous weapon systems were to become more complex or to be given more freedom of action in their operations, and therefore become less predictable.

The ICRC continues to urge all States in this meeting to elaborate what "meaningful" or "effective" human control entails in practice. States must also address fundamental concerns about weapon systems that may introduce inherent unpredictability, such as those employing artificial intelligence (AI) machine-learning algorithms.

Thank you

