

Building Blocks for a Regulation of LAWS and Human Control

iPRAW Briefing Paper – July 2021

The International Panel on the Regulation of Autonomous Weapons (iPRAW) is an independent, interdisciplinary group of scientists working on the issue of lethal autonomous weapon systems (LAWS). It aims at supporting the current debate within the UN Convention on Certain Conventional Weapons (CCW) – looking at a potential regulation of LAWS from different perspectives.

This briefing paper is a summary of the iPRAW Report “Building Blocks for a Regulation of LAWS and Human Control” and is accompanied by an interactive infographic: <https://www.ipraw.org/publications/building-blocks/>.



iPRAW has identified three larger buildings blocks that can guide the creation of the normative and operational framework for a regulation of LAWS. These blocks are (1) challenges to be addressed by a regulation, (2) the human element at the core of any regulation of LAWS, and (3) actual elements of the framework. iPRAW maintains the approach that a future regulation of LAWS should focus on the human element, especially human control in the use of force. iPRAW defines human control as situational understanding and options for intervention enabled both by design and in use, considering both the life cycle of a weapon system and the targeting process.

Block I – Challenges: The development and use of LAWS raises several challenges that need to be addressed, ranging from technological aspects to military, legal, and ethical considerations. But also questions relating to international security and stability play a pivotal role, deserving greater attention. Most cross-cutting topics, like gender issues, should be considered as well but are not further discussed in this report. Depending on the challenges it addresses, the regulation will look differently.

First, understanding the **technology** behind LAWS is imperative. By integrating, processing, and analyzing large amounts of data quickly, AI-enabled technologies can offer useful decision support and might furthermore allow for new operational options. At the same time, however, due to their brittleness and opaque nature, they could increase unpredictability and escalation risks and perpetuate biases.

However, a new international regulation shall focus on the human element over the use of force instead of technological aspects. The latter may thwart efforts of creating a new regulation due to the atypical nature of LAWS and may prevent it from standing the test of time. Likely, new inventions will quickly outpace the diplomatic efforts that have been hitherto achieved. A new commonly agreed regulation must be future-proof.

Second, **military** decision-making processes and the role of humans and ‘machines’, i.e. automated processes, are the centerpiece of any considerations on LAWS. In order to discuss the issue of LAWS and human control, a sufficient understanding of the military targeting process is crucial – various steps regarding human control in the targeting cycle may be taken at earlier stages in military operations, special attention should be given to the final step of the targeting cycle.

Third and probably most relevant to the CCW, LAWS are **legally challenging**, especially the use against humans and against military targets by use. A regulation of LAWS could take these aspects into consideration, for example, by prohibiting or strictly regulating the deployment of LAWS against humans. Even though IHL does not address LAWS explicitly yet, an obligation to maintain human control and other limitations and constraints can arguably be derived from the IHL principles by implication. An international regulation would help to establish and strengthen that norm and to create a common understanding.

Fourth, it is arguable that the concept of **human dignity** entails a moral obligation to maintain human agency and therefore the necessity of human control over the use of force. These considerations could influence the way a future regulation of LAWS looks like and how it could be structured.

Finally, the use and deployment of LAWS bears risks for **security and international instability**. A major benefit of applying autonomous functions for military purposes is the possibility of accelerating information processing, decision-making, and command and control cycles. A faster tempo of warfare however also runs risk of overwhelming human operators and undermining human judgment, especially in crisis situations. In addition, containing proliferation and maintaining international stability are major objectives when elaborating a normative and operational framework for LAWS, even though these factors might not become part of a CCW Protocol. There are other avenues in order to take these aspects into account, such as the adoption of soft-law documents.

Block II – Human Control: The challenges discussed above are mostly caused by a lack of human control in the use of force. Accordingly, a regulation of LAWS should focus on that. iPRAW defines human control as situational understanding and options for intervention enabled both by design and in use. To account for the context-dependency of human control, a future regulation of LAWS (e.g. a CCW Protocol) will probably have to consist of rather abstract stipulations regarding the concept of human control. The supplementary adoption of further agreements – legally or politically binding – could be useful to delineate human control in further detail.

Block III – Elements of the Regulatory Framework: iPRAW recommends a technology-agnostic approach when it comes to LAWS and a focus on the human element in the use of force rather than a categorical definition of LAWS. iPRAW considers it advisable to focus on the obligation to maintain human control over the use of force instead of a definition of LAWS. This obligation would apply to all conventional weapons, but could be established beyond the scope of the CCW, too.

The GGE Guiding Principles of 2019 are a suitable starting point for further discussions on a normative and operational framework on LAWS, but they are not sufficient. For example, a more detailed account of human-machine interaction is necessary. In addition, other principles that were not explicitly mentioned in the Guiding Principles could also find entry into a future CCW Declaration or Protocol, such as predictability, reliability and transparency. Solely one international treaty might not suffice to tackle all the aspects and challenges that are presented by LAWS. The adoption of additional treaties or even soft-law documents, such as codes of conduct and best practices, are highly recommended to supplement a potential treaty on LAWS.