Governing Lethal Autonomous Weapon Systems (LAWS): A Two-Tier Framework

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King's Policy Journal

KCL Policy Research Centre

Centre for Security & Defence

Word Count: 1851

January 2026

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From Israel's AI-enabled Lavender targeting-support system in Gaza to Ukraine's unmanned aerial systems (UAS) tracking software, advances in artificial intelligence (AI) are transforming how militaries generate targets and apply force in conflicts (McKernan & Davies, 2024). Lethal Autonomous Weapon Systems (LAWS) are commonly defined as AI-enabled weapons "that, once activated, can select and engage targets without further intervention by a human operator" (Russell, 2022, p. 62). LAWS shift elements of lethal decision-making from humans to algorithms, triggering concerns over legal compliance, moral agency and strategic stability. Yet, while norms and principles have been articulated in international forums to mediate the legal and humanitarian implications of LAWS employment in armed conflict, major powers continue to hinder progress toward a legally binding governing framework.

This essay argues that the pace of LAWS development and employment makes the adoption of a legally binding governance framework urgent. It first outlines the key legal and ethical risks associated with LAWS and reviews current multilateral efforts to govern them. Second, it explains why progress remains stalled, focusing on three obstacles: national security dividends, definitional disagreement and institutional constraints. Finally, it proposes a treaty-based two-tier framework — combining categorical prohibitions and targeted regulations — alongside practical policy recommendations to build convergence in international forums and advance progress for LAWS governance.

Legal and Ethical Implications

AI is at the heart of the contemporary debate regarding LAWS. Earlier military weapons, including homing missiles and naval mines, have long enabled lethal force without direct human intervention. However, recent advances in AI extend automation beyond execution into core judgement tasks — such as target classification, prioritisation and engagement — serving as agents rather than complementary tools in lethal decisions and the use of force. AI's ability to compute vast amounts of data and derive patterns through machine learning has already proven effective in providing militaries with tactical and operational advantages on the battlefield (Saxon, 2022a, p. 8). However, shifting elements of lethal decision-making to autonomous functions complicates legal and ethical principles.

First, LAWS raise the risk of violating International Humanitarian Law (IHL), particularly the principles of distinction and proportionality (Righetti et al., 2018, p. 124). The principle of distinction is the necessity to always discriminate between combatants and non-combatants, while the principle of proportionality restricts the type and amount of force that can be applied in conflict to minimise

excessive destruction to civilian lives and infrastructure with respect to the direct anticipated military advantage. These legal principles were enshrined to regulate the conduct of war, limiting the humanitarian effects of armed conflict. However, scepticism persists over whether LAWS can reliably interpret and apply these standards in dynamic military environments where data is incomplete and battlefield conditions are difficult to model (McFarland, 2020, p. 60). As LAWS functions rely on training data and probabilistic inference, their performance can degrade or they can behave unexpectedly in rapidly changing operational contexts.

Second, LAWS can also weaken IHL's enforceability by complicating accountability for unlawful harm. When human involvement is minimal, diffuse or pushed upstream into LAWS design and training, it becomes harder to determine who exercised the decisive judgement that led to unlawful harm. For instance, responsibility may be distributed across a chain of actors — from software developers who set model parameters to commanders who authorise deployment. More crucially, when decisions are unpredictable or difficult to explain, it becomes more challenging to attribute responsibility to a single actor over a specific engagement (Righetti et al., 2018, p. 124). This risks creating an accountability gap, undermining deterrence and weakening incentives for IHL compliance.

Finally, LAWS have the potential to undermine human dignity in warfare. Military personnel spend years cultivating the expertise and judgement needed to make decisions that may result in the loss of human life. When these life-and-death decisions are delegated to AI, the moral agency traditionally exercised by trained soldiers is displaced, eroding human dignity over time. More broadly, delegating lethal judgement lowers psychological and political barriers to the use of force by making violence easier to scale and harder to attribute accountability (Saxon, 2022b, p. 36). Taken together, LAWS' difficulties with predictable IHL compliance, accountability and human dignity strengthen the case for stronger governance of their development and use.

Policy Challenges to Governing LAWS

National Interests

The security-related dividends of LAWS disincentivise states from accepting prohibitions or regulations on their development or use. As discussed, AI advancements offer militaries operational benefits for states employing LAWS on the contemporary battlefield. As LAWS compress decision timelines and expand the scale of operations, states may prioritise battlefield advantage over legal and ethical restraint, particularly in high-stakes situations. These incentives are reinforced by broader patterns of investments in LAWS. According to Human Rights Watch, the US, the UK, China, Israel, Russia and South Korea are investing heavily in the development of various autonomous weapons

systems (Wareham, 2020, p. 3). Therefore, in pursuit of military advantage, many states have strong incentives to resist binding limits on the design, development and employment of LAWS, constraining international efforts to establish a treaty framework.

Definitional Challenges

The difficulty in governing LAWS is further exacerbated by the persistent failure of states to converge on a universally accepted definition of LAWS (United Nations Group of Governmental Experts, 2023). Since LAWS' autonomy consists of varying degrees of human control, states interpret them differently, such as whether "identification" should be included in the definition of LAWS on top of "selection" and "engagement". Major military powers with advanced defence-industrial bases tend to favour capability-based definitions which exclude many existing or planned systems, preserving room for continued innovation. For instance, the United States Department of Defence Directive 3000.09 defines an autonomous weapon system as "a weapon system that, once activated, can select and engage targets without further intervention by a human operator." The Directive's framing is often treated as narrower in practice, focusing debate on systems that can select and engage targets without human supervision, rather than the wider range of semi-autonomous functions. In contrast, coalitions of smaller states and NGOs advocate broader definitions that cover LAWS that detect, identify, track, select and engage targets — using force to neutralise, damage or destroy — without human intervention (United Nations Group of Governmental Experts, 2023). As a result, states remain deeply divided not only on the substance of regulation, but also on whether new regulation is necessary.

Institutional Constraints

Institutional constraints have also impeded progress on LAWS governance. Within the CCW, the Group of Governmental Experts (GGE) has progressed the debate on LAWS — most notably the 11 non-binding Guiding Principles affirmed in 2019 (United Nations Group of Governmental Experts, 2019, p. 3). However, a negotiating mandate for a binding instrument remains hamstrung by consensus-based decision-making, which enables several states to block a legally binding framework. In parallel, the UN General Assembly has elevated the issue politically, passing resolutions that called for a Secretary-General report and convened open informal consultations in "full complementarity" with the CCW process. Despite growing political support in the UN First Committee, these steps remain non-binding and risk creating a fragmented two-track process that dilutes institutional authority and delays the path towards a treaty.

Two-Tier Framework

To address these challenges, this essay proposes a two-tier framework by dividing LAWS into two categories: those that should be banned outright and those that can be regulated.

Tier 1 – Prohibitions

Certain autonomous weapon systems are understood as inherently incompatible with IHL and fundamental ethical constraints. These systems would not be developed, deployed or used at all. In UNODA's summary of GGE work, the "two-tiered approach" is defined, in its simplest form, as: (i) prohibitions on LAWS that cannot be used in compliance with IHL and (ii) regulations on all remaining LAWS to ensure compliance with IHL. These prohibitions apply to unpredictable systems whose effects cannot be sufficiently understood, predicted or explained, which raise the risks of indiscriminate attacks. In addition, systems designed or used to target humans, including selecting and attacking persons based on algorithmic profiling rather than specific human judgement about a concrete military objective, will also be prohibited. Tier 1 would prohibit the development, deployment and use of weapons whose effects cannot be reliably predicted, and systems that autonomously select and engage persons based on algorithmic profiling rather than human judgement.

Tier 2 – Regulations

For all other LAWS that are not categorically banned, states would accept positive duties to design, test, deploy and use them in ways that keep operations within IHL and broader international law. In GGE framing, this means ensuring compliance with IHL throughout the life cycle of LAWS, not just at the point of use. Proposed regulatory elements include implementing stringent weapon reviews under Article 36 for systems with autonomous functions, and imposing limits on types of targets, time, space and scale of operation. This tier would also require meaningful operational constraints: ensuring operators have adequate situational awareness, effective override mechanisms and ongoing monitoring, testing and incident-reporting obligations. Together, systems within this tier would be regulated to ensure that the employment of permitted LAWS remains within the bounds of international law throughout their life cycle.

Policy Recommendations

Institutionalise scenarios alongside other methods

States, NGOs and expert groups must establish a systematic use of scenario-based exercises to clarify the limits and requirements for the development and use of LAWS. By working through concrete operational scenarios — both within national processes and in multilateral forums — states can identify which technical characteristics and patterns of use must be placed in the prohibition tier,

and which can be allowed under strict regulation. Scenario work can also reduce the definitional deadlock by forcing agreement on specific risk factors — such as predictability, target types, operating environments and required human control. Over time, this enables states to converge on practical treaty language that draws and justifies a clearer distinction when classifying LAWS into Tier 1 and Tier 2 categories.

Bring ethical considerations to the centre of the debate

The international community must ensure that ethical concerns are treated as a core pillar of international work on LAWS and not as a secondary add-on. There should be explicit articulation of ethical arguments and rationales behind the calls for prohibitions and safeguards. This exploration of perspectives beyond IHL when defining LAWS — such as moral agency, human dignity and limits on delegating lethal decisions — would enable a more robust and transparent basis for progressing the two-tier framework. Clarifying how ethics inform elements of a prohibition will give states greater confidence that fundamental values are properly discussed and reflected in governing frameworks. A clearer, ethical rationale can also strengthen legitimacy and coalition-building, increasing the prospects of moving from non-binding principles to a binding framework.

Conclusion

A two-tier framework offers a practical way to reconcile divergent state approaches to LAWS by prohibiting clearly incompatible systems while imposing restrictions on those that can be used consistently with IHL. International organisations should institutionalise scenario-based exercises to build a shared understanding of LAWS' risks and place ethical concerns at the centre of treaty negotiations, not at the margins. Together, these steps can help generate the convergence and political will to overcome the constraints that impede progress towards a legally binding framework to govern LAWS.

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