Australia’s Submission to the United Nations Secretary-General’s Report on Lethal Autonomous Weapons Systems

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2. In this submission, we provide our views on ‘ways to address the related challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives, and on the role of humans in the use of force’, while acknowledging the potential benefits of LAWS.

3. Australia recognises the potential of Autonomous Weapons Systems (AWS) to enhance defence capabilities, reduce risk to defence personnel, and increase precision and efficiency in military operations – while minimising civilian casualties. All military capability must be used in compliance with international law.

4. Australia remains committed to working to build common understandings of the opportunities and risks associated with LAWS, in particular through constructive participation in the current Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems (‘the GGE’). Australia supports this forum being used to achieve practical and tangible outcomes.

5. Australia also participates in complementary international efforts that consider the breadth of applications of artificial intelligence (AI) and autonomy in the military domain. Australia has endorsed the Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy and the Responsible AI in the Military Domain (REAIM) Summit’s Call to Action.

Legal considerations

6. Existing international law regulates the study, development, acquisition, adoption and employment of new weapons, means and methods of warfare, including emerging technologies such as LAWS. Australia recognises that compliance with applicable international law is critical to ensuring the responsible development and use of LAWS.

7. The law applicable to the development and use of LAWS will depend on an assessment of the circumstances. This includes, for example: the particular conduct in question; whether the conduct is taking place in peacetime or armed conflict; and the parties in question, including identification of their respective international legal obligations.
8. International humanitarian law (IHL), as the body of law designed to regulate the conduct of hostilities, is the *lex specialis* governing armed conflict. As such, in the context of an armed conflict, the test of whether particular conduct complies with or constitutes a violation of international law should generally be determined by reference to IHL.

9. International human rights law (IHRL) may be relevant to the development and use of LAWS, either alongside IHL during armed conflict, or in peace time outside the context of an armed conflict.

10. Well established international legal principles of State responsibility and individual criminal responsibility also apply when States and individuals use LAWS. For example, every internationally wrongful act of a State, including those involving the use of LAWS, entails the international responsibility of that State. An individual will also be criminally responsible for his or her conduct in violation of IHL under applicable international and domestic law.

11. Australia has been actively engaged in GGE discussions, under the auspices of the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (CCW), a key instrument of IHL, since its inception.

12. Australia considers that the CCW is the most appropriate framework for multilateral discussions on LAWS. The purpose of the CCW is to ban or restrict the use of specific types of weapons that are considered to cause unnecessary or unjustifiable suffering to combatants or to affect civilians indiscriminately. The CCW brings together States with diverse security interests and benefits from the inputs of a wide range of experts, including from governments, international organisations, civil society and academia. CCW States Parties include the major developers and users of military capability.

13. Australia advocates for building a shared understanding of how existing IHL applies to LAWS before pursuing any new legal instrument. Australia is fully committed to building this shared understanding through the ongoing discussions in the GGE. Accordingly, we do not support the creation of a parallel process on LAWS that would be detrimental to our collective efforts in the GGE.

14. Australia co-sponsors – alongside Canada, Japan, the Republic of Korea, Poland, the United Kingdom and the United States – a joint proposal to the GGE entitled ‘Draft Articles on Autonomous Weapons Systems – prohibitions and other regulatory measures on the basis of international humanitarian law’ (the Joint Proposal).

15. Australia prefers to refer to ‘AWS’ instead of ‘LAWS’, since autonomous weapons may have a range of effects, including non-lethal, that are regulated by IHL. This submission, however, uses ‘LAWS’ for consistency with Resolution 78/241 (except when referring to the Joint Proposal).

16. The Joint Proposal adopts a two-tier approach, elaborating types of AWS that would, by their nature, be categorically prohibited under IHL, and placing limitations on the use of
other AWS not categorically prohibited. The Joint Proposal also outlines practical measures States may take to ensure AWS are designed and used in ways that address existing IHL requirements.

**Application of IHL**

17. IHL addresses the legality of weapons in two ways. First, it prohibits certain types of weapons based on intrinsic characteristics and effects. Secondly, it restricts certain uses of otherwise lawful weapons.

18. As with all weapons systems, there are certain characteristics that would render LAWS inherently incapable of being used in compliance with IHL. For example, use of a LAWS would be unlawful per se if the system was inherently indiscriminate because it cannot be directed at a specific military objective; its effects were unable to be limited as otherwise required by IHL; or if it were of a nature to cause superfluous injury or unnecessary suffering.

19. The Joint Proposal proposes certain measures to prevent development and use of systems that cannot, under any circumstances, be used in compliance with IHL. Article 1 of the Joint Proposal states that AWS must not be designed to: (a) target civilians or civilian objects, or spread terror among the civilian population; (b) conduct engagements that would invariably result in incidental loss of civilian life, injury to civilians, and damage to civilian objects excessive in relation to the concrete and direct military advantage anticipated; or (c) conduct engagements that would not be the responsibility of the commanders and operators using the system.

20. Articles 3 to 5 of the Joint Proposal set out regulatory measures to ensure effective implementation of the principles of distinction and proportionality, as well as the requirement to take feasible precautions when planning and conducting attacks.

21. This creates an obligation on States to perform rigorous testing and evaluation of autonomous functionalities to make relevant assessments and inform commanders and operators of how the system performs in different circumstances. Before a system may be deployed or used, commanders and operators must exercise due diligence, based on their knowledge of a system and operational environment, to ensure that use adheres with the principles of distinction, proportionality, and precautions in attack.

**Legal review of LAWS**

22. Legal reviews are a critical safeguard for ensuring all weapons systems are capable of being used in compliance with IHL. A legal review (often referred to as a ‘weapons review’) is the process by which States determine the lawfulness of any new weapon, means or method of warfare, before it is used in armed conflict. States Parties to Additional Protocol I to the Geneva Conventions (such as Australia) are required to conduct legal reviews pursuant to article 36.
23. The GGE has, over many years, recognised the importance of States’ obligations under international law to conduct legal reviews of LAWS. LAWS GGE Guiding Principle (e) affirms the importance of States conducting legal reviews to determining the legality of LAWS prior to their use in armed conflict. The 2023 GGE report encouraged the voluntary exchange of relevant best practices between States in this area.

24. Australia has long advocated for the importance of legal reviews as a mechanism for ensuring that the development and use of LAWS in armed conflict is lawful under international law, including IHL. To that end, Australia also encourages States that are not party to Additional Protocol I to undertake legal reviews, to enhance compliance with international law. All Australian Defence Force (ADF) weapons and weapons systems must comply with Australia’s international legal obligations, and are subject to legal reviews prior to employment, in accordance with Australia’s obligations under article 36 of Additional Protocol I.

25. In 2023 and in 2024, Australia hosted two expert meetings on the Legal Review of Autonomous Weapons Systems in Sydney. The expert meetings provided an opportunity for a cross-regional grouping of States, academics, NGOs and industry to discuss State practice and establish mechanisms for exchanging information in relation to legal reviews of LAWS and more broadly.

**Human involvement and control**

26. Australia does not agree with proposals for creating new international law mandating a single standard of human control over or human involvement in the use of LAWS. Noting there is no express IHL requirement for a weapon to be subject to ‘human control’, Australia considers ‘human control’ or ‘human involvement’ as one means – but not the only means – of ensuring compliance with IHL. The level of human control or human involvement will vary depending on the context of the use of a LAWS.

27. The specific measures needed to anticipate and control the effects of a weapon system to ensure compliance with IHL, will be highly context specific. The degree of human involvement or supervision, and types of human-machine interaction required, will vary depending on the operator training and requirements, capabilities and limitations of the weapon system, the operational context (including targets intended for engagement), and the environment of use. For example, very different controls and levels of human involvement would be required in a static environment with no civilians or civilian objects, as opposed to a more complex, populated and dynamic environment where there is a risk of civilian harm.

28. Australia outlined an incremental, layered approach to applying control over the military use of force in a working paper submitted to the GGE in 2019, entitled ‘Australia’s System of Control and Applications for Autonomous Weapons Systems’. Australia’s system of control measures provides comprehensive control over any weapon system, including how and
under what circumstances it can be deployed, and compliance with international and domestic law.

**Harnessing technology in support of IHL**

29. In recognising the risks that AI and autonomy-related technologies present, it is also important to acknowledge the opportunities they may present to minimise risks associated with human fallibility in decision-making in conflict (bias, stress or errors). Where LAWS have the potential to be more precise through the use of AI and autonomy-related technologies, these technologies should be harnessed to reduce harm to civilians and civilian objects, and to strengthen compliance with IHL.

**Risk mitigation measures**

30. Australia advocates for risk assessments and mitigation measures to be part of the design, development, testing and deployment cycle of emerging technologies in any weapons systems. This notion is recognised by the LAWS GGE Guiding Principle (g).

31. The 2023 GGE report concluded that ‘states must ensure compliance with their obligations under international law, in particular IHL, throughout the lifecycle of a weapon system based on emerging technology in the area of LAWS. When necessary, States should, inter alia: (a) limit the types of targets that a system can engage; (b) limit the duration, geographic scope and scale of the operation of the weapon system; and (c) provide appropriate training and instruction for human operators’.

**Ethical considerations**

32. As for any type of weapon, the development and use of LAWS raises ethical considerations. For this reason, IHL, as the legal framework developed to govern the development and use of weapons, is based on and has roots in ethical principles. A key tenet of IHL is that the means of conducting warfare are not unlimited and that civilians, in particular, must be protected and the impact on them minimised.

33. The link between ethical considerations and IHL is recognised in the Martens Clause, as articulated in Article 1(2) of Additional Protocol I to the Geneva Conventions, which provides that, in cases not otherwise covered by international law:

   ‘civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience.’

34. During armed conflict, IHL provides a robust operational articulation of how any weapon, including LAWS, must be used in compliance with the ethical principles upon which the system of law is based. Ensuring that LAWS are designed and used to strictly adhere to IHL is essential in addressing ethical considerations.
35. The ADF applies the ADF Philosophical Doctrine on Military Ethics, which provides high-level ethical guidance to the ADF and applies to all new and emerging technologies, including AI and LAWS.

**Accountability considerations**

36. Australia recognises that humans will be involved during the lifecycle of LAWS. This includes in development, conducting testing, carrying out legal reviews, training operators, setting operational parameters and control measures, setting rules of engagement, deciding to deploy or decommission them, and evaluating their effectiveness.

37. Australia notes that decisions made with the assistance of LAWS are subject to accountability frameworks, encompassing both domestic and international law. As previously mentioned, Australia recognises that legal frameworks governing state responsibility and individual accountability apply equally to the use of LAWS as they would any other weapon.

38. Humans remain responsible for effecting obligations under IHL. Humans, not weapons, are legally accountable for the effects of weapons in military operations, including LAWS. If a weapon system cannot be used in accordance with Australia’s international law obligations, the Australian Department of Defence will not deploy it during armed conflict. A commander must understand the effects of the weapons systems they employ.

39. Australia recognises that LAWS must not be designed to deliberately preclude or prevent responsibility or accountability. LAWS can be designed to trace accountability on the battlefield, through system logs that record data on the operation of a weapon system, which can be used in post-mission assessment by human-machine teaming to consider and conduct improvements.

**Security and technological considerations**

**Cybersecurity vulnerabilities**

40. All systems are at risk of hostile interference or attack. As LAWS capabilities develop, including through the incorporation of AI technologies, Australia will continue to apply a rigorous approach to the development, acquisition and fielding of these capabilities, that takes account of cybersecurity vulnerabilities. The ADF has robust governance for the operation of sophisticated weapons systems, supported by rigorous engineering, acceptance and deployment procedures. Cybersecurity risk management will necessarily form part of the broader framework of LAWS risk assessment and mitigation.

**Proliferation risks**

41. Australia encourages countries interested in addressing the potential proliferation risks associated with emerging technologies like LAWS to engage in the work of the multilateral export control regimes. These regimes are the premier forums for participating nations to come together and develop shared approaches to addressing these challenges.
42. Australia’s export control policies and procedures undergo regular review to align with evolving priorities and reflect changes in the various international counter-proliferation and multilateral export control regimes of which Australia is a member. Australia implements catch-all controls on goods and technologies that are not covered by existing control lists, assisted through sharing of information and case studies with partners.

**Unintended bias**

43. The development of LAWS that employ AI may engage issues of unintended bias concerning race, gender or other characteristics. Australia recognises that people can be differently affected by new and emerging technologies depending on gender, ethnicity, socio-economic background and other characteristics. Consideration of unintended bias and potential discriminatory effects of new technologies is crucial.

44. In the GGE, Australia has advocated for measures to reduce unintended bias in AI capabilities relied upon in connection with the use of LAWS. Australia sees value in dialogue on questions of unintended bias, among other social-technical issues related to LAWS.

45. States continue to grapple with complex issues associated with emerging technologies, such as the gender digital divide and technology-facilitated gender-based violence. Australia advocates for the forums where these issues are discussed to be diverse and inclusive, and enable meaningful participation, leadership and representation of women and gender diverse people. Australia stresses the importance and value of diversity and gender parity in discussions on the governance of LAWS.

**Australian Defence Strategies**

46. LAWS have the potential to enhance defence capabilities, reduce risk to defence personnel and increase precision and efficiency in military operations, while minimising collateral damage and casualties.

47. In this context, the Australian National Defence Strategy, released in April 2024, reflects on the current international security environment and technological advancements. The Strategy highlights AI and autonomy as one of Australia’s immediate priorities for collaboration under the AUKUS Pillar II Partnership. The Australian Government will also be investing an additional of AUD 1 billion over the next four years to accelerate ADF preparedness including for long-range strike, targeting and autonomous systems.

48. The Australian Defence Industry Development Strategy, released in February 2024, identifies the development and integration of autonomous systems as one of seven Sovereign Defence Industrial Priorities.

**Complementary efforts on responsible military use of AI and autonomy**

49. Australia participates in complementary international efforts that consider the breadth of applications of AI and autonomy in the military domain. Implementing governance to ensure the responsible use of AI in the military domain presents a policy and practical challenge,
and Australia welcomes cooperation to share approaches on mechanisms to manage risks while harnessing the benefits and opportunities of these technologies. Australia values this cooperation and the opportunities it presents to inform development of its national approach and policy on responsible use of AI in the military domain.

**Responsible AI in the Military Domain (REAIM)**

50. Australia participated in the REAIM Summit in February 2023, co-hosted by the Netherlands and Republic of Korea. Australia joined the REAIM ‘Call to Action’, a political declaration which stresses the importance of the responsible use of AI in the military domain, in accordance with international obligations and in a way that does not undermine international security, stability and accountability.

51. Australia attended the REAIM Regional Consultations in Singapore in February 2024, which provided an opportunity to better understand approaches and challenges relevant to our region. These ongoing REAIM consultations are useful in preparation for the second Summit to be held in Seoul in September 2024.

**Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy**

52. Australia endorses the landmark 2023 *Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy*. Endorsed by 54 States to date, the Declaration provides that military use of AI can and should be ethical, responsible, and enhance international security, and must be in compliance with applicable international law, including IHL.

53. Reflecting the strength of Australia’s endorsement, on 3 November 2023, the Deputy Prime Minister, Foreign Minister, and Minister for Industry and Science published a joint media release on Australia’s decision to join the Declaration. Australia attended an inaugural plenary meeting of these States in Washington in March 2024, and is participating in regular dialogue on the Declaration’s implementation.