

CONVENTION ON CERTAIN CONVENTIONAL WEAPONS (CCW)
Lethal Autonomous Weapons Systems
National Commentary – Australia

Australia is a strong supporter 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* (generally referred to as the Convention on Certain Conventional Weapons - CCW). The CCW has broad support from all regions across the globe, and is the appropriate forum to discuss issues related to lethal autonomous weapons systems (LAWS).

In 2016, a United Nations Group of Governmental Experts (GGE) was established in Geneva to examine emerging technologies in the area of lethal autonomous weapons systems in the context of the objectives and purposes of the CCW. The discussions on LAWS reflect a recognition that emerging technology, such as driverless cars, can bring many benefits but pose challenges – and a GGE could conduct balanced discussions with subject matter experts on the implications of potential incorporation of LAWS into military capabilities.

Systems with advanced artificial intelligence (AI) and enhanced autonomous functions are becoming increasingly prevalent in both civilian and military sectors. These developments are not new or surprising. Australia recognises the potential value and benefits that AI brings to military and civilian technologies.

Militaries throughout the world are incorporating ever more automation into their systems. These systems can: reduce civilian casualties or collateral damage; improve the accuracy of weapons; reduce the risk to defence personnel; and provide enhanced situational awareness. In the civilian sector, emerging technologies are being used in numerous areas including medical analysis, genomics, logistics, automotive and aerospace manufacturing.

The Challenge of Defining LAWS

Australia calls for CCW High Contracting Parties to be realistic and pragmatic when discussing emerging technology such as LAWS. The LAWS-GGE has not yet reached consensus on a definition of LAWS. This does not suggest that the task of defining LAWS is insurmountable but reflects that this is a difficult and constantly evolving area of policy involving dual-use technologies with inherent complex technical and legal considerations. Autonomous technology originating from, or designed for, civilian use, may easily be converted for military use and vice versa. Where governments were previously at the forefront of technological breakthroughs in support of military or civilian applications, private companies are now leading in many areas.

Australia contends that it is important to ensure that the discussion on LAWS is not inadvertently conflated with automated or remotely operated weapons systems. Not all automated weapons systems should per se be classified as LAWS.

System of Control over Weapon Systems

Australia believes that it is important to look at the lifecycle of a weapon or weapons system when examining the issue of control. As our paper, *“Australia’s System of Control and applications for Autonomous Weapon Systems”*

(CCW/GGE.1/2019/WP.2/Rev.1) makes clear, a substantial degree of control already exists through the design, development and use of weapons systems. This includes setting parameters, conducting tests, carrying out legal reviews, training operators, setting rules of engagement, taking the decision to deploy them, evaluating their effectiveness after use and taking the decision to decommission them.

The discussion on control should not be narrowed or restricted to requiring the presence of a human in the loop to make ‘trigger-pull’ decisions. Australia welcomes the recognition by the GGE that control should be considered across the entire life cycle of a weapons system. This approach enables discussions on LAWS to be more grounded in the realities of the military context, including how control is exercised by responsible modern militaries.

Article 36 Reviews - Additional Protocol I to the Geneva Conventions of 12 August 1949

Australia believes that an aspect of the current system of international law – embodied in Article 36 of *Additional Protocol I to the Geneva Conventions of 12 August 1949* contributes to the robust framework for regulating weapons systems, including those with autonomous functionality. Australia’s approach to Article 36 Reviews was described in detail in the paper “*The Australian Article 36 Review Process*” (CCW/GGE.2/2018/WP.6).

Article 36 reviews provide an important mechanism for States Parties to test whether the development or acquisition of weapons systems complies with international humanitarian law (IHL). As a party to Additional Protocol I, Australia adheres to the obligation to undertake a review of any new weapon, means or method of warfare, to determine whether its employment would, in some, or all circumstances, be prohibited by IHL or other applicable international law. Australia’s national system of control embodies a suite of laws, regulations, processes, orders and doctrine that ensures all weapons intended for use by the Australian Defence Force during an armed conflict are capable of being used in compliance with Australia’s legal obligations.

Strengthening compliance with existing IHL, including through Article 36 reviews, is the most effective way to manage new weapons systems, including the potential development of LAWS. Australia encourages other nations to undertake weapons reviews, even if they are not a party to Additional Protocol I. States should ensure accountability for developing, deploying and using emerging weapons systems through appropriate review systems, in accordance with applicable domestic and international law.

In this context, Australia has consistently argued that discussions concerning a treaty banning LAWS are premature in the absence of an agreed definition and understanding of the technology – including the benefits it may provide. Australia believes that it is neither necessary nor desirable to ban or create new legal frameworks to regulate LAWS, as this technology may provide many benefits including minimising incidental harm to civilians and reducing risks to military personnel. Instead, we suggest that compliance with existing IHL, including the conduct of Article 36 reviews, may serve to mitigate many of the concerns voiced by some CCW States Parties and interest groups.

Operationalising 11 Principles that have been affirmed by the LAWS-GGE

Australia will continue to participate constructively in the LAWS-GGE process. We note that broad areas of convergence have emerged in relation to policy options for the way forward. The Group has affirmed eleven guiding principles in relation to the potential development and use of LAWS. Australia welcomes the affirmation that IHL continues to apply fully to all weapons systems, including LAWS. High Contracting Parties have also acknowledged that human responsibility for decisions on the use of weapons systems must be retained since accountability cannot be transferred to machines.

In his letter of 29 May 2020, the Chair of the Group of Governmental Experts on Lethal Autonomous Weapons Systems called for submissions on how the guiding principles might be operationalised. We provide some ideas below.

(a) *International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems;*

States should continue to emphasise in their military doctrine and manuals the importance of compliance with International Humanitarian Law (IHL). While high level documents such as these are often technology agnostic, it is crucial that an understanding of IHL, and the need for compliance, is established in such foundational documents. The importance of compliance with IHL should be reinforced and incorporated into Law of Armed Conflict (LOAC) training for all military personnel. As new technology is introduced into service, documents, such as rules of engagement, targeting directives and standard operating procedures, will provide clarity regarding how such weapons systems are to be used in compliance with IHL.

The Australian Department of Defence, through the Indo-Pacific Centre for Military Law (IPCML) offers courses including the 'Command and Staff Operations Law Course', the 'Cyber Law and Other Emerging Technology Course' and the 'Rules of Engagement Course'. The mission of the IPCML is to 'promote respect for the rule of law and compliance with international law in military operations through training, international engagement and related activities with partners from the Indo-Pacific region'. While the focus of the IPCML is on Australia's regional partners, enrolment in IPCML courses is open to military personnel from all States.

(b) *Human responsibility for decisions on the use of weapons systems must be retained since accountability cannot be transferred to machines. This should be considered across the entire life cycle of the weapons system;*

As mentioned above, States should continue to ensure appropriate national accountability mechanisms for the use of force in armed conflict including in the future should LAWS be developed and deployed.

(c) *Human-machine interaction, which may take various forms and be implemented at various stages of the life cycle of a weapon, should ensure that the potential use of weapons systems based on emerging technologies in the area of lethal autonomous weapons systems is in compliance with applicable international law, in particular IHL. In determining the quality and extent of human-machine interaction, a range of factors should be considered including the operational context, and the characteristics and capabilities of the weapons system as a whole;*

Please refer to comments above on Article 36 Reviews and Systems of Control.

(d) *Accountability for developing, deploying and using any emerging weapons system in the framework of the CCW must be ensured in accordance with applicable international law, including through the operation of such systems within a responsible chain of human command and control;*

States should continue to ensure accountability for developing, deploying and using emerging weapons systems through appropriate national control systems, in accordance with applicable domestic and international law.

(e) *In accordance with States' obligations under international law, in the study, development, acquisition, or adoption of a new weapon, means or method of warfare, determination must be made whether its employment would, in some or all circumstances, be prohibited by international law;*

As consistently mentioned throughout GGE discussions, Australia is a strong supporter of Article 36 Reviews.

States should conduct weapons reviews in accordance with their international legal obligations in order to ascertain whether use of a new weapon, means or method of warfare would be prohibited under international law.

Australia, through the previously mentioned Indo-Pacific Centre for Military Law, offers two courses which include sessions focussed on the conduct of weapon reviews; the 'Commanders and Staff Operations Law Course' and the 'Cyber Law and Other Emerging Technology Course'. While these courses have not been run during 2020 due to travel restrictions and social distancing requirements necessitated by the COVID-19 pandemic, the intent for 2021 is to once again welcome enrolments from military personnel from all States.

(f) *When developing or acquiring new weapons systems based on emerging technologies in the area of lethal autonomous weapons systems, physical security, appropriate non-physical safeguards (including cyber-security against hacking or data spoofing), the risk of acquisition by terrorist groups and the risk of proliferation should be considered;*

All military capability should be secured to the appropriate level.

(g) *Risk assessments and mitigation measures should be part of the design, development, testing and deployment cycle of emerging technologies in any weapons systems;*

Please refer to comments above on Article 36 Reviews and Systems of Control.

(h) *Consideration should be given to the use of emerging technologies in the area of lethal autonomous weapons systems in upholding compliance with IHL and other applicable international legal obligations;*

States should consider how technological advances in weapons systems, such as autonomous systems, may help enhance compliance with IHL, increase precision, and support commanders to fulfil their obligations under IHL on the battlefield.

(i) *In crafting potential policy measures, emerging technologies in the area of lethal autonomous weapons systems should not be anthropomorphized;*

Australia supports this Guiding Principle.

(j) *Discussions and any potential policy measures taken within the context of the CCW should not hamper progress in or access to peaceful uses of intelligent autonomous technologies;*

Australia supports the aim of this Guiding Principle. States should consider the potential benefits of using emerging technologies in terms of the ability to better comply with IHL and other applicable international law.

(k) *The CCW offers an appropriate framework for dealing with the issue of emerging technologies in the area of lethal autonomous weapons systems within the context of the objectives and purposes of the Convention, which seeks to strike a balance between military necessity and humanitarian considerations.*

Australia agrees that the CCW is the appropriate forum to continue discussions on LAWS.