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SMRTÍCÍ AUTONOMNÍ ZBRAŇOVÉ SYSTÉMY Budoucí výzvy týkající se jejich regulace na mezinárodní úrovni

LETHAL AUTONOMOUS WEAPONS SYSTEMS

Future Challenges Concerning Their Regulation on International Level

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Abstrakt

Od roku 2013 probíhají debaty o smrtících autonomních zbraňových systémech (LAWS) a přístupu k nim z hlediska mezinárodní legislativy v rámci Úmluvy o některých konvenčních zbraních (CCW) a později od roku 2017 na platformě Skupiny vládních expertů při CCW. V návaznosti na probíhající debaty a důležitost tématu si autorka v článku klade za cíl shrnout výsledky dosažené v rámci jednání pod CCW, zejména hlavní kroky, úspěšně zvládnuté výzvy a posuny v postojích států od roku 2013, jakož i otevřené otázky při regulaci LAWS v rámci této mezinárodní úmluvy. Část článku je věnována identifikaci existujících podobných rysů zemí sdílejících společný postoj k LAWS na konferencích CCW, jakož i výzvám a možným důsledkům postavení Číny, která podporuje zákaz nasazení LAWS, nikoli však jejich výzkumu a výroby.

Abstract

Since 2013, the debates on lethal autonomous weapons systems (LAWS) and approach to them from the point of view of international legislation have been taking place within the framework of the Convention on Certain Conventional Weapons (CCW) and later, since 2017, on the platform Group of Governmental Experts under CCW. Following the ongoing debates and the importance of the topic, in her article, the author aims to summarise the results achieved in the discussions under the CCW, especially the main steps, successfully handled challenges and shifts in the countries' positions since 2013, as well as open issues in regulating LAWS under this international convention. Part of the article is dedicated to the identification of existing similar features of countries sharing a common position on LAWS at CCW conferences, as well as the challenges and possible implications of China's status, which supports a ban on the deployment of LAWS, but not on their research and production.

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Klíčová slova

Konvenční zbraně; smrtící autonomní zbraňové systémy; Úmluva o některých konvenčních zbraních; skupina vládních expertů.

Keywords

Conventional weapons; lethal autonomous weapons systems; Convention on Certain Conventional Weapons; group of governmental experts.

INTRODUCTION

International or regional security, respectively, has always been influenced by countries' efforts to improve the technological level of their military arsenal whether in order to gain a competitive advantage against other state or non-state actors and to increase political power on global or regional level, respectively, or to influence the development of the ongoing armed conflict in their favour. However, not all progressive military technologies have been positively received by society. The lethal autonomous weapons systems (hereinafter LAWS), often referred to as "the third revolution in warfare, after gunpowder and nuclear arms", 1 have sparked an enormous debate among governmental and non-governmental representatives and experts, despite the fact that they are still in the process of development and there is no common definition that would define weapons falling in this category. "The debate on autonomous weapons focuses primarily on the ability of a weapon system to independently select and attack targets without human intervention." Experts see positive and at the same time negative implications in this particular ability of LAWS, from the point of view of fundamental human rights, security, law, psychology, sociology but also economical aspects.

"There is currently no global regime formally banning, or even purposefully regulating, fully autonomous (lethal) weapon systems." Countries have been divided into several groups. The first group consists of countries that support fully banning of LAWS in the form of international legislation, whether by the creation of a new one or by the extension of an existing one with additional protocols or articles. The second group includes countries that support non-legally binding political declaration proposed by Germany and France, and the third group covers countries that have spoken out against the introduction of international legislation to impose a ban on LAWS. The nature of LAWS and the disagreement of individual state actors have resulted in the creation of several international initiatives and campaigns, such as the global coalition of nongovernmental organizations named The Campaign to Stop Killer Robots, movements of state actors and the involvement of international governmental and non-governmental organizations, which have further fuelled the existing debate. The most appropriate way to regulate LAWS seems to be the addition of the Sixth Protocol to 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 (hereinafter CCW).

"The flexibility of the CCW and its deep roots in international humanitarian law make it ideally suited to be the framework under which the legal, military and

¹ Future of Life Institute. *Lethal Autonomous Weapons Systems*. No date stated. [on-line] [cit. 2021-02-15]. Available on: https://bit.ly/2VvPlno

² EKELHOF, Merel A. C. Complications of a Common Language: Why it is so Hard to Talk about Autonomous Weapons. In: *Journal of Conflict & Security Law*. London: Oxford University Press, 2017, pp. 311-331.

³ HYNEK, Nik, SOLOVYEVA, Anzhelika. Operations of power in autonomous weapon systems: ethical conditions and socio-political prospects. In: *AI & Soc*, 2020. [on-line] [cit. 2021-03-01] Available on: https://bit.ly/3jlJE3s

humanitarian issues arising out of the potential development proliferation and use of LAWS can be tackled." [4]

CCW has already launched annual meetings of state representatives on the subject since 2013 and established a Group of Governmental Experts (GGE) on emerging technologies in the LAWS area in 2016.

AIMS AND METHODS

The open question of LAWS regulation, their very nature, the possible consequences for international security and humanitarian law, and the fast pace of development of new progressive technologies are creating pressure for the need to constantly examine the issue from different perspectives. This article focuses exclusively on the CCW, namely through the amendment of the Sixth Protocol under the CCW, and does not further explore other possibilities for legislative coverage of the LAWS. It summarises the results achieved in the discussions under the CCW, especially identifying the main steps and successfully handled challenges in regard with the shifts in countries' positions since 2013, when the LAWS debate came to the forefront. Based on the summary, the author analyses the current and future challenges and open issues in regulating LAWS under this international convention from the point of view of attitude or the opinion of individual states, respectively. The author aims to identify if there are any similar features among countries sharing a common position on LAWS at CCW conferences and also examines the challenge and possible implications of China's status as a country dedicated to LAWS development that at the same time supports the banning of their deployment in military operations. Last but not least, it is important to highlight the contribution of the article by providing the complete picture of the development of the LAWS debate within the CCW since its origin interlinked with the opinion of the individual countries, development of their positions and content of national opinions and statements, bringing together a wide variety of sources.

Following the set areas and goals of the research, the author mainly uses the method of synthesis of quantitative and qualitative data available on official internet portals of CCW, United Nations, international non-governmental organizations operating in the field of conventional weapons and LAWS, web portals of state authorities of each analysed state, and largely follows up on publications by research experts and articles in the field of LAWS. In the second part of the article, the method of comparison, which compares positions and the status of countries related to LAWS within the CCW, plays an important role in trying to identify the common and different features, whether among countries supporting or rejecting the introduction of pre-emptive ban on LAWS. In the end, conclusions are formulated for individual researched areas using the method of deduction, while the space is also devoted to open issues and the most current challenges for the future.

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⁴ GILL, Amandeep Singh. 'Introduction' in Perspectives on Lethal Autonomous Weapon Systems. UNODA Occasional Papers No.30, New York: United Nations Publication, 2017, p. 2.

DISCUSSIONS ON LETHAL AUTONOMOUS WEAPON SYSTEMS UNDER CCW

Since 2013, there have been discussions within the CCW on the topic of autonomous weapons systems, but the large number of involved actors, governmental as well as nongovernmental, the very nature of LAWS and the associated implications for international law, economics, politics, sociology and security have not allowed to conclude a common consensus, but on the contrary, led to the deepening of the debates. During the CCW meetings and later in the GGE LAWS format, various aspects of LAWS were discussed, with a high diversity of LAWS topics covered being influenced by a large number of different state and non-state actors participating in the meetings as well as the challenges posed by LAWS for each area. Based on the reports of individual meetings since 2013,⁵ the topics of compatibility of LAWS with the international humanitarian law, definition of technologies falling to this category, issues of accountability and responsibility have resonated in the foreground within legal topics. Within the security topics, it was a dual nature of robotic technologies, transparency, potential military application and potential impact of LAWS on international security. Importance was also attached to issues related to degree of autonomy, interrelationship with human element or ethical issues.

Despite the inability to reach a common consensus for LAWS as a whole topic, the annual debates under the CCW have led to several outputs and general understandings in some areas related to LAWS. First of all, it is necessary to emphasize the very positive nature of the annual meetings under the CCW on LAWS, as they represented, and continue to represent, the opportunity for diverse actors from across the globe to meet in one room and debate and exchange information on a highly important topic with a global impact, such as LAWS are. It is also necessary to point out the diversity of the participating states, whether on the basis of their geographical location or warfare and economic development, which is also reflected in the large representation of countries from the Global South and their high interest in reaching a consensus on LAWS. The interest and importance of the topic has been also emphasized by the quantity of entities number of which present at meetings has increased enormously compared to the first two years, both at the level of high contracting parties, international governmental and non-governmental organizations, and at the level of other entities, for instance from the research sector.

From 2016, the subjects started to meet under GGE LAWS format, which is an openended platform uniting international governmental and non-governmental entities and is exclusively focused on LAWS. GGE LAWS has a mandate to

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⁵ The statement is based on several sources: Reaching Critical Will. Draft Report of the 2014 Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS). 2014. [on-line] [Accessed 2021-02-18] Available on: https://bit.ly/3fwLUUA; United Nations. Fifth Review Conference of the High Contracting Parties to 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. 2016. [on-line] [cit. 2021-02-22] Available on: https://bit.ly/3lAnPzK; United Nations. Report of the 2017 Group of Governmental Experts on Lethal Autonomous Weapons Systems (LAWS). 2017. [on-line] [cit. 2021-02-24] Available on: https://bit.ly/3lHtuEa

"explore and agree on possible recommendations on options related to emerging technologies in the area of LAWS, in the context of the objectives and purposes of the Convention, taking into account all proposals - past, present and future." [6]

Already during the first year of its existence, the participating countries agreed that civilian research in autonomy technologies cannot be hampered, but that military applications must be kept under constant surveillance. The agreement formulated in this way gives the states involved in the development of LAWS the opportunity to continue their efforts, but also leaves room for the remaining states to develop their peaceful autonomous technologies without being affected by the growing negative perception of autonomous military technologies. In 2018, there was a step toward the characterization of LAWS, which was the definition of four broad approaches. The different approaches to the definition of LAWS are also influenced by the existing research and development of technologies, including, but not only, the research of LAWS, in individual countries and their attitudes to ban these weapons systems. In this regard, approach to the definition of LAWS can be described as one of the features that distinguishes the countries that oppose the pre-emptive ban on LAWS and the countries that support it. These four approaches consist of (1) separative approach, (2) cumulative approach, (3) accountability approach, and (4) purpose oriented and effectbased approach. Separative and cumulative approaches differ based on the evaluated characteristics of LAWS and their relevance from the point of view of CCW, while the cumulative approach contains a larger number of characteristics from various areas, from technical to humanitarian. The accountability approach is the result of multi-year debates about the type of decisions and capabilities that are passed on to LAWS. The last defined principle, purpose oriented and effect-based principle, deals with the examination of possible effects and consequences from the deployment of LAWS. As it has not yet been possible to agree on a unified definition of LAWS, the introduction of several principles for their definition has made it possible to cover the diverse approaches to their characterization from the point of view of the individual participating countries.

Probably one of the most important outputs was the adoption of 11 guiding principles in 2019 (Table 1), while their creation began a year earlier. As one of the positives, it is necessary to mention that the principles were also supported by the countries that were from the beginning of the debates against the introduction of ban, or new legislation exclusively for the LAWS area. This point is particularly important because CCW decision-making is based on the consensus principle and can easily be blocked by some states. As the second part of the article is devoted to the analysis of the attitudes, respectively opinions of the countries, the author does not provide further details here.

⁶ Stockholm International Peace Research Institute. *SIPRI Yearbook - 2010-2016*. 2016. [on-line] [Accessed 2021-02-24] Available on: https://bit.ly/3fAwTB4

⁷ United Nations. Report of the 2018 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems. 2018. [on-line] [cit. 2021-02-27] Available on: https://bit.ly/3xsGr7l

Table 1. Guiding Principles affirmed by the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons System

- (a) International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems;
- (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;
- (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;
- (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;
- (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, a determination must be made whether its employment would, in some or all circumstances, be prohibited by international law;

- (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;
- (g) Risk assessments and mitigation measures should be part of the design, development, testing and deployment cycle of emerging technologies in any weapons systems;
- (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:
- (j) In crafting potential policy measures, emerging technologies in the area of lethal autonomous weapons systems should not be anthropomorphized; (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:
- (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.

Source: Author's own processing according to CCW. Meeting of the High Contracting Parties to 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: Final Report. 2019. [online] [cit. 2021-03-01] Available on: https://bit.ly/2VARwWr

Regarding possible future developments in the debates under GGE LAWS, it can be assumed, based on the outputs of the Berlin Forum supporting the 2020 GGE LAWS, that high contracting parties could establish a set of joint operational standards that would reflect good practices and sharing of information. Information sharing will be available and beneficial not only to countries, that are already engaged in LAWS research and development, but also to countries that have spoken out in favour of their pre-emptive ban, especially sharing of information in the area of risk assessment. It is also possible to assume a refining of the existing 11 guiding principles on the basis of new findings and outputs resulting from the ongoing debates.

⁸ Federal Foreign Office. Forum on Lethal Autonomous Weapons Systems. 2020. [on-line] [cit. 2021-03-03] Available on: https://bit.ly/3fzRRQl

COUNTRIES' POSITIONS ON LETHAL AUTONOMOUS WEAPON SYSTEMS

During the Informal Meeting of Experts on LAWS under CCW and since 2017 in the format of GGE LAWS meetings, the effort to define the concept of LAWS and their characteristics has always been a part of the agenda. "Each country's definition of an autonomous weapon system reflects, to a certain extent, their position on the matter." The positions of the subjects, namely states, international organizations and other involved entities, on LAWS were initially divided into two groups; the first group consisting of states supporting the pre-emptive ban on LAWS and the second group of states that are against the ban on LAWS. As a result of intense debate and new findings, other approaches have joined these two groups. In 2018, Germany and France supported a non-legally binding political declaration, that

"would affirm that international humanitarian law applies to LAWS and that [states parties] share the conviction that humans should continue to be able to make ultimate decisions with regard to the use of lethal force and should continue to exert sufficient control over lethal weapons systems they use." [10]

The group of states accepted this proposal positively, but from the point of view of international non-governmental organizations, it was faced with negative responses. A separate approach to LAWS has been introduced by China, which has expressed support for the development and production of LAWS, but not their deployment on battlefield (Figure 1).

⁹ SONI, Anoushka, DOMINIC, Elizabeth. Legal and Policy Implications of Autonomous Weapons Systems. In: *The Centre for Internet and Society*, India. 2020, p. 65.

¹⁰ SAYLER, Kelley M., MOODIE, Michael. *International Discussions Concerning Lethal Autonomous Weapon Systems*. 2020. [on-line] [cit. 2021-03-07] Available on: https://fas.org/sgp/crs/weapons/IF11294.pdf

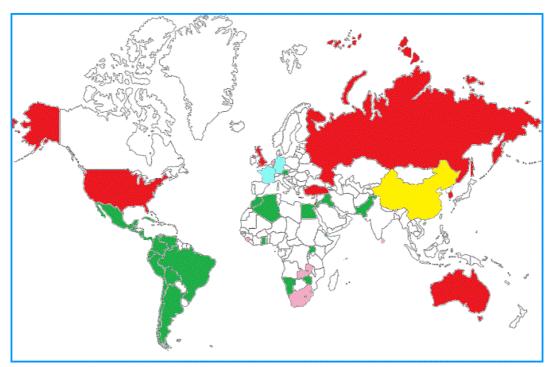


Figure 1 States' position on the lethal autonomous weapons systems

Explanatory notes: green (countries supporting pre-emptive ban on LAWS), red (countries against ban on LAWS), yellow (countries supporting ban on use of fully autonomous weapons, but not their development or production), pink (states supporting legally binding instrument but have not officially mentioned the notion pre-emptive ban), blue (countries supporting non-legally binding political declaration), white (countries that have not yet taken a formal position on the pre-emptive ban on LAWS).

Source: Author's own processing according to Human Rights Watch. Stopping Killer Robots - Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control. 2020. [online] cit. 2021-03-04] Available on: https://bit.ly/3rWrlFN

Countries supporting the pre-emptive ban on LAWS

The largest group consists of states supporting the introduction of a pre-emptive ban on LAWS; in addition, "approximately 165 non-governmental organizations have called for a pre-emptive ban on LAWS due to ethical concerns," as well as huge amount of research entities. According to the portal of Campaign to Stop Killer Robots, 2 a group of non-governmental organizations supporting the implementation of the pre-emptive ban on LAWS, which closely monitors the progress of LAWS-related activities and events, 2 states have spoken out in favour of introduction of the pre-emptive ban (the author

¹² Campaign to Stop Killer Robots. *Country Views on Killer Robots*. 2019. [on-line] [cit. 2021-04-22] Available on: https://bit.ly/37jqAxg

¹¹ SAYLER, Kelley M., MOODIE, Michael. *International Discussions Concerning Lethal Autonomous Weapon Systems*. 2020. [on-line] [cit. 2021-03-07] Available on: https://bit.ly/3A5HA6u

excludes China, as this country represents a special category within the article). The countries have gradually spoken in favour of this opinion during the period 2013-2020, influenced by their national policy, the country's approach to the definition of LAWS, or the development of discussions in international fora. The first country to support the introduction of a pre-emptive ban on LAWS was Pakistan in 2013, followed in 2014 by Ecuador, Egypt, Holy See and Cuba; in 2015 by Bolivia, the State of Palestine and Zimbabwe; in 2016 by Algeria, Costa Rica, Mexico, Chile, Nicaragua, Panama, Peru, Argentina, Venezuela and Guatemala; in 2017 by Brazil, Iraq and Uganda; in 2018 by Austria, Djibouti, Colombia, El Salvador and Morocco; and in 2019 the countries of Jordan and Namibia added their names to the list of countries supporting the pre-emptive ban on LAWS. With the exception of three countries, Zimbabwe, Namibia and Egypt, all states supporting the introduction of pre-emptive ban are high contracting parties to the CCW. As for Egypt, it is one of the signatory states. Namibia and Zimbabwe are not parties to the CCW.

During the CCW and later the GGE LAWS meetings, countries supporting the introduction of a pre-emptive ban on LAWS gave a variety of reasons to support their position, including legal, humanitarian, security, but also political reasons. Pakistan, the first country to speak out in favour of a pre-emptive ban on LAWS, stated that "LAWS are by nature unethical, and irrespective of the degree of sophistication, they cannot be programmed to comply with international humanitarian law." Other countries that were among the first ones to support the introduction of a pre-emptive ban on LAWS developed Pakistan's position and added further concerns about the potential deployment of LAWS in the future. The Permanent Observer Mission of the Holy See to the United Nations and other International Organizations at the Informal Expert Meeting on LAWS stated that

"besides the fact that it leaves to a machine the decision of life or death of a human being, one of the dangers is that these weapons could lead to strategies diluting or concealing true responsibilities, inducing a total lack of accountability." [14]

The question of LAWS's non-compliance with international humanitarian law as well as the lack of accountability also resonated in the statements of the Cuban Ambassador to the United Nations Office in Geneva during the meetings of CCW on LAWS. He also added concerns that "machines or robots cannot replace human beings in the qualitative judgments that are of key importance in armed conflicts." African countries' comments on the development and deployment of LAWS often included

¹³ BIBI, Gulshan. Implications of Lethal Autonomous Weapon Systems (LAWS): Options for Pakistan. In: *Journal of Current Affairs*, Vol. 2, No. 2 - 2018. [on-line] [cit. 2021-03-11] Available on: https://bit.ly/3fzr46Y

¹⁴ The Permanent Observer Mission of the Holy See to the United Nations and Specialised Agencies in Geneva. Statement by H. E. Archbishop Ivan Jurkovič Permanent Observer of the Holy See to the United Nations and other International Organizations at the Informal Expert Meeting on Lethal Autonomous Weapon Systems (CCW). 2016. [on-line] [cit. 2021-03-11] Available on: https://bit.ly/3ims6F8

¹⁵ Representaciones Diplomáticas de Cuba an el Exterior. *Cuba calls for a ban on lethal autonomous weapons and defends the International Humanitarian Law*. 2017. [on-line] [cit. 2021-03-11] Available on: https://bit.ly/3lBfH2e

concerns based on the political and economic strength of developed countries, in addition to the reasons mentioned by other countries above. "Ghana and Zimbabwe presented arguments that acknowledge that great powers will continue to develop LAWS for their immense military benefits irrespective of the views of smaller powers." ¹⁶

Since 2016, a large number of states have started joining the group of countries supporting the pre-emptive ban on LAWS, which has not only broadened the basis of the arguments against LAWS, but also highlighted the ongoing debates in this area. In its statement to the meeting of GGE LAWS in 2020, Venezuela identified potential challenges that LAWS could cause in their future deployment. In addition to the fundamental challenges to the principles of international humanitarian law in the form of the principles of distinction and proportionality, the representatives of this country stated that

"it must be guaranteed that international responsibility for acts that violate international humanitarian law can be ensured for those who design, produce, and/or deploy them, regardless of the forensic difficulties arising from their use." [17]

A similar position to Venezuela regarding the responsibility for the deployment of LAWS was shared by other countries supporting the pre-emptive ban, which may be due to the fact that states that have spoken out against the introduction of internationally binding LAWS legislation are the leader developers of this type of weapons.

In 2017, Brazil joined the group of countries supporting the introduction of the preemptive ban, and it is one of the countries that are more "aggressive" in their statements and are not afraid to express a critical attitude to the slow development of debates in this area.

"With clear statements, Brazil articulated the need for new international regulation, asserting that member states must not sign a blank check for the development of autonomous systems that will disrespect international humanitarian law and human rights." [18]

It was Brazil, together with Austria and Chile, which at the CCW Meeting of High Contracting Parties in November 2018 put forward a concrete proposal to negotiate a legally binding instrument, which would guarantee meaningful human control over critical functions in LAWS, such as selecting and attacking targets. Austria emphasized that:

"it is important to set standards now preventively to minimise the possibly far reaching negative implications of increasingly autonomous weapons systems and

¹⁶ Observer Research Foundation. *The need for African centrality in the Lethal Autonomous Weapons debate*. 2019. [on-line] [cit. 2021-03-11] Available on: https://bit.ly/3rVRULj

¹⁷ United Nations Office for Disarmament Affairs. Reflections by the Bolivarian Republic of Venezuela on emerging technologies in the area of lethal autonomous weapons systems (LAWS) and the mandate of the Group of Government Experts (GGE). 2020. [on-line] [cit. 2021-03-11] Available on: https://bit.ly/3AfZd3q

¹⁸ GARCIA, Denise. Governing Lethal Autonomous Weapon Systems. In: *Ethics & International Affairs*. 2017. [on-line] [cit. 2021-03-16] Available on: https://bit.ly/2VyPru6

ensure the respect for international law in the future" and that "in the absence of a clear international norm judgements of what is acceptable and what is not acceptable will inevitably be subject of interpretation." ¹⁹

The proposal met with negative responses from countries that are in the process of developing autonomous weapons systems, namely the United States, Israel, the Russian Federation and South Korea. These countries considered it premature to discuss such a legally binding instrument.

At the sub-national level or at the level of members of the European Parliament (hereinafter as EP), respectively, debates took place in favour of a legally-binding instrument on LAWS. The first case, where a ban on autonomous weapons was requested at EP level, was Resolution 2014/2567, in which 534 members of EP were in favour, and 49 were against the ban. The resolution, among other things, called for a "ban [on] the development, production and use of fully autonomous weapons which enable strikes to be carried out without human intervention." In 2018, the EP adopted another resolution on LAWS, in which case 566 members of EP voted in favour and 47 against. Resolution 2018/2752 followed up on the resolution from 2014, thus by supporting the introduction of a pre-emptive ban on LAWS, stressing the need to respect the international humanitarian law, maintaining critical functions such as selecting and attacking the targets under human control, and warning against unprecedented and uncontrolled arms races that LAWS can result in. The resolution called on the High Representative for Foreign Affairs and Security Policy, individual member states and the European Council to create

"common position on lethal autonomous weapon systems that ensures meaningful human control over the critical functions of weapon systems, including during deployment, and to speak in relevant forums with one voice and act accordingly." [21]

Despite the adopted resolutions, the member states of the European Union remain inconsistent and they hesitate to make statement either in favour of or against the introduction of a pre-emptive ban on LAWS. Of the European Union countries, only Austria has officially spoken out in favour of the introduction of the pre-emptive ban.

Following the development in international forums and international organizations, the very nature of LAWS, the attitude of research and public sector, it is probable to expect in the future the expanding of the base of countries supporting the introduction of preemptive ban on LAWS. An example of such a country is Canada. Although Canada's main partner countries, the United Kingdom, the United States and Australia, have spoken out against the introduction of a legally binding instrument on LAWS, Canada's Prime Minister Justin Trudeau in a mandate letter to the Minister of Foreign Affairs of Canada Mr. Champagne advised him to "advance international efforts to ban the development"

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¹⁹ KAYSER, Daan, BECK, Alice. European positions on lethal autonomous weapon systems - Update 2018. 2018, p. 21, ISBN 978-94-9287-31-5

²⁰ European Parliament. European Parliament resolution on the use of armed drones (2014/2567(RSP)). 2014. [on-line] [cit. 2021-03-16] Available on: https://bit.ly/3A5lcJk

²¹ EUR-Lex. European Parliament resolution of 12 September 2018 on autonomous weapon systems (2018/2752(RSP)). 2018. [on-line] [cit. 2021-03-17] Available on: https://bit.ly/2Vjmq6h

and use of fully autonomous weapons systems."²² Canada adheres to its Strong, Secure, Engaged policy, released by the Department of National Defence in 2018, according to which the Canadian Armed Forces are "committed to maintaining appropriate human involvement in the use of military capabilities that can exert lethal force."²³ LAWS also falls into such formulated category and Canada could play an important role in drafting a legally binding instrument on LAWS, similar that the country played in the case of Anti-Personnel Mine Ban Treaty in 1997.

Other countries, where positive developments towards policies supporting the introduction of a pre-emptive ban on LAWS can be observed, are the Netherlands and Sweden. Both countries have stated during the CCW meetings on LAWS that they do not plan to develop or manufacture autonomous weapons in the future and that they support decision-making on the use of force to always remain under human control. In the case of Sweden, it was a proposal for a parliamentary decision, in which the Sveriges Riksdag (Swedish parliament) supported motion stated by the members of parliament that Sweden should develop a national ban on autonomous lethal weapons systems, work for international bans where possible and evaluate the risks of artificial intelligence in order to ensure human control.²⁴ Another significant shift towards a policy of supporting the pre-emptive ban was the statement by Foreign Minister Ann Linde and Deputy Prime Minister Isabella Lövin to "established a committee to make 'concrete proposals on how to achieve an effective ban' on lethal autonomous weapons systems."25 A similar situation occurred in the Netherlands, where resolution was adopted by the national parliament in 2019, with a vote of 148 parliament members in favour and 2 against. The resolution was calling for a legally binding instrument on control of the production, placement, distribution and deployment of new potential weapons technologies, including autonomous weapons.²⁶

Countries against the pre-emptive ban on LAWS

On the opposite side, the group of countries which refuse adoption of a legally binding instrument on LAWS "put together the world's leading countries in LAWS research and development (R&D) that oppose a ban on LAWS, despite still ambiguous policy statements, and can collectively prevent its passing at the CCW."²⁷ The arguments of countries against the pre-emptive ban on LAWS are of a diverse nature, in a similar

²² Prime Minister of Canada Justin Trudeau. *Minister of Foreign Affairs Mandate Letter*. 2019. [on-line] [cit. 2021-03-17] Available on: https://bit.ly/3iqpB4P

²³ SAAD, Christiane, GOSAL, Ewa. *Autonomous Weapons Systems: How to work towards a total ban?*. 2019. [on-line] [cit. 2021-03-20] Available on: https://bit.ly/3rXFPW7

²⁴ Sveriges Riksdag. Förbjud autonoma dödliga vapensystem och reglera utvecklingen av artificiell intelligens. 2017. [on-line] [cit. 2021-03-20] Available on: https://bit.ly/3rUdyzA

²⁵ Human Rights Watch. Stopping Killer Robots - Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control. 2020. [on-line] [cit. 2021-03-04] Available on: https://bit.ly/3rWrlFN

²⁶ Tweede Kamer: Der Staten-General. *Motie van het lid Koopmans c.s. over beheersing van de productie, plaatsing, verspreiding en inzet van nieuwe potentiële massavernietigingswapens.* 2019. [on-line] [cit. 2021-03-20] Available on: https://bit.ly/3rUdUWW

²⁷ HYNEK, Nik, SOLOVYEVA, Anzhelika. Operations of power in autonomous weapon systems: ethical conditions and socio-political prospects. 2020. [on-line] [cit. 2021-03-01] Available on: https://bit.ly/3jUE3s

fashion to those of countries supporting the ban, but the main focus is on the reference to the pace of technological progress and the inconsistency of LAWS definitions across individual states. "According to the opponents of this ban, it makes no sense, because development and implementation of such systems are already inevitable, since in principle the necessary technologies already exist." During the CCW meetings and later in the GGE LAWS format, the United States, the Russian Federation, the United Kingdom, South Korea, Australia, Turkey and Israel officially spoke out against the preemptive ban on LAWS. All of these states are among the major exporters of conventional weapons with a highly developed defence industry. According to them, this type of armament provides a chance to drastically reduce the risk borne by one's own soldiers, which is certainly an important factor in the framework of international humanitarian law.²⁹

As a leader in the manufacture and export of conventional weapons, the United States invests heavily in the development of autonomous weapons systems, across all categories of land, air and sea-based weapons systems. As support for the introduction of legislation restricting the production of LAWS would be a counterproductive step for the United States, it is understandable that it considers pre-emptive ban on LAWS premature, justifying it also by the non-existence of a common definition of LAWS.³⁰ Representatives of the United States delegations to meetings of GGE on LAWS often draw attention to the potential benefits that the deployment of autonomous weapons could bring, and whereas these are new progressive weapons systems, "we may change our views of technologies over time as we gain more experience with them."31 On the potentially positive consequences of the deployment of LAWS, the United States presented the statement Potential Military Applications of Advanced Technology at the GGE LAWS meeting in 2019, describing ways in which the deployment of LAWS could positively impact protection of civilians during armed conflicts, improve the effectiveness of military operations or increase targeting, identification, tracking and selection. "Rather than trying to stigmatize or ban such emerging technologies in the area of lethal autonomous weapon systems, states should encourage such innovation that furthers the objectives and purposes of the Convention."32 The United States, unlike other high contracting parties to the CCW, believes that LAWS could contribute to the fulfilment of objectives and obligations under currently valid international law, including the Convention on Certain Conventional Weapons.

²⁸ ANDERSON, Kenneth, WAXMAN, Matthew C. Law and Ethics for Autonomous Weapon Systems: Why a Ban Won't Work and How the Laws of War Can. 2013. [on-line] [cit. 2021-03-10] Available on: https://bit.ly/3CuE6wq

²⁹ SCHMITT, Micheal N., THURNHER, Jeffrey S. 'Out of the Loop': Autonomous Weapon Systems and the Law of Armed Conflict. 2013. [on-line] [cit. 2021-03-10] Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2212188.

³⁰ Reaching Critical Will. Characterization of the systems under consideration in order to promote a common understanding on concepts and characteristics relevant to the objectives and purposes of the CCW. 2018. [on-line] [cit. 2021-04-03] Available on: https://bit.ly/3rVXJbA

³¹ U.S. Mission in Geneva. *Group of Governmental Experts on Lethal Autonomous Weapons Systems (LAWS) - Agenda item 5(b)*. 2020. [on-line] [cit. 2021-04-03] Available on: https://bit.ly/3Ae3Zyp

³² U.S. Mission in Geneva. *U.S. Statement on LAWS: Potential Military Applications of Advanced Technology*. 2019. [on-line] [cit. 2021-04-03] Available on: https://bit.ly/3xoV4bx

Similar to the United States, the Russian Federation has set its top national defence priority and is investing enormous financial resources in research and development of autonomous systems, including their military use. President Putin made an official statement about introducing autonomous systems into the country's military arsenal during the Defence Ministry Board meeting in 2019, when he confirmed that "robotic systems and unmanned aerial vehicles are being rigorously introduced and used in combat training, which dramatically boosts the capabilities of armed units and subunits."33 The difference compared to other countries developing autonomous technologies for military uses is that most of Russia's companies, which are at the forefront of development of artificial intelligence for military purposes, are to a large extent, under state ownership. Following the country's ongoing research, the deployment of weapons systems in the Russian army, the setting of national priorities and the attitude of the leading representatives, it is obvious that the Russian Federation has become one of the countries that firmly refuses introduction of any ban on LAWS. Representatives of the Russian Federation have declared several times at the CCW meetings that the current international legislation, including international humanitarian law, is sufficient to cover the deployment of LAWS in the future. In November 2019, Russia expanded its position on LAWS, when it "argued that the concepts of human involvement and human control involve subjective assessments and are irrelevant."34

In the case of the United Kingdom, the country's representatives repeatedly stated during the CCW meetings on LAWS that the country had no intention to develop lethal autonomous weapons systems and that human control in weapons systems needed to be maintained in the future. However, the United Kingdom approaches the definition of LAWS as a futuristic non-existing type of weapons systems that are more sophisticated and progressive than weapons systems understood by other states or experts. Therefore, when the representatives of the United Kingdom are making statements that the country has no intention of developing these systems,

"it appears to be in reference only to these more sophisticated weapon systems that are currently not yet technologically achievable, and not those systems that are the subject of international discussions at the CCW on the cusp of development and therefore requiring urgent attention." [35]

According to Joint Doctrine Publication 0-30.2 on Unmanned Aircraft Systems by Ministry of Defence of the United Kingdom,³⁶ LAWS are capable of understanding higher-level intent and direction. Based on the analysis of the environment and situations, they are able to take appropriate actions to achieve the desired results. The weapons systems will be able to choose within the available alternatives the direction of their actions, without human control and oversight, although they may still be present. Although the overall activity of an autonomous unmanned aircraft will be predictable, individual

³³ President of Russia. 2019. *Meeting on the development of artificial intelligence technologies*. [online] [Accessed 2.4.2021] Available on: https://bit.ly/3rVNCUk

³⁴ ABONDANO, Juan Pablo Prieto, SAAD, Rebecca Abiantoun. *United Nations Security Council*. 2020. [on-line] [cit. 2.4.2021] Available on: https://bit.ly/2VysPtK

³⁵ Article 36. The United Kingdom and lethal autonomous weapons systems. *Background Paper*, April 2016, p. 4. [on-line] [cit. 2021-03-31] Available on: https://bit.ly/3Ak3mUh

³⁶ Ministry of Defence of the United Kingdom. *Joint Doctrine Publication 0-30.2: Unmanned Aircraft Systems*. 2017. [on-line] [cit. 2021-03-31] Available on: https://bit.ly/2Vy7O2q

actions may not be. Contradictory views on LAWS can be observed within the country's political scene, in the form of submitting a bill by the Scottish National Party on 16th December 2020 to the House of Commons calling upon the government to support a ban on LAWS.

Another case of a country opposing the creation of a legally-binding instrument on LAWS is South Korea. Like other countries in this group, South Korea is heavily investing in the development of military applications of artificial intelligence and weapons systems with autonomous functions. South Korea even has an SGR-A1 weapon deployed in the demilitarized zone, a type of sentry gun that can function as a 'human on the loop' system. "That means that it can autonomously select and engage targets, but a nearby human operator can intervene to turn off the system, if necessary."37 This is also one of the reasons why representatives of South Korea often point out during the CCW meetings the possible positive consequences of the deployment of LAWS in the future. Following ongoing research and development, and the already deployed weapons with a degree of autonomy on this country's territory, it would be also counterproductive if South Korea did not join the group of countries rejecting the introduction of a preemptive ban on LAWS. South Korea has participated in all meetings on LAWS under CCW since 2014. Its representatives interpreted the country's opinion at the 2018 meeting, where they stated that "we need to enhance our common understanding in the area of LAWS, in particular we still need to discuss where, how and to which degree the human elements should be maintained."38 South Korea, therefore, supports the preservation of the human element in the autonomous weapon systems, but considers the introduction of a legally-binding instrument as premature until a consensus is reached on the type and degree of involvement of the human component. In this context, it also considered the existing international legislation, in particular, the international humanitarian law and Article 36 of the Additional Protocol I of the 1949 Geneva Conventions, to be sufficient instrument dealing with LAWS.

Australia, as another country that is against the introduction of a ban on LAWS, has participated in all meetings on LAWS under the CCW since 2014. It is a country that is largely engaged in the research on autonomous weapons systems and has a positive perception of the potential benefits of deploying autonomy in military technologies. Australia considers current international legislation on conventional weapons to be sufficient and does not consider the introduction of new legislation solely on the LAWS area to be urgent. Australia stated during the GGE LAWS meeting on 13th - 17th November 2017 that it

"fully supports and adheres to the obligation to undertake a review of any new weapon, means or method of warfare to determine whether its employment

³⁷ VELEZ-GREEN, Alexander. *The Foreign Policy Essay: The South Korean Sentry—A "Killer Robot" to Prevent War*. 2015. [on-line] [cit. 2021-03-25] Available on: https://bit.ly/3fvVCq4

³⁸ Government of the Republic of Korea. *Statement to the Convention on Conventional Weapons Group of Governmental Experts on lethal autonomous weapons systems*, April 13, 2018. Audio recording (24:30-26:35). [on-line] [cit. 2021-03-25] Available on: https://bit.ly/3rT0lqU

would, in some or all circumstances, be prohibited by International humanitarian law or other international law by which Australia is bound." [39]

The statements clearly confirm the opinion of the country regarding the sufficiency of international legislation. Later in 2019, during the GGE LAWS meeting, Australia developed its position and stated in a submitted report that "if states uphold their existing international law obligations and implement a thorough internal process of regulations, there is no need to implement a specific ban on LAWS at this time." Although Australia's listed arguments are mainly of a legal nature, the country has also expressed its views in terms of other areas relating to LAWS. Australia's negative attitude towards the introduction of new legislation exclusively for LAWS is surprising, in particular because Australia is generally one of the countries with a high degree of involvement in international conventional arms legislation, while with some, e.g. Convention on Cluster Munitions or Arms Trade Treaty, Australia has played an important role in their creation and promotion.

The last two countries that are against the introduction of a pre-emptive ban on LAWS are Turkey and Israel. Both countries have participated in all CCW meetings on LAWS since 2014, and both also develop, manufacture and deploy weapons with some degree of autonomous systems. Examples are KARGU kamikaze drones, which are part of the Turkish Armed Forces, and Green Dragon, the Harop and the Harpy made by Israel Aerospace Industries. "In view of the security challenges Israel faces and the fact that it is a manufacturer and exporter of weapon systems, it must seek to maintain its freedom of action in this field as much as possible."41 During the meeting of CCW on LAWS, Israel often pointed out in its statements the prematurity of introduction of the pre-emptive ban on LAWS, as these are weapons systems that are still in the process of development and their capabilities in the coming years cannot be estimated. According to the representatives of the country from the 2014 CCW meeting, "it would be factually unfounded to argue today that autonomous systems could never reach certain positive capabilities, which would enable their use in accordance with international humanitarian law."42 Both, Israel and Turkey have made statements in favour of the need to maintain human control and accountability of autonomous weapons systems.

Status of China

A separate category in the approach to LAWS regulation is China's position. The country's defence industry is technologically highly advanced, resulting in China becoming one of the world's leading exporters of conventional weapons. "China's defense industry [has] been pursuing significant investments in robotics, swarming, and

³⁹ Australian Permanent Mission and Consulate-General Geneva. *LAWS GGE 13-17 November 2017 - Australian Statement - General Exchange of Views*. 2017. [on-line] [cit. 2021-03-23] Available on: https://geneva.mission.gov.au/gene/Statement783.html

⁴⁰ CALDWELL, Sarah, BYRNE, Matilda. *Australia out of the loop - why we must not delegate decision making in warfare from man to machine*. 2020. [on-line] [cit. 2021-03-23] Available on: https://bit.ly/3Ck7bKR

⁴¹ ANTEBI, Liran. The International Process to Limit Autonomous Weapon Systems: Significance for Israel. In: *Strategic Assessment*, Volume 21, No. 3, October 2018, pp. 83-93

⁴² Government of Israel. Statement to the Convention on Conventional Weapons Meeting of High Contracting Parties. 2014. [on-line] [cit. 2021-03-30] Available on: https://bit.ly/2TVdLpF

other applications of artificial intelligence and machine learning,"⁴³ among other reasons, in order to remain competitive with other leading exporters and strengthen its national security. The increased financing of the application of artificial intelligence and robotic technologies in weapon systems is also influenced by the national policy. Based on the "New Generation Artificial Intelligence Development Plan" adopted by China in 2017, it is necessary to "strengthen a new generation of AI technology as a strong support to command and decision-making, military deduction, defence equipment, and other applications."⁴⁴ Similarly supportive for the introduction of artificial intelligence into the military sphere is the Chinese national "Military-Civil Fusion" strategy, which sees "AI as a force multiplier across systems, a potential asymmetric advantage against high-value conventional weapons systems, and even a harbinger of a new mode of combat."⁴⁵ The national strategy is perceived mainly by Western experts as aggressive, as it works to a large extent with expressions such as "catch up to" and "surpass" the United States, which China is compared to in the text.

In 2016, China officially commented on the LAWS as on weapons that present "considerable uncertainties" for compliance with international humanitarian law and expressed the need of establishing precautionary measures. 46 Two years later, in 2018, the representatives of the country stated during the CCW meetings that China supported the introduction of ban on use of LAWS, but not on their development or production.⁴⁷ The definition of LAWS from China's point of view also raises questions, as it has laid out five key attributes that describe what constitutes an autonomous weapon, but it gives space for many exclusions. Based on the position paper of China published during the GGE LAWS meeting in 2018, LAWS must meet the following 5 characteristics:⁴⁸ (1) lethality; (2) autonomy, which means absence of human element during executing the entire task; (3) impossibility for termination, which means the device cannot be terminated once started; (4) indiscriminate effect, meaning that the device will execute the task of killing regardless of conditions, scenarios and targets; and lastly (5) evolution, which means device can learn autonomously, expanding its function exceeding human expectations. From the point of view of many experts, this position of China is "characterized by a degree of strategic ambiguity and apparent preference for

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⁴³ KANIA, Elsa B. "Al weapons" in Chinese military innovation. In: *Global China*. 2020. [on-line] [cit. 2021-04-20] Available on: https://bit.ly/3jlJE3s

⁴⁴ New America. Full Translation: China's 'New Generation Artificial Intelligence Development Plan' (2017). 2017. [on-line] [cit. 2021-04-20] Available on: https://bit.ly/3xonfHH

⁴⁵ Military Civil Fusion. Section 2 Emerging technologies and military-civil fusion: Artificial intelligence, new materials, and new energy. 2021. [on-line] [cit. 2021-04-22] Available on: https://bit.ly/3inyFXU

⁴⁶ Human Rights Watch. Stopping Killer Robots - Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control. 2020. [online] [cit. 2021-03-04] Available on: https://bit.ly/3rWrlFN

⁴⁷ Campaign to Stop Killer Robots. *Country Views on Killer Robots*. 2019. [on-line] [cit. 2021-04-22] Available on: https://bit.ly/3xoWMcX

⁴⁸ Reaching Critical Will. Characterization of the systems under consideration in order to promote a common understanding on concepts and characteristics relevant to the objectives and purposes of the CCW. 2018. [on-line] [cit. 2021-04-03] Available on: https://bit.ly/3fSIEmH

optionality."⁴⁹ Adherence of some experts to such an opinion may also be largely due to China's adopted national strategies, which make research and production of autonomous weapons systems one of the country's defence sector priorities. From this point of view, it would be counterproductive for China to support the ban on LAWS, as it has devoted enormous resources to research and it would also be contrary to the set political direction.

DISCUSSION AND CONCLUSION

The main part of the research within the article was devoted to the position of individual states in relation to LAWS, the aim of which was to identify if there are common features among the countries that share the same position and to what extent, as well as to outline possible directions and challenges for the future concerning the development of the individual states' opinions. Based on the analyzed facts, the author concludes that there are certain common features among countries that share the same attitude towards the introduction of a pre-emptive ban on LAWS.

The largest group of countries consists of those that have not officially expressed their position by either supporting or refusing the introduction of a pre-emptive ban on LAWS. The second largest group of countries supporting the establishment of a pre-emptive ban on LAWS includes 29 states. These are countries that are not engaged in the production and research of LAWS, nor are they among the leading exporters of conventional weapons. The other common feature is the reasons they have expressed in favour of the introduction of a pre-emptive ban on LAWS, which in many cases are the main topics of the debate resonating during the GGE LAWS meetings and are contained within the 11 guiding principles. This group of countries also includes several developing states, in which the political and economic concerns associated with LAWS often appear in the statements of their representatives. The arguments relate in particular to the most advanced economies, which, according to developing states, will be developing LAWS in order to gain economic and strategic benefits, regardless of the will of developing countries.

When it comes to the challenges for the incoming years, it is necessary to mention the approach of European Union countries. Of the 27 European Union countries, only Austria has so far officially spoken out in favour of the introduction of a pre-emptive ban on LAWS, while other countries have not yet taken an official position. However, from the level of the EU institutions, namely the European Parliament, the position is evolving in favour of the introduction of a pre-emptive ban on LAWS, which is also supported by the two adopted resolutions. Nevertheless, European Union countries are still inconsistent in their approach to LAWS, although several have stated that they do not plan to invest in LAWS production and research in the future. Positive developments towards supporting of the introduction of a pre-emptive ban can be also seen in the case of the Netherlands and Sweden. The formation of a common position of the European Union countries is one of the main open challenges of the region in the future.

⁴⁹ KANIA, Elsa B. China's Strategic Ambiguity and Shifting Approach to Lethal Autonomous Weapons Systems. In: *Lawfare*. 2017. [on-line] [cit. 2021-04-20] Available on: https://brook.gs/3Adp2kH

On the other hand, there are countries that are refusing the introduction of a new legislation and a pre-emptive ban on LAWS. These countries share a common feature in the activities covering research and production of weapons systems with autonomous elements leading to the development of LAWS. They are among the leading exporters of conventional weapons with highly developed defence industries. Based on the positions of state officials during the CCW meetings, these countries also show some commonalities in their statements on LAWS. They defend the LAWS research and production by mentioning the inevitable technological pace, inconsistencies in the definition of LAWS across countries, as well as the potential benefits that these technologies could bring. They refer mainly to the impossibility of estimating the capabilities of these systems in the future and consider it therefore premature to introduce new legislation that would ban LAWS research and production.

LAWS and the related debates under the CCW on new legislation are highly dynamic topics that are subject to change, whether as a result of progress in defining this category of conventional weapons, increase of the technological level of automated systems or new positions and approaches of individual state and non-state actors. Based on the conclusions of the research within the article, we observe that in many cases the reasons given for not introducing or introducing, respectively, a pre-emptive ban on LAWS are contradictory, and that a large number of states have not yet decided for either of the existing positions. For this reason, as well as the based on very nature of LAWS, there is a need to constantly research and build on the existing literature and available data, while the author herself perceives a positive opportunity to express herself on the topic and enrich the basis of the existing research for LAWS.