KEY ELEMENTS OF THE TREATY BANNING FULLY AUTONOMOUS WEAPON SYSTEMS

PERSPECTIVES IN SOUTHEAST ASIA

NONVIOLENCE INTERNATIONAL SOUTHEAST ASIA

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ACKNOWLEDGEMENTS

ACRONYMS

AI	Artificial intelligence
ASEAN	Association of Southeast Asian Nations
FAWS	Fully autonomous weapon system
IHL	International humanitarian law
LAWS	Lethal autonomous weapon system
SDG	Sustainable Development Goals
STEM	Science, technology, engineering, and mathematics

INTRODUCTION

Southeast Asia is a vast region with histories, experiences and cultures as varied and diverse as its member countries. Most countries emerged from a colonial past and have been independent for only half a century or less. This means all countries have also experienced, in one way or another, war and conflict, disagreements and internal strife. Treating it as a monolithic bloc would be a mistake and obfuscate critical characteristics that lend to each country's unique qualities, motivations and interests.

A treaty on fully autonomous weapon systems (FAWS) for Southeast Asia will incorporate the diversity of national interests in the region. In each diplomatic conference where states negotiate what goes into the final text of a treaty, every state reads the proposal bearing in mind its own national considerations. For instance, the Philippines places the plight of migrant workers high in its list of priorities and will almost always examine any treaty based on how it affects migrant workers. Thailand is generally in favor of the regulation of weapons and dangerous goods, but also considers enforcement an important issue given its history of combating transnational crimes to foster a stable environment for businesses and tourism. Given the diversity of Asia, a lot of national considerations and situations come into play.

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This does not mean that Southeast Asia does not have any commonalities with regard to humanitarian disarmament. In fact, a number of humanitarian disarmament initiatives have been successful with the support of states in the region, such as the Southeast Asia Nuclear Weapon Free Zone, the Convention on Cluster Munitions, and the Mine Ban Treaty. Historically, states are engaged both at the bilateral and multilateral levels, even sub-regionally, and translate the issue based on the issue's relevance in the region. Strengthening trust through establishing strong relationships is important for Southeast Asian countries.

This document may be interpreted as aspirations that hopefully find its way into the final text of the Treaty prohibiting FAWS. It is a compilation of elements drawn from various discussions on the issue not just with states but also with civil society, the STEM sector, and the academe. It will focus specifically on Southeast Asia. The analyses and recommendations are also drawn from past experiences in other treaty negotiations of global humanitarian disarmament instruments, current engagements, and future discussions surrounding the issue, which makes this an evolving document.

Whenever this document uses the term lethal autonomous weapon systems (LAWS), it refers only to FAWS and both terms are thus used interchangeably.

KEY ELEMENTS

For Southeast Asia, the key elements of a treaty prohibiting FAWS must address its threat to humanity, including ethical and moral issues, while not inhibiting enforcement capabilities. While security and armed conflict are generally the affairs of the military and enforcement is under the purview of the police, weapons are used in any security situation. Possession of FAWS is thus in itself a risk and poses a danger that is outside of human control.

"The key elements listed here are the result of bilateral and multilateral consultations with government and civil society representatives as well as members of various industries and the academic community."

The key elements listed here are the result of bilateral and multilateral consultations with government and civil society representatives as well as stakeholders in the private sector and the academic community. NISEA and its partners conducted a series of workshops with civil society organizations in Asia to obtain a clear portrait of the different situations in their respective countries. A series of regional workshops including civil society organizations, government officials, and technical experts was held starting September 2020 as an essential introduction to dialogues between these sectors. Technical experts were invited to speak on different technological aspects of FAWS. After this, workshops and bilateral meetings were conducted with government officials to get a sense of their views and concerns on FAWS. Finally, a multi-sector seminar brought together technical, academic and media experts to speak about the dangers of FAWS and misusing AI.

This document serves as a starting point for negotiations and is not meant to be exhaustive.

"I CALL ON STATES TO BAN THESE WEAPONS, WHICH ARE POLITICALLY UNACCEPTABLE AND MORALLY REVOLTING."

UN Secretary-General on killer robots, 11 Nov 2018

Photo: MSC / Kuhlmann

1   A pre-emptive humanitarian disarmament treaty

The Treaty on the Prohibition of Fully Autonomous Weapon Systems should be viewed as a pre-emptive humanitarian disarmament treaty, a treaty that "seeks to prevent and remediate human suffering from problematic weapons".[1] Some experts claim that FAWS do not yet exist as an entire unit, although components and parts are already available. Some components, especially the software, are even readily accessible. A treaty prohibiting FAWS will be considered a pre-emptive humanitarian disarmament treaty, something that may concern states, especially if it stifles such a weapon's potential to augment a state's security capabilities. Historically, negotiating a pre-emptive treaty has not been a problem, as in the case of the Association of Southeast Asian Nations (ASEAN) responding to the issue of nuclear weapons decades ago with the "Bangkok Treaty", despite tensions between nuclear states India and Pakistan.

On the other hand, there have been reports that claim FAWS already exist. If they do, states should discuss steps on how to comply with a pre-emptive treaty. Several states in Asia have indicated a willingness to support a process leading to a legally binding global instrument on the prohibition and regulation of FAWS.[2] Those who are still considering it have shown an openness to discuss the issue through dialogue. There are also states that remain undecided on the matter due to a lack of understanding on the technology itself and a lack of appreciation for its risks. States in general have asked for more information about FAWS and their impact on national and regional security.

2   Accountability and chain-of-command in weapon systems

Fully autonomous weapon systems are a problematic type of weapon systems that integrate wider complex systems of various artificial intelligence (AI) infrastructures and emerging technologies. The chain of command and responsibility for FAWS are thus less clear and indirect.

Experts have pointed out that, unlike in the use of FAWS, accountability in the military or enforcement groups is easy to establish. There is a Commander-in-Chief or a Chief of Police, and it is possible to trace where decisions are made down the line, as well as where the responsibilities lie in the chain-of-command. On the other hand, when AI is able to make decisions autonomously, without human intervention, this command responsibility gets murky.

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1   Harvard Law School. (2018). Humanitarian disarmament: The way ahead. Conference Summary. http://hrp.law.harvard.edu/wp-content/uploads/2018/10/HumanitarianDisarmamentConferenceReport.pdf

2   Joint Working Paper: Submitted by the Republic of Costa Rica, the Republic of Panama, the Republic of Peru, the Republic of the Philippines, the Republic of Sierra Leone and the Eastern Republic of Uruguay. https://documents.unoda.org/wp-content/uploads/2021/06/Costa-Rica-Panama-Peru-the-Philippines-Sierra-Leone-and-Uruguay.pdf

To ensure accountability, command responsibility must be applied in all aspects of weapons development, deployment and use. Where it cannot be applied, such as in FAWS, the weapon or weapons system must be prohibited.

As AI is increasingly applied and used in many areas of our lives, including transportation (for instance, in self-driving cars), medicine, information technology, even social relationships and other related fields, we must be wary of a similar "normalization in warfare". The use of AI in non-war fields already has significant impacts in the distribution and delivery of services, even more so in war. The treaty on FAWS will prevent these weapon systems from being normalized in the area of security, especially the conduct of war.

3 Ban development and use

There should be an incentive to ban the development and use of FAWS. Work on criminalizing FAWS should not be left to the fate of future availability and use. The treaty complements international humanitarian law (IHL) by expanding on its goal of safeguarding humanitarian principles during conflicts, especially its traditional view of placing the primary responsibility of maintaining the rules of engagement on human behavior. IHL puts limits on the methods and means of warfare, while behavior is criminalized. The means, or the weapon itself, are subjected to varying degrees of criminalization. As an example, not all use of landmines is banned in the Mine Ban Treaty. What is completely banned is one type of a weapon which is inherently indiscriminate, the "anti-personnel mines," while the use of other kinds of landmines must be discriminate.

In other words, IHL, because of the context in which it was first conceived and developed, puts the responsibility of the rules of engagement primarily on human behavior in a war or conflict setting. This does not mean, however, that there are no efforts to expand what it covers and how it is defined, as this is constantly evolving at the international level. The treaty must take into account how IHL, especially how it was adopted in many states, is further complicated by newer weapons, especially those operated by emerging technologies and AI, which are not part of existing governance structures and would thus benefit from a treaty prohibiting FAWS.

4 Promote sustainable development

FAWS are far more expensive and will further increase military spending which otherwise could be channeled to achieving Sustainable Development Goals (SDG) by 2030. Southeast Asian countries are in different levels of development, with most countries being considered developing or poor. Countries that have been afflicted by conflicts and various other security issues have been unable to maintain serious economic development as governments are forced to devote considerable resources to its military operations to combat threats to the state.

Under this consideration is the fact that AI and emerging technologies are not cheap. It costs an enormous amount of resources to acquire and train personnel to maintain it. As much as 20 people are required to operate a single autonomous weapon system.[3] Developing countries will thus always be left out of any global arms race and be severely placed at a disadvantage against wealthier countries who are capable of developing and acquiring FAWS technology.

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3   Scharre, P. (2018). Army of none: Autonomous weapons and the future of war. New York: W.W. Norton and Company.

5 Promote humanity

There is a consensus among experts that AI cannot replace human intelligence, replicate human emotion, process societal information, or understand contexts. Experts agree that AI is only as good as what it is programmed to do and will always reflect the biases of its programmer. It is not always logical and all-encompassing. It only responds to what software and data are installed in it. Facial recognition software has been shown to more accurately recognize caucasian faces and mistakenly match people of color with animals. Virtual assistance software has been shown to have gender biases, such as feminine tropes and discrimination against women job applicants. In existing AI systems, gender sensitivity and racial diversity must be improved before it is utilized in any other application.

AI is also not capable of empathy or understanding the complexities of context. While AI can collect and generate data, this must be distinguished from information, especially intelligence or analyzed information. Data by itself is simply data. It can be numbers or names or a set of personal characteristics upon which meanings or understandings can be applied. Data can be a tool that may be used to uplift or destroy, to inform or mislead. Without context, data is incomplete. Leaving a weapon in the hands of AI software does not ensure it will not contain these biases or lack of understanding, just as its alleged precision and speed are not guaranteed to be effective. Information and contextual analysis is a complex function that in some situations could spell life or death and should be left with humans alone.

6 Retain meaningful human control

To minimize the uncertainty of fully autonomous weapons systems, there must remain meaningful human control over the determination of targets and actions on those targets. This means a human must be in the loop to supervise its actions. The primary issue with FAWS is that humans are "out of the loop" in its decision-making and deployment. There is no way to recall a weapon without access to an off switch. Even with the presence of a recall option or an off switch, a weapon could go offline and lose contact with its human team in the fog of war, or be susceptible to jamming technology or cyber attacks committed by opponents. Meaningful human control means that humans would be involved in every part of the weapons' deployment, from turning it on, launching it, deciding what to target, the elimination of targets, and its recall or turning it off.

7 Prevent the development and use by non-state actors

The treaty on fully autonomous weapons systems must prevent the development and use of FAWS that escape human supervision and control. Prohibiting the use of FAWS is moot if development is allowed. As mentioned, FAWS are made up of complex systems of hardware and software. Many of these parts are readily available and could fall in the hands of non-state actors, criminals or terrorists. Recall of software applications is no longer an option as current technology has made connections travel at unprecedented speed. If FAWS are developed, it is certain they will be available to all those who can get their hands on them, even unauthorized ones. Any software and hardware application towards a fully autonomous weapon should thus be prohibited.

8 Total ban of a specific type/class of weapons system

The treaty is only concerned with fully autonomous weapon systems that keep humans out of the loop of control. It must be noted that autonomy comes in degrees and this distinction is important. There are weapons outfitted with software that enables it to more precisely identify hostiles and can thus reduce casualties. Early models of armed drones required a human to operate it and pull the trigger. These examples involve meaningful human control where the weapon can be recalled or turned off in any instance of technological or human error. The treaty will only prohibit FAWS that do not involve meaningful human control.
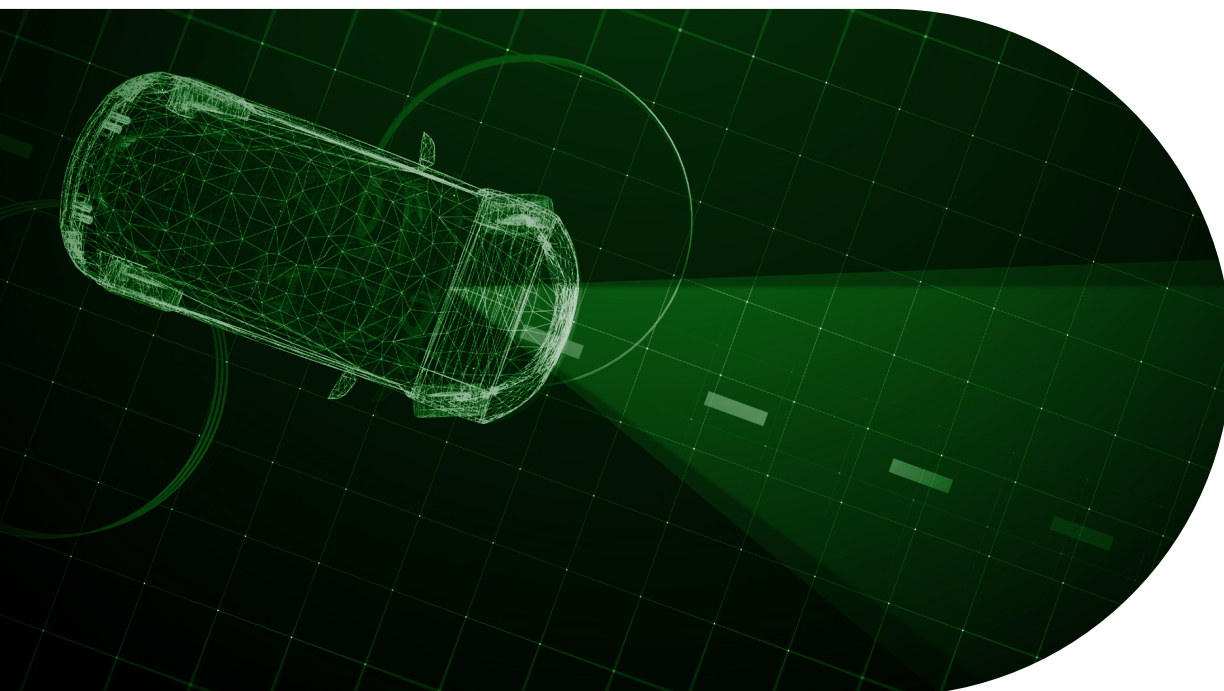
9 Prevent a new wave of arms race

AI and emerging technologies will fuel the new wave of arms race among and between countries, furthering insecurity in the region. As mentioned earlier, it is most likely that only developed countries will ever benefit unitarily from developing, manufacturing and using FAWS because they have the resources to do so. This means that developing countries will always be at a disadvantage relative to wealthier countries. An arms race will fuel insecurity in a region that still suffers from armed conflict and tensions over territorial disagreements.

10 Include industries in positive obligations

The treaty should contain positive obligations on the Science, Technology, Engineering, and Mathematics (STEM) industry. Tech experts and scientists involved in AI development were among the first to globally call for a prohibition of FAWS. Many felt uncomfortable in developing technology that could be used to perpetrate wars and conflict.

There should be a provision in the treaty that safeguards members of the STEM industry when they declare opposition to a project dedicated to developing FAWS. In the same provision, a code of ethics in industry should also be promoted to create a culture of the ethical research and development of new technology and how these could impact society.

I1 Reinforcing IHL in emerging technology

The use of explosive weapons in autonomous weapon systems shall be bound by international humanitarian law (IHL). Regardless of the degree of autonomy in any weapon system, the use of its explosive component is bound by IHL. IHL in general is also a solid basis for a prohibitive treaty on FAWS and must be incorporated in drafting it.

I2 Scope that includes all parts and components, including AI co-systems

The treaty must include in its scope parts and components of the physical weapon as well as AI co-systems. While the treaty aims to prohibit fully autonomous weapon systems, there must also be provisions to address its different parts and components. As mentioned, some parts, especially the AI co-systems, namely the software and hardware to handle the computing and analyses, are already readily available. For example, some data systems can be used in facial recognition software. The hardware itself is already widely applied in daily life, such as in phones, CCTV and other types of identification and surveillance. It would be remiss not to examine closely how the supply and distribution of these parts and components will affect the assembly of FAWS.

On the other hand, the treaty must also be careful not to hamper legitimate development of AI to alleviate social issues, such as in climate change analysis, economic development and scientific pursuits that improve the quality of life of people. There should, at the very least, be a keen dialogue with tech experts as to how the treaty can help further the cause of these legitimate and positive areas.

I3 Promote international cooperation

The treaty shall promote international cooperation and the sharing of best practices in national implementation. International cooperation and the sharing of best practices enables governments to assist each other and augment their capabilities. International cooperation also fosters confidence-building and norm-building in the region, and promotes principles that further the universal acceptance of the treaty.

14 Uphold victims' rights

As in other disarmament treaties, victims' rights will be ensured in the treaty, both in terms of justice and reparation. One of the treaty's primary purposes will be to uphold IHL and prevent humanitarian issues and crises. The treaty must contain a provision protecting victims' rights and securing assistance for them. No one should fall victim to these kinds of weapons.

15 Regular review should be in place

Review of the treaty, meeting of states parties, and implementation support mechanisms shall be put in place. Review conferences are vital in assessing the effectiveness of the treaty and any deficiencies in its universal adoption and implementation. It is only in a review conference where states can collectively evaluate any challenges they have encountered in implementing the treaty, and if there are any difficulties that are outside the treaty's scope and provisions. If amendments are necessary, this is the proper avenue for discussing it. This way, the treaty can respond to any unforeseen issues in the future.

CONCLUSIONS AND RECOMMENDATIONS

There is yet little understanding among governments in Southeast Asia regarding AI and autonomous weapon systems due to the technical nature of the subject. Our discussions with stakeholders reinforce this. Official structures and channels of communication between the government on one side and the tech industry and members of the academe on the other are either weak or nonexistent in most of the countries in the region. In assisting governments to develop policy on a treaty on FAWS, a good understanding of the issue is vital and therefore these channels must be created and strengthened.

Based on consultations with state officials, the response on a treaty concerning FAWS is generally positive. Governments are open to discussions and are concerned themselves on the implications of FAWS on national security. There is also an interest in maintaining positive research and development in technologies that genuinely help countries in their economic and social development. On the other hand, tech experts in more advanced countries have expressed misgivings about the application of AI in weapon systems pointing to the lack of governance structures regulating FAWS as one of the reasons that development has not waned.

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In connection with this, due to the nature of FAWS, there is little scrutiny and regulation on collaborations between and among research institutes and any research and development subsumed under the umbrella of national security. Concern about the ethical and moral implications of research into FAWS or undertakings related to FAWS have been expressed, but there is no overarching governance structure that promotes a code of ethics for companies and businesses. Thus, the treaty should also promote the establishment of norms and standards in private industry where practice has far-reaching impacts on technological trends.

Consultations regarding the treaty must thus be focused on engagement with government representatives, for it is in the area of policy and formal structures where regulations on FAWS or AI in general are currently lacking. Support should be dedicated to whole-of-society linkages in general. As tech and policy experts have been more than willing to educate both the government and the public on the dangers of FAWS, civil society organizations must create avenues that foster dialogue among all stakeholders. This will increase the overall understanding of the issues at hand and will facilitate the translation of abstract ideas into concrete policy.

Sub-regional and regional dialogues among ASEAN countries can contribute to the content of the treaty and facilitate a robust process. To this end, there should be support for civil society organizations in the region, especially those who actively work at the national level, given governments' preference for bilateral dialogue and trust-building. Bilateral engagements will be the building blocks of regional consultations and dialogue in Southeast Asia, while regional engagements will contribute to confidence and norm-building. Local civil society organizations serve as conduits between all stakeholders to promote greater understanding and build support for a treaty prohibiting FAWS. These discussions with stakeholders should also include compelling reasons, practical solutions and approaches to FAWS. What would especially be important for states are ways in which the treaty will impact their ability to achieve the SDGs and at the same time establish national and regional security anchored on regional cooperation and trust.

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More tangible resource materials must be part of the engagement with governments. NISEA and its partner civil society organizations have been developing primers and information materials for government officials, which serve as introductory materials to the issue. Resource materials not only serve as a solid reference for training government officials and personnel, they also promote the principles of the treaty. They can be used as a tool to unify government agencies towards a foreign policy that supports the drafting and passing of the treaty and as materials in legislative hearings on FAWS.

National governments are especially interested in understanding FAWS through the eyes of their constituents, taking into consideration their own socio-political situation, problems and national concerns. There is thus a great need to tailor-fit these materials and national efforts to ensure that these needs are addressed properly and to reflect and acknowledge the multitude of perspectives that drive policy making.

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Finally, an ASEAN caucus or an equivalent process that consolidates ASEAN's position on FAWS must be encouraged. A caucus will reflect the solidarity of its members as well as serve as a platform for sharing concerns regarding the treaty. In this way, there is constant input and feedback regarding the diverse concerns and needs of ASEAN members. It ensures the relevance of the treaty in the distinct national and regional contexts in Southeast Asia and enables a future treaty to be robust and responsive to their needs.

Nonviolence International, an NGO
in Special Consultative Status with the Economic
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