DISARMAMENT

Chaired by **Míša** Nekolová & **Madeline** Koning

Topic I:

Guidelines for the use of Artificial Intelligence in weapons development

I. Background Information

Lethal Autonomous Weapons Systems, also known as LAWS are by definition weapons that can locate, select and eliminate target without human intervention. Although it sounds impossible there are some simple forms of LAWS already existing. For example, landmines, whose use has been regulated by the Ottawa treaty which entered into force on the 1st March 1999. They were programmed to locate and select the target. Other type of autonomous weapons was Samsung sentry robot. In 2014 Samsung revealed their SGR-1 robot which was able to identify a target from more that 2 miles away based using its heat and motion detectors. Although it was able to identify the target pretty accurately, SGR-1 required human operator to allow the attack.

In November 2012, a 50-page study called "Losing Humanity: The Case Against Killer Robots" was published. Steve Goose, Arms Division director at Human Right Watch wrote, that any attack of an AI weapon requires and appropriate level of human judgment. In April 2013, a

campaigned called "Stop Killer Robots" was launched in London. It was a warning on drones encouraging people to act against fully autonomous weapons. In July 2015, an open letter from AI & Robotics Researchers came out warning on autonomous weapons and urging action on treaty which resulted in 3 105 signatories among AI & Robotic Researchers and 17 701 others including e.g. Stephen Hawking or Elon Musk. In December 2015 US Department of Defense request more than 12 billion dollars for their Research and Development department. Soon after that, in March 2016, they reveal their "Avatar" fighters and drone swarms.

Moving on to the functioning of LAWS, the autonomy of these kinds of weapons is not a difficult concept. It is as if you played a chess game against a computer. The computer just follows a series of quantitative generalizations of the chess board. The only difference is that LAWS have partial observability, count with uncertainty or more that two agents attacking. According to the Ministry of Defense using these kinds of weapons will be feasible for submarine warfare or air-to-air combat within a few years as well as for clearing an underground complex, preventing ground infiltration in border area or elimination of human targets meeting criterion X in region Y. Theoretically you can upload a database of objects and faces that are supposed to be eliminated into an AI weapon and it will then find them and kill/destroy them.

The International humanitarian law requires from these weapons to discriminate between combatants and non-combatants, assess military necessity of an attack and judge proportionality of collateral damage to value of the military objective.

The question of autonomous weapons has raised many concerns such as morality of such attack, consequences if operated by a dictator, non-state actor or a terrorist, or the fact that all computer-based devices can be hacked.

However, there are also counterarguments defending LAWS listed by IEEE (The Institute of Electrical and Electronics Engineers). Firstly, "autonomous weapons are the "third offset" required to maintain US dominance" after nuclear weapons and high precision rapid decision cycle weapons. Secondly, "it is inevitable to prevent the proliferation of AWs so we have to develop the as soon as possible" – anyone can buy a drone, a quadcopter or a 3D printer while no one controls and tracks what is done with these. And finally, "we could just have wars between robots so no one gets hurt."

II. United Nations Involvement

The topic of AI weapons development is quite new since the technologies have only been developing since around 2012, however, the United Nations have come across the topic of LAWS a several times during the past few years. One of the first times LAWS were discussed was at the Convention on Certain Conventional Weapons (CCW) in Geneva in 2014. Representatives from more than 80 countries heard about the technical issues, ethics and sociology, legal aspects and operational and military aspects of lethal autonomous weapons system. The conclusion of the discussion was to take actions to encourage "prohibitions and restrictions on the use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects"[1]. The following meeting in 2015 resulted in almost the same way, no resolution upon this topic has been published but the delegates heard more and deeper information about the ethics and technical aspects that are key for writing a substantial document that could prevent and limit the development of AI weapons.

III. Block Positions and Possible Solutions

Almost all the states call for an action when it comes to limiting or banning the development and use of lethal autonomous weapons systems. Even non-governmental organizations or individuals like the Human Rights Watch or Elon Musk and others see the risks that these weapons can carry.

It is essential to come up with a resolution that would be thorough enough to at least control the AI weapons development. United Nations have to assemble and approve guidelines for the use of such weapons and at the same time all the nations should regulate the development and distribution by their state law. Meanwhile, an increased control should be implemented in countries leading in venture-capital investments in key technologies such as the United States, China, Japan or North Korea.

IV. Sources and Useful Links

- https://futureoflife.org/open-letter-autonomous-weapons/
- https://www.stopkillerrobots.org/act/
- https://www.hrw.org/news/2012/11/19/ban-killer-robots-its-too-late

---

[1] https://documents-dds-ny.un.org/doc/UNDOC/GEN/G14/048/96/PDF/G1404896.pdf?OpenElement

- https://www.theguardian.com/technology/2015/jul/27/musk-wozniak-hawking-ban-ai-autonomous-weapons
  https://www.defensenews.com/2015/12/16/congress-includes-572-7b-for-dod-in-spending-bill/
- https://www.washingtonpost.com/news/checkpoint/wp/2016/03/08/inside-the-secretive-pentagon-office-planning-skyborg-fighters-and-drone-swarms/?utm_term=.4c102e08ebfd
- https://spectrum.ieee.org/automaton/robotics/artificial-intelligence/we-should-not-ban-killer-robots
- https://www.hrw.org/news/2012/11/19/ban-killer-robots-its-too-late
- https://asia.nikkei.com/Features/Cover-story/China-gains-in-race-to-develop-AI-enabled-weapons
- https://en.wikipedia.org/wiki/Ottawa_Treaty#Retention_of_landmines

Topic II:

Establishment of a nuclear-weapon-free zone in the region of the Middle East

I. Background Info

One of the most war-torn regions of the world is the Middle East, having disputes between countries over religion, culture, land, and water. Many states feel hostile towards each other with the competition being higher than ever between them. For example, much of the Middle East is populated by ethnic Arabs and there is a sense of solidarity amongst Arabs that transcends the existing political boundaries, leading to regional disputes that could turn deadly fast with the possession of Weapons of Mass Destruction (WMD). The Middle East is made up of 17 countries; Bahrain, Cyprus, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Syria, Turkey, the United Arab Emirates and Yemen. In this region, Israel, Iraq, Iran, Libya, Syria, and Egypt all possess the capabilities to strength there WMD. With the constant threat of disputes turning into bigger problems, the possession of WMD in the region, may lead to unwanted issues.

The Middle East has faced many obstacles when trying to make a nuclear-weapon-free zone. Israel has held on to its nuclear weapons, refused to join the NPT, significantly expanded its stockpile of fissile material for weapons, and developed advanced delivery systems. Nuclear-weapon programs were revealed in Iraq in 1991, in Libya in 2003, and in Syria in 2007 – all while these countries were signatories to the NPT. In 2003, Iran was discovered to have an

undeclared uranium enrichment research and development program as well as a reactor under construction that could potentially be used for plutonium production for weapons. The distrust in the Middle East has led to many resolutions but not many countries sticking to them.

II. United Nations Involvement

The United Nations views the establishment of a Nuclear-Weapons-Free-Zone (NWFZ) in the Middle East as very important. In 1974 the United Nations General Assembly (UNGA) approved a resolution endorsing the goal of establishing a NWFZ in the Middle East, being proposed by Iran and Egypt. The establishment of NWFZ is a regional approach to strengthen global nuclear non-proliferation and disarmament norms and consolidate international efforts towards peace and security. Article VII of the Nuclear Non-Proliferation Treaty (NPT) states: "Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories." The General Assembly resolution 3472 B from 1975 defines a Nuclear-Weapon-Free Zone as …any zone recognized as such by the General Assembly of the United Nations, which any group of States, in the free exercises of their sovereignty, has established by virtue of a treaty or convention whereby: The statute of total absence of nuclear weapons to which the zone shall be subject, including the procedure for the delimitation of the zone, is defined and an international system of verification and control is established to guarantee compliance with the obligations deriving from that statute.

In 1980 Israel joined international consensus allowing the General Assembly to pass a resolution supporting the goal of NWFZ without a vote. Then in 1990 the Egyptian's proposed to establish an expanded WMDFZ in the Middle East; first submitted before the Conference on Disarmament in Geneva. By 1991 the International Atomic Energy Agency (IAEA) General Conference passes resolution on "the Application of IAEA safeguards in the Middle" as a necessary step towards the establishment of a NWFZ in the region. The resolution has since been passed annually without objections. In the same year, the UN Security Council Resolution number 687 passed, endorsing a goal of establishing a WMDFZ in the Middle East. From then the UN has held many conferences trying to sort out all the parts of the resolution but since then many signatories have not followed along.

III. Bloc Positions and Possible Solutions

The Middle East there is two major coalitions and spheres of power. Iran has extended its influence around the region by supporting Shiite opposition groups and conducting military operations in a handful of countries such as Lebanon, Syria, Iraq, Bahrain and Yemen. Then

there is Saudi Arabia and its Arab who is pushing back against Iran's influence in the region, and fear that a Western deal to restrict Iran's nuclear program in exchange for removal of economic sanctions will further strengthen Tehran's power.

Many of the western countries have different viewpoints based on past contact for each country in the Middle East. For example, China is heavily linked in the Middle East for economic reasons and is becoming more and more involved in the Middle East.

An action plan that would go beyond the elimination of weapons of mass destruction and incorporate at least some elements that would also benefit every country such as having a better approach to the situation in the Middle East. The multidimensional perspectives need to be brought together not pitted against each other when trying to form a resolution. The creation of a Middle East common market (or a Mediterranean one, as some European factors have been promoting), which would directly benefit business organizations and in the process transform business activity into a vehicle for peace instead of trying to take over other countries markets. Then Pressure from influential players, notably the U.S. and other permanent members of the United Nations Security Council, the European Union and middle powers on all regional states to engage in the WMDFZ negotiating process to help out the countries in the Middle East.

IV. Sources and Useful Links

General

- http://www.voltairenet.org/article166466.html
- http://www.nti.org/analysis/articles/weapons-mass-destruction-middle-east/
- http://www.nti.org/learn/treaties-and-regimes/arms-control-and-regional-security-middle-east-acrs/

UN Help

- https://www.un.org/disarmament/wmd/nuclear/nwfz/
- http://www.un.org/en/conf/npt/2010/pdf/daisyalliance.pdf
- http://www.un.org/en/conf/npt/2015/pdf/background%20info.pdf

Blocs

- https://www.nytimes.com/interactive/2015/03/30/world/middleeast/middle-east-alliances-saudi-arabia-iran.html