Input to the Committee to review the Guidelines for Observation and Exclusion of Companies from the Government Pension Fund Global (GPFG)

December 2019

Dear Review Committee,

Hereby I send you the input on behalf of the Campaign to Stop Killer Robots for the review of the Guidelines for Observation and Exclusion of Companies from the Government Pension Fund Global (GPFG).

The Campaign to Stop Killer Robots is a civil society organisation with over 120 members from 50 countries. It includes technical, international security, ethical and legal experts. The Campaign to Stop Killer Robots aims to prevent the development and use of fully autonomous weapons. To that effect we advocate a legally binding instrument that prohibits fully autonomous weapons and ensures meaningful human control over the use of force.

Regarding the Guidelines for Observation and Exclusion of Companies from the Government Pension Fund Global, the Campaign to Stop Killer Robots recommends the committee consider the following:

- **Add fully autonomous weapon systems to its product-based exclusion list, and;**
- **Add meaningful human control as a principle for assessing the exclusion of weapon systems.**

Fully autonomous weapon systems, also known as lethal autonomous weapons or killer robots, are weapon systems that select and attack individual targets without meaningful human control. This means that the decision to select a target and deploy force against it is delegated to a machine. The development and use of these weapons would fundamentally change the way war is conducted and has been called the third revolution in warfare, after gunpowder and the atomic bomb.

Lethal autonomous weapons systems have not yet been used in warfare. However, experts estimate that autonomous weapon systems could be deployed in just a few years. The technology required to produce these weapons is developing incredibly quickly. Artificial Intelligence (AI) can have a positive contribution to our societies and there are beneficial uses of AI by the military, for example for streamlining logistics or using robots for transportation purposes. The development of lethal autonomous weapons, however, raises serious concerns.

Violate fundamental humanitarian principles
Lethal autonomous weapon systems, that by their nature select and engage targets without meaningful human control, would violate fundamental humanitarian principles through their normal use. These weapons would mean "the loss of the ability of combatants to exercise the context-specific judgments required of international humanitarian law (IHL) rules, and the loss of human agency and diffusion of moral responsibility in decisions to use force".[1]

International Humanitarian Law requires combatants to make legal judgements as to whether an attack complies with international humanitarian law. As the ICRC states "the law is addressed to humans, and the relevant legal obligations under international humanitarian law (IHL) – notably the rules of distinction, proportionality and precautions in attack – rest with those who plan, decide on,

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[1] Statement at the CCW meeting on LAWS (agenda item 5e) by the International Committee of the Red Cross (March 2019) https://www.unog.ch/80256EDD006B8954/(httpAssets)/59013C15951CD355C12583CC002FDAFC/$file/CCW+GGE+LAWS+ICRC+statement+agenda+item+5e+27+03+2019.pdf

and carry out attacks."[2] The ICRC writes its core concern is "a loss of human control over the use of force, which: has potentially serious consequences for protected persons in armed conflict; raises significant legal questions regarding compliance with international humanitarian law; prompts fundamental ethical concerns about human responsibility for life and death decisions".[3] On this Asaro writes "The very nature of IHL, which was designed to govern the conduct of humans and human organizations in armed conflict, presupposes that combatants will be human agents. It is in this sense anthropocentric."[4]

Furthermore the use of lethal autonomous weapons without meaningful human control would most likely not comply with the principles of distinction, proportionality and military necessity. IHL cannot be simply be programmed into a machine. These principles require complex qualitative assessments based on context of an attack, which can be said to require human judgement, as discussed by Harvard Law School and Human Rights Watch.[5] Even if it would be technically possible in the future to program these legal assessments, it can be argued that for moral reasons a human should make these assessments. Asaro states "This is more obvious in proportionality decisions in which one must weigh the value of human lives, civilian and combatant, against the values of military objectives. None of these are fixed values, and in some ways these values are set by the very moral determinations that go into making proportionality judgements." Adding "the law does not impose a specific calculation, but rather, it imposes a duty on combatants to make a deliberate consideration as to the potential cost in human lives and property of their available courses of action." [6]

Another concern is responsibility, as "such systems may not have an identifiable operator in the sense that no human individual could be held responsible for the actions of the autonomous weapon system in a given situation, or that the behaviour of the system could be so unpredictable that it would be unfair to hold the operator responsible for what the system does".[7] Another relevant legal aspect is the Martens Clause which "establishes a baseline of protection for civilians and combatants when no specific treaty law on a topic exists". As argued by Harvard Law School and Human Rights Watch lethal autonomous weapons would contravene the principles of humanity and the dictates of public conscience.[8] Finally it would be deeply unethical and a violation of an individual's human dignity to delegate the decision over life and death to a machine.[9] As the organisation Article 36 states "Targeting people through an AWS fails to take account of potentially harmed individuals as fellow human beings, equal in worth and dignity, is dehumanising and objectifies human beings".[10] UN Special Rapporteur Heyns notes "They become zeros and ones in the digital scopes of weapons which are programmed in advance to release force without the ability to consider whether there is no other way out, without a sufficient level of deliberate human choice about the matter."[11]

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[2] ICRC (March 2019) 'Statement at the CCW meeting on LAWS (agenda item 5a) by the International Committee of the Red Cross' https://www.unog.ch/80256EDD006B8954/(httpAssets)/5C76B1301CEC4BE6C12583CC002F6A15/$file/CCW+GGE+LAWS+ICRC+statement+agenda+item+5a+26+03+2019.pdf
[3] ICRC (August 2019) 'Autonomy, artificial intelligence and robotics: Technical aspects of human control'. https://www.icrc.org/en/download/file/102852/autonomy_artificial_intelligence_and_robotics.pdf
[4] Professor P. Asaro (2012) 'On banning autonomous weapon systems: human rights, automation, and the dehumanization of lethal decision-making'. https://e-brief.icrc.org/wp-content/uploads/2016/09/22.-On-banning-autonomous-weapon-systems.pdf
[5] Harvard Law School & Human Rights Watch (2016) 'Making the Case; The Dangers of Killer Robots and the Need for a Preemptive Ban'; Harvard Law School & Human Rights Watch (2018) 'Moral and Legal imperative to ban killer robots'. https://www.hrw.org/report/2018/08/21/heed-call/moral-and-legal-imperative-ban-killer-robots
[6] Professor P. Asaro (2012) 'On banning autonomous weapon systems: human rights, automation, and the dehumanization of lethal decision-making'. https://e-brief.icrc.org/wp-content/uploads/2016/09/22.-On-banning-autonomous-weapon-systems.pdf
[7] Ibid.
[8] Harvard Law School & Human Rights Watch, 'moral-and-legal-imperative-ban-killer-robots '(2018) https://www.hrw.org/report/2018/08/21/heed-call/moral-and-legal-imperative-ban-killer-robots
[9] ICRC (2018), 'Ethics and autonomous weapon systems: An ethical basis for human control?' https://www.icrc.org/en/document/ethics-and-autonomous-weapon-systems-ethical-basis-human-control
[10] Article 36, (2019) 'Targeting people' http://www.article36.org/wp-content/uploads/2019/11/targeting-people.pdf
[11] Christof Heyns, UN Special Rapporteur on extrajudicial, summary or arbitrary executions 'Autonomous Weapon Systems: Human rights and ethical issues' (April 2106), https://www.unog.ch/80256EDD006B8954/(httpAssets)/205D5C0B0545853BC1257F9B00489FA3/$file/heyns+CCW+2016+talking+points.pdf

How to address the issue of lethal autonomous weapons
For the reasons mentioned above lethal autonomous weapons would violate fundamental humanitarian principles through their normal use. Therefore the Campaign to Stop Killer Robots recommends that the Ethics Council take a two-pronged approach. It recommends on the one hand adding lethal autonomous weapons to its product-based exclusion list, and on the other hand adding the principle of meaningful human control to its exclusion criteria for weapon systems.

Adding lethal autonomous weapons to the product-based exclusions
The Campaign to Stop Killer Robots recommends that the Ethics Council adds lethal autonomous weapons to its product-based exclusion list, as these weapons would violate fundamental humanitarian principles through their normal use. This exclusion should also include weapons systems that select and engage targets and are inherently unacceptable for ethical or legal reasons.

The exclusion should cover weapons systems that by their nature select and engage targets without meaningful human control. It should cover, for example, systems that become too complex for human users to understand and thus produce unpredictable and inexplicable effects. These complex systems might apply force based on prior machine learning or allow critical system parameters to change without human authorization.

The exclusion should also extend to specific other weapons systems that select and engage targets and are by their nature, rather than their manner of use, problematic. In particular, it should exclude weapons systems that select and engage humans as targets, regardless of whether they operate under meaningful human control.[12] Such systems would rely on certain types of data, such as weight, heat, or sound, to represent people or categories of people. In killing or injuring people based on such data, these systems would contravene the principle of human dignity and dehumanize violence. An exclusion of this category of systems would also encompass systems that, deliberately or unintentionally, target groups of people based on discriminatory indicators related to age, gender, or other social identities.

Meaningful human control
Adding meaningful human control as a principle for assessing the exclusion of weapons systems is necessary as many of the humanitarian concerns raised by lethal autonomous weapons are related to the absence of such control. It also solves the issue of complex technical definitions that might need to change over time as technology develops.[13]

Observation and Exclusion of Companies
Lethal autonomous weapons systems do not yet exist. Therefore at this time the Fund should monitor those companies that could be involved in the development of lethal autonomous weapons. This includes both traditional arms producers as well as tech companies. Also the Fund could engage with these potential developers. If a company is not responsive to engagement and has a high risk of contributing to the development of lethal autonomous weapons, this should lead to the listing of that company on the Council exclusion or observation lists.

Kind regards, on behalf of the Campaign to Stop Killer Robots,

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[12] For more information on such systems and the proposal to prohibit them, see Moyes, "Target Profiles." (2019). http://www.article36.org/wp-content/uploads/2019/08/Target-profiles.pdf
[13] For more information on this principle see the work by Article 36 (2016) 'Key elements of meaningful human control' http://www.article36.org/wp-content/uploads/2016/04/MHC-2016-FINAL.pdf ; as well as the 'Elements of a treaty' by the Campaign to Stop Killer Robots.