

December 2019

Input to the Ethics Committee on the Guidelines for Observation and Exclusion of Companies from the Government Pension Fund Global

Dear Ola Mestad and members of the Ethics Committee,

PAX works together with committed citizens and partners to protect civilians against acts of war, to end armed violence, and to build a just peace. We also strive to contribute to strong international standards and regulation concerning the protection of human rights. Our central values of human dignity and solidarity with peace activists and victims of war violence lead to a distinct vision of peace and security. In our peace work we are guided by the concept of human security; the protection and security of civilians.

PAX hosts several projects aimed at reducing humanitarian suffering caused by controversial weapons, including weapons of mass destruction. These efforts seek to reduce private sector investment into the producers of controversial weapons while increasing the understanding of socially responsible investment norms in order to preclude investment in inhumane weapons and redirect it towards sustainable development. We also encourage investors to engage directly with weapons producers involved in the arms trade: weapons should not be exported to states that violate international humanitarian law. This is done through primary research and international campaigning and advocacy work.

The activities of companies have enormous consequences and affect the lives of everyone — for better or for worse. Several actors have influence over company management and therefore company behaviour. These include institutional investors, such as the Government Pension Fund Global.

Regarding the Guidelines for Observation and Exclusion of Companies from the Government Pension Fund Global, PAX recommends the Council on Ethics consider the following:

- Adjust the methodology on nuclear weapon producer screening, and expand the exclusion list;
- Exclude companies known to be selling weapons fuelling the Yemen crisis;
- Add lethal autonomous weapon systems to its product-based exclusion list, and;
- Add meaningful human control as a principle for assessing the exclusion of weapon systems.

Nuclear Weapons

The Ethical Guidelines that guide investment in this fund have proven to shape the direction of other institutional investors and have had a notable impact on preventing human suffering. The leadership demonstrated through these guidelines can be indirectly linked to the end of cluster munitions production by any U.S. manufacturer. In addition, changes to the interpretation of the guidelines to broaden the interpretation of key components for nuclear weapons is a positive influence for other institutional investors. The decision in 2018 to exclude AECOM, BAE Systems, Fluor Corp and Huntington Ingalls Industries was warmly welcomed.

Further elaboration in the guidelines on the issue of nuclear weapons would reflect the changed discourse. Norway started a process in 2013 to look at the humanitarian impact of any use of a nuclear weapon. The initial discussion led to a series of conferences which reframed the discussion around nuclear arms. It placed nuclear bombs squarely in the category of other controversial weapons, and many financial institutions are taking note.

The Treaty on the Prohibition of Nuclear Weapons, like the nuclear Non-Proliferation Treaty, does not explicitly define “nuclear weapons” or “other nuclear explosive devices”. However, through decades of practice, there is a general agreement amongst states about what these terms include. “A nuclear explosive device is an explosive device whose effects are derived primarily from nuclear chain reactions. A nuclear weapon is a nuclear explosive device that has been weaponised, meaning that it is contained in and delivered by, for example, a missile, rocket, or bomb. Thus, all nuclear weapons are a form of nuclear explosive device but not all nuclear explosive devices are nuclear weapons”.¹

Whereas the Ethical Guidelines do not elaborate on nuclear weapons specifically, in 2004 the Revised National

Budget included a list of the types of weapons the Fund shall not contribute to the production of, and specifically stated that the Fund shall not invest in companies that produce key components for nuclear weapons.² In applying this criteria to the Fund exclusions, there are some opportunities to refine the screening methodology to prevent investment in companies currently producing key components for nuclear weapons that at present remain inside the Fund's investment universe.

The methodology used by PAX, for example in our recent Report *"Producing mass destruction: Private companies and the nuclear weapons industry"*,³ assesses companies involved directly in the development, testing, production or maintenance of nuclear weapons related technology, parts, products or services. It includes companies involved in the production of warheads and key components for warheads, or specifically designed nuclear capable delivery systems such as missiles. This includes 'dual use' (military and civilian) technology but excludes technology that is not specifically designed for but can be adapted or configured for use in nuclear warfare. It has been our experience that anything specifically designed for military purposes is always a military product at the outset, and only moves to a dual-use designation if at some point in time civilian uses of that specific good have become (more) prevalent (e.g. some sensor technologies).

There is room within the application of the Fund guidelines to maintain a conservative application of the policy with a scope that provides for the exclusion of companies involved in the "production, development, sale and/or distribution of the core weapon system" and for specifically designed or key components, as do other comparable institutional investors (like APG).⁴

Exclusions

The Fund should therefore consider adding the following companies to the exclusion list based on their involvement in nuclear weapon production:

Bharat Dynamics Limited

Bharat Dynamics is known to be involved in the production of both the Prithvi II and Agni V nuclear capable missiles for the Indian arsenal.⁵

Constructions Industrielles de la Méditerranée (CNIM)

CNIM itself states that it has been involved in producing key components for the French nuclear arsenal since at least the 1960s.⁶

General Dynamics

General Dynamics is involved in the production and maintenance of the Trident II (D5) for the US and UK. General Dynamics is also responsible for integrating the Trident SLBM in the new US Columbia-class program and the United Kingdom Dreadnought-class submarines.⁷ General Dynamics was previously excluded for a connection to the production of cluster munitions. They should not have been removed from the exclusion list.

Larsen & Toubro

L&T advertises their involvement in the development of launching systems and key components for the Indian nuclear arsenal, specifically for the nuclear-capable Prithvi II missile,⁸ described by the Bulletin of Atomic Scientists as "the first missile to be developed under India's Integrated Guided Missile Development Program... The Prithvi-II can deliver a nuclear or conventional warhead to a range of 250 kilometres (155 miles)".⁹ According to our research, GPFG currently holds investments in this company.¹⁰

Leidos

Leidos is involved in US nuclear weapon production facilities, including Pantex. The Pantex site is currently involved in the life extension programme for the W76 warheads deployed on Trident II (D5) ballistic missiles,¹¹ the W80-1 nuclear warhead,¹² as well as other warheads. According to our research, GPFG currently holds investments in this company.¹³

Leonardo

Leonardo (Italy) (formerly Finmeccanica) is involved in the production of medium-range air-to-surface missiles for the French arsenal. MBDA-Systems, a joint venture between BAE Systems (37.5%), Airbus (37.5%) and Leonardo (25%), supplies the medium-range air-to-surface missile ASMPA to the French air force.¹⁴ According to our research, GPFG currently holds investments in this company.¹⁵

Moog

According to its Annual Reports, Moog has developed launch vehicle and strategic missile controls for the Minuteman III and Trident II (D5) missiles.¹⁶

Raytheon

Raytheon is involved in missile production and development for the US nuclear arsenal. Involvement includes contracts for the Minuteman MEECN (Minimum Essential Emergency Communication Network) programme and the Minuteman MEECN programme upgrade,¹⁷ the Long-Range Standoff weapon,¹⁸ and the Ground Based Strategic Deterrent.¹⁹ According to our research, GPFG currently holds investments in this company.²⁰

Textron

Textron was previously excluded for their involvement with the production of cluster munitions. Textron continues its involvement with inhumane and indiscriminate weapons, now converting US ICBM re-entry vehicles.²¹

Thales

Thales is involved in the French nuclear-armed medium-range air-to-surface missile ASMPA.²² Thales, via Naval Group, is also involved in the integration of the M51 nuclear missiles in the French nuclear-armed submarines.²³ According to our research, GPFG currently holds investments in this company.²⁴

United Technologies Corp

United Technologies Corporation (UTC) acquired Rockwell Collins in November 2018. Rockwell Collins was subsequently renamed Collins Aerospace Systems. Since October 2017, this company has been involved in the modernisation programme for the US Minuteman III intercontinental ballistic missile weapon system.²⁵ (It should be noted however, that UTC and Raytheon are in the process of merging, scheduled to take place in the first part of 2020).²⁶ According to our research, GPFG currently holds investments in this company.²⁷

Recommending these companies for exclusion from investment would send a clear signal that nuclear weapons through their regular use cause devastating humanitarian harm and are unacceptable and illegitimate and would be an appropriate application of the product-based exclusion criteria of the Fund.

Controversial Arms trade

The ethical guidelines also prohibit the Fund from investing in companies that sell weapons or military materiel to certain countries that are subject to investment restrictions on Government bonds. The guidelines also contain the prohibition of investment in companies that produce weapons which violate fundamental principles through normal use. The 2018 Annual Report of the Council on Ethics does recognize that *all* weapons can be put to use to cause humanitarian harm. However, it does not reflect the potential impact that conduct-based exclusion of weapons producers can have on reducing civilian suffering. For instance: the report discusses the issue of weapons sales that fuel the conflict in Yemen, a known humanitarian disaster, and concludes that the fund should only exclude companies responsible for these sales based on the 'conduct-based criteria'. The annual report states that 'there must be a clear element of contribution to these violations [widespread violations of humanitarian law or human rights] on the part of the company, through the sale and later use of these weapons.'²⁸

A recent report by PAX, "Controversial Arms Trade and investments of Dutch pension funds", elaborates on the specific role of pension providers in the controversial arms trade and also builds on conduct-based criteria. Whereas states party to the Arms Trade Treaty are meant to prevent sales of weapons to known human rights violators, institutional investors are well placed to reinforce these provisions. A decision by the Council of Ethics to incorporate 'conduct-based' analysis of weapons producers into its criteria in order to prevent gross humanitarian harm and human rights violations would put these weapons companies on notice that their actions are unacceptable and cannot continue with impunity.

Exclusions

The following companies are publicly traded and known to have financial links with a number of institutional investors. These companies have provided several states involved in the conflict in Yemen with military goods, ranging from (guided) ammunition to fighter jet engines. Conclusive evidence linking the specific weapons to

specific violations is difficult to obtain. The report by PAX referenced above however makes a strong case for some of the arms companies in the report that they contribute to the violations, as their supplies of weapons continued after the war in Yemen started. These should be excluded from the GPFG investment universe:

General Dynamics

General Dynamics supplied Saudi Arabia with tanks and armoured personnel carriers after the start of the war in Yemen.²⁹

General Electric

General Electric supplied Saudi Arabia with F110 engines for their F-15 fighter jets after the start of the war in Yemen. The company is also open about its involvement in maintaining fighter jets engines in cooperation with the Royal Saudi Air Force. According to our research, GPFG currently holds investments in this company.³⁰

Raytheon

Raytheon supplied Saudi Arabia as well as the United Arab Emirates with substantive quantities of guided bombs and missiles after the start of the war in Yemen. According to our research, GPFG currently holds investments in this company.³¹

United Technologies Corp

UTC provided the United Arab Emirates with engines for Archangel combat aircraft the UAE purchased. UTC is open about its ongoing involvement in servicing engines operated in fighter jets operated by the air force of Saudi Arabia. According to our research, GPFG currently holds investments in this company.³²

These four companies are only examples emerging from our report which focuses on a limited set of major arms producers. Concerns around the issue of controversial arms trade are in no way limited to these companies. Continuous screening of the sales of arms companies, also for other destinations beyond the parties involved in the war in Yemen, is therefore necessary.

Lethal Autonomous Weapons Systems

Lethal Autonomous Weapon Systems - also referred to as 'killer robots' - are weapon systems that can select and attack targets without meaningful human control.³³ This means the decision for a weapon to deploy lethal force would be delegated to a machine. This development would have an enormous effect on the way war is conducted and has been called the third revolution in warfare, after gunpowder and the atomic bomb.

Lethal autonomous weapon systems would violate fundamental humanitarian principles through their normal use. The main legal concern is that lethal autonomous weapons are unlikely to comply with International Humanitarian Law (IHL), as it is unlikely that they will be able to properly distinguish between civilians and combatants, or to make a proportionality assessment. Also, as the ICRC argues, the law is addressed to humans, and it is humans not machines, that should comply with and implement the law. Another legal concern is that lethal autonomous weapons create an accountability vacuum in terms of to whom responsibility can be attributed in case of an unlawful act. Furthermore, it is deeply unethical to delegate the decision over life and death to a machine and/or algorithms. This violates fundamental ethical principles, such as human dignity and the right to life. These issues were also raised in the 2015 Annual Report of the Ethics Council.³⁴

Concerns have been raised by various international actors. For example, the UN Secretary General has called these weapons "*politically unacceptable and morally repugnant*".³⁵ Thousands of experts in artificial intelligence have warned these weapons would violate legal and ethical norms and have called for a prohibition. The Council on Ethics itself has "*previously expressed concern that the development of entirely autonomous weapons systems could lead to a risk that companies contribute to the violation of international humanitarian law principles*".³⁶ Also the ICRC has stated that "*limits are necessary for addressing legal, ethical and humanitarian concerns*".³⁷ It argues that these weapons would violate fundamental humanitarian norms. ICRC's 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*".³⁸

How to address the issue of lethal autonomous weapons

PAX 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. Ensuring weapons systems retain meaningful human control at all times and under all circumstances focuses on adherence to fundamental humanitarian principles.

Adding lethal autonomous weapons to the product-based exclusions

PAX 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. The exclusion should cover, *inter alia*, systems that cannot be used with meaningful human control because they can change critical system parameters based on machine learning or become too complex for human users to understand and thus produce unpredictable and inexplicable effects. The exclusion should also extend to the broader category of autonomous weapon systems that select and engage targets without humans in the loop, which are problematic for ethical reasons. In particular, the exclusion should include weapons systems that select and engage humans as targets, or systems that target groups of people based on discriminatory indicators related to age, gender, or other social identities.

Meaningful human control

Adding the principle of meaningful human control as a principle for assessing the exclusion of weapons systems is necessary because 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. A weapon system's functioning should allow a human operator to make a carefully considered decision whether an attack complies with legal and ethical principles. The person who makes this judgement must have sufficient information of the situation on the ground, the functioning of the weapon system and the interaction between the two. This also means a weapon system must be reliable, predictable and understandable for the user.³⁹

Relevant companies

As lethal autonomous weapons systems do not yet exist, the key role for the fund in applying this new criteria at this point in time would be to engage with companies that are likely to develop lethal autonomous weapons systems. All engagement should be time-bound and goal-oriented. 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. Companies that could be involved in the development of lethal autonomous weapons and therefore need to be monitored, include traditional arms producers as well as tech companies.

Screening criteria could therefore consider:

- *Tech companies*: There are at least two key aspects to a tech company's operations that should raise red flags and that warrant observation of the company in question:⁴⁰

The company develops or produces relevant technologies (see below).

The company cooperates with arms producers or military (research) agencies.⁴¹

- *Defence industry*: Many arms producers are looking to integrate autonomy and artificial intelligence into their products. The weaponization of AI and related technologies will eventually be done by (government contracted) arms companies.⁴²

Relevant technologies

The use of new technologies in weapon systems is not always controversial. For example, autonomous take-off and landing, or the use of robots for transporting goods, are applications that do not necessarily raise concerns. However, the capability of selecting and attacking targets without meaningful human control is highly controversial. Therefore, relevant technology is that which facilitates autonomous targeting, as well as key-components that are specifically designed for LAWS.

Such technologies include, but are not limited to:

- Sensors: including radar, camera, Lidar (Light Detection and Ranging), IMUs (Inertial Measurement Unit).
- Software: including object detection, identification and classification and target tracking.
- Related hardware: notably chips and semiconductors.
- Other key components for robotic systems.

While these dual-use technologies may have legitimate civilian purposes, there is reason for concern when a technology or product is specifically designed or developed to be used in a lethal autonomous weapon.

Conclusion

These are three areas in which the Council of Ethics could consider action with the aim to reduce human suffering and prevent investments in companies which themselves or through entities they control produce weapons that violate fundamental humanitarian principles through their normal use or contribute to serious or systematic human rights violations including violations of the rights of individuals in situations of war or conflict.

We encourage an examination of these issues and PAX remains at the disposal of the committee to discuss further.

Submitted on behalf of PAX by Susi Snyder, snyder@paxforpeace.nl, 4 December 2019

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