In this statement on emerging technologies, I will address the topics of outer space security and armed drones. Afterwards, we will hear a short statement on fully autonomous weapons from the Campaign to Stop Killer Robots. Please note that this study guide is highly inspired by official United Nations documents as I see no other source more precise and accurate.

Outer space

Humankind has become increasingly reliant on outer space for a wide range of concrete social, economic and security benefits. However, the continued enjoyment of the benefits of space is anything but guaranteed. It is incumbent upon the international community to ensure that current use and access of outer space do not compromise the ability of present and future generations to benefit from this domain.

From satellite navigation to weather forecasting, from treaty verification to search and rescue operations, international dependence on the benefits derived from outer space has steadily expanded and will continue to grow. As the number of space users and applications has increased, so too have the threats to the long-term sustainability of the space domain. It has become apparent that the existing legal regime for outer space activities is not sufficient to effectively address the many space governance challenges that have emerged since the dawn of the space age.

There is a growing risk that space assets may collide with one another or with a piece of orbital debris. There are currently more than 20,000 pieces of debris larger than 10cm in diameter and hundreds of thousands smaller. As outer space becomes more congested, the likelihood of such events increases, making all spacecraft vulnerable, regardless of the nation or entity to which they belong.

We view with optimism the establishment in recent years of groups specifically tasked with examining measures and recommendations for best practices in the conduct of outer space

activities. Two notable examples are the UN Group of Governmental Experts on space transparency and confidence-building measures (TCBMs), which held meetings in 2012 and 2013 and successfully concluded a consensus report, and the ongoing efforts of the Working Group on the Long Term Sustainability of Outer Space Activities, established by the Scientific and Technical Subcommittee of the UN Committee on the Peaceful Uses of Outer Space.

As well, proposals such as the International Code of Conduct for Outer Space Activities constitute welcome developments. We encourage the drafters of the Code to facilitate transparent and inclusive consultations with various stakeholders so that the input and concerns of all interested actors are reflected in the final version of the Code, thereby increasing the likelihood of widespread adoption.

Initiatives like the GGE on TCBMs for space, the COPUOS sustainability Working Group, and the proposed International Code of Conduct for space activities are undoubtedly valuable and represent essential steps toward building norms for responsible behavior in space. But we remain concerned that a narrow focus among some in the international community on the development of such soft norms has resulted in a retreat from policy discussions and legal instruments specifically related to the need for arms control in outer space.

Skeptics argue that given the inherently dual-use nature of the space domain, defining space weapons and then limiting them in traditional arms control measures is extremely difficult; as a result, they question the very need, adequacy and applicability of arms control measures in outer space. But this view is far from universal.

Several actors in the international community—including major space faring nations and civil society organizations—do not see the dual-use nature of the space domain as an obvious impediment for developing concrete proposals under international law to regulate the eventual

use of space weapons. We are fully aware that, from nuclear capabilities to the use of UAVs, dual-use technologies such as those seen in the space domain constitute an obvious consideration for multilateral arms control efforts. But the unequivocal need for such efforts is beyond dispute.

In this context, the international community cannot and should not be content with addressing only some of the challenges facing the space domain, while turning a blind eye to others just as critical. We are greatly concerned that discussions related to space weaponization and the prevention of an arms race in outer space (PAROS) have yet to gain sufficient traction in the Conference on Disarmament.

Efforts to address PAROS head-on have unfortunately been relegated to a diplomatic limbo. At the UN General Assembly, the annual PAROS resolution has not once been supported by the most advanced spacefaring nation in history, despite having the support of the vast majority of world states. And at the Conference on Disarmament, where PAROS is a core agenda item, substantive negotiations have been effectively deadlocked for more than 15 years.

In the past decade alone, ground-based anti-satellite weapons (ASATs) have been tested, one of which created a hazardous cloud of orbital debris; several communications satellites have been deliberately jammed; missile defense systems have been used as ASATs; and precursor technologies that would allow space-to-space offensive capabilities have been developed.

The ability to use missile defense systems as anti-satellite weapons is not dormant, potential, or eventual. It is an actual and proven capability. Relying upon the unilateral restraint of states not to use ASATs is not a viable long-term solution. As history has shown time and again, appeals to self-restraint are no substitute for effective arms control.

Several obstacles are routinely cited in discussions relating to the development of an effective arms control mechanism that prevents the weaponization of space. But we believe it in the interest of international security and the sustainability of the space domain if all states pledge, at a minimum:

Not to use any space- or ground-based capabilities to deliberately damage or destroy space assets.

Such a pledge—which should be codified multilaterally—would not require a precise definition of space weapon, nor would it disregard the oft-cited need for effective verification of compliance. The primary focus would be on protecting the physical and operational integrity of space assets, as opposed to attempting to define the weapons that might harm them. As well, existing technical means would make the destruction of space assets without attribution virtually impossible. The unwillingness to embrace such a pledge may signal an ongoing desire to maintain the option of attacking space assets going forward.

States should build on this minimum pledge to pursue creative arms control mechanisms that result in a legally-binding prohibition on the deployment and use of space weapons. Distinguished delegates, Other emerging technologies whose use has inescapable ethical and security implications pose similarly complex governance challenges, which must be fully recognized so effective multilateral action can be taken to regulate their use.

Drones

Drones and other remotely-operated robotic systems

According to the 2010 report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, more than 40 countries now have drone technology. Some, including China, France, India, Iran, Israel, Russia, Turkey, the United Kingdom, and the United States either

have or are seeking drones that also have the capability to shoot laser-guided missiles. The report also highlighted the destabilizing potential of a robotic arms race.

Despite mounting public pressure, states continue to refuse to provide factual information about who has been targeted under their policies and with what outcome, including whether innocent civilians have been ―collaterally‖ killed or injured. While human rights monitors and civil society are able to document some instances where the extrajudicial killings take place in easily accessible urban areas, others go undocumented, either because of remoteness or security concerns. The 2012 report of the Special Rapporteur reiterated the recommendation that governments track civilian casualties in disaggregated data so as to identify the number of casualties resulting from the use of drone attacks.

The US has routinely used unmanned drones to launch attacks in six different countries: Afghanistan, Iraq, Libya, Pakistan, Somalia, and Yemen. This illustrates how drones make undertaking military interventions easier. Drone attacks are often directed at individuals believed to be terrorist suspects, but this effectively results in all males considered of ―military age‖ to be targeted, In addition, militaries circumvent the laws of war by not actually entering into war. Civilians have perished in the context of armed conflict (e.g. in Afghanistan) or in attacks in regions where it is unclear whether or not there was an armed conflict (e.g. in Pakistan). These drone attacks have killed or maimed over 4,000 people, mostly in Pakistan, including women, men, girls, and boys. These drones are controlled from remote locations in the United States or other countries. Finally, as noted in the NYU/Stanford report Living Under Drones, there is also a grave psychological impact of drone use stemming from the uncertainty and from the noise of loitering drones.

A rise in the use of unmanned systems on the modern battlefield is likely to give armed forces an improved sense of security by reducing risk for their own troops and the increased option

to apply precision technology to weapon systems. However, these developments focus too narrowly on short term technological military fixes for complex conflicts. They will provide politicians with deadly instruments to be used in remote or inaccessible conflict areas, thus reducing the opportunity to see the impact of those weapons, which is urgently needed to hold those who use them accountable for their actions.

A number of questions arise from the use of drone technology: the scope of the armed conflict; who may be targeted; the weapons used and their accuracy and wide-area explosive effects; and the legal and policy implications of who conducts the targeting. Issues stem not just from drone technology itself, but also from the kind of warfare currently occurring. These questions must be referenced to bodies of law that place significant limits on targeting operations, including human rights law, domestic law, the UN Charter, the law of neutrality, and principles of non-intervention and distinction.

Military drone manufacturers are also looking for civilian uses for remote sensing drones to expand their markets and this includes the use of drones for domestic surveillance. Drones will no doubt make possible the dramatic expansion of the surveillance state. With the convergence of other technologies it may even make possible machine recognition of faces, behaviors, and the monitoring of individual conversations. This has colossal implications for privacy laws and for accountability for remove surveillance and targeting, given the diffuse legal responsibility.

The 2012 Special Rapporteur's report expressed ―serious concern‖ with the US practice of extrajudicial killing, including through armed drone attacks. We call upon states to stop using, deploying, and developing armed drones. We also demand the US government clarify its procedures for determining how its drone strikes are in compliance with international

humanitarian law and human rights, and that it publish disaggregated data on casualties of its drone attacks.

The 2013 report concludes that the use of drones by states to exercise essentially a global policing function to counter potential threats presents a danger to the protection of life. It contains a series of recommendations calling for transparency, accountability, and application of IHL to use, among other things.

In addition, we would encourage governments to look at the importance of controlling the trade and proliferation of drones. In this regard, work should be done in the UN Register on Conventional Arms to clarify the categories that the Arms Trade Treaty relies upon to ensure that the Register and the ATT control robotic weapons comprehensively. We also encourage states to develop comprehensive national control lists in their implementation of the ATT, including robotic systems, potential dual-use technologies, parts, and components.

Conclusion

We urge international policymakers to pursue parallel processes that fully take into account the threats to international security and stability posed by emerging technologies such as space weapons and UAVs. There will be hurdles along the way, of course. But that is all the more reason to promptly move forward to develop robust space governance mechanisms. The consequences of inaction could be dire.

Further Readings:

Even though there are many sources to further your research, I highly recommend you to read the following article on this website to widen your knowledge on the matter: http://yangonmodelunitednations.weebly.com/uploads/6/3/5/3/63535265/emerging_technologies_and_their_impact_on_the_arms_trade.pdf