



Statement of the UN Institute for Disarmament Research

on Lethal Autonomous Weapon Systems
at the 2017 Group of Governmental Experts on LAWS
15 November 2017

Delivered by Kerstin Vignard, Deputy to the Director

Mr Chairman, distinguished colleagues,

A year ago, when High Contracting Parties decided to establish a Group of Governmental Experts (GGE) on Lethal Autonomous Weapon Systems (LAWS), they tasked themselves with identifying characteristics of LAWS and elaborating a working definition.

Agreeing on a working definition of LAWS will be a challenging endeavour, as there are several working definitions already in circulation, and some stakeholders have already stated a preferred policy response. Moreover, each proposed definition attends to a particular set of concerns and characteristics, while omitting others.

One's position on both an appropriate definition and an adequate policy response ultimately depends on what one is concerned about. Different definitions attend to different sets of concerns, as well as privilege different sets of characteristics.

UNIDIR's latest paper "**Concerns, Characteristics and Definitional Approaches**" offers an overview of both concerns and characteristics and illustrates how different definitional approaches attend to these. Deeper understanding of the characteristics described in section II of that paper, as well as using more precise terminology in the CCW discussions themselves, will contribute to more focused discussions going forward. The paper is available at bit.ly/UNIDIR_AWSPprimer.

The 2017 GGE may make a recommendation to the CCW Meeting of High Contracting Parties to renew the mandate of the GGE in 2018. This makes sense—particularly since the 2017 meetings were cut short due to the financial situation of the Convention. It is all the more urgent as the underlying technologies are advancing at a pace at which it is difficult for the international policy discussion to keep up.

Going forward, governments that are interested in making progress on addressing the issue of autonomy in weapon systems will need to decide the most productive way to do so in the limited time that is accorded to this activity within the disarmament calendar. One concrete approach would be for High Contracting Parties to be more specific in the sequencing of activities within the GGE's mandate in order to use the limited time in the most effective way.

Turning to new issues, last year, UNIDIR raised the issue of unintentional risks and accidents in the weaponization of increasingly autonomous technologies. This year we encourage High Contracting Parties to give deeper consideration to the potential risks of intentional exploitation of software vulnerabilities in weapon systems and ask whether LAWS would have the same cyber vulnerabilities we have already seen in conventional weapon systems or whether there could be new or particularly acute vulnerabilities. In the interests of time I'll say more about this on Friday during the panel dedicated to cross-cutting issues. Our introduction to this topic

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for CCW delegations, “The Weaponization of Increasingly Autonomous Technologies: Autonomous Weapon Systems and Cyber Operations”, is available at bit.ly/UNIDIR_AWS_Cyber.

We encourage the High Contracting Parties to consider all facets of the issue of responsibility in your future discussions—including the consequences that arise from accidents and unintended risks, as well as cyber vulnerabilities, in systems dependent on machine learning for critical functions. UNIDIR’s papers on these topics serve as one resource.

As part of our Phase III work, we have placed particular emphasis on encouraging practical reflection on how incrementally increasing autonomy could be incorporated in existing weapon systems. This is a useful exercise to prompt consideration of how autonomy is likely to develop, in what sorts of timeframes, as well where different non-linear technological trajectories that might lead. We have received several requests to continue to offer table top exercises so that more participants can benefit from this sort of activity—we plan to continue to offer these exercises in 2018. In the meantime, we look forward to sharing observations drawn from the 2017 exercise with you in a short report.

Finally, building on its work on algorithmic bias and optimization earlier this year, in the coming months UNIDIR will release additional reports on machine learning in adversarial environments, and decision points in autonomous systems.

I would like to thank the German Federal Foreign Office for its support of Phase III of this project. The papers and audio files from public events of all three phases of the project are available on our website—including our work on framing discussions on AWS, meaningful human control, ethical issues, maritime autonomy, and unintentional risk and safety issues. Funding permitting, UNIDIR looks forward to continuing to support your work in 2018.

Thank you, Mr Chairman.

