

Statement by the UN Institute for Disarmament Research (UNIDIR)

Delivered by Kerstin Vignard, Deputy to the Director

13 November 2015

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Mr President, distinguished colleagues

Thank you for giving me the opportunity to tell you about research underway at the UN Institute for Disarmament Research that pertains to your discussion on Lethal Autonomous Weapon Systems and that we hope will add value to your work.

UNIDIR's work on the weaponization of increasingly autonomous technologies started in 2013 and is focused on helping to advance multilateral discussion in this domain.

Building upon the success of Phase I, this past Spring UNIDIR launched the second phase of the project, with support from Canada, Germany, Ireland and the Netherlands. The project's primary aim remains the same as in Phase I: to help policy-makers to better consider and make informed decisions about autonomy in weapon systems.

In this phase, through the productive format of small, expert-led discussions and public observation papers and events, the project will drill down into substantive areas where there is common ground, identify areas requiring further investigation and indicate where other fields and disciplines might have something useful to contribute to the discussion in the arms control community.

Phase II of the project will continue to focus on where UNIDIR can bring added value—particularly highlighting cross-disciplinary topics, where the critical issues require discussion and consideration beyond the traditional CCW stakeholders, such as the private sector, scientists involved in R&D, and experts from other relevant academic disciplines.

In phase II of the project, some of the themes UNIDIR is considering include:

- Economic dimensions of increasing autonomy
- Military perspectives on responsibility, accountability and increasingly autonomous technologies
- The implications of developments in Artificial Intelligence, and rapid advances in methods like learning algorithms, underpin increasing autonomy
- Decision making, risk assessment and safety
- Transparency

Mr President, distinguished colleagues,

In your efforts to help focus your discussions on LAWS, UNIDIR would like to bring to your attention our recent report on the weaponization of increasingly autonomous technologies in the maritime environment (entitled *Testing the Waters*). While experts have suggested that fully autonomous weapons are likely to first appear in the maritime environment, policy-makers have directed relatively little attention to the specific issues and challenges that arise in this environment that might be different or more acute than on land or in the air.

Even in this relatively “uncomplicated” environment, a range of fundamental issues need to be considered, addressed and resolved. In particular, the risks of deploying increasingly autonomous weaponized systems in the underwater environment where communication is

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difficult or impossible for extended periods of time requires much deeper reflection and discussion.

Rather than being a marginal part of current international discussions, autonomy in the marine environment is a **practical case study** for international policy discussions on weapons and autonomy:

- These **autonomous technologies in the maritime environment are well advanced**, not futuristic scenarios.
- Due to the civilian applications of autonomy in the marine environment, there is a wide group of **stakeholders**: not just the military, but also a variety of industries and scientific communities, which helps us ensure that while considering policies on weaponization we not hinder the peaceful applications and benefits of increasingly autonomous technologies.
- The **limitations on communications** underwater offer a concrete opportunity to consider what level of comfort States have with weaponized objects operating outside of real-time human control.
- Lastly, underwater activities are more difficult to observe than those on the surface, on land or in the air, and therefore invite consideration of what levels and types of **transparency** would be necessary or desirable for increasingly autonomous weaponized technologies.

Thus we encourage governments to actively consider the weaponization of increasingly autonomous technologies in the maritime environment as a practical and near term scenario in order to help focus their discussions.

Mr President, distinguished colleagues,

UNIDIR stands ready to continue to assist Member States as you move forward in your discussions on the weaponization of increasingly autonomous technologies in this forum as in others. If you haven't already seen them, we encourage you to download UNIDIR's Observation Papers: on "Framing discussions", on "Meaningful Human Control", on Ethics and Social Values and most recently on Maritime Autonomy. All of these papers and other resources are available for download from our website.

Funding permitting, UNIDIR intends to continue its work in this regard through at least 2017. If your government is interested in supporting UNIDIR's work on LAWS, I'd be happy to discuss areas for collaboration with you.

Thank you, Mr President.