

Japan's views on the role of science and technology in the context of international security and disarmament pursuant to UN General Assembly Resolution A/RES/72/28

Today, we are witnessing the rapid pace of scientific advancement in fields such as artificial intelligence, robotics, autonomous systems, information technology, life science, nanotechnology, and material science as well as the extensive global diffusion of such knowledge and technologies both in tangible and intangible forms. Japan welcomes the adoption of resolution A/72/28 on the role of science and technology in the context of international security and disarmament, and expects that the initiative will deepen the international community's understanding of this novel, multifaceted, complex, globalized and thus important topic.

At the same time, the deliberations on this topic are at an early stage and their scope is inherently wide. We all acknowledge the significance of this issue, but it contains diverse aspects which require further study. To this end, the following should be taken into consideration as we move forward:

- A structured analysis and evaluation of the current state of emerging technologies and possible impacts in the area of international security and disarmament are necessary so that we can identify areas where concerted international action is necessary, urgent and effective.
- The potential misuse or malicious use of emerging dual-use technologies is one of the key cross-cutting issues under this topic. We must place special focus on tackling this threat, while taking care not to hinder the healthy advancement of science and technology.
- It is useful to draw lessons and best practices from the ongoing discussions under existing frameworks such as the Convention on Certain Conventional Weapons (CCW), the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (BWC), the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (CWC), and the other export control regimes. In the meantime, it is also important to avoid launching new initiatives in duplication with existing or already proposed ones, such as discussions on cyber security.
- Given the rapid pace of change, it is essential and useful to have inputs from related stakeholders, particularly from the private sector. In this regard, Japan held, in cooperation with the Stimson Center, "Turtle Bay Security Roundtable" in New York on 23 March 2018. Under the theme of "Managing the Frontiers of Technology", experts from UN Member States, subsidiary organs of the Security Council, think tanks, industries, and academia discussed implications of evolving technologies for

international security, and UN Secretary-General António Guterres, emphasized the need to maximize the benefits of technological revolution while mitigating and preventing dangers. Japan is determined to continue these kinds of discussion, engaging multiple stakeholders to learn from each other.

- Education and awareness-raising is a key component of scientific training early on in the career progression of scientists, helping them to grapple with the possible misuse of technology.
- Capacity building and establishing related technologies for detecting and verifying new types of threats, such as biological and chemical agents, is important.
- The transfer of sensitive items and technology that could contribute to weapons of mass destruction or conventional arms, and thus have impacts on international security, disarmament, and non-proliferation, should be controlled in accordance with the guidelines of export control regimes (Nuclear Suppliers Group, Missile Technology Control Regime, Australia Group, and Wassenaar Arrangement) and related Security Council resolutions, including resolution 1540 (2004).
- Multi-stakeholder approach should be taken and close collaboration among policymakers, industry, academia, and civil society is necessary.
- Inter-disciplinary approach is needed because advancement of science creates a number of inter-linkages including the one between cyber security and artificial intelligence discussions.
- Consistency with existing legal norms and frameworks should be taken into consideration.

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