15th ESARDA Export Control Working Group Meeting

Session: **Risk assessment approaches for dual-use technologies**

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Rationale: Several developments in the past years have raised concern about the effectiveness and timeliness of the existing export control regimes to prevent illicit diffusion and use of dual-use technologies. While the usefulness of trade controls in traditional proliferation domains such as the nuclear one is widely acknowledged, there is a number of challenges requiring new responses at multilateral or plurilateral level.

First, the expansion in the number of emerging, and readily-available technologies, such as bio-, nano-, and quantum technologies, micro-electronics and semi-conductors, PNT technologies, additive manufacturing and AI, that may converge and find risky novel applications, in the civil, space, and also defence domains. Second, the digitalization of operative functions than can be transmitted electronically, stored in clouds, etc. Third, a major shift in the global geopolitical environment that has given rise to new technological races among major high-tech states.

Existing export control regimes have as primary mandate to prevent the diversion of key technologies to actors that could build WMDs. However, the recent expansion of control objectives to public security, counterterrorism, and prevention of human rights violations needs to take account the above challenges. What is more, the modalities of proliferation have become more complex and difficult to trace, as they unfold along global supply chains and include a vast array of relevant actors, foreign investment activities, a higher degree of accessibility to technologies with misuse potential, as well as novel channels of transmission and sanctions evasion.

Against that backdrop, the panel will explore technological and non-technological parameters for updating technology risk assessment approaches. These parameters may include technology maturity scales, skills required to application, threshold for diffusion, etc., but also current trends towards convergence and mission creep, involved stakeholders' constellations along the value chain (from R&D to commercialization and export), and not least the shifting geopolitical context and potential "rivalries" and "races" that provide incentives or constraints to State and non-State actors.

The panel should conceive risk as both chances for benefit, and probabilities for generation of new threats, in order to provide insights into political trade-offs when it comes to updating or adding new control rules. Based upon comparative work done in the previous years, the session will seek to foster mutual learning among more and less mature control domains (i.e. nuclear, biological, chemical, cyber), and spell out which mechanisms and practices are "fit-for-purpose", and "what-works" under which circumstances. Not least, the session will attempt to break silos, by bringing together experts, practitioners and analysts from different communities. The session will particularly address three questions:

- Which is the influence of the shifting geostrategic environment on the existing MECR fitness for purpose? Which multilateral or plurilateral modalities of collaboration foster which goals?

- Are there any examples of current approaches (tools and methods) used by industry and academia for operationalising risk assessment and complying with existing export control obligations and due diligence requirements, while not undermining innovation or freedom of research?

- Which methodologies identifying dual-use risk can be productively transferred among the nuclear, chemical, biological, or cyber domains? To what extent can they be accommodated within formal export controls, contributing, among other, to up-to-date control- and watch-lists?

Agenda:

15.30 - 18.00: Risk assessment approaches for dual-use technologies
Luxembourg Congress Conference Centre & Online

- **Introduction** (G. KOLLIARAKIS – *German Council on Foreign Relations* and C. CHARATSIS - *European Commission Joint Research Centre*)

- **Factoring in the geostrategic context** (K. WOLF- *Akin Gump Strauss Hauer & Feld LLP*; R. CZERNATONI – *Carnegie Europe*)

- **Reviewing existing approaches and instruments** (B. NELSON – *University of Wisconsin*; B. ALEKSIC- *Fraunhofer Gesellschaft*; A. MELVILLE – *Pacific Northwest National Laboratory*)

- **Enabling cross-domain inspiration among communities of practice** (H. LIN – *Stanford University*; S. WEISS EVANS – *Harvard University*; M. LADIKAS - *Karlsruhe Institute of Technology*)