

Position Statement for the 8th Joint INMM/ESARDA Workshop Building International Capacity

Title: International Safeguards and Nuclear Security Synergies Built on an Academic Foundation

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Even though it is universally acknowledged that synergies between international safeguards and nuclear security exist, efforts to realize them do not follow a holistic and comprehensive vision but are rather sporadically targeted at different levels and with different intensities. Further, they are hampered by the silo structure of international safeguards and nuclear security, where staff may have a limited interface with each other and generally know little about the challenges of the other party.

Academia can be:

- 1) A strong contributor to the development and adaptation of a holistic strategy, and
- 2) The first proponent in its implementation by reaching out to and guiding future staff and experts both during their education period as well as during educational outreach to working professionals and faculty.

Academia has access to future personnel on both sides of the 'fence', it can ensure more intimate knowledge of both areas to reduce resistance against working together and can provide first guidance in a more universal approach to realizing synergies, working as one/initial element of a long-term strategy.

At the IAEA, the State or the facility levels interfaces between international safeguards and nuclear security can occur but are voluntary. It is recognized that creating such interfaces between these systems can be of high value in an overall strengthening of international security.

The drivers for safeguards and security are fundamentally different, of course. While one seeks to detect diversion of significant quantities of nuclear material in a timely manner and to deter by the threat of this detection, the other is concerned with non-state actors, sub-national terrorist or criminal groups, or sabotage/insider threats.

But at the same time safeguards and security have similar requirements for governance since both are subject to either national laws or international agreements and both require regulatory bodies that guide the licensing, monitoring, inspection, and enforcement efforts in the State.

At the facility level, the responsibilities of the operator share similarities between safeguards and security, as well. Both have to implement the full spectrum of requirements and regulations of nuclear material accountancy and physical protection.

But today, international safeguards and nuclear security are still separate silos, with little interaction or exchange, and limited knowledge of the 'other' side build up resistance to cooperate, even if (or especially if) potential synergies become obvious: it is a concern on which side the realized resource savings will result in reduced budgets or personnel.

'Multidisciplinary' experts would not only be better suited to support current requirement and responsibilities but also emerging needs: Fissile Material Cutoff Treaty (FMCT), bilateral material reduction, global zero (situations outside established frameworks) or why not envisioned the future of a State System of Accountancy and Control (SSAC) or Regional System of Accountancy and Control (RSAC) for potential nuclear emerging countries required for the implementation of both international safeguards and nuclear security.

They are also better suited to implement the elements of specific interfaces such as Material Balance Area (MBA) structure, inventory and flow key measurement points, material control, notification in case of suspected loss of nuclear material using common tools: NDA measurement, DA, containment and surveillance systems, nuclear forensics, procedure based.

Comprehensive understanding, discussion and evaluation of international safeguards and nuclear security implementation, approach and synergies from political, institutional, and technical perspective with roots in academia are needed.

In this context, the role of academia in both the definition of the overall strategy and its implementation is:

- To be an active contributor in countries with established nuclear programs vs. newcomer countries
- To interface with IAEA, national SSAC/RSAC, security leaders
- To provide 'Boots on the ground' standardized coursework at the university (degree credit) and targeted workshops/seminars to prepare future professionals to accept and implement synergies when they join workforce
- To adapt coursework for emerging nuclear countries
- To serve as 'reservoir' for knowledge conservation
- To continually review and adapt strategy following developments within international safeguards or nuclear security culture

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