



Contribution ID: 149

Type: oral

The Potential of Open Source Information in Supporting Acquisition Pathway Analysis to Design IAEA State Level Approaches

Wednesday 22 October 2014 11:20 (20 minutes)

International Atomic Energy Agency (IAEA) safeguards designed to deter nuclear proliferation are constantly evolving to respond to new challenges. Within its State Level Concept, the IAEA envisions an objective-based and information-driven approach for designing and implementing State Level Approaches (SLAs), using all available measures to improve the effectiveness and efficiency of safeguards. The main Objectives of a SLA are a) to detect undeclared nuclear material or activities in the State, b) to detect undeclared production or processing of nuclear materials in declared facilities or locations outside facilities (LOFs), c) to detect diversion of declared nuclear material in declared facilities or LOFs. Under the SLA, States will be differentiated based upon objective State-Specific Factors that influence the design, planning, conduct and evaluation of safeguards activities. Proposed categories of factors include both technical and legal aspects, spanning from the deployed fuel cycle and the related state's technical capability to the type of safeguards agreements in force and the IAEA experience in implementing safeguards in that state. To design a SLA, the IAEA foresees the use of Acquisition Path Analysis (APA) to identify the plausible routes for acquiring weapons-usable material and to assess their safeguards significance. In order to achieve this goal, APA will have to identify possible acquisition paths, characterize them and eventually prioritise them. This paper will provide an overview of how the use of open source information (here loosely defined as any type of non-classified or proprietary information and including, but not limited to, media sources, government and non-governmental reports and analyses, commercial data, satellite imagery, scientific/technical literature, trade data) can support this activity in the various aspects of a typical APA approach.

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