Joint Research and Development — Member States Support Programmes (MSSPs) as a Vehicle for the Technical Development and Further Improvement of IAEA Safeguards

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The Treaty establishes a safeguards system under the responsibility of the IAEA (Art. III) to deter the proliferation of nuclear weapons through the early detection of potential misuse of peaceful nuclear programmes and to provide credible assurances of States’ compliance with their commitments to use nuclear material and facilities solely for peaceful, non-explosive purposes.  

[IAEA Long Term Strategic Plan 2012-2023]
Need for Safeguards R&D

NPT-Member States to cooperate with the IAEA in order to:

- facilitate the application of safeguards and to
- enable the IAEA to apply state-of-the-art methods and techniques.

- 21 Member States Support Programmes (2015): ARG, AUL, BEL, BRZ, CAN, CPR, CZ, EC, ESP, FIN, FRA, GER, HUN, JPN, NET, ROK, RSA, RUS, SWE, UK, USA
- 353 active MSSPs tasks, 25 joint MSSP tasks, 52 MSSPs tasks on stand-by*

* SPRICS 2.0 as of Aug 19, 2015
Example: German MSSP

Providing Support to the IAEA since 1978

- Established by an exchange of letters of Sept 3/Oct 5, 1978, between the Director General of the IAEA and the German Governor at the IAEA’s Board of Governors.
- Funded and coordinated by Federal Ministry of Economic Affairs and Energy.

Objectives

- To cooperate with the IAEA in developing safeguards methods and techniques,
- To assure the supply with the developed methods and techniques,
- To provide expert advice and consultancy,
- To inform the IAEA, as early as possible, about Germany’s nuclear plans and projects.

Four Areas of Activities

A. Safeguards System Designs and Safeguards Approaches
B. Safeguards Data Collection, Treatment and Evaluation
C. Measurement Methods and Techniques
D. Containment and Surveillance

27 Active Taks
157 Completed Taks
405 Progress Reports

Scientific coordinator: Forschungszentrum Jülich (since 1985)
MSSPs Coordination and Exchange

- 12 years IAEA Department of Safeguards Long-Term R&D Plan
- Biennial Development and Implementation Support Programme for Nuclear Verification
- SPRICS 2.0 Portal: Safeguards Support Programme Information and Communication System

- (Semi-) Annual MSSP Review Meetings
- Biennial MSSP Coordinators Meetings
Some Lessons Learnt

- Member Safeguards Support Programmes have proven to be a powerful vehicle in safeguards implementation.
- Safeguards R&D is highly interdisciplinary.
- Close cooperation between coordinators and contractors (research labs, nuclear industry, commercial developers), IAEA, regional/national safeguards authorities, and operators is essential.
- Customized safeguards equipment comes in small series production, often from small manufacturers committed to international safeguards.
- Synergies with (nuclear) security, arms control and disarmament verification.
Thank you for your attention.

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