Priorities for Strengthening International Safeguards

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Outline

- Trends in International Safeguards: 2003-Present
  - Safeguards authorities
  - Safeguards implementation
  - Emerging technologies
  - Human capital development
Facilities/LOFs and SQs of Material Under Safeguards

SQs under safeguards

Facilities and LOFs under safeguards

IAEA Safeguards: 2003-2017

IAEA Safeguards Regular Budget (inflation adjusted)

Deployment of Unattended and Remote Monitoring Systems

- Regular Budget (inflation adjusted, 2003)
- Total Remote and unattended monitoring and surveillance systems

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- Electronic Seals
- LG-SIMS
- NGSS

Information Revolution

Volume
Number of Websites: 2000-2017

Velocity
Transistors per Computer Processor

Availability
Global Internet Users:

2017 IAEA SIR
• Over 1 million material accounting reports
• Over 2,200 AP declarations
• Over 140 million open source items collected
• 556 commercial satellite images acquired
• 932 unattended safeguards data streams
• Completion of MOSAIC project

Source: http://www.internetlivestats.com
Where are we today?

- Future of nuclear power uncertain
  - Greatest interest among states with less experience
  - New types of nuclear facilities (e.g. SMRs, geological repositories)
  - Safeguards burden associated with facility decommissioning
- Resource-intensive monitoring and verification missions (including potential return to DPRK)
- Availability of / Access to sensitive information and technology
- Turnover among safeguards workforce
- State System of Accounting and Control (SSAC) shortfalls
Safeguards Authorities

- Comprehensive Safeguards Agreement (CSA) and the Additional Protocol (AP) as the *de facto* standard for safeguards and verification
- Full use of IAEA authority to pursue all safeguards-relevant information related to potential undeclared nuclear materials and activities
Safeguards Implementation

- Development and adoption of State Level Approaches (SLAs)
- Focus on acquisition pathway analysis (APA) and development of technical objectives
Safeguards Tools / Technologies

- Revisit feasibility of Wide Area Environmental Sampling (WAES)
- Particle age-dating
- Statistical methodologies for evaluating safeguards data
- Applications for information collection, synthesis, and analysis
- Asset management and life-cycle planning
Safeguards Expertise

- Outreach to post-docs and mid-career professionals through fellowships and short-term, substantive opportunities in the safeguards field
- Improve SSAC capacity (INSEP program)
- Development of online resources for aspiring safeguards / nonproliferation professionals
- Training courses
Questions?