



**Office of
Nonproliferation
and International
Security (NIS)**

-  Safeguard and Secure nuclear material to prevent its diversion, theft and sabotage.
-  Control the spread of WMD-related material, equipment, technology and expertise.
-  Negotiate, monitor and verify compliance with international nonproliferation and arms control treaties and agreements.
-  Develop and implement DOE/NISA nonproliferation and arms control policy to reduce the risk of weapons of mass destruction.

Introduction to the Additional Protocol

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**Office of
Nonproliferation
and International
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Outline

- The Additional Protocol – History and context
- The case of Iraq
- Developing strengthened safeguards
- The Model AP
- Traditional safeguards vs. AP safeguards
- Key sections of the AP
- Complementary access
- Why countries sign the AP
- The system needed to meet AP declaration requirements

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- **Non-Proliferation Treaty (NPT) – Obligations of non-nuclear weapon states**
 - Not to manufacture or acquire nuclear weapons
 - Export nuclear material or especially designed nuclear equipment only if placed under safeguards
 - Conclude a comprehensive safeguards agreement with IAEA
 - NPT signed by more than 180 countries
- **International Atomic Energy Agency (IAEA)**
 - Verifies compliance with safeguards agreements
 - Provides the world with assurance that nuclear material is not being diverted to weapons use

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- Iraq violated the NPT
- Undeclared enrichment next to inspected facilities
 - Not discovered by normal IAEA inspections
 - Discovered by UN after first Gulf War in 1991
- Additional information and broader access needed by the IAEA to detect such undeclared activities

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Program 93+2: Developing Strengthened Safeguards Measures

Example Part 1 Measures

Existing Authority under Traditional Safeguards

- Environmental swipe sampling at strategic points
- Examination of open source information
- Remote monitoring and analysis
- Commercial satellite imagery

Example Part 2 Measures

Additional Authority requiring an Additional Protocol

- Location-specific environmental sampling
- Declaration of fuel cycle-related research & development not involving nuclear material
- Short-notice access to additional locations

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Creation of the Model AP

- Written by IAEA staff and a committee of the Board of Governors
- Approved by the Board of Governors in May 1997 (INFCIRC/540)
- 139 countries have signed. Of those, 121 entered-into-force. (as of June 2013)
- United States entered-into-force January 2009

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What is the Additional Protocol?

A legal document

Attached to the State's IAEA Safeguards Agreement

Provides IAEA access to additional
1) Information (*declarations*) and
2) Locations (*Complementary Access*)

Helps fill the gaps in traditional safeguards

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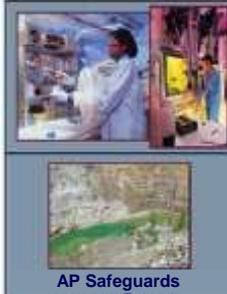
Traditional Safeguards Versus AP

- Traditional (or comprehensive) safeguards focused on detecting diversion of nuclear material from declared activities
- A State may try to hide some nuclear material and not declare it
- The AP addresses this gap with measures to detect undeclared nuclear activities
- AP: Helps confirm the absence of undeclared nuclear material and activities

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Strengthened Safeguards: Verifying a Wider Spectrum of Nuclear Activities

Additional Protocol



AP Safeguards

Under the AP

- R&D that enhances nuclear capability
- Manufacturing and export/import of certain nuclear equipment and non-nuclear materials
- Uranium mines & mills

Comprehensive Safeguards: Verifying nuclear material



Comprehensive Safeguards

Plus under the AP

- Description of buildings on a site.
- Source material before the starting point of safeguards: inventories and export/import.

Additional Protocol



AP Safeguards

Under the AP

- Status of decommissioned facilities and LOFs
- Status of nuclear material exempted from safeguards and certain waste on which safeguards have been terminated

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Key Sections of the AP

- Declaration requirements
- Complementary Access
- Designation of Agency inspectors; Visas
- Entry-into-force
- Definitions
- Annex I: nuclear-related manufacturing activities
- Annex II: nuclear equipment and non-nuclear material especially designed for nuclear use

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Key Declaration Requirements

- Fuel cycle research & development not involving nuclear material
- All buildings on a site
- Nuclear-related manufacturing
- Uranium mines and concentration plants; thorium concentration plants
- Certain source material, including exports/imports
- Certain radioactive waste
- Exports and imports of especially designed equipment and non-nuclear material
- Ten-year nuclear plan

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The Declaration Process

1. Organizations identify declarable activities
2. Organizations transmit declarable information to the AP implementing agency
3. The AP implementing agency reviews accuracy of declaration information
4. The AP implementing agency prepares declarations using, for example, the IAEA *Protocol Reporter* software
5. The AP implementing agency (or other responsible agency) submits declarations to IAEA
 - Annual updates due to IAEA by May 15
 - Quarterly reports of Annex II exports due to IAEA 60 days after end of each quarter

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- Reasons for complementary access (CA)
 - To assure absence of undeclared nuclear material
 - Resolve a question or inconsistency
 - Confirm status of decommissioned facility
- Any declared location
- Location-specific environmental sampling anywhere
- Usually 24-hour notice; 2-hour notice if during a traditional inspection

- Consistency checks are performed
 - Internal consistency of information
 - Consistency with inspection/CA data and State reporting
 - Consistency with open source information
- IAEA combines AP declarations, inspection and CA results, and open source information into a *State Evaluation Report*
 - Reviewed by Departmental Committee
 - Supports “Broader Conclusion” (no evidence of undeclared activities)
 - Basis for “State Level Integrated Safeguards Approach” and an “Annual Implementation Plan” for ongoing inspection, CA, and review activities

Why Countries Sign and Implement the AP

- Demonstrates a country's expanded commitment to the nonproliferation of nuclear weapons
- Could increase access to nuclear-related imports and technology
- Helps a country from unintentionally contributing to illicit proliferation networks
- Comprehensive safeguards plus the AP is becoming the universal standard for verifying nonproliferation commitments
- Is a significant step toward integrated safeguards, which could lead to reduced traditional IAEA inspections in the country

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What is Needed to Meet AP Declaration Requirements?

- Laws and regulations
 - Information required to be reported to State implementing agency
 - Timing
- Establish the process for preparing declarations
 - Identify declarable activities: AP awareness
 - Organizations transmit declarable information to State implementing agency
 - May use DOE *AP Declaration Helper* software
 - Government review
 - State implementing agency inputs to *Protocol Reporter* software
 - State submits declarations to IAEA
 - Quarterly reports of Annex II exports
 - Annual updates of all other declarations
 - Develop a timeline to ensure May 15 deadline is met

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What Is Needed to Meet AP Export/Import Declaration Requirements?

- A nuclear export control system is not required but very useful
- Components of a nuclear export control system may include
 - National law
 - Regulations
 - Licensing process
 - System for tracking and reporting information
 - Enforcement
- Export control system would help with AP reporting on:
 - Source material that is before the starting point of safeguards
 - Annex II items

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Summary

- The AP helps fill the gaps in traditional safeguards
- The AP helps confirm the absence of undeclared nuclear material and activities
- AP declarations are submitted to the IAEA
- The IAEA can visit declared and certain other locations

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