Verification pursuant to the NPT: Concluding safeguards agreements and additional protocols

Jan Lodding
Senior Policy Officer
Verification and Security Policy Co-ordination Section
Office of External Relations and Policy Co-ordination
Outline of Presentation

1. Evolution of the IAEA’s safeguards system for verification under the NPT
2. Legal instruments of the Agency’s safeguards system
3. Adherence to the Agency’s safeguards system
   1. IAEA outreach
   2. Status of adherence; Developments 2000-2005
   3. Non-member States of the Agency
4. How to conclude the legal instruments of the Agency’s safeguards system
Nuclear energy supports development
Key Challenge:
HOW TO DISSEMINATE THE BENEFITS OF NUCLEAR ENERGY WHILE ENSURING AGAINST ITS DESTRUCTIVE CAPABILITIES
U.S. President Eisenhower proposed an “international agency for nuclear energy” under the UN responsible for nuclear material

- To promote peaceful uses of nuclear energy
- To control that nuclear material under its control is used solely for peaceful purposes

General Assembly
8 December 1953
IAEA Mission and Activities

To accelerate and enlarge the contribution of nuclear energy to peace, health and prosperity while ensuring its peaceful use
(Article II, IAEA Statute)

3 “Pillars” of work

- Technology
- Safety/Security
- Verification
The IAEA’s Verification Role

**What:** The IAEA verifies that States honour their nuclear non-proliferation undertakings

- The Agency provides *credible assurance* to the international community that nuclear material under its verification is not diverted and regarding the peaceful nature of States’ nuclear programmes

**How:** This function is performed on the basis of safeguards agreements with States (legal aspects) and through the *technical measures* available to inspectors (technical aspects)
Treaty Verification

Two distinct but interrelated roles of treaty verification:

1. To build confidence between parties
2. To deter against cheating by risk of detection
Treaty Verification

The effectiveness of a verification system is a function of:

1. RIGHTS TO INFORMATION

2. RIGHTS OF ACCESS

3. AVAILABILITY OF AND RIGHTS TO APPLY VERIFICATION TECHNOLOGY
The NPT: Comprehensive Safeguards Agreements

- NNWS undertake to accept safeguards, through an agreement with the IAEA in accordance with its statute and safeguards system, for verification of the fulfillment of its obligations assumed under [the NPT].

- Safeguards to be applied to all nuclear material in all peaceful nuclear activities in the state.

- NNWS undertake to bring into force a comprehensive safeguards agreement with the IAEA within 180 days of becoming party to the NPT.
Evolution of the Agency’s safeguards system for verification under the NPT

All Regional Nuclear-Weapon-Free Zones require comprehensive safeguards agreements with the IAEA

- Tlatelolco Treaty (Latin America and the Caribbean)
- Rarotonga Treaty (South Pacific)
- Bangkok Treaty (Southeast Asia)
- Pelindaba Treaty (Africa)
- (Central Asian Nuclear-Weapon-Free Zone)
Evolution of the Agency’s safeguards system for verification under the NPT

Safeguards Agreements pursuant to the NPT (INFCIRC/153 (Corrected))

- Negotiated 1968-1970 in Vienna
- Obligatory for all NPT Non-Nuclear-Weapon States (NWS)
Evolution of the Agency’s safeguards system for verification under the NPT

- INFCIRC/153 type safeguards agreements:
  - "States undertake, in accordance with Article III of the NPT, to accept safeguards on all their nuclear material in all peaceful nuclear activities to verify that such material is not diverted to nuclear weapons."
  - "Agreement provides for the Agency’s right and obligation to ensure that safeguards will be applied on all nuclear material in all peaceful nuclear activities of the State."
    - States report holdings of significant quantities of nuclear material and facilities containing such nuclear material
    - IAEA carries out inspections in accordance with the agreement at agreed strategic points in facilities and other declared locations
Evolution of the Agency’s safeguards system for verification under the NPT

- Traditional safeguards focused on assuring against the possible diversion of declared nuclear material from peaceful uses.

- Experience with *Iraq, DPRK and South Africa* underlined need to focus more on the possibility that States have undeclared nuclear material and activities.

→ Model Additional Protocol, May 1997
“I believe that, for the Agency to be able to fulfil its verification responsibilities in a credible manner, the additional protocol must become the standard for all countries that are party to the NPT”

IAEA Director General, Mohamed ElBaradei
Legal instruments and requirements
Agency’s safeguards system for verification under the NPT

Legal instruments:
NPT Safeguards Agreement (INFCIRC/153 (Corr.))
Additional Protocols (INFCIRC/540 (Corr.))
Part 1 provides the general framework
- The States basic NPT undertaking
- The Agency’s “right and obligation”

Part 2 outlines the detailed reporting and inspection provisions for reporting and carrying out inspections related to nuclear material and facilities
State parties must maintain a State System of Accountancy for and Control of Nuclear Material (SSAC)

The State must provide:
- Initial report on nuclear material, and subsequent reports on inventories and inventory changes
- Design information on planned and existing nuclear facilities

The Agency may perform:
- Verification through inspections at declared facilities and locations outside facilities where nuclear material is customarily used
- Routine, ad hoc and special inspections, as appropriate
Additional Protocols

Same focus on nuclear material, nuclear facilities and related activities and locations; additional protocols provides the Agency with:

1. ADDITIONAL INFORMATION

2. BROADER ACCESS

3. STREAMLINED ADMINISTRATIVE PROCEDURES
Additional Protocols

ADDITIONAL INFORMATION:
1. Initial declaration on various aspects of the nuclear fuel cycle, including any uranium mining and any exports of specified items for weapons production to NNWS (also nil reports)
2. Yearly update of any changes (also nil reports)
3. Quarterly reports on imports/exports (also nil reports)
Additional Protocols

BROADER ACCESS:
- Focused on declared sites
- Routine use of environmental sampling

1. Broader access at declared locations to ensure the absence of undeclared nuclear material and activities
2. Additional access to resolve a question or inconsistency for environmental sampling
The 2000 NPT Review Conference recommended a plan of action, to promote and facilitate the conclusion and entry into force of NPT safeguards agreements and additional protocols, including, for example, specific measures to assist States with less experience in nuclear activities to implement legal requirements.

The 2000 IAEA General Conference provided a number of “elements of an Action Plan”
Secretariat efforts to encourage wider adherence to strengthened safeguards

2005 Plan of Action: Three categories of States

✓ (1) Member States with nuclear material or facilities under routine safeguards (71 States)
   ➢ Individual consultations, national seminars

✓ (2) Member States without such material or facilities (Small Quantity States) (64 States)
   ➢ Co-operation within the Secretariat, outreach seminars

✓ (3) Non-Member States (57 States)
   ➢ Co-operation with advocate States, presentations in the margins of regional meetings
Secretariat efforts to encourage wider adherence to strengthened safeguards

More than 150 States have attended IAEA outreach events over the past four years.

  Planned: Jamaica 2005, Fiji 2006
- SSAC Training, Legislative Services and Assessment Services; national and regional SSAC workshops and training courses
- Correspondence and drafting of agreements and protocols, outreach publications
As of 24 Apr. 2000:

9 States have APs in force

1 State has an AP otherwise applied
AP World Status

As of 5 May 2005

66 States have APs in force

2 States have APs otherwise applied
AP World Status

As of 5 May 2005

66 States have APs in force

2 States have APs otherwise applied

23 States have APs signed but not yet in force

11 States have APs Board approved but not yet signed
AP Africa Status

As of 24 Apr. 2000:

0 States have APs in force

1 State has an AP otherwise applied

1 State has an AP signed but not yet in force
AP Africa Status

As of 5 May 2005

6 States have APs in Force

1 State has an AP otherwise applied

7 States have APs signed but not yet in force

6 States have APs Board approved but not yet signed
States that have yet to conclude safeguards agreements pursuant to the NPT 1998-2005 (Until 5 May 2005)

![Graph showing the number of states that have yet to conclude safeguards agreements for the years 1998 to 2005.](image)
Conclusion of Additional Protocols, 1998-2005
(cumulative, as of 5 May 2005)
Conclusion of NPT Safeguards Agreements

- In 24 April 2000, 135 NPT States had safeguards agreements with the Agency; on 5 May 2005, 151 NPT States are party to safeguards agreements

- 38 NPT States (compared with 52 in 2000) still have no safeguards agreements with the IAEA:
  - 9 of these have signed safeguards agreements but not yet completed constitutional requirements for entry into force
  - 5 of these have had safeguards agreements approved by the Board but have not yet signed these
  - 24 of these have no approved safeguards agreement
IAEA non-Member States

55 NPT States are non-Members of the IAEA

- Out of 24 States that have not yet notified the Agency of their Governments’ intention to conclude NPT safeguards agreements, 16 are IAEA non-Members
- Out of 90 States that have not yet notified the Agency of their Governments’ intention to conclude additional protocols, 50 are IAEA non-Member
How to bring into force the legal instruments of the safeguards system

Three Steps

1. The State writes notifies the Agency of its decision to conclude the agreement/protocol

2. The IAEA Board of Governors authorizes the Director General to sign and implement the agreement/protocol

3. The agreement/protocol is signed by the Director General and a duly authorized representative of the State

- The agreement/protocol enters into force either upon signature or upon receipt, by the Agency, of a notification that constitutional and statutory requirements for entry into force have been met, depending of the State’s legal system.
Trust but Verify!

United States President Ronald Reagan & Soviet Union President Michail Gorbatchov
The End