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IAEA Safeguards System

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“The SIR for 2022 reflects the dedicated collective effort of the Agency’s staff to maintain, in close cooperation with all States, the robustness and agility of the safeguards system. It is this cooperation, and the continuous engagement of States towards our shared objectives, that make it possible for the Secretariat to continue drawing the independent and soundly-based safeguards conclusions that are at the core of our verification mandate.”

• IAEA safeguards implemented and conclusions drawn for 188 States with safeguards agreements in force with IAEA
• 722 nuclear facilities (e.g. reactors; conversion, enrichment, fuel fabrication and reprocessing plants) and 631 MBAs outside facilities under IAEA safeguards
• 2975 in-field verification missions carried out by IAEA inspectors
• 230,754 significant quantities* of nuclear material under IAEA safeguards

* A significant quantity is the approximate amount of nuclear material for which the possibility of manufacturing a nuclear explosive device cannot be excluded
IAEA SAFEGUARDS

Legal Framework

- IAEA safeguards - technical means embedded in legal instruments (safeguards agreements) implemented by IAEA to verify States’ non-proliferation undertakings to use nuclear material and technology for peaceful purposes

- Implementation of IAEA safeguards is based on safeguards agreements which are international treaties

- Safeguards agreements set out the rights and obligations of the parties, as well as the implementation procedures
LEGAL INSTRUMENTS

- The IAEA’s Statute
- Safeguards Agreements
- Additional Protocols to Safeguards Agreements
THE IAEA’s STATUTE

**Background**

- Entered into force on 29 July 1957 – 178 Member States are currently parties to the Statute
- IAEA is independent intergovernmental organization established by its Statute
  
  *Relationship Agreement with UN (1959)*

- Policy-Making Organs
  - General Conference (Art. V)
  - Board of Governors (Art. VI)
- Director General (Art. VII)
The IAEA’s Statute

✓ Article III.A.5 of the Statute authorizes the IAEA:

✓ To establish and administer safeguards to ensure that special fissionable and other materials, services, equipment, facilities and information made available by the IAEA to Member States are not used in such a way as to further any military purpose; and

✓ To apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement, or at the request of a State, to any of that State’s activities in the field of atomic energy
CONCLUSION OF SAFEGUARDS AGREEMENTS

✓ The IAEA membership does not require acceptance of safeguards
  ✓ Safeguards are applied in Member and non-Member States

✓ Implementation of safeguards is based on safeguards agreements concluded at the request of States and are based on documents approved by the Board of Governors
  ✓ Negotiated by the Secretariat and the State
  ✓ Approved by the Board of Governors which authorizes the Director General to sign and implement
  ✓ Signed by the State’s authorized representative and the Director General
  ✓ Enter into force upon signature or written notification by the State
TREATIES REQUIRING SAFEGUARDS

• Bilateral nuclear cooperation agreements
• Multilateral treaties, e.g. NPT
• Regional treaties establishing nuclear weapons free zones, e.g.
  – 1967: Tlatelolco Treaty
  – 1986: Rarotonga Treaty
  – 1997: Bangkok Treaty
  – 1996: Pelindaba Treaty
  – 2008: Semipalatinsk Treaty
TYPE OF SAFEGUARD DFS AGREEMENTS

- **Item-Specific Safeguards Agreements** (based on INFCIRC/66)
  - Safeguards system prior to the NPT: currently implemented for 3 non-NPT States

- **Comprehensive Safeguards Agreements (CSAs)** (based on INFCIRC/153)
  - CSAs in connection with the NPT and NWFZ Treaties: currently implemented for 182 States (NPT NNWSs and States parties to NWFZ Treaties)

- **Voluntary Offer Safeguards Agreements (VOAs)** (also based on INFCIRC/153)
  - Not required under the NPT or NWFZ Treaties; currently implemented for the 5 NPT NWSs

- **Additional Protocols** (based on INFCIRC/540) may be concluded to any of the above-mentioned type of safeguards agreements
  - Additional Protocols are currently in force and implemented for 141 States (135 States with CSAs; 5 States with VOAs; and one State with an item-specific safeguards agreement)
COMPREHENSIVE SAFEGUARDS AGREEMENTS (CSA)
CSAs: INFCIRC/153

• Drafted by Board of Governors’ Committee 22 – Board approved the document in 1971
  • Part I (Main Provisions)
  • Part II (Safeguards Procedures)

• CSAs currently in force for 182 States

Small Quantities Protocols (SQPs) to CSAs - if eligibility criteria are met

➢ Suspends the application of certain safeguards procedures as long as eligibility criteria are met
➢ Standard SQP text modified in 2005 by the Board (GOV/INF/276/Mod.1 and Corr.1)

Voluntary Offer Agreements (VOAs) with NWS Parties to the NPT also based on INFCIRC/153, but States’ undertakings differ
CSA: RIGHTS AND OBLIGATIONS

STATE

INFCIRC/153, para. 1
Undertakes to accept safeguards on all source or special fissionable material in all peaceful nuclear activities within the territory of the State, under its jurisdiction or carried out under its control anywhere, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices

IAEA

INFCIRC/153, para. 2
Shall have the right and obligation to ensure that safeguards are applied on all source or special fissionable material in all peaceful nuclear activities within the territory of the State, under its jurisdiction or carried out under its control anywhere, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices
CSA: RIGHTS AND OBLIGATIONS

MAIN PROVISIONS

• State’s undertaking to accepts safeguards

• IAEA’s right and obligation to apply safeguards

• Cooperation IAEA-State

• Confidentiality

• Establishment and maintenance of State system of accounting for and control of nuclear material (SSAC)

• Provision of information concerning nuclear material and facilities

• IAEA verification, inspectors, visas, privileges and immunities
CSA: SAFEGUARDS PROCEDURES

PROCEDURES

✓ Records (operating and accounting)
✓ Reports to the IAEA
✓ Design information on facilities
✓ Information on locations outside facilities (LOFs)
✓ Access:
  • inspections
  • design information verification
✓ Subsidiary Arrangements
  Further details on safeguards procedures – General Part and Attachments for facilities and LOFs

ADMINISTRATIVE PROVISIONS

✓ Inspectors designation and visas
✓ Privileges and immunities apply to IAEA inspectors and property
STRENGTHENING MEASURES: 1992-1997

1992
Special inspections
Provision of early design information
Code 3.1 of Subsidiary Arrangements modified

1993
Voluntary Reporting Scheme (VRS)
information on imports/exports of nuclear material and certain nuclear equipment

1995
Programme 93+2 (Part 1 measures)
e.g. environmental sampling, remote monitoring, satellite imagery

1997
Model Additional Protocol approved by Board
ADDITIONAL PROTOCOLS
MODEL ADDITIONAL PROTOCOL (INFCIRC/540)

COMPLEMENTARY LEGAL AUTHORITY

- AP does not change the State’s basic undertaking
- AP includes additional measures aimed to strengthen the effectiveness and improve efficiency of safeguards
- The Model Additional Protocol was approved by the Board of Governors in May 1997; currently in force for 141 States
- INFCIRC/540 is a model for States with CSAs
- AP may enter into force upon signature or signature and subsequent written notification of the State; may be applied provisionally pending its entry into force
BROADER INFORMATION

ALL ASPECTS OF A STATE’S NUCLEAR FUEL CYCLE (ART. 2)

- **State-controlled** nuclear fuel-cycle research & development (R&D) not involving nuclear material
- **Non-State controlled** R&D activity if related to enrichment or reprocessing of nuclear fuel or waste processing
- All buildings on nuclear sites
- **Manufacturing of nuclear-related items** – Annex I

Exports/imports of equipment and non-nuclear material – Annex II (quarterly reports)
- Mines and concentration plants
- Source material
- Material exempted from safeguards
- Location & further processing of intermediate and high-level waste

General 10-year plans relevant to development of nuclear fuel cycle
COMPLEMENTARY ACCESS (CA)

NOTICE

- 24-hour notice
- Except, 2-hour notice to any place on a site, when in connection with an inspection or DIV
- The notification specifies the activities to be performed and reasons for access

LOCATIONS

✓ Any building on a site and other places where nuclear material is declared to be to assure the absence of undeclared nuclear material and activities
✓ Other locations declared by the State to resolve a question or inconsistency relating to the correctness and completeness of State’s declarations
✓ Decommissioned facilities and LOFs to confirm decommissioned status of facilities
✓ Other locations specified by the IAEA for environmental sampling to resolve a question or inconsistency

ACCESS

• In the case of a question or inconsistency relating to the correctness and completeness of State’s declarations, the State is provided the opportunity to clarify it before access is requested, unless the delay in access would prejudice the purpose of the CA
• Managed Access possible upon request to protect proliferation sensitive, commercial and proprietary information, or to meet safety or physical protection requirements

Articles 4-10 of the AP
An Additional Protocol is not a stand-alone instrument, it can only be concluded to an existing Safeguards Agreement.

The additional measures become part of the Safeguards Agreement for optimal effectiveness and efficiency.

The provisions of the Safeguards Agreement continue to apply – in case of conflict, the Additional Protocol provisions apply.

Safeguards measures in the Additional Protocol include:

- Broader access to information (AP declarations)
- Increased physical access (complementary access)
- Enhanced confidentiality regime
- Administrative provisions (inspector designation and visas) and use of modern communication systems
CSA: MEASURES IN RELATION TO VERIFICATION OF NON-DIVERSION

- **CSA, Art. 18**
  - The Board, upon report of the Director General, may decide that an action by the State is essential and urgent to ensure verification that nuclear material subject to safeguards under the CSA is not diverted to nuclear weapons or other nuclear explosive devices.
  - The Board may call upon the State to take the required action without delay...

- **CSA, Art. 19**
  - If the Board upon examination of relevant information reported to it by the Director General finds that the IAEA is not able to verify that there has been no diversion of nuclear material required to be safeguarded under the CSA to nuclear weapons or other nuclear explosive devices, it may make the reports provided for in Article XII.C of the IAEA Statute, including reporting the non-compliance to all members and to UN Security Council and UN General Assembly.
Safeguards findings and conclusions are reported annually by the Director General to the Board of Governors in the SIR

- Safeguards findings and conclusions are reported in the SIR for all States with safeguards agreements in force

- For example, for a State with CSA and AP in force, a safeguards conclusion that all nuclear material in a State remains in peaceful activities is based on the Agency’s finding that there are no indications of:
  - diversion of declared nuclear material from peaceful nuclear activities
  - undeclared production or processing of nuclear material at declared facilities/LOFs
  - no indications of undeclared nuclear material or activities in the State as a whole
IAEA SAFEGUARDS: EVOLUTION

- **1950s**
  - IAEA Statute (1957)

- **1960s**
  - IAEA Safeguards System (item-specific)
    - INFCIRC/26 to INFCIRC/66/Rev.2 (1961-1968)

- **1970s**
  - Comprehensive Safeguards Agreements (CSAs)
    - in connection with the NPT
    - INFCIRC/153 (1971)

- **1990s**
  - Model Additional Protocol
    - INFCIRC/540 (1997)