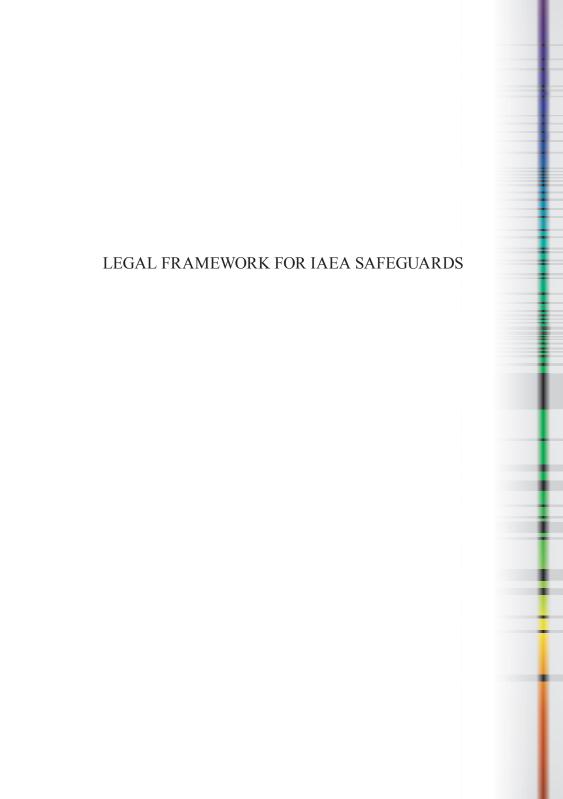
legal framework for IAEA safeguards

Laura Rockwood





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The Agency's Statute was approved on 23 October 1956 by the Conference on the Statute of the IAEA held at United Nations Headquarters, New York; it entered into force on 29 July 1957. The Headquarters of the Agency are situated in Vienna. Its principal objective is "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world".

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FOREWORD

In recognition of the inherently dual nature of nuclear energy, interest in its peaceful exploitation for the benefit of humankind has historically been accompanied by a corresponding interest in ensuring that it is not used for the destruction of humankind.

It was this duality, and the rapidly escalating nuclear arms race involving increasingly destructive weapons, that prompted U.S. President Dwight D. Eisenhower, at the 1953 session of the United Nations General Assembly, to reveal his 'Atoms for Peace' proposal: to create an international organization responsible for promoting safe and peaceful uses of nuclear energy, entrusted with verifying that nuclear technology is not misused.

The instrument which eventually created that organization — the Statute of the IAEA — took just under three years to negotiate, and it took another nine months for its entry into force on 29 July 1957. It is that Statute which provides the fundamental basis for the establishment and implementation of IAEA safeguards. Today, IAEA safeguards serve as the cornerstone of the nuclear non-proliferation regime.

The legal framework for IAEA safeguards has evolved significantly since the Board of Governors first approved ad hoc safeguards arrangements in 1959. This book provides a succinct, yet comprehensive, review of the current legal framework and its historical development.

EDITORIAL NOTE

This report does not address questions of responsibility, legal or otherwise, for acts or omissions on the part of any person.

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1. INTRODUCTION

The nuclear non-proliferation regime is, in reality, a matrix of measures and mechanisms designed to address the risk posed to global peace and security by the possible misuse of nuclear material for non-peaceful purposes. It comprises global and regional non-proliferation treaties, export controls, security assurances, physical protection, security measures designed to address non-State actors, mechanisms to track and deter illicit trafficking in nuclear and other radioactive materials, and many other unilateral and multilateral initiatives. Although individual measures and mechanisms may have been designed to address different aspects of that risk, collectively they contribute to the prevention of the proliferation of nuclear weapons. While these measures are many and varied, international verification through IAEA safeguards is the cornerstone of the nuclear non-proliferation regime.

The legal framework for IAEA safeguards is likewise multifaceted and consists of a number of elements, including: the Statute of the IAEA; the undertakings of States in connection with supply arrangements and other treaties requiring verification; the basic safeguards documents; the safeguards instruments themselves, including safeguards agreements, protocols and subsidiary arrangements; and, finally, the decisions and practices of the IAEA Board of Governors.

The purpose of this publication is to introduce IAEA safeguards to the reader and to describe the legal framework for their implementation.

2. THE STATUTE OF THE IAEA

The IAEA, whose Headquarters are situated in Vienna, Austria, is an independent intergovernmental organization consisting of over 150 Member States and a Secretariat headed by the Director General. The IAEA was created by its Statute, which entered into force on 29 July 1957. The fundamental objective of the IAEA, as set out in Article II of its Statute, is to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world."

Under Article III.A.5 of the Statute, the IAEA is authorized to establish and administer safeguards:

- To ensure that special fissionable and other materials, services, equipment, facilities and information made available by the IAEA or at its request or under its supervision or control are not used in such a way as to further any military purpose;
- To apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement;
- To apply safeguards to any of the nuclear activities of a State, at that State's request.

Article XII requires the IAEA to establish a staff of inspectors responsible for verifying compliance with the conditions prescribed in the relevant agreements concluded in the implementation of this authority. Article XII.A describes the rights and responsibilities of the IAEA when carrying out safeguards, to the extent relevant to the specific situation. These include, among others:

- The right to examine the design of specialized equipment and facilities;
- The right to require the maintenance and production of operating records to assist in ensuring accountability for and control of source and special fissionable materials;
- The right to require the submission of reports;
- The right to send into the State inspectors, designated by the IAEA after consultation with the State or States concerned, who shall have access at all times to all places and data and to any person who by reason of his or her occupation deals with materials, equipment or facilities which are required by the Statute to be safeguarded, as necessary to account for nuclear materials and to determine whether there is compliance with the undertaking against use in furtherance of any military purpose and with any other conditions prescribed in the agreement;

In the event of non-compliance and failure by the State concerned to take
requested corrective steps within a reasonable time, the right to curtail or
suspend assistance and call for the return of any materials and equipment
made available by the IAEA or a Member State in furtherance of the
project.

Article XII.C of the Statute describes the measures available to inspectors, the Director General and the Board of Governors in the event that a State is found to be in violation of its safeguards agreement, including: calling upon the State to remedy non-compliance; reporting non-compliance to the Member States of the IAEA and to the Security Council and the General Assembly of the United Nations; calling for the return of materials and equipment made available to the State; and suspending the State from the exercise of the privileges and rights of IAEA membership.

However, the safeguards provisions of the Statute are not self-executing. A State is not bound to accept safeguards simply by virtue of becoming a Member of the IAEA. For that matter, safeguards can be implemented in States which are not Members of the IAEA. What is required for the implementation of safeguards is the consent of the State concerned, and that consent is most commonly manifested in the conclusion of a safeguards agreement with the IAEA.

The type of safeguards agreement concluded with the State depends on the nature of the State's basic undertaking.

3. STATES' UNDERTAKINGS

3.1. IAEA ASSISTANCE

Article III.A.5 of the Statute contemplates the application of IAEA safeguards to assistance provided by the IAEA. In accordance with Article XI.F of the Statute, assistance may be provided to IAEA Member States by the IAEA in connection with any project for research on, or development or practical application of, atomic energy for peaceful purposes. Assistance provided under such projects can take the form of the supply of special fissionable or other material, services, equipment and/or facilities. These projects are administered by the IAEA's Department of Technical Cooperation and may, in certain circumstances, entail the conclusion of a supply agreement between a supplier State, the recipient State and the IAEA, and a project agreement between the IAEA and the recipient State (these two agreements may be combined into a single project and supply agreement). These agreements may include, where relevant, provisions requiring the application of IAEA safeguards. The determination as to whether the project requires safeguards is made in accordance with The Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency (INFCIRC/267), but in general would include any project which involves the supply of nuclear material or nuclear facilities.

3.2. MULTILATERAL AND BILATERAL TREATIES

3.2.1. The Treaty on the Non-Proliferation of Nuclear Weapons

The first — and only — global treaty requiring IAEA safeguards is the Treaty on the Non-Proliferation of Nuclear Weapons (the NPT), which entered into force on 5 March 1970.

Articles I and II of the NPT contain the non-proliferation undertakings of the nuclear-weapon States (NWSs) Party to the NPT, and the non-nuclear-weapon States (NNWSs) Party to the Treaty, respectively. In general terms, the NWSs agree not to transfer nuclear weapons or other nuclear explosive devices to any other State, and not to assist, encourage or induce any NNWS to manufacture or otherwise acquire such weapons or devices, or control over them. The NNWSs, for their part, undertake not to manufacture or acquire nuclear weapons or other nuclear explosive devices, or to seek or receive assistance in their manufacture.

It is worth noting that the NPT does not prohibit all military uses of nuclear material, but only explosive uses of such material. This formulation was designed to accommodate the interest of a number of States in retaining the right to use nuclear energy for non-explosive military purposes, specifically, nuclear naval propulsion. In addition, the NPT contemplated availability to NNWSs of the potential benefits of peaceful applications of nuclear explosives, but not access to the nuclear explosive devices themselves or the relevant technology.

Article III.1 of the NPT requires each NNWS to accept safeguards, as set forth in an agreement to be concluded with the IAEA, in accordance with its Statute and the IAEA's safeguards system, on all source or special fissionable material in all peaceful nuclear activities within its territory, 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 (such agreements are commonly referred to as 'full scope' or 'comprehensive' safeguards agreements).

Article III.2 of the NPT requires each State Party to the NPT not to provide source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any NNWS for peaceful purposes unless the source or special fissionable material is subject to IAEA safeguards (there is no corresponding requirement with respect to exports to NWSs). Compliance with these export controls is not verified by the IAEA, although certain information related to exports is required to be provided to the IAEA in accordance with relevant safeguards agreements and protocols, as described below.

3.2.2. The Tlatelolco Treaty

The first regional treaty on non-proliferation creating a nuclear-weapon-free zone (NWFZ) was the Treaty for the Prohibition of Nuclear Weapons in Latin America (the Tlatelolco Treaty), which was opened for signature in Tlatelolco, Mexico, on 14 February 1967, and is in force for all of the States in the zone.

Article 1 of the Treaty requires all Contracting Parties to use exclusively for peaceful purposes the nuclear material and facilities which are under their jurisdiction, and to prohibit and prevent in their respective territories: (a) the testing, use, manufacture, production or acquisition by any means whatsoever of any nuclear weapons, by the Parties themselves directly or indirectly, on behalf of anyone else or in any other way; and (b) the receipt, storage, installation, deployment and any form of possession of any nuclear weapons, directly or indirectly, by the Parties themselves, by anyone on their behalf or in any other way.

Articles 12–18 of the Tlatelolco Treaty establish a control system for the purpose of verifying compliance with the obligation under the Treaty to use nuclear energy exclusively for peaceful purposes. Under that system, each Contracting Party is required to conclude multilateral or bilateral agreements with the IAEA for the application of IAEA safeguards to its nuclear activities. Similar to the NPT, the Tlatelolco Treaty also contemplated the possibility of peaceful applications of nuclear explosions. Unlike the NPT, the Tlatelolco Treaty does not contain a requirement for safeguards as a condition of nuclear supply.

There are two additional protocols to the Tlatelolco Treaty. Parties to Additional Protocol I to the Treaty, which is open to each State having territories in the zone of application of the Treaty for which it is, de jure or de facto, internationally responsible, undertake to conclude a safeguards agreement with the IAEA with respect to such territories. Additional Protocol II, to which all five NPT NWSs are party, contains an undertaking not to use or threaten to use nuclear weapons against the Contracting Parties to the Tlatelolco Treaty, a so-called negative security assurance.

3.2.3. The Rarotonga Treaty

The South Pacific Nuclear Free Zone Treaty (the Rarotonga Treaty) was opened for signature in 1985 and entered into force on 11 December 1986. In Article 3 of the Treaty, each party to the Treaty renounces all nuclear explosive devices. Unlike the NPT and the Tlatelolco Treaty, no nuclear explosives or nuclear explosive devices, regardless of their intended use, are permitted within the zone of application of the Treaty.

Article 8 of the Treaty, which establishes the control system under that Treaty, requires the application to the Parties' peaceful nuclear activities of safeguards by the IAEA as provided for in Annex 2 to the Treaty. In accordance with Annex 2, the safeguards agreement with the IAEA must be an agreement required in connection with the NPT, or one equivalent in its scope and effect.

Article 4 of the Rarotonga Treaty requires each State Party not to provide source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material, for peaceful purposes to any NNWS unless subject to IAEA safeguards, or to any NWS unless subject to applicable safeguards agreements with the IAEA. Under that same Article, each State Party also expressly undertakes to support the continued effectiveness of the international non-proliferation system based on the NPT and the IAEA safeguards system.

The Rarotonga Treaty includes three protocols. Protocol 1 is similar to Additional Protocol I of the Tlatelolco Treaty; it is open for signature to France,

the United Kingdom and the United States of America and relates to each State in respect of territories for which it is internationally responsible situated within the zone. Protocols 2 and 3 are open to the five NPT NWSs. Protocol 2 contains an undertaking not to use or threaten to use any nuclear explosive device against any Party to the Treaty or any territory within the zone for which it is internationally responsible. Protocol 3 contains an undertaking not to test any nuclear explosive device within the zone.

3.2.4. The Bangkok Treaty

The Treaty on the Southeast Asia Nuclear Weapon-Free Zone (the Bangkok Treaty) was opened for signature to all States in Southeast Asia, namely Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam, on 15 December 1995, in Bangkok, Thailand, and entered into force on 27 March 1997. The Treaty prohibits the development, manufacture, acquisition, possession and control of nuclear weapons, as well as the stationing, transport, testing and use of nuclear weapons.

Each State Party undertakes to use exclusively for peaceful purposes nuclear material and facilities which are within its territory and areas under its jurisdiction and control, and, if it has not yet done so, to conclude an agreement with the IAEA for the application of full scope safeguards to its peaceful nuclear activities. The Treaty also prohibits the export of source or special fissionable material, or especially designed or prepared equipment or material, to any NNWS except under conditions subject to the safeguards required by Article III.1 of the NPT, and to NWSs, in conformity with applicable safeguards agreements with the IAEA.

Similar to the Tlatelolco Treaty and the Rarotonga Treaty, the Bangkok Treaty contains a protocol open to signature by the five NPT NWSs, whereby such States undertake not to use or threaten to use nuclear weapons against any State Party to the Treaty or within the zone of application.

3.2.5. The Pelindaba Treaty

The African Nuclear-Weapon-Free Zone Treaty (the Pelindaba Treaty) was opened for signature in Cairo, Egypt, on 11 April 1996, and entered into force on 15 July 2009. Pursuant to this Treaty, each Party undertakes not to conduct research on, develop, manufacture, stockpile or otherwise acquire, possess or have control over any nuclear explosive device by any means anywhere; not to seek or receive any assistance in the research on, or development, manufacture, stockpiling or acquisition, or possession of, any nuclear explosive device; and not to take

any action to assist or encourage the research on, or development, manufacture, stockpiling or acquisition or possession of, any nuclear explosive device. The Parties also undertake to prohibit the stationing of nuclear weapons and the testing of any nuclear explosive devices on their territory.

The Pelindaba Treaty also contains an article on the declaration, dismantling, destruction or conversion of nuclear explosive devices, and the facilities for their manufacture, under IAEA verification.

Under the Pelindaba Treaty, each State Party undertakes to conduct all activities for the peaceful use of nuclear energy under strict non-proliferation measures to provide assurance of exclusively peaceful uses, to conclude a comprehensive safeguards agreement with the IAEA and not to export source or special fissionable material, or especially designed or prepared equipment or material, to NNWSs unless subject to a comprehensive safeguards agreement. Associated with this Treaty are three protocols: Protocol I is open to signature by the five NPT NWSs and binds the States not to use or threaten to use a nuclear explosive device against a Party to the Treaty or any territory within the African NWFZ for which a State that has become a Party to Protocol III is internationally responsible; Protocol II, also open to signature by the five NWSs, commits the Parties to it not to test or assist or encourage the testing of a nuclear explosive device within the zone; and Protocol III, similar to Additional Protocol I of the Tlatelolco Treaty and Protocol 1 of the Rarotonga Treaty, which is open to all States having territories with respect to which they have, de jure or de facto, international responsibility situated in the zone, requires, inter alia, the application of safeguards to such territories.

3.2.6. The Semipalatinsk Treaty

The Treaty on a Nuclear-Weapon-Free Zone in Central Asia (the Semipalatinsk Treaty) was signed on 8 September 2006 by Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan in Semipalatinsk, Kazakhstan, close to a nuclear weapons test site of the former Soviet Union. The Treaty, which entered into force on 21 March 2009, created the first denuclearized zone situated entirely in the Northern Hemisphere, and the first bordered by two NWSs.

As in other NWFZ treaties, the States Parties undertake, inter alia, not to conduct research on, develop, manufacture, stockpile or otherwise acquire, possess or have control over any nuclear explosive device by any means anywhere; not to seek or receive any assistance in the research on, development, manufacture, stockpiling or acquisition, or possession of any nuclear explosive device; and not to take any action to assist or encourage the research on, or development, manufacture, stockpiling or acquisition, or possession of, any nuclear explosive device. The

Parties also undertake to prohibit the production, acquisition, stationing, storage or use of nuclear weapons or other nuclear explosive devices on their territories and the testing of any nuclear weapon or other nuclear explosive device at any place under their jurisdiction and control. They also undertake to refrain from causing, encouraging, or in any way participating in the carrying out of any nuclear weapon test explosion or any other nuclear explosion.

Each State Party undertakes to use nuclear material and facilities for exclusively peaceful uses, and to conclude with the IAEA (and bring into force), if it has not already done so, a comprehensive safeguards agreement and an additional protocol. This is the first such treaty to require the conclusion of an additional protocol to a State's safeguards agreement (see discussion below). The Parties also undertake not to export source or special fissionable material, or especially designed or prepared equipment or material, to a NNWS unless that State has concluded with the IAEA a comprehensive safeguards agreement and an additional protocol, another first in connection with non-proliferation treaties.

There is one protocol to the Semipalatinsk Treaty, open to signature by the five NPT NWSs, in which the States undertake not to use or threaten to use a nuclear weapon or other nuclear explosive device against a Party to the Treaty and not to contribute to any act that constitutes a violation of the Treaty or the protocol.

3.2.7. The Argentina-Brazil Agreement

Over the course of 1990 and 1991, the Governments of Argentina and Brazil agreed bilaterally to use the nuclear material and facilities under their jurisdiction or control exclusively for peaceful purposes, to establish a bilateral inspectorate (the Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials (ABACC)), and to conclude with the IAEA a joint agreement for the application of safeguards to all nuclear material in nuclear activities in Argentina and Brazil. The resulting quadripartite comprehensive safeguards agreement concluded between Argentina, Brazil, ABACC and the IAEA, which entered into force in 1994, is a unique example of a safeguards agreement concluded at the request of States party to a bilateral non-proliferation arrangement (as distinguished from a supply arrangement).

3.3. REQUEST BY A STATE

This provision of the Statute covers bilateral (and sometimes trilateral) safeguards agreements between the IAEA and a State concluded at the request

of the State. These include many of the early safeguards agreements based on INFCIRC/66/Rev.2 (or one of its predecessor documents, as discussed below) and cover only the items identified in the agreement as being subject to safeguards. Most of these agreements have been requested by the State due to requirements in arrangements with supplier States wishing to have verified assurance that their nuclear related trade is not used for any military purpose.

4. BASIC DOCUMENTS

4.1. INFCIRC/66/Rev.2 — THE FIRST SAFEGUARDS DOCUMENTS

The first Safeguards Document (INFCIRC/26) was developed by interested Member States and the Secretariat in 1959 and 1960, and approved by the IAEA's Board of Governors on 31 January 1961. It contained the principles and procedures for the application of safeguards to small reactors. This document was extended to cover larger reactors by decision of the Board on 26 February 1964. In 1964 and 1965, a completely revised Safeguards Document was worked out by a group of Member State experts and approved by the Board after unanimous concurrence by the General Conference in September 1965 (INFCIRC/66). Annex I to INFCIRC/66 (published in INFCIRC/66/Rev.1), which contains provisions for reprocessing plants, was approved by the Board in 1966, and Annex II (published in INFCIRC/66/Rev.2), which contains provisions for safeguarded nuclear material in conversion and fuel fabrication plants, was approved by the Board in 1968. With its two annexes, the Safeguards Document is now referred to as INFCIRC/66/Rev.2. It is important to note that the Safeguards Document is not a model agreement, but rather a set of procedures which are incorporated by reference in agreements based on that document (commonly referred to as 'INFCIRC/66-type agreements' or 'item specific agreements', as discussed below).

In June 1961, the Board of Governors adopted a document referred to as the Inspectors Document (GC(V)/INF/39, Annex), worked out with the help of experts from Member States, which covers four different areas related to inspections, including the designation of IAEA inspectors, notification of inspections, the conduct of inspections and rights of access, and the privileges and immunities of inspectors. This document is also incorporated by reference in INFCIRC/66-type agreements. The Inspectors Document is of relevance only to such agreements, since the comparable provisions in connection with comprehensive safeguards agreements are actually included in the text of the agreements themselves.

In general, the implementation of an INFCIRC/66-type agreement involves notification to the IAEA by the State of the receipt (usually through import) of items which are required to be safeguarded under the agreement. These items, whether nuclear material, non-nuclear material, facilities, equipment or components, are listed on the main part of the inventory that is maintained under each such agreement. The inventory also includes any nuclear material produced, processed or used in or by the use of those items, and any nuclear material substituted for safeguarded nuclear material. The inventory might also, where relevant, include

any facilities replicated on the basis of a supplied facility or supplied technology. As indicated above, what is included in the inventory is largely dependent on the scope of the agreement, as determined by the State.

4.2. INFCIRC/153 (Corr.) — THE STRUCTURE AND CONTENT OF AGREEMENTS REQUIRED IN CONNECTION WITH THE NPT

In 1970, the Board of Governors established a Safeguards Committee (Committee 22) to advise it on the contents of safeguards agreements to be concluded between the NNWSs party to the NPT and the IAEA. Participation in the Committee was open to all Member States of the IAEA, whether party to the NPT or not. The Safeguards Committee developed a document entitled "The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons" (INFCIRC/153 (Corr.)), which the Board, in 1972, approved and requested the Director General to use as the basis for negotiating safeguards agreements under the NPT. A model agreement based on INFCIRC/153 (Corr.) was eventually developed and published in 1974 as GOV/INF/276, Annex A. Agreements concluded on the basis of that model are commonly referred to as 'full scope' or 'comprehensive' safeguards agreements.

INFCIRC/153 (Corr.) has also served as the basis for comprehensive safeguards agreements concluded pursuant to the Tlatelolco Treaty and is considered the standard for safeguards agreements under the other four NWFZ treaties. In addition, it provided a basis for the negotiation of two unilateral comprehensive safeguards agreements with States which were not yet party to the NPT, and for the quadripartite safeguards agreement concluded with Argentina and Brazil. INFCIRC/153 (Corr.) also provided the framework for the voluntary offer agreements (VOAs) of the five NPT NWSs, so-called owing to the fact that the NPT does not require such States to conclude safeguards agreements.

Once a comprehensive safeguards agreement enters into force, the State is required to submit to the IAEA an initial report of all nuclear material in the State, in accordance with the terms of the agreement. The IAEA then verifies the initial report with a view to ensuring that the declaration is not only correct but also complete. The State is also required to provide the IAEA with a list of all of its nuclear facilities, as also defined in the agreement, and information on the design of each of the facilities. The list must include not only operating facilities, but all facilities, even if they contain no nuclear material or are under construction. The IAEA then verifies the design information to ensure that the facility is constructed and is operated as declared by the State.

4.3. INFCIRC/540 (Corr.) — THE MODEL ADDITIONAL PROTOCOL

In 1997, the Board of Governors approved the text of a Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards (INFCIRC/540 (Corr.)), referred to as the Model Additional Protocol. Unlike INFCIRC/153 (Corr.), this document is an actual model. The Board requested the Director General to use the Model Additional Protocol as the standard for additional protocols concluded by States and other parties to comprehensive safeguards agreements. Additional protocols to such agreements must include all of the measures in the Model Additional Protocol. The Board also requested the Director General to negotiate additional protocols with NWSs and other States, incorporating those measures which the State concerned is prepared to accept.

The measures provided for in the Model Additional Protocol include:

- Information about, and inspector access to, all aspects of a State's nuclear fuel cycle, from uranium mines to nuclear waste and any other location where nuclear material intended for non-nuclear uses is present;
- Information about, and short notice inspector access to, all buildings on a nuclear site;
- Information about, and inspection mechanisms for, fuel cycle related research and development;
- Information about the manufacture and export of sensitive nuclear related technologies and inspection mechanisms for manufacturing and import locations;
- Collection of environmental samples beyond declared locations when deemed necessary by the IAEA;
- Administrative arrangements to simplify the process of designating inspectors, the issuance of multiple-entry/exit visas and IAEA access to modern means of communications.

Following entry into force of an additional protocol, a State with a protocol which includes all of the measures is required to submit an initial declaration of the information required in the protocol, and thereafter to submit updates as provided for in the protocol. The complementary access available to the IAEA under such protocols is distinguished from inspections and design information verification (DIV), which are provided for under the safeguards agreements.

An additional protocol is not a stand-alone document. It can only be concluded in conjunction with a safeguards agreement (or agreements), although the two instruments need not be concluded simultaneously. As provided for in Article 1

of the Model Additional Protocol, the safeguards agreement and the additional protocol are to be read as a single document with, in cases of conflict, the provisions of the additional protocol prevailing.

4.4. THE SMALL QUANTITIES PROTOCOL

In 1974, the Secretariat developed the text of a protocol available to States which concluded a comprehensive safeguards agreement and had little or no nuclear material and activities (referred to as 'small quantities protocols' (SQPs)) (GOV/INF/276, Annex B). The effect of such protocols was to hold in abeyance most of the provisions of Part II of the agreement (with the exception of those relating to the starting point of safeguards, submission of design information and reporting imports/exports of nuclear material), in particular the requirement that a State provide the IAEA with an initial report of all nuclear material in the State, and the IAEA's right to verify such information. Under that model, a State was eligible to conclude such a protocol if the quantity of nuclear material in the State did not exceed the quantities set out in para. 37 of INFCIRC/153 (Corr.) and had no nuclear material in a nuclear facility.

In 2005, the Board of Governors, acting on the advice of the Director General, decided that the SQP, in its original form, constituted a weakness in the IAEA's safeguards system and decided further that, although SQPs should remain part of the system, there should be modifications in the eligibility criteria and in the substantive requirements of such protocols. Now, in order for a State to qualify for an SQP, it must not only have limited quantities of nuclear material, but it must also not have taken a decision to construct or authorize construction of a facility (GOV/INF/276/Mod.1 and Corr.1). The new SQP now requires the submission by the State of an initial report on nuclear material and notification as soon as a decision has been taken to construct or to authorize construction of a nuclear facility, and permits the IAEA to carry out ad hoc inspections in the State.

4.5. OTHER PROTOCOLS

4.5.1. Cooperation protocols

Protocols for cooperation and coordination with multinational or national inspectorates have been concluded with the European Atomic Energy Community (Euratom), with ABACC and with Japan. In each case, the IAEA's ability to reach independent conclusions concerning compliance with the agreement is

reaffirmed as an indispensable element. There is also a protocol to the US VOA which provides for cooperation in the conclusion of transitional subsidiary arrangements for facilities which are on the list of facilities offered to the IAEA for the implementation of safeguards but which have not been selected for purposes of carrying out inspections.

4.5.2. Suspension protocols

Paragraph 24 of INFCIRC/153 (Corr.) requires the suspension of the application of safeguards under other agreements with the State or States concerned while a comprehensive safeguards agreement is in force. Accordingly, the IAEA has concluded protocols giving effect to this provision ('suspension protocols') where a State which concludes an INFCIRC/153-type agreement has had a pre-existing safeguards agreement or agreements with the IAEA. In cases where the State has a pre-existing trilateral agreement for the application of safeguards (i.e. between the State concerned, the IAEA and another party), the consent of the third party to the trilateral agreement must also be obtained before the application of safeguards thereunder can be suspended.

4.6. SUBSIDIARY ARRANGEMENTS

INFCIRC/153-type agreements expressly require the conclusion of subsidiary arrangements between the State and the IAEA which detail how the procedures in the agreement are to be implemented. Subsidiary arrangements consist of a general part, which addresses such matters as points of contact and other procedures applicable to the State as a whole, and facility attachments, which detail the safeguards procedures for each individual facility, including the frequency of routine inspections and the strategic points to which the IAEA has access during such inspections. The subsidiary arrangements may also include, where applicable, an attachment or attachments for locations outside facilities where nuclear material is customarily used (LOFs).

Although INFCIRC/66/Rev.2 itself does not refer to subsidiary arrangements, most recent agreements based on INFCIRC/66/Rev.2 do include a specific reference to them. However, this merely formalizes the IAEA's practice of making detailed arrangements for the implementation of safeguards in all States with safeguards agreements.

The Model Additional Protocol permits, but does not require, the conclusion of subsidiary arrangements with respect to the measures laid down in an additional protocol, unless requested by one of the parties to the protocol.

4.7. INFCIRC/9/Rev.2 — THE PRIVILEGES AND IMMUNITIES AGREEMENT

IAEA inspectors are entitled to certain privileges and immunities while they are carrying out their safeguards responsibilities in the field. These are grounded in Article XV.B of the IAEA Statute, which provides that the staff of the IAEA shall enjoy "such privileges and immunities as are necessary in the independent exercise of their functions in connexion with the Agency", and are detailed in the Agreement on the Privileges and Immunities of the International Atomic Energy Agency (INFCIRC/9/Rev.2) (the P&I Agreement).

These include immunity from legal process in respect of words spoken or written and all acts performed by an inspector in his or her official capacity, immunity from personal arrest or detention for non-official capacity, and immunity from personal arrest or detention for non-official as well as official acts occurring during a mission. The P&I Agreement also provides for the inviolability of papers and documents and freedom from seizure of personal baggage. While not all Member States are party to the P&I Agreement, the relevant provisions of the Agreement are incorporated by reference in all safeguards agreements.

These privileges and immunities are to be extended to inspectors not only by the country in which an inspection takes place, but also by those Member States through which inspectors are transiting on their way to and from that country. In this regard, it bears noting that the IAEA has consistently taken the position that the Statute creates an obligation for Member States to grant inspectors the immunities as specifically defined in INFCIRC/9/Rev.2, and that non-acceptance of that Agreement does not reduce the obligation of a Member State to accord inspectors immunities adequate to enable them to efficiently complete their missions.

5. DECISIONS AND PRACTICES

The legal framework of IAEA safeguards is formed not only by legal instruments, such as the documents referred to above, but also by the decisions and practices of the IAEA's Board of Governors. The following are a selection from the more significant actions taken by the Board in connection with the implementation of IAEA safeguards agreements.

5.1. DURATION OF INFCIRC/66-TYPE AGREEMENTS

Paragraph 16 of INFCIRC/66/Rev.2 makes reference to the "desirability" of providing for the continuation of safeguards with respect to produced special fissionable material and to any materials substituted for such material. In 1973, the Board expressed concern about the need for safeguarding such material after the expiry of a safeguards agreement (GOV/1621). As a consequence, since 1974, the duration of INFCIRC/66-type agreements has been tied to the actual use in the recipient State of supplied material or items, rather than to fixed periods of time. Under these agreements, safeguards are required to continue on all safeguarded items, including subsequent generations of produced nuclear material derived from safeguarded material or facilities, until safeguards are terminated on all items subject to the agreement in accordance with the provisions of INFCIRC/66/Rev.2.

5.2. THE 'NO MILITARY USE' UNDERTAKING

The safeguards agreements based on INFCIRC/66/Rev.2 contain an undertaking by the State not to use safeguarded items for "any military purposes". In 1974, the Director General proposed, and the Board accepted, an interpretation of that undertaking as precluding the use of safeguarded items for any nuclear explosive device, whether intended for peaceful or non-peaceful ends, owing to the technical impossibility of distinguishing between a nuclear explosive device for peaceful uses and one for military uses. Although a small number of States expressed reservations about this interpretation, all INFCIRC/66-type agreements concluded since 1975 have incorporated a basic undertaking which expressly precludes the use of safeguarded items for the manufacture of any nuclear weapon or to further any other military purpose or for the manufacture of any other nuclear explosive device.

Although comprehensive safeguards agreements concluded along the lines of INFCIRC/153 (Corr.) do not prohibit all military uses of nuclear material, they, like INFCIRC/66-type agreements, expressly prohibit the use of nuclear material for nuclear weapons or any other nuclear explosive devices.

5.3. EXPANSION OF INFCIRC/66-TYPE AGREEMENTS

Although the safeguards procedures in INFCIRC/66 were originally developed to apply to nuclear material and certain types of nuclear facility, the scope of INFCIRC/66-type agreements has, with the approval of the Board of Governors, expanded over the years. Such agreements have included provisions for the safeguarding of non-nuclear materials (such as heavy water and zircaloy), non-nuclear facilities (heavy water production plants) and transferred technology.

5.4. CONTAINMENT AND SURVEILLANCE

Although originally not expressly included in INFCIRC/66-type agreements, the Board of Governors has approved specific provisions for the application of containment and surveillance measures, which have routinely been included in the more recent agreements of this type.

5.5. FINANCIAL CLAUSES

While all IAEA safeguards agreements reflect the basic principle that the expenses of safeguards are to be shared between the IAEA and the State concerned, with each party bearing the expenses of carrying out its own responsibilities under the agreement, questions have arisen over the years as to the responsibility for particular expenses associated with certain safeguards activities. In 1990, the Director General presented to the Board of Governors a uniform policy with respect to the allocation of such expenses under both INFCIRC/66- and INFCIRC/153-type agreements (GOV/INF/577). The Secretariat has, since that time, incorporated in the subsidiary arrangements (see below) to all safeguards agreements the financial provisions presented to the Board.

5.6. EARLY PROVISION OF DESIGN INFORMATION

On 26 February 1992, the Board of Governors adopted a recommendation by the Director General related to the early provision of design information. In so doing, the Board established that para. 42 of INFCIRC/153 (Corr.), which stipulates that such information shall be provided "as early as possible before nuclear material is introduced into a new facility", should be interpreted as requiring the provision of design information as soon as the decision to construct, to authorize construction or to modify a facility has been taken and, on an iterative basis, as the designs are developed (GOV/2554/Att.2/Rev.2). At the direction of the Board, steps were taken to adapt all subsidiary arrangements accordingly.

5.7. CORRECTNESS AND COMPLETENESS

Following the end of the Cold War, a series of events changed the circumstances and requirements of the safeguards system. The discovery of a clandestine nuclear weapons programme in Iraq, the anomalies related to possible undeclared plutonium uncovered in the Democratic People's Republic of Korea after the entry into force of its comprehensive safeguards agreement, and the decision by South Africa to give up its nuclear weapons programme and join the NPT all played a role in an ambitious effort by IAEA Member States and the Secretariat to strengthen the IAEA's safeguards system.

In February 1992, the Board of Governors affirmed that the scope of comprehensive safeguards agreements was not limited to verification of the non-diversion of nuclear material actually declared by a State, but included verifying the absence of undeclared nuclear material and activities in the State. Expressed differently, the Board confirmed that, in accordance with para. 2 of INFCIRC/153 (Corr.), the IAEA has the right and obligation under such agreements to verify not only that State declarations of nuclear material subject to safeguards are "correct", but that they are also "complete".

5.8. PROGRAMME 93+2

While some steps had already been taken by the Board of Governors to strengthen safeguards (such as the decision to require the early provision of design information and confirmation of the IAEA's right to verify correctness and completeness of States' declarations under comprehensive safeguards agreements, as described above), in June 1993, the Board requested the Director General to

submit to it concrete proposals for the assessment, development and testing of measures for strengthening safeguards and improving its cost effectiveness.

In response to that request, the Secretariat presented to the Board in December 1993 a programme — "Programme 93+2" — which aimed, within two years, to evaluate the technical, financial and legal aspects of a comprehensive set of measures, and to present, early in 1995, proposals for a strengthened and more efficient safeguards system.

As a result of that effort, in May 1995, the Secretariat tabled a document (GOV/2807) in which it identified a comprehensive set of strengthening and efficiency measures divided into two parts: Part 1, consisting of measures which could, in the Secretariat's view, be implemented under existing legal authority; and Part 2, consisting of measures which were believed to require complementary legal authority.

At its meeting in June 1995, the Board took note of the Director General's plan to implement at an early date those measures which were within existing authority (such as the use of environmental sampling during inspections and DIVs, and the improved analysis of all information available to the IAEA), thus indicating the Board's concurrence with the Secretariat's legal interpretation of the IAEA's existing rights of access to information and locations, and urged States party to comprehensive safeguards agreements to cooperate with the Secretariat to facilitate such implementation. The Board also asked the Secretariat to further develop the Part 2 measures.

Between June 1995 and June 1996, the Secretariat of the IAEA, in close consultation with Member States of the IAEA, was able to develop for the Board's consideration a draft model protocol for that complementary authority. That draft served as the basis for the deliberations of Committee 24, the Committee established by the Board of Governors to negotiate a draft model protocol. On 15 May 1997, the Board of Governors, in a special session, approved the new Model Additional Protocol.

6. COMPARISON OF SAFEGUARDS AGREEMENTS

The safeguards agreements concluded by the IAEA may be categorized generally as item specific agreements based on INFCIRC/66/Rev.2, comprehensive safeguards agreements concluded in accordance with or along the lines of INFCIRC/153 (Corr.) and the VOAs of the NPT NWSs.

While INFCIRC/66/Rev.2 only contains procedures, INFCIRC/153 (Corr.) instructs the Secretariat on all aspects of the structure and content of comprehensive safeguards agreements. Hence, agreements concluded pursuant to INFCIRC/66/Rev.2 reflect a greater degree of variation than do agreements concluded on the basis of INFCIRC/153 (Corr.). The agreements concluded with the NPT NWSs more closely resemble the latter in format, but differ substantively both from the comprehensive safeguards agreements and among themselves.

The basic goal of all safeguards agreements is the same: to verify compliance with the undertakings of the States Parties not to use safeguarded items for proscribed purposes. Moreover, the basic technical aspects of the implementation of safeguards are applied in all States subject to safeguards: each agreement provides for the IAEA's review of facility design information, reporting and record-keeping by the State, inspection activities to be carried out by the IAEA, including rights of access and notification of inspections, and provisions related to exemption from and termination of safeguards. To the extent practical and legally permissible, efforts are made to standardize the IAEA's safeguards approaches, taking into account technical variations among the States' nuclear programmes.

However, the specific terms of the agreements vary, as outlined below.

6.1. BASIC UNDERTAKING

Safeguards agreements based on INFCIRC/66/Rev.2 prohibit the use of safeguarded items in such a way as to further any military purpose (including non-explosive uses such as nuclear naval propulsion) and explosive purposes. Agreements with NNWSs party to the NPT prohibit the diversion of nuclear material from peaceful nuclear activities to nuclear weapons or other nuclear explosive devices. There is, however, no prohibition of non-explosive military applications of nuclear material under the NPT. Accordingly, agreements with NNWSs party to the NPT contain provisions for the withdrawal from safeguards of nuclear material for use in non-proscribed military nuclear activities (see para. 14 of INFCIRC/153 (Corr.)). As

regards NWSs, the undertaking is limited to a commitment not to withdraw material or facilities offered by the State to the IAEA for the application of safeguards from civil or peaceful activities except in accordance with the terms of the relevant agreement. The VOAs permit withdrawal by the State of material and facilities subject to the agreement upon notification to the IAEA.

6.2. SCOPE

INFCIRC/66-type agreements are designed to cover only specified items, such as certain facilities, equipment, nuclear material and non-nuclear material. Therefore, they must describe in detail their scope of application. This is usually done in the basic undertaking provision, as well as in the provision on the inventory. Agreements with NNWSs along the lines of INFCIRC/153 (Corr.) cover all nuclear material of the State. Hence, there is no elaborate provision on the scope of the agreement or on the inventory. The scope of the VOAs varies from agreement to agreement. However, while some provide for the application of safeguards to all of the State's civil nuclear activities and others to only some of the State's civil programme, all provide for the discretionary selection by the IAEA for the application of safeguards of some, all or none of the facilities or material offered by the State concerned.

6.3. DIV AND INSPECTIONS

All safeguards agreements require States to submit to the IAEA information on the design of facilities (design information (DI)) where safeguards are applied. They also provide for IAEA access to verify the design information (DIV). All of the agreements also contemplate a three tier approach to inspections (as distinguished from DIVs), consisting of ad hoc inspections (those carried out prior to entry into force of detailed arrangements for routine inspections, and for verification of transfers of nuclear material out of or into the State), routine inspections and special inspections.

Safeguards agreements concluded on the basis of INFCIRC/66/Rev.2 incorporate the IAEA's statutory right of access to all persons, places and information relevant to the implementation of safeguards. INFCIRC/153-type agreements, on the other hand, limit the IAEA's access to carry out routine inspections to strategic points identified in the subsidiary arrangements (as do the VOAs). However, it should be noted that this limitation does not apply to ad hoc inspections, nor does it apply to special inspections.

INFCIRC/66/Rev.2 limits the maximum number of routine inspections annually at nuclear facilities based on the inventory or throughput of nuclear material at the facility in question, while providing for a right of access at all times to facilities with an inventory or annual throughput in excess of 60 effective kilograms of nuclear material. INFCIRC/153-type agreements, on the other hand, limit the IAEA's 'inspection effort', permitting the IAEA to distribute its inspection activities within categories of facilities in the State.

6.4. PRIVILEGES AND IMMUNITIES

As indicated above, each of the safeguards agreements contains a provision obliging the State or States party to the agreement to extend to IAEA inspectors while on mission certain privileges and immunities. These privileges and immunities are granted to inspectors in the interest of the IAEA and not for the personal benefit of the inspectors. Therefore, the IAEA has the right to waive immunity in any case where, in the IAEA's opinion, the immunity would impede the course of justice and could be waived without prejudice to the interest of the IAEA.

6.5. VISAS

Before an inspector begins to travel for the IAEA, he or she must receive a Laissez Passer, a travel document issued by the United Nations. The Laissez Passer, which is honoured by most Member States of the IAEA, needs to be stamped with the appropriate visas (if required by the State concerned) prior to the inspector's departure on official business. Visas must be secured not only for the State of ultimate destination, but also for any States which require a visa in which the inspector may be stopping over (although generally not for those through which the official is simply transiting). For travel to those countries not honouring the Laissez Passer, an inspector must use his or her national passport, including visas where appropriate.

To facilitate the administration of safeguards, and the efficient use of inspectors, a number of States have agreed to forgo the need for visas, or have agreed to issue long term multiple-entry/exit visas.

6.6. DURATION

The duration of INFCIRC/153-type agreements is generally linked to the State's adherence to the NPT, to the Tlatelolco Treaty or to other underlying treaties or

agreements. There is no provision for the survival of safeguards on produced special fissionable material upon expiry of such an agreement. However, as noted above, more recent safeguards agreements concluded on the basis of INFCIRC/66/Rev.2 include a provision requiring continuation of the agreement until safeguards are terminated in accordance with the provisions of the Safeguards Document.

6.7. SAFEGUARDS ON EXPORTS

INFCIRC/66/Rev.2 contains provisions requiring, in general, the application of safeguards as a condition of re-transfer of safeguarded items. INFCIRC/153 (Corr.) contains no such condition, as the drafters considered it unnecessary in the light of Article III.2 of the NPT, which prohibits the transfer of nuclear material to a NNWS unless the material will be subject to safeguards in that State. However, INFCIRC/153 (Corr.) does contain a provision requiring notification to the IAEA if safeguards will not be applied on nuclear material in the importing State, a provision intended to address only transfers to NWSs.

6.8. DISPUTES RESOLUTION

Because safeguards agreements are treaties, the principles of international law, rather than the rules of domestic national law, are used in their interpretation and application. While the court systems of most countries are available to resolve differences between private parties to a contract, for sovereign States, the International Court of Justice (ICJ) is available to resolve disputes concerning treaties if the requirements of the Statute of the Court are met.

The IAEA, however, is not subject to the jurisdiction of national courts, nor under the Statute of the ICJ is it eligible to be a party to an action before that tribunal. Thus, there is no court or established judicial tribunal which has competence to resolve a dispute between the IAEA and a State relating to the interpretation and application of a safeguards agreement.

For this reason, all safeguards agreements contain a provision for submitting disputes concerning the interpretation and application of the agreements to binding arbitration. Although there are variations in the wording of this provision, they all basically provide for the establishment of an arbitration panel (or arbitral tribunal) composed of one member selected by each of the parties to the dispute, plus one or two members designated by the panel members chosen by the parties to the dispute. The arbitration provisions are designed to ensure that the panel is always composed of either three or five members to avoid the possibility of a tie vote.

No recourse to arbitration has been made to date in the implementation of safeguards.

6.9. COMPLIANCE AND ENFORCEMENT

Because a safeguards agreement is a treaty, the responsibility to fulfil the obligations of the agreement rests with the Government of the State that is party to the agreement. For example, if the operator of a privately owned facility subject to safeguards were to refuse to allow IAEA inspectors to conduct a properly scheduled inspection, the IAEA would request the Government of the State concerned to take whatever steps were necessary to ensure that IAEA inspectors had adequate access to the facility. If the Government did not or could not obtain adequate access for the inspectors, then the State, not the operator, would be in breach of the agreement. It is the State's responsibility to ensure that persons under its jurisdiction or control act in accordance with the treaty obligations assumed by that State.

Under Article XII.C of the Statute of the IAEA, failure by a State to take fully corrective action within a reasonable time with respect to non-compliance could subject the State to curtailment or suspension of assistance provided by the IAEA or by a Member State, the recall of material and equipment, and/or the suspension of the privileges and rights of IAEA membership. Article XII.C also provides for the reporting of non-compliance to the Security Council and to the General Assembly of the United Nations, which may trigger measures by the Security Council within the framework of the United Nations Charter.

The nature of non-compliance by a State with its safeguards obligations may vary. Non-compliance could derive, for example, from the unaccounted for presence or absence of nuclear material, from misleading and/or falsified records or reports, from the denial of access to IAEA inspectors, or from the tampering with IAEA instruments or seals. There is no formal definition of the term.

The information that a safeguards inspector is likely to uncover, however, is such that, rather than demonstrating a clear violation of the agreement, it would give rise to concerns as to whether the State were fulfilling its obligations under the agreement. Regardless of the type of agreement, the IAEA has the right and the duty to try to resolve these concerns through the examination of available information and by obtaining from the State amplifications, clarifications and additional information and/or access to additional locations.

Under a comprehensive safeguards agreement, if such doubts cannot be resolved to the satisfaction of the Director General, the Director General may, under para. 18 of INFCIRC/153 (Corr.), report to the Board of Governors that action by the State is essential and urgent to ensure the verification of non-diversion of

nuclear material subject to the agreement. Any actions considered by the Board to be "essential and urgent" are required to be implemented by the State without delay. The Director General could also report to the Board the IAEA's inability to verify that nuclear material required to be safeguarded has not been diverted.

If the Board, upon examination of relevant information reported to it by the Director General, concludes that the IAEA cannot fulfil its obligation under an agreement to verify that there has been no diversion of nuclear material required to be safeguarded under the agreement, para. 19 of INFCIRC/153 (Corr.) provides that the Board may make the reports provided for in para. C of Article XII of the Statute, and may also take, where applicable, the other measures provided for in that paragraph.

As for INFCIRC/66-type agreements, while the wording varies some from agreement to agreement, as a general rule, they provide that, if the Board determines that there has been non-compliance with the agreement, the Board shall call upon the Government concerned to remedy the non-compliance forthwith, and make such reports as it deems appropriate. In the event of failure by the Government to take fully corrective action within a reasonable time, the Board may take any other measures provided for in Article XII.C of the Statute. These agreements also generally include a separate provision which states that decisions by the Board concerning the implementation of the agreement (except those relating to expenses and third party liability) shall, if they so provide, be given effect immediately by the parties pending final settlement of any dispute.

Since the inception of safeguards, the Board of Governors has reported to the Security Council cases of States' non-compliance under five agreements, all involving comprehensive safeguards agreements (Iraq, the Democratic People's Republic of Korea and the Islamic Republic of Iran; in the cases of Romania and Libya, the reporting was for information purposes).

6.10. ADDITIONAL PROTOCOLS

The additional protocols concluded with NNWSs are substantively identical to, and contain all of the measures referred to in, the Model Additional Protocol. The additional protocols concluded with other States vary in scope and content, ranging from those which include all of the measures (excluding only activities with direct national security significance) to those which include only those measures which the State has concluded have a relevance to NNWSs.

7. CONCLUSION AND AMENDMENT OF SAFEGUARDS INSTRUMENTS

7.1. AGREEMENTS AND PROTOCOLS

While the IAEA is not a State under international law, it is an entity having 'international personality'. That is to say, States have recognized the IAEA as an entity which has some of the powers and privileges normally associated with a sovereign State. One of the IAEA's recognized powers is to become a party to treaties. In simple terms, a treaty is an agreement between two or more entities, usually States, having international personality. Thus, the IAEA's safeguards agreements, and the protocols thereto, which are negotiated and concluded between the IAEA and States, or other intergovernmental entities with international personality (such as Euratom or ABACC), are treaties under international law.

The process of concluding a safeguards agreement is begun with a request by the State or States concerned that the Secretariat prepare a text in accordance with the particular underlying obligations and commitments of the State or States. The Secretariat then prepares a draft text of the agreement and any relevant protocols, based on existing models and standardized texts, and submits it to the State or States for consideration. If necessary, consultations are held between the IAEA and the State authorities with a view to agreeing ad referendum on a text. In conducting these negotiations, the Secretariat is guided by the policies and practices previously approved by the Board of Governors. Upon completion of the negotiations, the safeguards agreement, along with any protocols, is presented by the Secretariat to the Board of Governors for its approval.

Upon approval of the text, the Director General is authorized to sign and implement the safeguards agreement, and protocols where relevant. Depending upon the State and its own national legislation, the agreement and protocols then enter into force either upon signature or upon receipt by the IAEA of notification from the State that its statutory and constitutional requirements for entry into force have been met. The choice of mechanism for entry into force is for the State concerned to make.

The parties to an INFCIRC/66-type agreement are required to consult, at the request of either party, on the amendment of such an agreement. If the Board modifies the Safeguards Document, the Inspectors Document or the scope of the safeguards system, the agreement must be amended if the State or States party to the agreement so request. Amendments to INFCIRC/66-type agreements are usually

made for the purpose of extending the duration, and occasionally the scope, of the agreement.

INFCIRC/153-type agreements provide that either party (the State or the IAEA) may request consultations on the amendment of the agreement. Any amendment would require the consent of all parties to the agreement. Entry into force of such an amendment would be subject to the same conditions as entry into force of the agreement. The same is true for the amendment of protocols, except with respect to the amendment of the annexes of additional protocols, as explained below.

If the Board of Governors were to amend the text of INFCIRC/153 (Corr.) (for example, should it decide to expand the definition of nuclear material), any such amendment would only become binding on a State upon its agreement to the amendment. That would also be the case for modifications to INFCIRC/540 (Corr.), except for amendments to the list of activities in Annex I and to the list of equipment and material in Annex II of that document, which are subject to a simplified amendment procedure. The annexes to INFCIRC/540 (Corr.) may be amended by the Board upon the advice of an open-ended working group of experts established by the Board. Any such amendment would take effect automatically for all additional protocols four months after its adoption by the Board.

7.2. SUBSIDIARY ARRANGEMENTS

The procedures for concluding subsidiary arrangements are not the same as for safeguards agreements. The process is generally initiated by the Secretariat before, or shortly after, the entry into force of the relevant agreement with the preparation of draft subsidiary arrangements based on standardized texts. Efforts are made to maintain the standardization of these documents, while taking into account the technical differences and circumstances of the individual States.

Subsidiary arrangements are agreed upon in exchanges of letters, not, as is the case with the safeguards agreements, by formal signature. They do not require review or approval by the Board of Governors. Subsidiary arrangements, which are treated as confidential documents and are not made public by the IAEA, may be amended at any time, but only upon agreement between the IAEA and the State concerned.

8. SAFEGUARDS IMPLEMENTATION

The implementation of safeguards has evolved over the years from a system designed for the verification of compliance with States' undertakings not to misuse supplied nuclear material and related items to one designed for verifying, in connection with legally binding non-proliferation commitments, compliance by States with undertakings not to misuse any nuclear material in the country, whether acquired from abroad or produced domestically.

This evolution has also required an evolution in approaches, from one focused on specific materials and facilities to a more holistic, integrated approach that views the State's nuclear programme as a whole. This State level approach involves the evaluation by the Secretariat of the IAEA of a broad range of information, such as information provided in State declarations, information obtained through IAEA verification activities and information from open and other sources, in drawing its annual safeguards conclusions. The nature of the conclusion which the IAEA is able to draw for each State depends on the scope of the agreement involved and the activities which the IAEA is able to carry out during the year:

- For a State with a comprehensive safeguards agreement and an additional protocol in force, if the Secretariat has found no indication of the diversion of declared nuclear material from peaceful nuclear activities, and no indication of undeclared nuclear material or activities, it can conclude for that State that all nuclear material remained in peaceful activities. If the evaluation regarding the absence of undeclared nuclear material and activities for such a State is ongoing at the time the conclusions are drawn, the Secretariat will limit its conclusion to the effect that all declared nuclear material remained in peaceful nuclear activities.
- For a State with a comprehensive safeguards agreement alone, while the IAEA's right and obligation to verify the correctness and completeness of the State's nuclear material declarations are the same, and the strengthening measures under such an agreement have somewhat increased the IAEA's ability to detect undeclared nuclear material and activities, the activities that the IAEA may conduct in this regard are limited for a State without an additional protocol. Thus, the conclusion for a State with only a comprehensive safeguards agreement relates only to the non-diversion of declared nuclear material, i.e. that all declared nuclear material remained in peaceful activities.

- For States with INFCIRC/66-type agreements in force, the conclusions
 are limited to the nuclear material, facilities and other items to which
 safeguards were applied. Thus, if the Secretariat finds no indication of
 the diversion of nuclear material or the use of safeguarded items for
 proscribed purposes, it is able to conclude that the nuclear material,
 facilities and other items to which safeguards were applied remained in
 peaceful activities.
- Under the NPT NWS voluntary offer agreements, the Secretariat's
 conclusion is limited to a statement with respect to those States in which
 safeguards were actually implemented on declared nuclear material in
 selected facilities: i.e. all such material remained in peaceful activities or
 was withdrawn from safeguards as provided for in the agreement.

The IAEA's safeguards system continues to evolve. The successive strengthening measures adopted since the early 1990s in connection with comprehensive safeguards agreements were never intended to constitute an additional layer of safeguards implementation. The aim has always been to integrate these measures with traditional ones to achieve an optimum combination of all safeguards measures available to the IAEA under comprehensive safeguards agreements and additional protocols to maximize effectiveness and efficiency within available resources in implementing safeguards: integrated safeguards. Once the IAEA is able to draw a conclusion regarding no indication of undeclared nuclear material and activities for a State as a whole, this can pave the way for reductions in verification effort on less sensitive declared nuclear material, and for other measures designed to optimize the effectiveness and efficiency of safeguards.

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