THE NON-PROLIFERATION TREATY AND THE IAEA

On 12 June the General Assembly of the United Nations passed a resolution commending the Treaty on the Non-Proliferation of Nuclear Weapons. An outline of the long negotiations leading to this momentous decision, of the effects it may have on the Agency's future and the system of safeguards devised to meet the implied responsibilities, is given below.

At the sixteenth session of the United Nations General Assembly in 1961, the Foreign Minister of Ireland introduced a draft resolution which marked the beginning of discussions within the United Nations on limiting the spread of nuclear weapons. General Assembly Resolution 1665 (XVI) called upon all States to work toward the conclusion of an international agreement, subject to inspection and control, whereby the nuclear States would undertake to refrain from relinquishing control of such weapons, and States not possessing such weapons would refrain from manufacturing them.

Until recently, despite the emphasis placed upon this question by the General Assembly, progress was slight. In 1964 the Eighteen-Nation Disarmament Committee (ENDC) in Geneva took up the question and four years of detailed negotiations culminated on 1 July 1968, in the signing by many nations of the Non-Proliferation Treaty (NPT), aimed at preventing the increase in the number of countries possessing nuclear weapons and ensuring to non-nuclear-weapon countries access to all peaceful uses of atomic energy.

A first draft treaty was submitted by the United States and the Soviet Union to the ENDC on 24 August 1967. However, in this draft, the important Article III on control was left blank. Intensive negotiations followed and on 18 January 1968, a revised and completed treaty was tabled. Article III stipulates that each non-nuclear-weapon State Party to the Treaty shall accept safeguards as set forth in an agreement with the Agency covering all their peaceful nuclear activities. Further, transfers of source or special fissionable material and special equipment to non-nuclear-weapon States cannot take place unless that material and equipment is put under Agency safeguards.

Two more months of negotiations in Geneva followed the tabling of this completed draft, pursuant to the mandate of the General Assembly in resolution 2346 (XXII) of 19 December 1967, which called upon the ENDC "urgently to continue its work in preparing a draft treaty to prevent the proliferation of nuclear weapons." A third version of the draft treaty dated 11 March 1968, was submitted with the ENDC's report to the United Nations General Assembly.

At the resumed twenty-second session of the General Assembly, the draft treaty was further discussed in the First Committee. Final changes were made

and on 12 June 1968, the General Assembly adopted a resolution commending the NPT and requesting the depositary governments to open the Treaty for signature.

Sixty-six States had by mid-August signed the Treaty, which will go into effect when it has been ratified by the depositary governments (UK, USSR, USA) and forty other States. Ireland has already ratified it.

EARLY DEVELOPMENT OF SAFEGUARDS

Ever since the end of World War II, various plans have been considered for the global control of nuclear energy. National and regional systems of control have been created to assure that nuclear material destined for peaceful uses is not diverted to military purposes. The first such controls were national safeguards systems developed by the major nuclear States. In some cases safeguards were also applied, through bilateral agreements, when nuclear material or equipment was exported to other countries.

In the later 1950's, two regional organizations also set up safeguards systems. The European Atomic Energy Community (EURATOM) established a control system which covers all peaceful nuclear installations in its Member States. The European Nuclear Energy Agency (ENEA) of the Organization for Economic Cooperation and Development (OECD) developed security controls for its own projects, and subsequently also for material emanating from these projects.

However effective some of these national, bilateral and regional systems may be, they are limited in their credibility for countries outside the system. To inspire confidence in the world community, a complete and truly international system of verification is required. This role was envisaged for the Agency by its founders.

THE IAEA SAFEGUARDS SYSTEM

One of the principal statutory objectives of the Agency is to assure, so far as it is able, that assistance given to promote peaceful uses of atomic energy is not used in such a way as to further any military purpose. The Statute also directs the Agency to carry out its activities in conformity with policies of the United Nations furthering the establishment of safe-guarded world-wide disarmament and in conformity with any international agreements entered into pursuant to such policies.

The Agency has, therefore, the statutory competence to carry out the control functions now envisaged for it under the NPT. It was natural, then, that the negotiators of the NPT chose the Agency as the organ to verify the fulfilment of the Treaty obligations.

The Agency has had several years of practical experience in building up and administering a safeguards system on an international basis. The countries

which will conclude agreements with the Agency are assured that they will be entering into a system which has been tried and tested and accepted over the years.

DEVELOPMENT OF THE SYSTEM

Statutory guidelines for safeguards were the basis for the first Safeguards System of the Agency adopted in 1961. At that time the system was designed for research reactors. The important decision to extend the system to power reactors was taken in 1963, when it was also decided to review the 1961 Safeguards Document. In 1965, the present Agency Safeguards System was established, and was extended in 1966 to plants which reprocess fuel from reactors. Provisions for safeguarding nuclear materials in conversion plants and fabrication plants were approved by the Board in June 1968. The present system covers the entire fuel cycle except uranium enrichment plants.

It is a common belief that "safeguarding" means "inspecting". While on-the-spot inspections are an important element of the application of safeguards, they are only a part of the system. Also necessary for an effective Safeguards System are design review and materials accounting on the basis of records and reports which are required on the use and location of nuclear material and the operation of facilities containing such material.

There are three ways in which the Agency assumes the responsibility to apply safeguards in a country: 1) When a State receives special fissionable and other materials, services, equipment or facilities, through the Agency; 2) When the Agency is requested to safeguard any bilateral or multilateral arrangement; 3) When a State submits any or all of its nuclear activities to Agency safeguards.

With one recent exception, safeguards agreements have so far been confined to specified installations, or materials in given countries. Under the terms of the Non-Proliferation Treaty each signatory non-nuclear-weapon State is required to conclude, individually or together with other States, a safeguards agreement with the Agency covering **all** their peaceful nuclear activities. Thus there may well be an appreciable extension of the safeguards activities of the Agency.

PREPARING FOR THE FUTURE

Even before the signing of the Non-Proliferation Treaty, however, an important step in the same direction was taken by 21 Latin American States when in February 1967 they signed the Treaty for the Prohibition of Nuclear Weapons in Latin America — the Treaty of Tlatelolco. This creates the first internationally controlled nuclear-free zone in a populated area. In the framework of that treaty, Mexico has already requested the Agency to apply safeguards to its nuclear activities. The resulting safeguards agreement, the first to cover all present and future nuclear activities in a State, was approved by the Board of Governors at its June meeting.

Thirty-nine safeguards agreements are now in force or have been approved by the Board. Of these, twenty-three are transfer agreements whereby the administration of bilateral safeguards has been entrusted to the Agency. The total number of principal nuclear facilities, research and development facilities and other separate accountability areas covered by these agreements is now more than 100. The reactors concerned have a total thermal capacity of roughly 3,220 MW. During the past year more than 30 inspections were made in 16 Member States.

The present system can be expanded to meet greatly increased responsibilities. There are also possible improvements in the application of safeguards to achieve greater effectiveness, simplicity and economy.

As part of its preparations, the Agency will study existing systems of nuclear materials management from the view point of their practicability and effectiveness. Future tasks would be greatly facilitated if progress were made toward a standard international system.

The Agency is closely following and fostering the exchange of information on development of techniques and devices to improve the credibility and facilitate the execution of safeguards. Several Member States are doing such research and development work, and the Agency itself has concluded research contracts. In order to carry out efficiently the considerable increase in work, the Agency will take advantage of simplified and mechanized procedures as they are developed.

INCREASING THE PEACEFUL USES OF ATOMIC ENERGY

As the countries of the world are assured that nuclear energy will not be diverted to nuclear weapons, the exchange of information, material, equipment and technical aid should increase. According to Article IV of the Treaty, "Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes."

As the first objective set forth in the Statute is to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world," the Agency, with its international membership, is well qualified to foster the further development of the peaceful uses of atomic energy.

The use of nuclear explosions for peaceful purposes has been much discussed and is the subject of Article V under which non-nuclear-weapon States Party to the Treaty shall be able to benefit, as a result of a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States.

Although the modalities for the implementation of this Article have not yet been worked out, U.S. President Lyndon Johnson suggested in a message to the ENDC on 16 July 1968 that "the International Atomic Energy Agency is the 'appropriate international body' through which the non-nuclear-weapon States Party to the Treaty may obtain these benefits under Article V of the Treaty if they choose to do so." At the same meeting the British Minister of State, Mr. Fred Mulley, proposed that the co-chairmen of the ENDC request the IAEA for a report on the part it might play in implementing Article V.

CHANGES IN THE AGENCY'S ROLE

In October 1967, Mr. Jan Neumann, Chairman of the Czechoslovak Atomic Energy Commission, who was President of the Eleventh Session of the General Conference, expressed the Agency's readiness to undertake its tasks under the Non-Proliferation Treaty and to make such preparations as might be necessary to discharge the wider responsibilities which would devolve upon it.

The magnitude of these tasks will necessarily involve some shifts of emphasis in the Agency's work. Until now, the Agency's role has been primarily of a scientific and technological nature. The effect of the enforcement of the Treaty will be to give the Agency responsibilities of considerable political significance.

SAFEGUARDS INSPECTORS AT WORK

In Japan. Checking the nuclear fuel assembly of a research reactor. Japan was the first country to accept safeguards control by the Agency, and has placed 19 reactors and critical assemblies under the system, including the large power station at Tokai-Mura.

In England. The Bradwell nuclear power station generating 300 megawatts of electricity, has been placed under Agency safeguards. This photo was taken at the first inspection.

In Austria. Three Austrian research reactors are subject to safeguards controls. This photo was taken while inspectors were visiting one situated at Seibersdorf, near Vienna.