

When the IAEA was born

Fifty years ago, on 23 October 1956, eighty-one member countries of the United Nations system adopted the Statute of the International Atomic Energy Agency. Their action changed the nuclear world.

Bertrand Goldschmidt recounted those times in an essay first published ten years ago. The IAEA marks its 50th anniversary in July 2007.

Three months after the end of the Second World War, on 15 November 1945, the heads of the US, British and Canadian Governments, meeting in Washington, decided to adopt a policy of secrecy in the nuclear field until a system had been established for the effective international control of the new and formidable source of power. By also deciding to buy up all available uranium, they thus created a perfect policy of non-proliferation based on blocking the transfer of the two things essential for nuclear development: the technical knowledge and uranium, both of which are widely dispersed in the world today.

A month later, the Soviet Union accepted an Anglo-American proposal to establish within the United Nations an atomic energy commission consisting of the 11 countries represented on the Security Council, and Canada. On 24 January 1946, the United Nations approved the establishment of such a commission.

The Idea of an “International Authority”

In March 1946, on the initiative of the US Secretary of State, a group of prominent persons—presided over by David Lilienthal, later the first Chairman of the US Atomic Energy Commission, and including also Robert Oppenheimer and three industrialists—was entrusted with the task of studying the problem of the peaceful development of nuclear energy and the elimination of nuclear weapons. The study led to a report which was almost as revolutionary at the political level as nuclear energy was at the technical level. The report centred on the idea that in the atomic age no security system based on agreements banning nuclear weapons or even on safeguards

and inspections will work. In the report, it was proposed that all operations which were dangerous from the point of view of nuclear weapons development be placed outside the competence of individual States and entrusted to a single international authority. An international administrative body would own, operate and develop the nuclear industry on behalf of all nations. The international authority would be the owner of nuclear ores and fuels, would carry out research (even in the field of nuclear explosives) and would operate nuclear fuel fabrication plants and nuclear power reactors, while international inspectors would be responsible for discovering any clandestine activities which took place.

Debate at the United Nations

Under Secretary of State Dean Acheson backed the draft report, which was presented almost without change, on 14 June 1946, at the inaugural session of the United Nations Atomic Energy Commission by the US delegate Bernard Baruch. One political clause had been inserted—it concerned abolition of the veto in respect of immediate sanctions against a nation seriously violating the treaty which was proposed. In the US proposal, the authority was called the International Atomic Development Authority, because its purpose was to control nuclear energy worldwide.

The transition from national to international controls would take place in stages still to be specified, the last stage being accompanied by the surrender of nuclear weapons to the international control agency. From the outset, the Soviet Union, supported by Poland, was against the US plan; it demanded as a preliminary step the unconditional prohibition of nuclear weapons, later accepting the idea of periodic international inspections but not subscribing to

the principles of international ownership and management, which it regarded as an unacceptable limitation on national sovereignty.

The negotiations continued during the autumn of 1946. For the first time, delegations contained scientists as well as diplomats, the former becoming advisers to the latter. The first headquarters of the United Nations were at Lake Success, about an hour's drive from New York, symbolically located in the reconverted part of an armaments factory which was still in operation. During the long drive we had time to initiate the diplomats into the mysteries of the atom and of nuclear fission.

Despite initial disagreement, Baruch wanted to go ahead and forced a vote; this took place on 30 December 1946, the result being ten in favor and two—the Soviet Union and Poland—abstaining. Four days before—as we learned only several years later—the first Soviet atomic reactor had gone into operation. The Soviet Union had decided to place its trust in its technicians and not to negotiate from a position of weakness.

How Much Nuclear Control?

The US plan, which had become known as 'the plan of the majority', was studied in detail throughout 1947 by experts from the Western countries under the amused gaze of the Soviet representative, who emphasized from time to time the obvious faults of the theoretical structure to which this exercise was leading, for at that time there was no chance of the Soviet Union's joining in.

Even within the majority group, agreement was sometimes difficult to achieve. For example, many meetings were devoted to the question of whether or not uranium ore still in the ground should belong to the future international control agency. Under pressure from Belgium and Brazil, it was finally agreed that uranium and thorium producing countries should remain the owners of ore in the ground; ore would become the property of the international control agency only after extraction.

At the same time, the international control agency would be empowered to impose each year quotas for the extraction of ore or for the production of fissionable materials, which would belong to it together with the reactors in which they were produced and—naturally—the isotopic separation and irradiated fuel reprocessing plants.

It was decided that the international control agency should have the sole right to manufacture nuclear explosives, so that it would be in the forefront in this field also and hence in a better position to detect any prohibited activities. At no time, however, was a study made of the question of the crucial transition period during which the USA would be



1955: Opening of the "Atoms for Peace" Conference, Geneva, Switzerland, 8 August.

Seen left to right are Mr. Max Petitpierre, President of the Swiss Confederation; UN Secretary-General Dag Hammarskjöld; Dr. Homi J. Bhaba of India, President of the Conference; and Prof. Walter G. Whitman of the US, Conference Secretary-General.

handing over its nuclear weapons gradually to the international control agency prior to the stage of universally controlled nuclear disarmament.

It was during these meetings, in 1947, that Oppenheimer gave us his views about the future of nuclear energy. He predicted that electricity generation on an experimental basis would start within five years, that a number of nuclear power plants would be built in industrialized regions where electricity is expensive during the next 10-20 years and that large scale development would begin after 30-50 years. His predictions have proved to be remarkably accurate.

Lost Chance, New Direction

After two years' work and over 200 meetings, the UN Atomic Energy Commission informed the Security Council, in 1948, that it had reached an impasse and discontinued its work. The first attempts to achieve international nuclear disarmament had failed and humanity's last chance of living in a world without the atomic bomb disappeared.

In the ensuing years, from 1949, the US nuclear monopoly disappeared. From 1951 onward, the negotiations on nuclear controls were linked with those on traditional disarmament. There was no more talk about the International Atomic Development Authority, the idea of international ownership and management becoming more difficult to put into practice as the world's uranium resources increased and further countries embarked upon large national nuclear programs. Moreover, the safeguards against all diversion of fissile materials which were to

have been applied by the international control agency became far less important, for atomic bomb stockpiles were increasing steadily and a substantial fraction of them could always be concealed when controlled worldwide disarmament was being established.

So the direction of the discussions on nuclear disarmament changed and, as in the case of conventional disarmament, attention focused on the transitional stages and the various prohibitions covering the use, manufacture and stockpiling of nuclear weapons which would accompany the gradual establishment of safeguards.

For the first time nuclear terrorism was mentioned in an official document.

The surprising speed with which the Soviet Union was catching up in the nuclear field (and in particular its breakthrough into the thermonuclear field in 1953), the British explosion of 1952 and the French decision—of the same year—to build large plutonium producing reactors fuelled with the uranium recently discovered in France itself made it clear that the Soviet Union and the United Kingdom had reached the most advanced stages of industrial nuclear technology and that France would do the same fairly soon.

The demonstration of the relative ineffectiveness of the policy of secrecy, the risk that a system of international nuclear cooperation and commerce would be established without the Anglo-Saxon powers—excluded by their own rigorous laws—and, above all, the desire to “initiate a process of détente and disarmament” induced the USA to change its policy quite suddenly at the end of 1953.

President Eisenhower’s Proposal

In his famous speech of 8 December 1953 before the UN General Assembly, President Eisenhower, just back from the Bermuda Summit Conference between the USA, the United Kingdom and France, after describing the balance of terror which was becoming the principal element in the relations between the two largest of the major powers, again proposed the establishment of an international agency for atomic energy, to which the countries most advanced in the nuclear field would contribute natural uranium and fissionable materials drawn from their national stockpiles. The agency would be created under the auspices of the United Nations and would be responsible for the materials entrusted to it. These materials—available initially in only small amounts—would serve to promote the peaceful applications of atomic energy, espe-

cially electricity generation, and would be distributed and used in such a way as to yield the greatest benefit for all.

The new agency would have control powers limited to verification of the peaceful utilization of the materials which it would be responsible for receiving, storing and redistributing. Such a ‘bank’ would have to be absolutely secure against attack or theft; for the first time, nuclear terrorism—about which so much is talked today—was mentioned in an official document.

Such an embryo international authority for atomic energy would assume even greater importance with the increase in the contributions of the countries most interested, of which Eisenhower stated that as a prerequisite the Soviet Union must be a part.

For the first time since the Second World War, a plan for nuclear détente was not characterized by the opposing demands of the two major nuclear powers—the US demand that the Soviet Union throw itself open to international inspections and the Soviet demand for the prohibition and destruction of nuclear weapons.

Soviet-US Dialogue

At the end of 1953, the Soviet Union agreed to discuss the Eisenhower proposal directly with the USA through diplomatic channels. Initially, however, the Soviet Government was very reluctant: it insisted on prior solemn renunciation of the use of the hydrogen bomb and of other weapons of mass destruction and espoused the US arguments of 1946, pointing out that the production of energy for peaceful purposes could not be distinguished arbitrarily from the production of materials usable for military purposes and that a country could not engage in one without engaging in the other.

Later, at the end of 1954, the Soviet Union subordinated discussions on the future international agency for atomic energy to the conclusion of an agreement on nuclear weapons; it proposed a meeting of Soviet and US experts to consider the technical possibility of preventing the diversion to military uses of fissionable materials originally intended for non-military uses and ways of making such materials unsuitable for military uses without detracting from their non-military value. A meeting of experts from the main nuclear powers took place in Geneva in September 1955, but no solution was found.

The Soviet reluctance did not prevent the USA from preparing and submitting to the Soviet Union several successive drafts of the statute of the future agency, drawn up after consultations with the main nuclear powers and the principal producers of uranium: Australia, Belgium, Canada, France, Portugal, South Africa and the United Kingdom. In

the summer of 1954, the US Government relaxed its internal nuclear legislation and authorized the placing of nuclear know-how and materials at the disposal of other countries provided that they were used only for peaceful purposes. It also announced its decision to go ahead with the establishment of the new agency, even without the Soviet Union.

In the autumn of 1954, the UN General Assembly urged a continuation of negotiations and decided on holding—under United Nations auspices—a large technical conference on the peaceful uses of atomic energy, designed to lift the veil of atomic secrecy to a great extent. The conference took place in August 1955 in Geneva, with success and with the full participation of the Soviet Union.

Soon after the conference, the Soviet Government announced its willingness to participate in the future agency, to transfer fissionable materials to it and to accept as a basis for discussion the third draft statute prepared by the US Government in March 1955. The discussion of principles thus ended, to be followed by a period of a year during which the final statute text was arrived at in the course of two conferences, held at the beginning and end of 1956 in Washington and New York, respectively.

In 1955, the UN General Assembly entrusted the USA with the organization—in Washington—of a conference of the 12 countries most interested in the creation of the new agency. The countries invited to participate were those which had been consulted over the drafts of the statute plus the Soviet Union, Czechoslovakia, Brazil and India. The conference took place in February and March 1956.

A feature of the negotiations, which lasted four weeks, was the conciliatory attitude of the Soviet Union. The type of organization which emerged from the negotiations was to have the role of a broker rather than a banker and possess very broad control powers which would apply both to agreements for the transfer of materials which had been placed at the new agency's disposal and—above all—to bilateral or multilateral agreements the parties to which wished the new agency to verify their non-military character.

With regard to the latter type of agreement it was decided, despite Soviet opposition, that the associated safeguards costs should be borne by the new agency, since the safeguards would be contributing to the maintenance of world peace. The Indian delegation, while accepting safeguards on special fissionable materials (enriched uranium and plutonium), opposed safeguards on natural uranium. The only delegation to take this line, it put forward the view that safeguards on natural uranium would divide the countries of the world into two categories: on one hand, countries which did not have uranium deposits on their territory or had not been able to acquire uranium through commercial channels, which would be subject to constant controls in the industrial area—the only one they

could develop; on the other hand, countries with a military nuclear programme, which could benefit from such a programme as regards industrial secrecy since they had uncontrolled materials available which could be switched to non-military uses.

The Conference and a Battle

At last, on 23 September 1956, the draft Statute was presented to a gathering of 81 countries at the Headquarters of the United Nations. It was decided that a two thirds majority would be necessary for amending the Statute, so that the final version adopted on 23 October did not differ much from the text which had been drafted in Washington six months previously.



1957: The Viennese public enjoying a sidewalk view of the scientists and diplomats from 55 nations who attended the First General Conference of the new IAEA which met at the Konzerthaus, one of Vienna's famous concert halls.

Most proposed amendments were withdrawn or did not obtain the two thirds majority necessary for acceptance. That was particularly so in the case of the fundamental amendments proposed by the Soviet Union and its allies: admission of the People's Republic of China as a founder member; demands for additional guarantees that the sovereignty of States would be respected; budgetary limitations; a demand that a three quarters majority be required in financial matters; a proposal that the agency should be able to acquire installations and equipment only if they were provided in the form of gifts.

The most controversial issue was that of the scope of safeguards. The principle of safeguards was criticized by many countries (several of them from the Third World) which tried to exempt natural uranium. They likened safeguards to neo-colonialism, pointing out that in general the nuclear weapons powers would be exempted since, owing to their

advanced stage of development, they would never have to request the assistance of the new agency.

India spearheaded the opposition to a very strict application of safeguards and France, which I represented, supported it by proposing a relaxation of safeguards on natural uranium and urging that safeguards should not be so severe as to deter future member countries from turning to the new agency for help.



Mr. Bertrand Goldschmidt, representative of France on the first IAEA Board of Governors in 1957. France held one of the five non-elective seats allotted to those members which were most advanced in the technology of atomic energy, including the production of source materials. The remaining four were held by Canada, the USSR, the United Kingdom and the United States.

India's position was stated clearly by Dr. Homi Bhabha, who enjoyed great personal prestige. He was opposed above all to a perpetuation of safeguards applied to successive generations of nuclear materials, which was very likely to occur in the case of his country, which possessed nuclear materials but needed assistance in order to embark on a nuclear programme. He pointed to the illusory nature of strict safeguards and emphasized that any aid in the nuclear field—be it training opportunities or nuclear materials—was potentially military aid since it might allow a country to switch resources to a military programme. At the Conference, he proposed that the new agency give assistance only to those countries which did not have military programmes—defined as programmes in the field of nuclear and thermonuclear explosives and radiological weapons, but not including military nuclear propulsion.

Lastly, the point on which the Indian delegate stated that he would be most intransigent, to the extent of categorical opposition, was the new agency's right under Article XII.A.5, in respect of all facilities subjected to its safeguards, "to decide on the use of all special fissionable materials recovered or produced as a by-product and to require that such special fissionable materials be deposited with the Agency, except for those quantities which the Agency allows to be retained for specified non-military purposes under continuing Agency safeguards." Such power in the hands of the new agency might well give it too strong a hold on a country's economy if the latter were based on nuclear power generation following an effort to which the new agency had contributed only in the initial stages.

Negotiations took place throughout the Conference between the US and the Indian delegations. The US delegation, which had consulted the Secretary of State and had his backing, refused to modify its position to any appreciable extent.

On 19 October 1956, the day the Conference was to end with a vote on Article XII, the Soviet Union, which had not yet declared its position, joined its allies, which had come out clearly on the side of India. Seeing that the vote might lead to an impasse or to approval of the US line by a slight majority, I and my Swiss colleague, Minister August Lindt, permanent observer at the United Nations, decided to table a compromise amendment. This amendment, the form of which was modified slightly the day after it had been tabled, gave a country the right to retain, from the fissionable materials which it had produced, those quantities which it considered necessary for its research activities and for fuelling the nuclear reactors which it already possessed or was constructing.

The US delegation requested 48 hours for reflection and the matter was put before Secretary of State John Foster Dulles and US Atomic Energy Commission Chairman Admiral Lewis Strauss. After discussions which lasted throughout Sunday 21 October and in which the Canadian delegation's influence worked in favour of acceptance of the compromise, while the British delegation tended to be intransigent, the three Anglo-Saxon delegations accepted the Franco-Swiss proposal, to which the Indian delegation agreed in its turn at the beginning of the night. The Indian delegation, in recognition of the way in which we had helped it, stopped pressing its proposal that the new agency should assist only countries which did not have a military programme.

The next day Article XII was voted on and adopted unanimously. A failure of the Conference had thus been narrowly avoided and the last obstacle to the establishment of the International Atomic Energy Agency and its safeguards, fundamental elements in the present world policy of non-proliferation, had been overcome.

Bertrand Goldschmidt, was born in 1912 and educated in Paris. After graduating from the Ecole de Physique et de Chimie, he was recruited in 1933, the year before her death, by Marie Curie, as her personal assistant at the Institut du Radium, Paris. He participated in the founding of the Commissariat à l'Énergie Atomique in France in 1946. Ten years later he headed the French delegation to the IAEA's Statute Conference. He served as the French Governor to the IAEA Board for 23 years. Bertrand Goldschmidt died in 2002.

To read the IAEA Statute or more about the IAEA's history, visit www.iaea.org.