

The Contribution of International Organizations to a Stable Environment for Nuclear Disarmament

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Introduction

President Obama's Prague Speech in 2009 set a tone of optimism which, while conceding that "global zero" might not be achievable in our lifetimes, identified "a world without nuclear weapons" not only as a desirable achievement, but necessary for global peace and security. The idea of low numbers, and even zero, was no longer treated as an ideal in the realm of fantasy.

Notwithstanding President Obama's positive re-emphasis on disarmament, the current state of affairs, and the escalating tensions between the Russian Federation and the United States have renewed historical pessimism within the disarmament community – and the global community as a whole – about the viability of any deep cuts in nuclear weapon stockpiles being made in the near term.

These international tensions are exacerbated by domestic politics – "fissiparous democracies, gangster States and theocracies."¹ A recent article in *The Economist* paints a bleak outlook on the immediate prospects for nuclear disarmament. The headline reads "A quarter of a century after the end of the cold war, the world faces a growing threat of nuclear conflict." "Worst of all," the article reads, "is the instability. During much of the cold war the two superpowers, anxious to avoid Armageddon, were willing to tolerate the status quo. Today the ground is shifting under everyone's feet."²

Although the prospects for disarmament do not look promising right now, this is no reason to give up the fight, for if there is one certainty in our uncertain world, it is change. There are great thinkers out there imagining precisely how that change might manifest itself in the context of disarmament. But that is not the subject of this paper. The purpose of this paper is to discuss the role of international and regional organizations in contributing to a stable environment conducive to nuclear disarmament, and whether indeed there is one.

When I was invited to contribute to this project, it hardly seemed necessary to me to make a case for such a role or for the increasing importance of that role in times of global and regional conflict and tension. It was, to me, simply self-evident. As a former staff member of the International Atomic Energy (IAEA), and lawyer for the IAEA's Department of Safeguards for 28 years, I experienced first-hand an excellent example of how an international organization can contribute to such stability.

However, as a practitioner, and a non-academic, I am not well versed in the competing theories of international relations. So, before setting out on my task, I polled colleagues of mine in the academic

¹ Personal communication from Andrew Brown, former research fellow at Harvard Kennedy School's Belfer Center Project on Managing the Atom.

² *The Economist*, "The New Nuclear Age," March 7, 2015, <http://www.economist.com/news/leaders/21645729-quarter-century-after-end-cold-war-world-faces-growing-threat-nuclear>.

community about those theories, and waded through dense and highly academic writings on the relative merits of, say, classic liberalism versus the realists' school of thought. I came away from that effort with a profound respect for the theorists and their valiant efforts to explain why States operate as they do and why, in some instances, they choose to operate through international organizations.

In a 1998 article entitled "Why States Act through Formal International Organizations," Abbott and Snidal analyze the question of why States use formal organizations, and what the role of international organizations (IOs) is in creating norms and understanding.³ In that article, the authors identify centralization and independence as the key properties of formal organizations, properties that "set formal organizations apart from alternative arrangements, such as decentralized cooperation, informal consultation, and treaty rules."

In the authors' view, IOs allow for "the centralization of collective activities through a concrete and stable organizational structure and a supportive administrative apparatus," which, in turn "increase[s] the efficiency of collective activities and enhance[s] the organization's ability to affect the understandings, environment, and interest of states."⁴ The property of independence is defined as "the ability to act with a degree of autonomy within defined spheres ... often [entailing] the capacity to operate as a *neutral* in managing interstate disputes and conflicts" (emphasis in original). However, as noted by the authors, "IO independence is highly constrained: member states, especially the powerful, can limit the autonomy of IOs, interfere with their operations, ignore their dictates, or restructure and dissolve. But . . . , participation by even a partially autonomous, neutral actor can increase efficiency and affect the legitimacy of individual and collective actions," thus providing "even powerful states with incentives to grant IOs substantial independence."⁵ The authors assert that centralized IOs provide "neutral, depoliticized, or specialized forums more effectively than almost any informal or decentralized arrangement." By way of example, they cite the fact that "the superpowers could discuss technical nuclear issues within the IAEA without the intrusion of high politics, even at the height of the cold war."⁶

As a non-academic, I found Abbott and Snidal's argument compelling and consistent with my experience as a practitioner. I also came to appreciate that the skepticism that exists among some of the theorists about the role of international organizations (IOs) in international relations. Some of that skepticism, it seemed to me, was a consequence of a lack of familiarity with the actual operation of an IO. I therefore concluded that the best contribution I could make to this project would be to speak from my own experience as a practitioner about how at least one IO – the IAEA – can and does contribute to a stable

³ Kenneth W. Abbott, Duncan Snidal, "Why States Act through Formal International Organizations," *The Journal of Conflict Resolution*, Vol. 42, No. 1 (Feb. 1998): 3-32 (<http://www.jstor.org/stable/174551>).

⁴ *Ibid.*, pp. 4-5.

⁵ *Ibid.*

⁶ *Ibid.*, p. 10. The concept of "independence" is a "murky one." In a personal communication from Andrew Brown, he noted that "Matthew Evangelista in his book *Unarmed Forces* makes the interesting point that the Russian Pugwashites had a tremendous influence with Khrushchev and later Gorbachev because at home they had no competing experts. In an open society, the influence peddlers and experts fight for access to the policy makers." The point is well taken: independence cannot be absolute for the organization to be effective. By analogy, intergovernmental international organizations are, by definition, creatures of their Member States, and as such, can never be completely independent from those States.

environment, an environment in which nuclear disarmament might eventually progress. I must leave it to the experts in international relations theory to explain why.

The IAEA: Its History and Structure

The History of the IAEA

In 1945, the United States was the only country with the industrial infrastructure, wealth, material and concentration of scientific expertise necessary to make nuclear weapons (a monopoly that would last for less than five years).⁷ Thus its initial efforts to constrain the spread of nuclear weapons were based on a policy of secrecy and denial.

In 1946, the US representative to the Atomic Energy Commission of the newly formed United Nations Atomic Energy Commission (UNAEC), Bernard Baruch, presented to the UNAEC a US proposal (known as “the Baruch Plan”) designed to achieve the abolition of nuclear weapons and the control of peaceful uses of nuclear energy by an international authority. The authority – the International Atomic Development Authority (IADA) – would own or control and operate all nuclear activities that lead to the production of fissile material, including all reactors except those considered to be “not dangerous” It would license and inspect all other nuclear activities and foster beneficial nuclear uses and research. The proposal provided further that, once the organization was operating effectively, the United States would stop making nuclear weapons and destroy those that it had. The Baruch Plan also provided for the imposition of sanctions upon decision by the IADA, a decision that would not be subject to the veto of any power.

The Soviet Union, which clearly had a vested interest in protecting its veto right in the Security Council, objected to the US proposal. In addition, it objected to the proposition of “control before disarmament,” arguing that disarmament should come before control. However, it is likely that the most significant motivation behind the Soviet resistance to the proposal was that the Soviet Union itself was in the process of developing its own nuclear weapons capability, in which efforts it succeeded in 1949.

The US status as the only nuclear-weapon State further eroded with the testing of a nuclear device by the United Kingdom in 1952. By that time, it was clear that denial was not working, and there ceased to be much discussion about disarmament. What prevented the further proliferation of nuclear weapons were not technical difficulties or lack of scientific expertise, but rather political considerations that persuaded most States to forego the nuclear option (e.g., nuclear umbrellas).

Warning that “the dread secret and the fearful engines of atomic might are not ours alone,”⁸ US President Dwight Eisenhower presented his Atoms for Peace proposal to the United Nations General Assembly (UNGA) in 1953. The proposal, which was endorsed by the UNGA in December 1954, was to

⁷ “Although some around the Truman Administration hoped it would last forever (Byrnes, HST and above all General Groves), the scientists as a group understood that it wouldn’t.” Personal communication from Andrew Brown.

⁸ http://www.eisenhower.archives.gov/research/online_documents/atoms_for_peace/Atoms_for_Peace_Draft.pdf

create an international organization that could serve as a repository for nuclear material donated by nuclear-armed States – by then, the United States, the Soviet Union and the United Kingdom – from their weapons programs, from which other States could make withdrawals for use in peaceful activities. The new organization would be responsible for promoting the safe and peaceful uses of nuclear energy, and would be entrusted with verifying that nuclear technology was not misused for military purposes.

This organization became the IAEA: an intergovernmental organization, independent from the United Nations but with a unique relationship permitting direct access to the United Nations Security Council. The Statute of the IAEA was approved in October 1956 by the Conference on the Statute of the IAEA, held at the United Nations in New York, and was opened for signature three days later. It entered into force on 29 July 1957 following the deposit of instruments of ratification by eighteen States with the depositary government (the United States). By operation of Article XXI of the Statute, among those eighteen were required to be Canada, France, the Soviet Union, the United Kingdom and the United States.

President Eisenhower's Atoms for Peace speech included more elements than just the establishment of an international inspectorate:

The United States would seek more than the mere reduction or elimination of atomic materials for military purposes. It is not enough to take this weapon out of the hands of the soldiers. It must be put into the hands of those who will know how to strip its military casing and adapt it to the arts of peace. The United States knows that if the fearful trend of atomic military build-up can be reversed, this greatest of destructive forces can be developed into a great boon, for the benefit of all mankind. The United States knows that peaceful power from atomic energy is no dream of the future. That capability, already proved, is here—now—today. Who can doubt, if the entire body of the world's scientists and engineers had adequate amounts of fissionable material with which to test and develop their ideas, that this capability would rapidly be transformed into universal, efficient, and economic usage? . . . The United States is prepared to undertake these explorations in good faith. Any partner of the United States acting in the same good faith will find the United States a not unreasonable or ungenerous associate.⁹

The US concept of controlled trade in nuclear technology was aimed primarily at the strengthening of economic and technical bonds between Europe and the United States. According to George Bunn, one of the American negotiators of the Nuclear Non-Proliferation Treaty (NPT), the real focus of the Atoms for Peace proposal was “[promoting] research and the generation of electrical power rather than nuclear disarmament.”¹⁰ In his book *Arms Control by Committee: Managing Negotiations with the Russians*, he cites US historians from the Atomic Energy Agency:

⁹ Ibid.

¹⁰ George Bunn, *Arms Control by Committee: Managing Negotiations with the Russians* (Stanford, CA: Stanford University Press, 1992).

. . . the policy was born in the Cold War and was designed primarily to supplement American military security. Following the precedent of the Marshall Plan, Atoms for Peace was expected to forge even stronger economic and technical links between Europe and North America. Atoms for Peace, if coupled with an enforceable international moratorium on weapon development . . . , would allow the United States to guard its near-monopoly over the military atom while promoting the peaceful atom.^{11,12}

In 1954, the US Congress adopted legislation that authorized controlled trade with other countries, subject to bilateral verification by the US of the non-military use of supplied materials, equipment, and facilities. By the end of 1959, the US had concluded nuclear cooperation agreements with 42 States (most of which foresaw the eventual transfer of safeguards responsibilities to the IAEA); within another 14 years, the Soviet Union, under its own Atoms for Peace program, had concluded nuclear trade arrangements with 26 countries (while these agreements contained no requirement for safeguards, they did include a peaceful use undertaking and require return of used fuel to the Soviet Union).¹³

In 1959, Japan and Canada were the first to move away from bilateral State-to-State safeguards and to conclude an agreement with the IAEA for the implementation of its safeguards on a Japanese research reactor and the Canadian-supplied fuel for the reactor.¹⁴ This gave rise to the eventual negotiation of the IAEA's first safeguards system, approved in 1961 by its Board of Governors.¹⁵ That same year, the United States, Canada and Japan proposed consultations on substituting IAEA safeguards for bilateral safeguards under their respective US/Japan and Canada/Japan nuclear cooperation agreements, which resulted in the conclusion of the "Safeguards Transfer Agreements" between the US, Japan, and the IAEA¹⁶ and between Canada, Japan, and the IAEA.¹⁷

The IAEA's safeguards system was now in place and operational.

¹¹ Ibid., p. 86, citing Hewlett and Holl, *Atoms for Peace and War, 1953-1961: Eisenhower and the Atomic Energy Commission* (Berkeley: University of California Press, 1989), pp. 306-7.

¹² Gunnar Skogmar examines the means and goals of US foreign policy in the 1950s towards Europe and reaches the conclusion that European integration was a general political goal, a crucial effect of which would be its contribution to non-proliferation there. Conversely, integration of the nuclear sector was a part of and a stage in the process towards European political and economic integration. Gunnar Skogmar, *The United States and the Nuclear Dimension of European Integration* (Basingstoke: Palgrave Macmillan, 2004), p. 3.

¹³ Bunn, *Arms Control by Committee*.

¹⁴ IAEA document INFCIRC/3, "The Text of Instruments Connected with the Agency's Supply of Uranium to Japan," 15 April 1959.

¹⁵ IAEA document INFCIRC/26, "The Agency's Safeguards," March 1961, and the associated "Inspectors Document," IAEA document GC(V)/INF/39, Annex), "The Agency's Inspectorate," 1961.

¹⁶ IAEA document INFCIRC/47, "The Text of the Agreement for the Application of Safeguards by the Agency to the Bilateral Agreement between Japan and the United States of America," 25 October 1963.

¹⁷ IAEA document INFCIRC/85, "The Text of the Agreement for the Application of Safeguards by the Agency to the Bilateral Agreement between Canada and Japan," 14 July 1966.

The Structure of the IAEA

The IAEA currently has 162 Member States, and a regular budget of around 344 million euros (133 million of which is for its verification roles). At its headquarters, in Vienna, Austria, around 2500 staff members are employed in the Secretariat, under the management and direction of the Director General of the IAEA. The Director General, the chief administrative officer of the IAEA, is appointed by the Board of Governors, with the approval of the General Conference, for a term of four years. The Director General is responsible for the appointment, organization, and functioning of the staff and operates under the authority of and subject to the control of the Board of Governors. The Secretariat is organized into six Departments reporting to the Director General: Management; Safeguards; Nuclear Safety and Security; Nuclear Sciences and Applications; Technical Cooperation; and Nuclear Energy.

Article V of the IAEA Statute provides for a General Conference of the entire membership, which meets once a year (usually in September). As provided in Article V.D, the General Conference may discuss any questions or matters within the scope of the Statute or relating to the powers and functions of any organs provided for in the Statute. It may also make recommendations to the membership of the IAEA or to the Board of Governors, or to both, on any such questions or matters.

In accordance with Article V.E of the Statute, the General Conference is responsible for: electing members of the Board in accordance with Article VI (see below); approving membership in the IAEA, suspending a Member State from the privileges and rights of membership; considering the annual report of the Board; approving the budget of the IAEA as recommended by the Board (or returning it with recommendations); approving reports to the United Nations, except those referred to in Article XII.C (i.e., reports to the Security Council in connection with findings of non-compliance with safeguards agreements); approving any agreement(s) between the IAEA and the UN and other organizations the work of which is related to the IAEA;¹⁸ approving certain rules regarding the borrowing powers of the Board and voluntary contributions; approving amendments to the Statute; and approving the appointment of the Director General.

Pursuant to Article V.F, the General Conference has the authority to take decisions on any matter specifically referred to the General Conference for this purpose by the Board, and to propose matters for consideration by the Board and request from the Board reports on any matter relating to the functions of the Agency.

The 35-member Board of Governors, which meets five times a year, is established in accordance with Article VI of the IAEA Statute. The Board consists of two categories of States: those *designated by the Board* as the most advanced in nuclear energy within their respective regions (Article VI.A.1 of the Statute), and those States *elected by the General Conference* by region (Article VI.A.2 of the Statute). Designations are required to be made within 60 days of each General Conference, and are normally agreed upon at the June meeting of the Board of Governors. The election of members to the Board by the General Conference takes place during the General Conference. Neither the Secretariat nor the Director General has any authority with respect to the designation or election of Board members.

¹⁸ This does not include the approval of safeguards agreements, which is a matter for the Board of Governors.

Article VI.F. defines the relationship between the Board, as the executive organ of the IAEA, and the General Conference. In accordance with that provision, the Board of Governors has the authority to “carry out the functions of the Agency in accordance with this Statute, subject to its responsibilities to the General Conference as provided in this Statute.” That is to say, what is not reserved to the authority of the General Conference is within the authority of the Board of Governors.

Of particular importance is the responsibility of the Board of Governors in connection with determinations of non-compliance with safeguards agreements. Article XII.C of the Statute requires the Director General to report to the Board of Governors any non-compliance with safeguards agreements, and for the Board to call upon the State to remedy forthwith any non-compliance which it finds to have occurred. The Statute provides further for reporting by the Board of such non-compliance to the Security Council and General Assembly of the United Nations, and, in the event that the State fails to take corrective action within a reasonable time, to curtail or suspend IAEA assistance to the State.

Although the rules of procedure for both organs contemplate decision-making through voting,¹⁹ the general practice of the Board and the General Conference is to operate, where possible, on the basis of consensus. If it is not possible to reach consensus, decisions can be taken by a vote. Except in specified circumstances,²⁰ the vote is by simple majority of the Members present and voting (an abstention is not considered a vote) and must, if requested by a member of that body, be taken by a show of hands. While both bodies can and do take decisions by the adoption of resolutions, decisions are more commonly taken in the Board of Governors through the mechanism of approval of the Chairman’s summary of the debate. For example, in July 1991, the Board of Governors adopted a resolution in which it found that Iraq’s failure to declare nuclear material and facilities constituted non-compliance with its comprehensive safeguards agreement, and requested the Director General to report the matter to Security Council.²¹ In September 1991, the Board, in approving the Chairman’s summary of the Board’s deliberations, took note of Iraq’s further non-compliance and decided to request the Director General to report again to the Security Council.²²

How the IAEA Contributes to an Environment Conducive to Nuclear Disarmament

In accordance with Article II of the Statute, the objective of the IAEA is “to seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world. It shall ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or

¹⁹ *The Provisional Rules of Procedure of the Board of Governors*, Article VII, Rules 35-46; *The Rules of Procedure of the General Conference*, Article XI, Rules 68-78.

²⁰ Rule 36 of the Provisional Rules of Procedure of the Board of Governors requires a two-thirds majority of the Board Members present and voting in connection with, inter alia, the amount of the Agency’s budget and the appointment of the Director General. Rule 69 of the Rules of Procedure of the General Conference requires a two-thirds majority for such matters as decisions on financial questions, decisions on proposals for amendment to the Statute, and decisions, upon recommendation of the Board of Governors, to suspend any Member from the exercise of the privileges and rights of membership in the IAEA.

²¹ GOV/2532, 18 July 1991.

²² GOV/OR.763, paras 47-53, reproduced in GC(XXXV)/978/Add.1 (16 September 1991).

control is not used in such a way as to further any military purpose.” While the original concept of the IAEA as a “nuclear broker” has never gained as much traction as originally foreseen, its role in safeguarding the peaceful use of nuclear energy eventually did.

In balancing its promotional and regulatory obligations, the work of the IAEA rests on three pillars: science and technology; safety and security; and verification. Its role in establishing safety standards is more of an advisory or norm setting role, and, like technical assistance, subject to the request of a State or States. The implementation of safeguards is more of a regulatory role.

This section will describe, in brief, the various ways in which the IAEA contributes to a stable nuclear environment, not just through verification, but through norm development, by making available to Member States assistance in the conduct of safe, secure and peaceful nuclear activities, and by providing a safe forum for debate and communication.

Verification

The most obvious contribution of the IAEA to non-proliferation, and potentially to disarmament, is verification through the implementation of independent, credible, neutral and technically sound safeguards. Importantly, impartial and effective verification not only provides credible assurances of States’ compliance, but also deters cheating by others.

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

- To establish and administer safeguards to ensure that nuclear material, services, equipment, facilities, and information made available by the IAEA are not used to further any military purpose;
- To apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement; and
- To apply safeguards at the request of a State to any of that State’s nuclear activities.

Article XII of the Statute details the measures that the drafters of the Statute anticipated the IAEA’s safeguards system would entail, measures that were novel and far-reaching, especially for their time: extremely broad rights of access at all times to all places and data and to any person who dealt with items required to be safeguarded; examination and approval by the IAEA of the design of specialized equipment and facilities to ensure that they would not further any military purpose, that they complied with applicable health and safety standards, and that they would permit effective application of safeguards; reporting and record-keeping by the State; and the possibility of reporting non-compliance to the Security Council. It is extraordinary to note that, at the height of the Cold War, consensus was achieved on such a visionary role for a supranational inspectorate.

The IAEA cannot implement safeguards without the consent of the State. Generally, that consent is manifested in the form of a safeguards agreement concluded with the IAEA. It is in that agreement that the State’s and the Agency’s rights and obligations are established. These provisions include, most significantly, the authority of the Board of Governors to report to the United Nations Security Council, as

the organ bearing the main responsibility for the maintenance of international peace and security, in the event that the Board determines that the IAEA is “not able to verify that there has been no diversion of nuclear material required to be safeguarded under the Agreement to nuclear weapons or other nuclear explosive devices,”²³ including in cases of non-compliance. While the IAEA is responsible for verifying compliance by a State with its safeguards obligations, the Security Council serves as the enforcer.

A fundamental aspect of IAEA verification is its international character. Indeed, had bilateral State-to-State verification of the non-misuse of nuclear-related supplies been adequate for the security needs of the global community, there would have been little reason to establish the IAEA. Although bilateral verification may be a necessary element for disarmament to progress, it likely would not be sufficient, as discussed further below.

Historically, the IAEA has not been tasked with an ongoing role in verifying disarmament. However, such a role is not entirely without precedent.

In April 1991, the IAEA was requested by the Security Council to map out and destroy Iraq’s nuclear weapons program.²⁴ Over the course of the next seven years, the IAEA succeeded in establishing a coherent picture of Iraq’s clandestine nuclear program. As a result of its verification activities, the IAEA was able to conclude that, while Iraq never reached the stage at which it could produce a nuclear weapon, it had carried out at the least research and development scale activities related to each of the steps necessary to lead to such production. The IAEA was also able to remove all nuclear-weapons usable material from Iraq, and to destroy, remove or render harmless all other aspects of Iraq’s clandestine nuclear weapons program, including subsystems and components, and related research, development, support and manufacturing facilities.

In July 1991, shortly after the IAEA initiated its investigation into Iraq’s clandestine nuclear program, South Africa became party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and, in September that year, concluded a comprehensive safeguards agreement with the IAEA.²⁵ Drawing on the IAEA’s authority under that agreement to verify the correctness and completeness of South Africa’s declarations,²⁶ the Board of Governors and the General Conference both adopted resolutions calling for the IAEA to verify that all of the nuclear material produced by South Africa, including that which had been contained in the six fully fabricated nuclear weapons, and the one partially constructed weapon,

²³ IAEA document INFCIRC/153 (Corr.), “The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons,” para. 19.

²⁴ United Nations Security Council resolution 687 (1991).

²⁵ IAEA document INFCIRC/394, Agreement of 16 September 1991 between the Government of the Republic of South Africa and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons, October 1991.

²⁶ The IAEA’s authority to verify the correctness and completeness of a State’s declarations under a comprehensive safeguards agreement derives from the article in the agreement corresponding to paragraph 2 of INFCIRC/153 (Corr.), which provides for the IAEA’s “right and obligation to ensure that safeguards will be applied ... on all source or special fissionable material” of the State (emphasis added).

had been declared and placed under safeguards.²⁷ By 1994, the IAEA was able to conclude that South Africa's nuclear weapons program had been dismantled and that all of the nuclear material was under safeguards.

Between 1996 and 2002, the Russian Federation and the United States joined forces with the IAEA under the Trilateral Initiative to investigate the technical, legal and financial issues associated with IAEA verification of weapon origin fissile material to be released by the States from their respective nuclear weapons programs. During the intervening six years, the three parties were able to develop effective and credible technical measures that would permit the IAEA to verify fissile material that had classified characteristics without revealing classified information to IAEA inspectors. These measures involved state of the art technology based on "attribute verification" with information barriers. The three parties were also able to largely complete the development of a model verification agreement for use in the drafting of bilateral agreements between the IAEA and each of the States. Although no such agreement has yet been concluded, the model could serve as the basis for first steps in internationally verified disarmament.

In 2006, the IAEA, at the request of the United Nations Conference on Disarmament (CD), made a presentation in connection with the CD's deliberations pursuant to United Nations General Assembly resolution A/RES/48/75/L (16 December 1993) recommending the negotiation of "a non-discriminatory multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices (referred to in general as the fissile material cutoff treaty or "FMCT") and requesting the IAEA "to provide assistance for examination of verification arrangements for such a treaty as required."²⁸

In its presentation to the CD, the IAEA recalled that the Secretariat of the IAEA had carried out internal studies to analyze the potential verification requirements of a fissile material cut-off and prepared preliminary estimates of the resources needed for their implementation, and that the results had been conveyed at various FMCT workshops in 1995. Noting that an FMCT would include an undertaking by States Parties not to produce any fissile material for proscribed purposes, and that the production of fissile material for other legitimate purposes would likely be permitted, the IAEA was of the view that the technical objective of verification of compliance with an FMCT would be to provide assurance against any new production of weapons-usable fissile material and the diversion of fissile material from the civilian nuclear fuel cycle to nuclear weapon purposes. It was the Secretariat's assessment that, while the choice of an FMCT verification system was a matter for the States to resolve, the verification of a treaty banning the production of fissile material would be possible through a verification system quite similar to the one applied under the existing IAEA safeguards system.

²⁷ For more information on the IAEA's verification activities in South Africa, see Adolf von Baeckmann, Garry Dillon and Demetrius Perricos, "Nuclear Verification in South Africa," *IAEA Bulletin*, January 1995, reproduced at <https://www.iaea.org/sites/default/files/publications/magazines/bulletin/bull37-1/37105394248.pdf>.

²⁸ CD/1795, 14 September 2006, "A Cut-Off of Production of Weapon-Usable Fissionable Material: Considerations, Requirements and IAEA Capabilities."

Whether the IAEA is tasked with a broader role in disarmament, controls on the acquisition of weapons usable fissile material – in which the IAEA is uniquely experienced – will be of critical importance as steps are taken in that direction. These controls must, of necessity, guarantee that classified information will not be divulged to or discovered by inspectors through the verification arrangements. This is especially important in relation to information pertaining to the design or manufacture of any part of a nuclear weapon.

But the cart is unlikely to get in front of the horse – indeed the cart will have to be developed before any nuclear-armed State will be willing to hitch its horse to it. The technical means necessary for verification will likely have to be designed, built, tested and demonstrated before States with nuclear weapons capability would be willing to proceed with verification of disarmament. The Comprehensive Test Ban Treaty is a case in point: the technical verification measures were developed and demonstrated before the treaty negotiations were concluded. The IAEA can and should take steps now to develop the necessary verification methods, technologies and equipment to facilitate confidence that such verification can indeed protect classified information while assuring that the verification results are credible and authentic.

As confidence increases in the IAEA's ability to verify material released from weapons programs without jeopardizing the protection of classified information, nuclear-armed States could place such material under IAEA safeguards as they progressively draw down their nuclear arsenals. These steps could be taken individually by a single nuclear-armed State, collectively by all of them or by States that find themselves in particular circumstances of conflict (e.g., India and Pakistan).

The IAEA Secretariat must ensure that its Member States are also engaged in this process, for ultimately, any role of the IAEA in the verification of disarmament would have to be approved by the Board of Governors, and that role will only be as effective as its Member States want it to be.

Norm Setting

Under the NPT, non-nuclear-weapon States forswear the acquisition of nuclear weapons, and undertake to accept IAEA safeguards for the purpose of verifying compliance by the States' with their obligations under the Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. To that end, each non-nuclear-weapon State party to the NPT is obliged to conclude with the IAEA a safeguards agreement covering all nuclear material in all peaceful nuclear activities – what is commonly referred to today as a “comprehensive safeguards agreement.”

The NPT currently has 191 parties.²⁹ However, it took time to reach that number. As of 1980, there were just over 110 parties to it, including three of the five nuclear-weapon States; by the end of 1989, there

²⁹ This figure includes the Democratic People's Republic of Korea (DPRK).

were approximately 144 States parties; between 1990 and 1995, another 43 States (including the remaining nuclear-weapon States, France and China) became party to the NPT.³⁰

The broadening adherence to the NPT, the increasing number of comprehensive safeguards agreements concluded with non-nuclear-weapon States, and successful IAEA verification of compliance (and non-compliance), have led to a gradual and general acceptance of measures developed in the early 1990s to strengthen safeguards, including those provided for in the Model Additional Protocol.^{31,32} The IAEA's "gold standard" of verification is now a comprehensive safeguards agreement with an additional protocol. As of the end of 2014, 116 of the 172 States in which comprehensive safeguards agreements were being implemented had concluded additional protocols.

However, there remain a few key States with significant nuclear activities which have taken policy decisions not to conclude an additional protocol, owing to the perceived imbalance between the non-nuclear-weapon States' acceptance of increased safeguards obligations and a lack of progress in disarmament by the nuclear-armed States.³³

Which brings to mind other ways in which the IAEA and its Member States could contribute to the development of norms.

The acceptance by even one nuclear-armed State of verified nuclear disarmament could lay the groundwork for further disarmament by other nuclear-armed States. Verified nuclear disarmament would also encourage, or at least facilitate, the further acceptance by the non-nuclear-weapon States of stronger safeguards measures, or at the very least make it impossible to use the lack of disarmament as a reason for rejecting strengthened safeguards.

Unfortunately, the recent deterioration in relations between the Russian Federation and the United States (and the European Union) has contributed to collateral damage in the safeguards environment. Over the past two years, significant challenges have been raised in connection with safeguards strengthening measures being implemented by the IAEA Secretariat, most vocally, but not solely, by the Russian Federation. Although these measures have their basis in the early strengthened safeguards measures, and were ultimately accepted by the membership of the IAEA in September 2014,³⁴ these

³⁰ See <http://disarmament.un.org/treaties/t/npt> for status of NPT adherence. Since the end of 1995, there have been four more accessions to the NPT: Brazil in 1998; Timor-Leste in 2003; Montenegro in 2006; and, most recently, the State of Palestine in February 2015.

³¹ "The Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards" (IAEA document INFCIRC/540 (Corr.)) was approved by the IAEA Board of Governors in 1997, the first new legal instrument in the area of safeguards since the Board's approval of the standard text for NPT safeguards agreements in 1971.

³² Indeed, the Treaty on the Central Asian Nuclear-Weapon-Free Zone, the most recently established nuclear-weapon-free zone, in Article 8 thereof, obliges all States party not only to conclude with the IAEA "an agreement for the application of safeguards in accordance with the NPT (INFCIRC/153 (Corr.))," but "an Additional Protocol (INFCIRC/540 (Corr.))." See <http://cns.miiis.edu/inventory/pdfs/aptcanwz.pdf>.

³³ E.g., Egypt and Brazil.

³⁴ GC(58)/RES/14, 26 September 2014.

challenges seemed to reflect a concern by some Member States that the Secretariat should not get out too far in front of the States.

Assistance in the development of safe, secure and peaceful nuclear programs

The IAEA further contributes to a stable environment by assisting States in the development of safe, secure and peaceful nuclear programs, whether they involve nuclear energy or non-power nuclear applications. It offers a number of resources to which a Member State in need of guidance and assistance in connection with its nuclear programs may turn, whether in drafting the necessary legislative framework, in setting up and/or reviewing the operation of the State's system of accounting for and control of nuclear material (SSAC) or in implementing safeguards.

The IAEA has established a legislative assistance program available to all IAEA Member States. Under that program, the IAEA can, at the request of any Member State, provide assistance in drafting and reviewing national legislation and regulations relevant to all nuclear matters. The program covers not just safeguards and export controls, but nuclear safety, civil liability, and nuclear security as well. The IAEA also provides assistance in the form of hosting fellowship trainees and conducting training courses.³⁵ The Department of Safeguards has also published a number of documents providing explicit guidance to States on the implementation of their NPT safeguards agreements.³⁶

In addition, the IAEA makes available, at the request of any Member State, an advisory service known as the IAEA SSAC Advisory Service (ISSAS). ISSAS missions involve interactive face-to-face guidance in the form of small teams of experts. Through these ISSAS missions, experts are able to evaluate the legal framework and regulatory, administrative, and technical systems of the SSAC, evaluate the performance of those systems in meeting the State's safeguards obligations, and make recommendations on how any shortcomings identified could be rectified or further cooperation could be implemented.

The IAEA also offers assistance to Member States in strengthening their national nuclear security regimes through its International Physical Protection Advisory Service (IPPAS), which provides peer advice on implementing international instruments, as well as IAEA guidance on the protection of nuclear and other radioactive material and associated facilities. At the request of the State, a team of international experts is assembled to review the State's system of physical protection and compare it with international guidelines³⁷ and internationally recognized best practices. Based on this review,

³⁵ As part of that program, the IAEA has published two documents providing guidance on nuclear law. The *Handbook on Nuclear Law*, International Atomic Energy Agency, Vienna, 2003, was developed to facilitate self-assessment by States so that they may ensure that, in drafting new laws or in revising or consolidating existing legislation, their national nuclear legal infrastructures are in line with the relevant international undertakings and best practices in the field of nuclear law. The second volume, the *Handbook on Nuclear Law: Implementing Legislation*, Vienna, 2010, was drafted to assist States in adopting and/or modifying their legislation by providing a brief narrative summary of key issues and approaches in nuclear legislation and model legislative provisions.

³⁶ E.g., *Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols*, IAEA Services Series 21, Vienna, March 2012; *Safeguards Implementation Guide for States with Small Quantities Protocols*, IAEA Services Series 22, Vienna, April 2013.

³⁷ IAEA document INFCIRC/225, Revision 5, *Nuclear Security Recommendations on Physical Protection for Nuclear Material and Nuclear Facilities*, IAEA Nuclear Security Series 13.

recommendations for improvements are provided to the State, in which both follow-up activities and available sources of assistance are identified.

Providing a Safe Forum for Debate and Communication, Especially in Times of Conflict

The IAEA also provides Member States with a forum for the exchange of views on all matters nuclear. Although it is clear that many of the issues debated in that forum have political aspects, the IAEA itself, and the meetings convened under its auspices, have a reputation for being “technical,” rather than “political” in nature.

The availability of such a forum has been especially critical in times of conflict. During the Iran/Iraq war, which raged from 1980 to 1988, both countries participated in the meetings of the Board of Governors, with a minor adjustment in the normally alphabetical seating of Member States. During the conflict between the United Kingdom and Argentina over the Falkland/Malvinas Islands, the IAEA continued to provide a forum in which both countries participated in discussions related to safeguards and non-proliferation, only occasionally taking verbal shots at the other country’s policies in connection with the conflict.

The case of Iraq during the period 2002-2003 further highlighted the IAEA’s ability to maintain its objective and technically sound approach to verification, even in the face of strong objections by its most powerful Member State in the run-up to the US invasion of Iraq.

Although the US Government was supportive of an independent IAEA through 1998, that support had started shifting to an emphasis on unilateral action by the early 2000s. In a prescient remark in their 1998 article, Abbott and Snidal assert that “[m]any states, notably the United States, now resist the creation of IOs and hesitate to support those already in operation.” They also note that:

Although centralization often requires some operation autonomy, many valuable IO functions require more substantive independence. The participation of an IO as an independent, neutral actor can transform relations among states, enhancing the efficiency and legitimacy of collective and individual actions. These functions require a delicate balance among short- and long-term collective and distributional interests. Powerful states will not enter an organization they cannot influence, yet *undermining the independence of an organization performing the functions . . . will simultaneously reduce its effectiveness and their own ability to achieve valued ends* (emphasis added).³⁸

That is exactly what happened in 2003. Just before the US invasion of Iraq, the IAEA was provided with intelligence allegedly demonstrating a resumption of Iraq’s uranium acquisition and enrichment program. Even though it was the IAEA Secretariat that determined that this information consisted of forged documents or was otherwise unfounded, the suspicion and distrust engendered by the attempted use of such information as a justification for war has had negative repercussions for the IAEA and its verification role – fallout from which is still being experienced in the Board of Governors and the

³⁸ Abbott and Snidal, p. 19.

General Conference. Some of that negative fallout is reflected in the 2012-2014 deliberations of the Board of Governors in connection with the implementation of safeguards under the State-level concept, during which Member States challenged some of the safeguards measures that the IAEA had been using under its strengthened safeguards system since the early 1990s, including the appropriate use of intelligence information.³⁹ It is also reflected in the discussions of the Board of Governors on Iran's nuclear program, in which Iran continues to challenge the IAEA's reference to intelligence information as giving rise to concerns about possible military dimensions to that program.

Regional Issues and the Special Role for Regional Bodies

The IAEA and EURATOM

Regional issues have directed the nuclear non-proliferation regime since its early days. Indeed, it was regional interests, strongly supported by the United States, which led to the creation of the European-based inspectorate, the European Atomic Energy Community (more commonly referred to as "EURATOM"), in 1957, the same year in which the IAEA's Statute was brought into force. The practical effect of US support for the regional EURATOM was to create conjoined twins, separated at birth, who continued to struggle for dominance as they matured.

EURATOM was created with the purpose of establishing a common market for the development of a nuclear-energy industry on a European, rather than national, scale. Among its responsibilities were (and are) to "guarantee, by appropriate measures of control, that nuclear materials are not diverted for purposes other than those for which they are intended."⁴⁰ Unlike the IAEA, which was not able to develop an effective safeguards system until 1961, EURATOM's system of safeguards was quickly put in place.

In a significant blow to the authority of the newly-formed IAEA, the US, in 1958, effectively endorsed EURATOM safeguards as an acceptable substitute for IAEA safeguards. In agreements concluded with the United States, EURATOM undertook to consult, and exchange experiences, with the IAEA, with the objective of establishing a safeguards system "reasonably compatible with" the IAEA's system. The principles followed closely those contained in the Statute of the IAEA.⁴¹ The newly appointed American Director General of the IAEA complained to the US Government that EURATOM should not be given the

³⁹ For more background on the State-level concept and the debates surrounding its implementation, see Rockwood L (2014), *The IAEA's State-Level Concept and the Law of Unintended Consequences*, Arms Control Today (September), https://www.armscontrol.org/act/2014_09/Features/The-IAEAs-State-Level-Concept-and-the-Law-of-Unintended-Consequences.

⁴⁰ Article 2(e) of the Treaty Establishing the European Atomic Energy Community, 25 March 1957, (http://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_3_antlasmalar/1_3_1_kurucu_antlasmalar/1957_treaty_establishing_euratom.pdf). Although France was an original party to that Treaty, EURATOM's control was not extended to nuclear materials intended for military use.

⁴¹ Fischer D., *International Atomic Energy Agency: The First Forty Years* (Vienna: IAEA, 1997). According to Fischer, with the encouragement of the United States, the Treaty of Rome which established EURATOM included inspection provisions similar to those that had been incorporated in the IAEA Statute, to the effect that the organization "shall at all times have access to all places and date and to any person[s] who by reason of his [their] occupation deal[s] with materials, equipment, or facilities" subject to safeguards. See Fischer, p. 42.

right of self-inspection, but politics prevailed. According to Fischer, the US President and the Department of State believed that the US had an overriding interest in strengthening Western European institutions. In their view, support for EURATOM and European integration would help to bind a peaceful and democratic Germany into Western Europe, and “set a term” to the ancient enmity between Germany and France. As recalled by Fischer, “[a]fter all, it had been divisions between the two that had led to two world wars in that century.”⁴²

The result of US support for EURATOM safeguards was the exclusion of the application of IAEA safeguards from most of Western Europe until 1978. Since IAEA inspectors had no access to those countries, in particular West Germany, the Soviet Union had no interest in supporting IAEA safeguards and, until 1963, sided with their opponents and critics.⁴³ The Soviet Union’s lack of interest in IAEA safeguards went so far as to support an Indian proposal in 1958 to decide against establishing a Division of Safeguards for the present, a proposal rejected by the Board of Governors.

In 1963, the Soviet position with respect to IAEA safeguards changed suddenly and dramatically. Fischer speculates that this was possibly a result of many factors, including the détente reached with the United States following the Cuban missile crisis, the emergence of two new nuclear-weapon States (the UK and France), and concerns about its own support for China, which contributed to China’s eventual nuclear weapons test the following year. According to Fischer, however, there is “no doubt that the underlying cause of the change was Soviet concern about the Federal Republic of Germany and its emerging nuclear programme.”⁴⁴ As he notes further, “[it] had become clear that stronger international safeguards would serve the interests of the Soviet Union, even though it was by no means certain in 1963 that IAEA safeguards would one day be applied in the Federal Republic of Germany.”⁴⁵

Whatever the reasons, in June 1963, the Soviet Ambassador to the IAEA informed a “startled audience that, as the Governors knew, the Soviet Union had always regarded the application of safeguards as the most important task of the Agency.”⁴⁶ With the new-found support of both the United States and the Soviet Union the IAEA safeguards system gained authority and legitimacy.

The next major showdown involving EURATOM and the IAEA was in the context of the negotiation of the NPT. Amid divisions within the US Government, and ongoing negotiations between the US and the Soviet Union, considerable effort was spent in resolving the issue of which system of safeguards would prevail. While EURATOM’s system was well developed, this did not lessen the security concerns of the Soviet Union. There were also concerns expressed by some on the US side. Bunn cites a television

⁴² Fischer, p. 245.

⁴³ Ibid. See also George Bunn, “The Nuclear Non-Proliferation Regime and Its History,” in *U.S. Nuclear Weapons Policy – Confronting Today’s Threats*, George Bunn, Christopher F. Chyba, eds. (Stanford, CA: Stanford University, Center for International Security and Cooperation, 2006), p. 79.

⁴⁴ Ibid., p. 251.

⁴⁵ Ibid., pp. 251-252.

⁴⁶ Ibid., p. 249. In the view of Andrew Brown, perhaps the Soviet statement should not in fact have been all that startling, given that the Soviet Union’s initial reaction to the Atoms for Peace speech was to be concerned about the potential for international proliferation, a theme repeated by it constantly over the years (personal communication with Andrew Brown).

interview of Dean Rusk, the US Secretary of State between 1961 and 1969, in which the latter summarized the problem:

If a nonproliferation treaty becomes general throughout the world, there may be a good many who would sign that treaty who would not be completely happy about relying upon the safeguards which [EURATOM] has adopted internally. Further than that, there could be other groupings in other parts of the world who might wish to put together a little family group which would inspect itself and deny outside inspection on the grounds that it is up to each regional group to provide its own inspection . . . I have no doubt at all that the safeguards in [EURATOM] insure that activities of [EURATOM] will not be abused . . . The problem is, how do you persuade 120 other nations that that is the case?"⁴⁷

A delicate balance, achieved through compromise and constructive ambiguity, eventually led to agreement on text for Article III.I and 4 of the NPT which, in its relevant part, reads as follows:

1. Each non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency *in accordance with the Statute of the International Atomic Energy Agency and the Agency's safeguards system*

4. Non-nuclear-weapon States Party to the Treaty shall conclude agreements with the International Atomic Energy Agency to meet the requirements of this Article *either individually or together with other States in accordance with the Statute of the International Atomic Energy Agency*. . . ." (emphasis added)

The issue of the relationship between EURATOM and the IAEA is reflected in the reference to the possibility of the conclusion of safeguards agreements "either individually or together with other States," balanced with the Soviet insistence on inclusion of the phrase "in accordance with the Statute of the [IAEA]." The next step was to negotiate an agreement with EURATOM and the then five NNWSs of the European Community. Indeed, it was only after signature of the text of a safeguards agreement in 1973⁴⁸ that the EURATOM countries simultaneously ratified the NPT in 1975.

⁴⁷ Bunn, *The Nuclear Non-Proliferation Regime*, pp. 92-93, citing U.S. ACDA, *International Negotiations on the Treaty on Non-Proliferation*, p. 70. The concern expressed by Rusk seemed well founded when, following EURATOM's lead, Japan insisted on similar treatment for it under its NPT safeguards agreement. As noted by Bunn, the eventual acceptance of such treatment under the EURATOM and Japanese safeguards agreements was a political necessity: to secure European (particularly German) and Japanese ratification of the NPT.

⁴⁸ IAEA document INFCIRC/193, *The Text of the Agreement between Belgium, Denmark, the Federal Republic of Germany, Ireland, Italy, Luxembourg, the Netherlands, the European Atomic Energy Community and the Agency in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, 14 September 1973.

The Middle East Region

Security issues are acute in the Middle East region, particularly given: (a) the non-compliance problems in the region (of the seven cases of non-compliance reported by the IAEA to the Security Council, four of them – Iraq, Iran, Libya, and Syria – are located either in or adjacent to the Middle East, depending on how the region is defined), (b) the presence in the region of a State presumed to possess nuclear weapons (the issues of Israeli nuclear capabilities and the application of safeguards in the Middle East remain perennial and highly charged political issues on the agenda of the IAEA’s General Conference); and (c) the existence of nuclear programs in States of the region in which the IAEA cannot implement optimum verification (such as Egypt, which has refused to conclude an additional protocol, given the lack of progress in the Middle East peace process and Israel’s nuclear program).

The expansion of existing nuclear programs in the region and the emerging quests for nuclear energy on the part of additional countries in the region therefore require vigilance, effective nuclear security measures, and international verification of the peaceful nature of such programs.⁴⁹

At the request of its Member States, the IAEA has contributed to the debate on issues associated with a possible nuclear-weapon-free zone in the Middle East. It has, among other efforts, hosted over the years a number of workshops and seminars to familiarize government officials of States in the region with safeguards principles, practices, and modalities, with a view to facilitating their choices of options for a future nuclear-weapon-free zone in the Middle East.

Over the years, the Directors General of the IAEA have continued to consult with States in the region, stressing the emphasis placed in successive General Conference resolutions on the application of comprehensive IAEA safeguards on all nuclear activities in the Middle East region and the mandates entrusted to the Director General in this context. They have continued to encourage the development and consideration of relevant new ideas and approaches that could help to move these mandates forward.⁵⁰

⁴⁹ “New actors with more versatile weapons have turned nuclear doctrine into guesswork. Even during the cold war, despite all that game theory and brainpower, the Soviet Union and America frequently misread what the other was up to. India and Pakistan, with little experience and less contact, have virtually nothing to guide them in crisis but mistrust and paranoia. If weapons proliferate in the Middle East, as Iran and then Saudi Arabia and possibly Egypt join Israel in the ranks of nuclear powers, each will have to manage a bewildering four-dimensional stand-off.” *The Economist*, “The New Nuclear Age,” March 7, 2015, <http://www.economist.com/news/leaders/21645729-quarter-century-after-end-cold-war-world-faces-growing-threat-nuclear>.

⁵⁰ The most recent report on these efforts is published in GC(58)/15, August 5, 2014. See IAEA, “Application of IAEA Safeguards in the Middle East,” GC(57)/10/ and Add.1, September 2013, for a detailed chronology of the IAEA’s efforts to contribute to the development of modalities for the application of IAEA safeguards in the Middle East. The first technical study prepared by the IAEA Secretariat is reproduced as an attachment to a Note from the Director General entitled “Modalities of Application of Agency Safeguards in the Middle East,” GC(XXXIII)/887, August 1989.

In a report issued in 1992 on the “Application of IAEA Safeguards in the Middle East,”⁵¹ the then Director General Hans Blix identified possible material obligations that could form part of an eventual Middle East nuclear-weapon-free zone agreement,⁵² along with possible verification requirements for such a zone.⁵³ The 1992 report also provided suggestions for institutional arrangements that might be established in the Middle East, including the possibility of combining international verification by the IAEA with regional verification, tailored to meet the requirements of an eventual agreement on the application of safeguards in the Middle East.

In November 2011, the IAEA was finally able to convene a forum on “Experience of Possible Relevance to the Creation of a Nuclear-Weapon-Free Zone (NWFZ) in the Middle East,” a forum that was many years in the making. During its one and a half day meeting, detailed briefings and interactive discussions were held on the history of the establishment of each of the existing nuclear-weapon-free zones in light of their respective geopolitical circumstances and regional and international security settings, and on how the zones supported cooperation, regional stability and security, as well as regional arms control and disarmament agreements. The process of establishing each of the zones was described as having involved unique, and usually lengthy, endeavors to address confidence building, non-proliferation and transparency issues through flexible and innovative negotiating approaches. Strong political will and commitment of the States involved were underlined as key elements in the successful establishment of the zones, along with the technical and legal support of relevant international organizations, such as the United Nations and the IAEA.

The Forum offered an important opportunity for States of the region to discuss the potential relevance of the experiences of existing zones and regional verification arrangements to the Middle East.

As regards the critical element of verification, the IAEA’s role will be essential. It may well be that bilateral or regional forms of collaboration will be a *sine qua non* for progress in nuclear disarmament, as in the case of Argentina and Brazil, or that they may provide necessary additional confidence building measures in regions of greater conflict (such as the Korean Peninsula) before States would be willing to accept international verification of disarmament measures. But it is worth noting that, while all of the

⁵¹ IAEA, GC(XXXVI)/1019, Vienna, September 16, 1992.

⁵² Including obligations addressing: research and development on and the possession, acquisition, manufacture or stationing of nuclear weapons or nuclear explosive devices; the disclosure of all nuclear activities, including research and development, imports, exports and production; the application of an Agency’s strengthened safeguards system, with possible additional features relevant to the region, to all nuclear material, installations and relevant equipment and material; and research and development on and the production, importing or stockpiling of weapon-usable fissile material, as well as other sensitive nuclear activities

⁵³ Specifically, (i) those which preclude research and development on and the possession, acquisition, manufacture or stationing of nuclear weapons or nuclear explosive devices; (ii) those which preclude research and development on and the production, importing or stockpiling of weapons-usable materials (i.e., uranium enriched to 20% or more; separated plutonium) and require the disclosure of all nuclear activities, including research and development, imports, exports, and production; and (iii) those which require the application of safeguards to all nuclear material, installations and relevant equipment and non-nuclear material.

existing nuclear-weapon-free zone treaties establish ad hoc or standing regional bodies for ensuring compliance with those treaties, they have all delegated the verification authority to the IAEA.⁵⁴

Regardless of whether, and if so, when, a nuclear-weapon-free zone can be established in the Middle East, the importance of effective safeguards to new and developing nuclear energy programs in the region cannot be overstated.

Argentina/Brazil – A Step by Step Approach to Disarmament

The assurances provided by effective safeguards have proven their value in other regions with a history of conflict. An excellent example of States' recognition of this value is the case of Argentina and Brazil, who, in the mid-to-late 1980's, after years of conflict and competition, agreed to forswear nuclear weapons, to establish a bilateral verification body (the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials or "ABACC"), and eventually to conclude with the IAEA an agreement for the application of international safeguards to all of their nuclear activities.⁵⁵ They did so even before becoming party to the NPT or to the nuclear-weapon-free zone treaty Latin America.⁵⁶ Indeed, it may well be that the conclusion of a bilateral arrangement between the two former adversaries was a necessary precondition for building confidence in the peaceful nature of their respective nuclear programs and adherence to those two treaties.

Conclusions

The purpose of this paper was to try, by example, to demonstrate how international and regional intergovernmental organizations, in particular the IAEA, can contribute to a stable environment conducive to positive steps towards disarmament through:

- Credible international verification of compliance by States with non-proliferation and disarmament undertakings;
- Norm development, through the soft law of guidance and recommendations and the hard law of binding legal obligations; and by
- Making available to States assistance in the development of the safe, secure and peaceful nuclear programs;
- Providing a safe forum for debate and communication, of particular importance during times of intense political conflict.

As other authors have observed, "it is not necessary to "defer or postpone progress on global disarmament until the regional challenges are fully resolved," such as those in South Asia, Northeast

⁵⁴ It also bears noting that the creation of EURATOM, and the early and heavy reliance by the US on regional (European) safeguards, was peculiar to a time when the IAEA was not fully formed and its safeguards system was not yet firmly established. That is no longer the case.

⁵⁵ IAEA document INIFCIRC/435, "Agreement of 13 December 1991 Between the Republic of Argentina, the Federative Republic of Brazil, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials and the International Atomic Energy Agency for the Application of Safeguards," March 1994.

⁵⁶ *Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean*, <http://www.opanal.org/opanal/Tlatelolco/Tlatelolco-i.htm>.

Asia and the Middle East. “Both processes, regional and global can proceed simultaneously. Progress in one arena will likely encourage progress in the other.”⁵⁷

However, the issue of nuclear disarmament is not just a regional or a global issue, or for that matter an “inter-national” issue, it is also profoundly domestic. While verification measures cannot make States lower the numbers of nuclear weapons, they can provide stability and predictability so that a government willing to progress in disarmament can make the case, domestically, in favor of reducing nuclear weapons.

The current challenging political atmosphere notwithstanding, the prospects for an IAEA role in the verification of disarmament are not all bleak. After many years of General Conference debates on the future of safeguards during which the nuclear-weapon States expressed allergies to references to “disarmament,” in September 2014, the General Conference adopted a resolution in which it noted “that the Agency must remain ready to assist, in accordance with its Statute, with verification tasks under nuclear disarmament or arms control agreements that it may be requested to carry out by the States parties to such agreements.”⁵⁸

But it is not possible to “get to zero” by starting from zero. The technical measures necessary for verification, especially in connection with materials with classified characteristics, need to be fully developed and tested before States will be willing to accept a role for international inspectors in the verification of disarmament steps. Verification shouldn’t become an obstacle if the political will is achieved. Continuing research in technological advances is necessary, as is experience gained in their application, to build confidence and gain the trust of both the nuclear-armed States and the non-nuclear-weapon States. Not only can we not afford to wait until the political will to pursue disarmament exists to start developing the necessary technical measures; it is unlikely that the political will can be achieved unless and until they have been developed.

⁵⁷ David Cortright and Raimo Vayrynen, *Towards Nuclear Zero* (International Institute for Strategic Studies, Routledge, 2010), p. 193.

⁵⁸ GC(58)/RES/14, 26 September 2014.