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# Director's Series on Proliferation

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**Editors Note:** This sixth edition of the *Director's Series on Proliferation* contains some of the papers that were presented in July 1994 at the Lawrence Livermore National Laboratory conference, "NPT: Review and Extension." The remainder will be published in forthcoming editions of this Series.

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# 1

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## Key Issues on NPT Renewal and Extension

*Ngo Quang Xuan\**

The world continues to undergo profound political changes, presenting the international community with opportunities and challenges. The end of the Cold War and East-West confrontation, the Strategic Arms Reduction Treaty II, the unilateral decision to dismantle some portions of awesome nuclear arsenals, the conclusion of the Chemical Weapons Convention, and the decision to commence negotiations on a comprehensive test ban (CTB) are among the very welcome, albeit delayed, changes that we have noted with satisfaction. Welcome as these changes are, they must not blind us to the changes that are essential to make our world truly safe from the dangers of a nuclear holocaust. It seems that there is no change in the thinking that nuclear weapons are still necessary for security, there has been no change in the doctrine of nuclear deterrence, and there is no change in the reluctance to renounce the right to use nuclear weapons or to threaten to use nuclear weapons, even though it is evident that a nuclear war cannot be won and must never be fought.

The overwhelming majority of humanity wants a nuclear weapon free world. People want complete nuclear disarmament. The immutable goal of total nuclear disarmament cannot be altered or diluted, regardless of improvements in the international climate.

The 1995 Review and Extension Conference on the Non-Proliferation Treaty (NPT) provides an important opportunity for an internationally agreed response to those concerns. Indeed, the NPT is just about the

\* Ngo Quang Xuan is Ambassador of the Socialist Republic of Vietnam to the United Nations. This paper was presented at a conference on the Nuclear Non-Proliferation Treaty held at Lawrence Livermore National Laboratory in July 1994.

only international agreement, which, while prohibiting possession of nuclear weapons to other than the recognized nuclear weapon states parties, obliges all its member states to negotiate nuclear disarmament. And unlike the other Review Conferences, a decision must be made in 1995 on the extension of the treaty. This adds significantly to the importance of the Conference and of perceptions of the value of the NPT to international security.

As the Cold War came to an end, a series of measures were taken to strengthen the nuclear nonproliferation regime. Such efforts happily coincided with the increase in the number of states parties to the NPT. A dozen nations acceded to the treaty during the last two years, bringing the number to more than 160 states. Of particular significance was the accession by China and France, the two nuclear weapon states that had stayed out for nearly a quarter of a century. The world also welcomed South Africa's becoming a party to the NPT.

The priority for 1995 is to ensure that the treaty is extended by consensus. The length of the treaty's extension will be decided by a majority of the parties choosing one of three options: an additional fixed period, fixed periods, or indefinitely. The debates taking place during sessions of the Preparatory Committee for 1995 NPT Conference are concentrating on the question of whether the treaty should be extended indefinitely or for a definite period.

The main reasons given against an indefinite extension is that the NPT is outdated, unequal, and discriminatory. Many states parties expressed their concerns about the failure of the NPT to prevent the proliferation of nuclear weapons and about privileged status given only to the nuclear weapon states. The NPT seeks to stabilize international relations by preserving the existing nuclear order and to transform that order by eliminating nuclear and other weapons entirely.

The process of disarmament is complicated. The last session of the Disarmament Commission (from April 18 to May 9, 1994, in New York) failed to achieve consensus on the role of science and technology in the context of international security. The Commission also did not reach consensus on nuclear disarmament and agreed to include that item in its 1995 agenda.

Some nations have called for an end to the discrimination inherent in the NPT by requiring all nuclear weapon states to eliminate their nuclear weapons. Some nations also call for the security of the non-nuclear states to be guaranteed. In addition to the problem of discrimination, there is a disturbing problem that the plutonium and highly enriched uranium

removed from weapons dismantled under bilateral nuclear disarmament treaties are being stored under national control. There is no guarantee that these materials will not be recycled into weapons in the future.

The 1995 Review and Extension Conference is also expected to review the record of implementation of Article IV (and the Preamble, paragraphs 6 and 7). Previous conferences have commented on the balance of the technical assistance program of the International Atomic Energy Agency. Many member states seek assistance in nonpower applications, and those interested in nuclear power argue for additional resources. A related issue has been the ability of donors to direct that their assistance and cooperation be preferentially directed to treaty members.

The process of preparing for the extension of this important treaty must be undertaken with absolute candor and guarantees of an equitable outcome mutually beneficial to all parties. Consequently, the process of extending the treaty should be a transparent exercise, and the debate should therefore be a public one, involving nonparties to the treaty, intergovernmental organizations, nongovernmental organizations, the media, and others. It is also necessary, as in the case of global issues (e.g., population, environment, and development), that people's groups (e.g., nongovernmental organizations) should be permitted to observe the preparatory process of global conferences.

A new world order cannot be fashioned according to the national interests of a few, but must be based on the interests of all nations. It must be a democratically decided collective exercise.



# 2

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## Africa and Nuclear Nonproliferation

*Oluyemi Adeniji\**

Many African governments considered the French nuclear test in the Sahara Desert in 1960 an affront to their sovereignty and territorial integrity. They also worried about the danger of their people being exposed to radiation from the test. Many reacted strongly; Nigeria broke diplomatic relations with France. In the fall of 1960 at the United Nations General Assembly, African countries introduced a draft resolution that would prohibit any nuclear test in Africa. Though this draft was not pressed to a vote, another resolution, sponsored by African countries in 1961, was adopted by the General Assembly. It called upon all states to consider and respect the continent of Africa as a denuclearized zone.<sup>1</sup>

The formation of the Organization of African Unity (OAU) in 1963 provided a forum for coordinating African joint responses to continental issues. On the question of nuclear tests in Africa, the first Assembly of Heads of State and Government of the OAU, held in Cairo in 1964, adopted the Declaration on the Denuclearization of Africa, wherein all states agreed not to test, manufacture, or store nuclear weapons on the African continent. It also announced Africa's readiness to undertake (in an international treaty to be concluded under the auspices of the United Nations) the obligation not to manufacture or acquire control of nuclear weapons.<sup>2</sup>

Voluntary renunciation of the right to develop nuclear weapons was thus first undertaken by African countries. The concept of a nuclear

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<sup>1</sup> UNGA Resolution 1652 (XVI) of November 24, 1961.

<sup>2</sup> OAU AHG/Resolution II (1) July 1964.

weapon free zone as a major component of the nonproliferation regime owes a great deal to African initiative.

### **The Non-Proliferation Treaty**

In the negotiations on the Non-Proliferation Treaty (NPT), African countries, particularly the three members of the Eighteen Nation Disarmament Committee (ENDC)—Egypt, Ethiopia and Nigeria—played an active role. Working with other non-aligned members of the ENDC, they made major contributions to the Articles dealing with peaceful uses of nuclear energy (Article IV), disarmament (Article VI), nuclear weapon free zone (Article VII), and the final clauses of the treaty.

Among the early signatories to the NPT were several African countries. Indeed Nigeria was one of the first countries to ratify it, having done so less than three months after signature. It was the hope that all African countries would become parties to the treaty at an early date. However, it became clear that two identifiable groups of countries in northern and southern Africa withheld accession. In the case of the northern countries, the nonadherence of Israel coupled with its nuclear program was the main objection. In the case of the southern states, the nonadherence of apartheid South Africa and the suspicion that it was developing a nuclear weapon capability were the inhibiting factors.

The southern Africa front-line states ultimately acceded to the treaty about the same time as South Africa, which became a party in July 1991. Thus, Mozambique acceded in September 1990, Zambia in May 1991, Tanzania in June 1991, and Zimbabwe in September 1991—only Angola has not become party to the NPT. As for the states of North Africa, Libya and Egypt became parties in 1975 and 1980; thus, only Algeria has yet to accede to the treaty. The current situation is that all African countries except Algeria, Angola, Djibouti, and Mauritania are parties to the treaty.

### **The NPT and African Security**

Africa's security preoccupations during the period of the Cold War reflected the universal apprehension of the devastating effect that a nuclear war would have. Apart from the continental concern with decolonization, foreign occupation, and apartheid, the security of Africa was perceived as threatened most by nuclear weapons. Even the primary continental concerns were soon seen in nuclear terms, in view of the widespread belief that both South Africa and Israel had developed

nuclear weapon capability. The many initiatives taken in the United Nations by African states on the nuclear programs of South Africa and Israel reflected their deep concerns and determination to expose those programs to international scrutiny. The alternative of an African nuclear arms race was evoked by some African strategists. African countries, such as Nigeria, Libya, Egypt, and even Zaire, were identified as those capable of developing nuclear weapon programs to meet the nuclear threats to the continent.<sup>3</sup>

Most African governments however preferred the nonproliferation approach. They adhered to the NPT in the hope that progress toward nuclear disarmament would reduce the risk of nuclear war. One of the essential principles on which the treaty was based was that of the balance of mutual responsibilities and obligations of the nuclear and non-nuclear states. In return for renouncing the development of nuclear weapons, the non-nuclear weapon states expected the nuclear weapon states to negotiate on the cessation of the nuclear arms race and on nuclear disarmament. This principle was reflected in Article VI of the treaty and was interpreted to include the determination expressed in Preamble Paragraph X to achieve the cessation of all test explosions of nuclear weapons. Rather than undertake negotiations on nuclear disarmament, however, the nuclear weapon states embarked on a nuclear arms race. The ensuing frustration on the part of non-nuclear weapon states was voiced at the various NPT Review Conferences.

Of particular concern to African parties was the continued nuclear tests by the nuclear weapon states and their refusal to even consider negotiating a comprehensive test ban (CTB) treaty. It should be recalled that African sensitivities to nuclear issues were aroused by the 1960 French nuclear test in the Sahara. The NPT and the Limited Test Ban Treaty had raised African expectations for a comprehensive ban on nuclear tests. African countries were therefore active in the NPT Review Conferences in pressing for the conclusion of a CTB.

African concern was further heightened by the South African nuclear program and, particularly, the report of the apartheid government's preparation in 1977 of a test site in the Kalahari desert, and its reported test in the Atlantic Ocean in 1979. Not surprisingly, the issue of a CTB has been dominant in the review of Article VI at subsequent NPT Review Conferences. African parties share the conviction that such a

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<sup>3</sup> See for instance, Ali Mazrui and Niger Saki, "Does Nigeria Have a Nuclear Option?" *Nigerian Institute of International Affairs Lecture Series No. 33*.

treaty would make an important contribution toward strengthening and extending the international barriers against the proliferation of nuclear weapons.<sup>4</sup>

The progress made by the United States and the Russian Federation in the Strategic Arms Reduction Talks give some hope on the question of nuclear disarmament. However, certain complementary steps are essential to give further hope and confidence to the international community. Cessation of further nuclear tests by all the nuclear weapon states is unquestionably the most important step.

### **Africa and Peaceful Uses of Nuclear Energy**

Article IV of the NPT affirmed the inalienable right of parties to the use of nuclear energy for peaceful purposes. Parties also undertook in the article to facilitate the fullest possible exchange of equipment, materials, and scientific and technological information for the peaceful uses of nuclear energy. The one precondition to the implementation of the provisions of this Article is the application of International Atomic Energy Agency (IAEA) safeguards in accordance with Article III of the treaty. Since the advent of the NPT, the inadequate provision of resources for this promotional aspect of the treaty has always been a source of complaint by the developing non-nuclear weapon states parties. The few African countries that showed interest in nuclear power plants or research reactors were discouraged by the huge investment involved, even before Chernobyl dampened enthusiasm for nuclear energy worldwide. In Africa at present, only four countries—South Africa, Egypt, Algeria, and Libya—have programs that require the application of safeguards. Among the four, only South Africa has nuclear power plants as well as a complete nuclear fuel cycle.

However, Africa's interest in the peaceful uses of nuclear energy derives from two main factors. First, Africa is a major source of nuclear fuel. Four countries—Gabon, Namibia, Niger, and South Africa—produce uranium commercially and still supply about 30% of the Western market for the product. Second, an increasing number of African countries are involved in the secondary uses of nuclear technology in the fields of agriculture, medicine, food preservation, and animal husbandry. The increased interest has been reflected in the growth of Africa's share in the total technical cooperation program of the IAEA,

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<sup>4</sup> Final Declaration of the NPT Third Review Conference.

which rose to 26% in 1992. In addition to national projects, regional projects on radioactive waste management, food preservation, radiation processing for sterilization, and preparation of radio immunoassay reagents have been prepared, but have to await funding.<sup>5</sup> To further encourage regional cooperation, African members of the IAEA created in 1990 the African Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA). The contribution of nuclear energy to African development will be an important factor in the continent's subsequent initiatives on non-proliferation.

### **Security Assurances**

Another question of controversy in the implementation of the NPT, but considered important by African countries, relates to security assurances. Despite proposals by several non-nuclear weapon states for an article in the treaty on security assurances, no such article was agreed upon. Security Council Resolution 255 (1968), which was proposed by the nuclear weapon states parties to the treaty, was considered insufficient from the beginning by the non-nuclear weapon states, especially as it violates the principle of an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear weapon states. If non-nuclear weapon states undertook their self-denial obligation in a legally binding form, the nuclear weapon states, it was argued, should do the same.

Africa's interest in this issue is related closely to the security concern of the continent, especially when it was exposed to two potential nuclear-capable adversaries, Israel and South Africa. Two major initiatives that have been undertaken by Egypt and Nigeria are (1) positive security assurances, embodied in Security Council Resolution 255 (1968), and (2) negative security assurances, which were not addressed in the NPT.

The Egyptian proposal submitted to the 1990 Review Conference seeks to update Security Council Resolution 255 to reflect the adherence of all five nuclear weapon states instead of only the original three. Substantively, it seeks to make specific that an aggression or threat of aggression involving nuclear weapons against a non-nuclear weapon state would constitute a threat to international peace and security in conformity with

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<sup>5</sup> AEA Technical Cooperation Activities in Africa 1992.

Article 39 of the United Nations Charter. This will replace the present formulation in Resolution 255, that merely states that such an aggression or threat of aggression would constitute "a serious situation."

Further, the Egyptian proposal requires that Resolution 255 should indicate more clearly the nature of action to be taken by the Security Council in support of the victim. This should include the application of sanctions against the aggressor as well as provision for technical, scientific, humanitarian, and financial assistance to the victim.

The Nigerian Proposal focused on negative security assurances and was submitted to the 1990 Review Conference in the form of a draft treaty to be signed and ratified by all NPT Parties. In this new treaty, nuclear weapon states parties to the NPT will undertake not to use or threaten to use nuclear weapons against non-nuclear weapon states parties to the NPT. It was Nigeria's belief that the end of the Cold War should facilitate the harmonization of the separate security assurances statement made by each nuclear weapon state at the first and second Special Sessions of the United Nations General Assembly devoted to disarmament. The reaction of the nuclear weapon states was generally favorable to the Nigerian proposal, but it could not be pursued because no final document emanated from the Fourth Review Conference. Obviously, non-nuclear weapon states parties to the treaty will look forward to an agreement on this issue, in the context of the 1995 NPT Review and Extension Conference.

### **The African Nuclear Weapon Free Zone**

The creation of a nuclear weapon free zone was first proposed by the African Heads of State and Government to secure Africa from nuclear weapons. The idea was reflected in Article VII of the NPT four years after the Declaration on the Denuclearization of Africa was adopted by the OAU. The nuclear Program of South Africa and its refusal to accede to the NPT made many African capitals reluctant to proceed with the proposal on denuclearization. Nevertheless, the idea of a nuclear weapon free zone in Africa was kept alive mainly through an annual resolution of the United Nations General Assembly calling attention to the South African nuclear program as a threat to international peace and security.

The changes that began in South Africa in 1990 made the difference. That year, President F. W. de Klerk took the first steps in the process of the reintegration of South Africa into the international community. He

not only liberated Mr. Nelson Mandela and other political prisoners, he started the process of repealing the laws that formed the pillars of the apartheid system. By September 1990, the South African government had indicated its willingness to accede to the NPT. Given these positive signs, the African Group at the United Nations felt that the time was auspicious for making progress on the idea of a nuclear weapon free zone on the continent.

General Assembly Resolution 45/56A of December 4, 1990, stated that a meeting of experts should be convened under the auspices of the OAU and the United Nations "to examine the modalities and elements for the preparation and implementation of a Convention or Treaty on the Denuclearization of Africa." Experts met in Addis Ababa in May 1991 and decided to commence preparations for drafting a treaty. A few months after the expert group meeting, in July 1991, South Africa acceded to the NPT, and in September, it concluded a comprehensive safeguards agreement with the IAEA. President de Klerk issued a statement on June 27, 1991, on South Africa's imminent accession to the treaty, saying:

*We are therefore hopeful that these developments, including South Africa's own accession to the treaty, will now make it possible to achieve the long-standing goal of a nuclear weapon free zone in southern Africa.*

In the drafting of the treaty on the African Nuclear Weapon Free Zone, the special situation of South Africa becomes very crucial. The suspicion of South Africa's nuclear weapon capability, which had preoccupied African countries since 1970s, was confirmed by President de Klerk in his statement to the South African Parliament on March 24, 1993. He disclosed that South Africa had indeed developed a nuclear weapon capability and had produced six nuclear devices. He was quick to add that South Africa had dismantled the devices and the production facilities before acceding to the NPT. President de Klerk's transparency was commendable; however, it evoked the necessity of a strict verification requirement in order to give complete assurances that not only no nuclear weapons are developed or introduced, but also that those already developed together with the production facilities, were indeed dismantled.

The IAEA sought to allay fears in its report on the completeness of the inventory of South Africa's nuclear installations and material submitted to the Agency's General Conference in September 1992.<sup>6</sup> The conclusion

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<sup>6</sup> IAEA Doc. GC (XXXVI/1015) of September 4, 1992.

of the report was that there is no evidence that the list of facilities and locations outside facilities provided by South Africa in its initial report as required by the Safeguards Agreement was incomplete, nor was there any information suggesting the existence of any undeclared facilities or nuclear material. Notwithstanding this assurance, the new democratically elected government of South Africa will need (as an editorial in the *Herald Tribune* postulated) to give assurances that the legacy of the old nuclear weapons program is one that it can do without.<sup>7</sup>

### **Elements of an African Nuclear Weapon Free Zone Treaty**

As outlined in the current draft treaty, each party undertakes:

- (i) Not to conduct research on, develop, manufacture, stockpile, or otherwise acquire any nuclear device.
- (ii) To prohibit the stationing of any nuclear explosive device on its territory.
- (iii) Not to test or permit the testing of any nuclear explosive device in its territory.
- (iv) To declare any capability for the manufacture of nuclear explosive devices.
- (v) To dismantle and destroy any nuclear explosive device that might have been manufactured prior to the coming into force of the treaty, as well as destroy the facilities for their manufacture.

The promotion of peaceful uses of nuclear energy is an important element of the draft treaty. Parties will undertake to promote individually and collectively the use of nuclear science and technology for economic and social development.

The verification provisions are designed to ascertain that prohibited activities are not undertaken and to ensure that peaceful uses are under effective safeguard arrangements. Verification will be conducted by both the IAEA and a regional mechanism to be created.

The treaty will have three protocols. Protocol I is addressed to the five nuclear weapon states, which will undertake not to use or threaten to use nuclear devices against parties to the treaty. Protocol II is also addressed to the nuclear weapon states, who will undertake not to test any nuclear explosive device within the zone. Protocol III is addressed to states that are

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<sup>7</sup> *International Herald Tribune*, May 13, 1994.

internationally responsible for territories within the zone. They are to undertake to apply the provisions of the treaty in respect of such territories.<sup>8</sup>

The draft treaty is now under consideration by the OAU. When adopted, it will represent a significant contribution to the nonproliferation regime.

### Conclusion

Africa's commitment to nonproliferation will continue to be strong. Of the four African states not party to the NPT, only Algeria, which has a nuclear program with two or three research reactors, attracts attention.

Steps are being taken to complete the Treaty on the African Nuclear Weapon Free Zone. The draft treaty was submitted at the last OAU summit held in Tunis in June 1994, and there is a possibility that it will be adopted by the summit next year.<sup>9</sup>

The countries of North Africa still have security concerns with regard to the continued refusal of Israel to accede to the NPT. Though an alternative nonproliferation instrument—a Nuclear Weapon Free Zone Treaty in the Middle East—has been under consideration, no appreciable progress has been made. Under the circumstances, it is commendable that the North African countries have been working with other African states on the African Nuclear Weapon Free Zone Treaty.

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<sup>8</sup> Text of the draft treaty was contained in the *Introduction of the Report of the OAU Secretary-General CM/1825 (LX)*

<sup>9</sup> OAU Res. CM/Res. 18 (LX)



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## Kenya's Views on the NPT

*Esther M. Tolle\**

The NPT was concluded at a time when East-West polarization was at its height and the Cold War had peaked in intensity. Fears of an all-out nuclear war, especially after the Cuban missile crisis of 1962, coupled with the possible spread of nuclear weapons to states whose restraint in their use could not be ascertained, called for decisive steps to halt such a spread in order to safeguard international peace and security. The fears were real enough. Even the major protagonists felt concerned enough to resist horizontal proliferation of nuclear weapons and related technology even to their respective allies. Their fears and concerns culminated in the conclusion and entry into force of the treaty.

The treaty has drawn some criticism, but its existence has provided an effective monitoring instrument whose contribution to global peace and security cannot be gainsaid. The large number of states that have freely acceded to the treaty bears witness to its popularity and the confidence that individual member states have in its capacity to safeguard their security. It is our hope and desire that it will soon receive universal acceptance and adherence.

It is commonly accepted that the world would have been a more dangerous place if nuclear weapons and the technology for their manufacture had been allowed to spread to many other countries. This fact alone does not eliminate fear and suspicion, and non-nuclear states feel intimidated and at times threatened by the large arsenals in the inventories of nuclear states. For this reason, the question of nuclear disarmament has been a contentious issue in NPT Review Conferences and will continue to be so in the future.

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The long-term objective of Article VI of the treaty is the total elimination of nuclear weapons from the arsenals of the states signatory to the treaty. This objective has not been realized, and the states parties to the treaty continue to be categorized into nuclear and non-nuclear states. This categorization should not be for all time, and all signatories to the treaty are enjoined to work toward the early realization of Article VI. Nevertheless, it is gratifying to note that the obligations under the treaty have been widely respected.

The fact that the NPT has worked well since its entry into force does not mean that it has not endured enormous pressures. Some of these pressures have been experienced during the past four review conferences, when the issues of a nuclear test ban and nuclear disarmament have been of crucial importance to numerous countries, especially non-nuclear weapon states. Immense political and operational pressures have of late been exerted on the NPT, especially in the execution of International Atomic Energy Agency (IAEA) safeguard arrangements. In the recent past, the fulfillment of Article III (1) of the NPT by some countries has not been as smooth as the agency officials had expected. We see further pressures being exerted on NPT by

- Increased and ready availability of fissionable materials emanating from wider peaceful uses of nuclear energy.
- Widening areas of conflict fueled by nationalism and terrorism worldwide with contestants seeking to win the conflict by any means.
- Clandestine disposal of fissionable material for commercial gain.

Kenya, like many other countries, has always stood for the strict observance and implementation of all obligations undertaken by states parties to the NPT. The debate on the linkage between the period of extension of the treaty and the unfulfilled obligations contained in the treaty is a crucial one. The commitment of states parties, both nuclear and non-nuclear weapon states, to implement all their obligations will probably influence the period of extension of the treaty in 1995.

The 1995 Review and Extension Conference of the NPT will be a stock-taking exercise on how well the treaty has operated and its continued validity for the years to come. There are a number of important issues that will be raised in 1995, particularly, a comprehensive test ban treaty (CTBT), nuclear disarmament, the safeguards regime, and the period of extension of the treaty.

### **The Nuclear Test Ban**

At long last it appears that a CTBT might be a reality very soon and, hopefully, before the 1995 NPT Review and Extension Conference. Those of us who know the history of efforts to achieve a CTBT know that it has been one of frustrations and disappointments. During the Cold War, it was evidently clear that the political will to prohibit underground nuclear tests was lacking. The 1963 Limited Test Ban Treaty was a clear statement that the nuclear powers that participated in the negotiations of the treaty were not willing to prohibit nuclear tests in all environments.

Kenya, like many other non-nuclear weapon states, has always stood for the prohibition of all nuclear tests. Whereas the logic for the continuation of nuclear tests during the Cold War was understandable, it is now increasingly difficult for any nuclear weapon state to convincingly argue for the justification of such tests in a world that has witnessed the spectacular collapse of the former East bloc.

There is no longer any valid reason for any country to continue testing nuclear weapons. Indeed, the unilateral moratoria on testing exercised by some of the nuclear powers is a clear admission that times have changed, and that the political and military motivation for testing is no longer as strong as it was during the Cold War era. The discussions currently taking place at the Conference on Disarmament appear to be promising more than ever before, and it is our hope and desire that they will lead to a ban on all forms of nuclear testing, thereby sending signals strong enough to influence the extension of the NPT indefinitely.

### **Nuclear Disarmament**

The nuclear disarmament process was given a long-awaited boost with the finalization in 1987 of the US-Soviet agreement to eliminate short- and medium-range nuclear weapon delivery systems. Prior to that, the nuclear weapon states had always been accused of a lack of commitment in nuclear disarmament efforts.

Kenya joined many other countries in hailing this historic treaty, which eliminated an entire category of nuclear weapon delivery systems. Certainly this achievement was recognized in the 1990 Review Conference of the NPT. Kenya expected an immediate continuation of the process to cover other categories of nuclear weapons. It also expected the involvement of other nuclear powers so that this important process would not be limited to only the two nuclear powers with the largest arsenals. Kenya has always maintained that no nuclear arsenal is too small to be ignored. All nuclear weapon states should involve themselves in the nuclear

disarmament process especially at this time when political conditions mitigate for the total elimination of nuclear weapons.

Further efforts to limit and eventually eliminate all other categories of nuclear weapons should be intensified. The nuclear disarmament process appears to have slowed down somewhat now that the East-West confrontation is over. It would be a contradiction of the times if more advanced nuclear weapons were to be developed. Whereas a CTBT would place severe restrictions on the development of more advanced nuclear weapons, it would not be a disarmament measure on its own. Nuclear weapons can be developed without necessarily conducting tests. Thus, a CTBT would be only one step in the nuclear disarmament process and would have to be coupled with the actual elimination of nuclear weapons for the nuclear disarmament process to be a success.

The political circumstances are now conducive for the nuclear weapon states to eliminate their nuclear weapons because they have no clear, identifiable enemy against whom these weapons could be used. To keep these weapons is to encourage other countries to yearn to possess them.

All the nuclear powers should commit themselves not only to the conclusion of a CTBT before the 1995 NPT Conference, but should also engage in negotiations, involving all nuclear weapon states, aimed at eliminating their nuclear arsenals once and for all. Kenya's position is that if the nuclear powers eradicated all of their nuclear arsenals before the 1995 Conference, non-nuclear weapon states would not pursue the debate on negative security assurances. If technical and political difficulties hinder the immediate elimination of such weapons, many countries would support a time-frame in which to eliminate them.

Non-nuclear weapon states party to the NPT confront the reality that, by having given up their right to acquire nuclear weapons, they are exposed to attack or threat of attack with nuclear weapons by nuclear weapon states. Non-nuclear weapon states have legitimately demanded to be given legally binding assurances enshrined in an internationally respected instrument. But these demands have not been adequately addressed by the nuclear weapon states. The 1968 United Nations Security Council Resolution 255 was insufficient. The negative security assurances issue has been raised in all review conferences of the NPT and the 1995 Conference will not be an exception. Although the threat of nuclear conflict has diminished with the end of the Cold War, non-nuclear weapon states parties to the NPT will continue to press for effective security guarantees for as long as nuclear weapons exist.

Some regions have been declared nuclear weapon free zones and have received assurances from some nuclear weapon states that these weapons would not be introduced in such zones. Logically it would be expected that if countries within a particular region favor the declaration of their region as a nuclear weapon free zone, the nuclear powers should respect their position and refrain from introducing nuclear weapons in such zones. The nuclear weapon free zones have substantially buttressed efforts toward the nonproliferation of nuclear weapons.

Countries in Africa have favored the creation of an African nuclear weapon free zone since 1964 when the Organization of African Unity (OAU) Heads of State and Government met in Cairo, Egypt, and adopted the declaration on the denuclearization of Africa. Efforts to have the declaration implemented could not succeed earlier due to the situation prevailing in South Africa. Now that South Africa is a state party to the NPT and non-racial rule has triumphed in that country, prospects for the declaration of Africa as a nuclear weapon free zone will soon become a reality.

Kenya has always stood for the exclusion of nuclear weapons not only in Africa but also in other regions. As a littoral state interested in the declaration of the Indian Ocean as a zone of peace, Kenya would not favor the introduction of nuclear weapons in this environment.

### **The Safeguards Regime**

The IAEA safeguards procedures, which a non-nuclear weapon state party to the NPT is obligated under the treaty to accept, used to be a routine exercise. In the recent past, however, some NPT states have been suspected of developing nuclear weapons. This means that the safeguards regime has serious shortcomings and should be improved. The credibility of the NPT and the safeguards procedures would be seriously impaired if the safeguards regime were to be violated at will.

Existing safeguards contain loopholes that erode the credibility of the NPT by allowing violations by states parties to the treaty. However, whatever safeguards regime is put in place, violations will always be attempted, and they may occasionally succeed. The international community, and particularly the states parties to the NPT, must collectively devise and agree on measures to improve the effectiveness of safeguards and to deter potential violators by convincing them of the futility and the likely high cost of their transgressions. The 1995 NPT Review and Extension Conference offers a good opportunity to frankly evaluate the effectiveness of the existing safeguards regime and to arrive at necessary improvements.

### Review and Extension of the Treaty

The major discussion during the 1995 NPT Conference will revolve around the period of extension of the treaty. This debate will, in turn, as already stated earlier, be determined by the review of how the treaty has operated since its coming into force.

There is no doubt that the treaty shall be extended. The major question is whether all the obligations undertaken by *all* states parties have been fulfilled satisfactorily to warrant an indefinite extension of the treaty. The verdict of the conference might be positive, but one cannot rule out the likelihood that a limited period of extension might be required by the non-nuclear weapon states in order to periodically monitor the fulfillment of Article VI on nuclear disarmament.

# 4

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## Prospects for Establishing a Zone Free of Weapons of Mass Destruction in the Middle East

*Mohamed Shaker\**

The Nuclear Non-Proliferation Treaty (NPT) is about to reach an important phase in its existence. In less than a year, the states party to the NPT will meet to decide on how long they want to extend the treaty. Their decision will depend on a number of factors and incentives, such as security enhancement, nuclear disarmament, and cooperation in the peaceful uses of nuclear energy. Regional issues at the 1995 NPT Review and Extension Conference will be of no less importance. It should be recalled that regional issues almost wrecked the 1985 NPT Review Conference and that they are no less acute today.

In this context, proposals for the establishment of nuclear weapon free zones and zones free of weapons of mass destruction deserve greater attention. The proposals themselves may not be at the top of the agenda of the forthcoming 1995 Conference, but they may help us to understand the attitudes of and challenges and problems faced by a great number of countries, which, in the absence of such zones or in the absence of universality of adherence to the NPT may have difficulties in extending the NPT's existence for a very long time.

The establishment of a zone free of weapons of mass destruction in the Middle East is a relatively new idea that was put forward in 1990 parallel to the earlier proposal for establishing a nuclear weapon free zone in the Middle East. The renewed peace process in the Middle East since the Madrid Conference in 1991 and the recent agreements signed

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by Israel and the Palestine Liberation Organization in September 1993 and May 1994 have engendered hopes for the establishment of both zones in the Middle East.

### Overview

Egypt joined Iran in taking the initiative in 1974 at the United Nations (UN) General Assembly for the establishment of a nuclear weapon free zone in the Middle East. Later, Egypt undertook on its own to pursue that initiative every year at the UN General Assembly. The last resolution adopted by the General Assembly in this respect was on December 16, 1993.<sup>1</sup> In the beginning, Israel abstained in the vote on the Egyptian initiative, but, as of 1980, joined in adopting the annual General Assembly resolution on this matter by consensus.

The General Assembly resolutions on the establishment of a nuclear weapon free zone in the Middle East evolved over the years. The essential features of these resolutions are:

- The establishment of a nuclear weapon free zone supplements the NPT. The adherence to the latter is urged.
- Until the establishment of such a zone is realized, all countries concerned must make serious declarations that they will abstain on a reciprocal basis from testing, producing, storing, or possessing, in whatever form, nuclear weapons and the means to deliver them.
- Until the establishment of a nuclear weapon free zone, all countries must declare that they will abstain, on a reciprocal basis, from allowing any third party to keep nuclear weapons on their territories.
- A major role for the International Atomic Energy Agency (IAEA) is predicted in safeguarding the nuclear activities of the countries concerned. Pending the establishment of the zone, countries of the region that have not yet accepted IAEA full-scope safeguards should agree to do so.
- Declarations made by countries with regard to the zone should be deposited with the UN Security Council.

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<sup>1</sup> A/RES/48/71, January 6, 1994. For a full account of the initiative and its examination by successive sessions of the UN General Assembly, see Mahmoud Karem, *A Nuclear-Weapon-Free Zone in the Middle East: Problems and Prospects* (New York: Greenwood Press, 1988).

- The nuclear weapon states not only have to abstain from any activity that would be in conflict with the goal of establishing such a nuclear weapon free zone, but would also have to cooperate fully.

In 1988, the UN General Assembly took an important step forward in adopting a resolution requesting the UN Secretary General to prepare a study on effective and verifiable measures that would facilitate the establishment of a nuclear weapon free zone in the Middle East.<sup>2</sup> Three consultants were appointed by the Secretary General to assist in the preparation of the study. By October 1990 the study, which concluded that it was feasible to establish a nuclear weapon free zone in the Middle East, was made available to the members of the United Nations.<sup>3</sup> (Note: This was not the first study of its kind undertaken by the United Nations. In 1975, a group of qualified governmental experts prepared a study on nuclear weapon free zones in all its aspects.<sup>4</sup>)

Three months prior to the release of the study in 1990, President Mubarak of Egypt proposed the establishment of a zone free of weapons of mass destruction in the Middle East. The proposal has three components:<sup>5</sup>

- All weapons of mass destruction in the Middle East should be prohibited.
- All states of the region should make equal and reciprocal commitments in this regard.
- Verification measures and modalities should be established to ascertain complete compliance by the states in the region.

Egypt underscored certain terms to be taken into account in this regard:

- A qualitative as well as quantitative symmetry in the military capabilities of the individual states of the Middle East. Asymmetries cannot prevail in a region striving for a just and comprehensive peace.
- Increased security at lower levels of armament. Security must be attained through political deliberations and disarmament rather than the force of arms.
- Arms limitation and disarmament agreements should consider equal rights and responsibilities, and states should equally issue legally binding commitments in the field of disarmament.

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<sup>2</sup> UN General Assembly Resolution 43/65 of December 7, 1988, Paragraph 8.

<sup>3</sup> UN Doc. A/45/435, October 10, 1990.

<sup>4</sup> UN Doc. A/10027/ADD. 1.

<sup>5</sup> See Conference of Disarmament Doc. CD/989, April 20, 1990.

At the beginning, President Mubarak's proposal received a lukewarm support from the major Western powers. For example, the statement made by the Foreign and Commonwealth Office spokesman in the United Kingdom just took note of the proposal without any further comment.

President Mubarak's proposal was made a few months before the eruption of the Gulf crisis triggered by the occupation of Kuwait by Iraq. Egypt, in fact, had sensed the dangers menacing the stability of the Middle East from the proliferation of weapons of mass destruction. Apart from the Israeli nuclear capabilities, which have been a great source of worry in the whole region, the revelations about Iraqi capabilities and plans for the production of weapons of mass destruction, including chemical and biological weapons, proved that Egypt's worries were well founded.

Following the Gulf crisis, the Mubarak proposal received increased attention. The five major arms supplier countries, which happen to be the five permanent members of the UN Security Council, gave support to the idea during their meeting in Paris in July 1991. They stated that essential steps forward in achieving this goal would include the full implementation of the April 3, 1991, UN Security Council Resolution 687 on Iraq, which clearly expressed concern over the threat that all weapons of mass destruction pose to peace and security in the region.

Implementation of Security Council Resolution 687, which requires destruction of Iraq's programs to produce weapons of mass destruction, could be a dramatic beginning of the two zones under consideration here. It must be pointed out, however, that the IAEA cannot assert beyond any doubt that Iraq is completely free of any nuclear material or equipment that could be used in a nuclear weapon program.

On May 29, 1991, US President George Bush presented a proposal for arms control in the Middle East that stressed the necessity for all states in the region to adhere to the NPT. The plan also called upon all major weapon-exporting countries to cease the supply of weapons of mass destruction to the region. Since 1991, regular reference has been made to this proposal in UN General Assembly resolutions on the establishment of a nuclear weapon free zone in the Middle East. The proposal has not yet been put forward as a separate item on the agenda of the UN General Assembly.

President Mubarak's initiative for the establishment of a zone free of weapons of mass destruction in the Middle East has continued to gain support. For example, at the Ministerial Conference of the Non-Aligned

Movement held in Cairo in June 1994, the Ministers paid tribute to the initiative and called for its realization.

The establishment of a Multilateral Working Group on Arms Control and Regional Security of the Madrid Process offers a possible mechanism to negotiate a nuclear weapon free zone and a zone free of weapons of mass destruction in the Middle East. The Multilateral Working Group has had five meetings so far alternating between Washington and Moscow, with the exception of the last one, which met in Qatar in May 1994. No progress has been made yet on the establishment of such zones. However, marginal progress has been made with regard to confidence-building measures, such as the participation of representatives of the countries of the Multilateral Working Group in an exercise of the Conference on Security in Europe (CSE) that took place in the United Kingdom in March 1993. Moreover, in July of the same year, Egypt hosted an intercessional workshop on the issue of confidence-building measures and verification of arms control agreements on different weapon systems. The UN Institute for Disarmament Research (UNIDIR) organized a two-session seminar on confidence building in the Middle East. The first session took place in Malta; the second will take place in Turkey in late 1994.

When the Multilateral Working Group met in Moscow in November 1993, the Israelis seemed reluctant to consider nuclear issues more deeply, although they have on many occasions since 1980 fully supported a nuclear weapon free zone in the Middle East. Hopefully the two co-sponsors of the Peace Conference, Russia and the United States, will exert more influence to push ahead with the discussions on the two zones. The more progress there is on the bilateral negotiations track, the more there will be progress in the Working Group. One of the encouraging features in the latter is the UN/IAEA participation since its third meeting in Washington, May 1993. The Director of UNIDIR will also be joining the UN/IAEA team. UNIDIR can contribute greatly to the in-depth study and analysis of intricate issues.

The two zones' proposals are on the table. Any progress achieved with regard to one of them would have a positive impact on the other. It is to be noted, however, that the Foreign Ministers of the Non-Aligned Movement, at their aforementioned Conference in Cairo in June 1994, considered the establishment of nuclear weapon free zones a necessary first step toward attaining the objective of eliminating weapons of mass destruction.

It should also be pointed out that a number of Arab countries refused to sign the Chemical Weapons Convention (CWC) in Paris in January 1993 because Israel has not acceded to the NPT, has not accepted full-scope safeguards on all its nuclear activities, and has not shown real interest in pursuing the nuclear weapon free zone proposal. It must be said, however, that those Arab countries are fully convinced of the merits of the CWC, and some of them, such as Egypt, have fully participated in the negotiations at the Conference on Disarmament in Geneva leading to the conclusion of the Convention. The position of the Arab states is not new. Their position has been consistent since the convening of the Paris Conference of 1989 on chemical weapons, when they stated that it would be difficult to sign as long as Israel has unsafeguarded nuclear activities that are viewed as a real threat to the region and its security.

There is also a link between the establishment of a nuclear weapon free zone in the Middle East and one in Africa. Some northern African states will be involved in the establishment of both zones. This link has been recognized by the United Nations and the Organization of African Unity working group entrusted with working out the modalities of the African nuclear weapon free zone, which is expected to be finalized in 1995.

### The Scope of Prohibition

All weapons of mass destruction must be prohibited. Nuclear weapons have not been defined in the NPT. A definition was provided, however, in Article 5 of the 1967 Treaty of Tlatelolco establishing a nuclear weapon free zone in Latin America, which reads as follows:

*For the purpose of this Treaty, a nuclear weapon is any device which is capable of releasing nuclear energy in an uncontrolled manner and which has a group of characteristics that are appropriate for warlike purposes. An instrument that may be used for the transport or propulsion of the device is not included in this definition if it is separable from the device and not an indivisible part thereof.<sup>6</sup>*

However, the term "nuclear weapons" in the NPT was later understood to mean nuclear bombs and warheads. The negotiators of a zone free of weapons of mass destruction in the Middle East may wish to follow the example of the Treaty of Tlatelolco and define nuclear weapons.

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<sup>6</sup> *Status of Multilateral Arms Regulations, op. cit., p. 76.*

It should also be pointed out that the NPT prohibits "other nuclear explosive devices" than nuclear weapons. The purpose is to limit the potential use of nuclear explosive devices for peaceful purposes. This technology did not prove to be feasible, and the whole issue of nuclear peaceful explosions (PNEs) has been left to rest permanently. Therefore, in the context of a zone free of weapons of mass destruction in the Middle East, this term is not expected to re-emerge. However, it must be noted that the PNEs were raised again by China in the context of the ongoing negotiations on a comprehensive test ban treaty at the Conference on Disarmament in Geneva.

As for chemical weapons, all chemical warfare agents—gaseous, liquid, or solid—should be prohibited. The 1925 Geneva Protocol, which bans the use of chemical weapons but not their production or their possession, is insufficient to prevent chemical warfare, as recent events have demonstrated. Thus, the negotiators of a zone free of weapons of mass destruction will have to rely on both the Protocol and the CWC signed in Paris in January 1993. Likewise, they will have to rely on the 1972 Biological Weapons Convention, which prohibits development, production, stockpiling, and acquisition of biological weapons. It is quite significant that while some Arab states have not signed the CWC of 1993, only ten Middle Eastern countries have ratified the Biological Weapons Convention.<sup>7</sup>

### **Geographic Delimitations**

The 1975 United Nations study on nuclear weapon free zones presupposed that a zone in the Middle East would include 15 states extending from Libya to Iran, including the Gulf States and Israel. The UN study used the UN definition of the Middle East. Therefore, it did not include the northern African states of Mauritania, Morocco, Algeria, or Tunisia, nor did it include Sudan. For this reason, many Middle Eastern countries questioned the wisdom of ascertaining the views of only 15 countries, especially when the Arab League in 1974 concluded that a nuclear weapon free zone in the Middle East should include all Arab states plus Iran and Israel.

The 1990 UN study took a different course than that of the 1975 study. It benefited also from a study made by the IAEA, which included a

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<sup>7</sup> *Ibid.*, pp. 5-21.

similar definition to that of the 1975 study.<sup>8</sup> The new study spoke of core countries and peripheral countries. Core countries meant the Middle Eastern countries involved in the Arab-Israeli conflict plus Iran. The peripheral countries are those existing in the area that can be involved in the establishment of the zone, but not necessarily from the beginning.

The 1990 UN study also mentioned the sea areas, such as the Red Sea and the Gulf as well as international waters, such as the Suez Canal. The countries of the Middle East may also wish to learn from the experience of the parties to the Treaty of Tlatelolco. For example, the latter seems to permit the transit of nuclear weapons through the Panama Canal, and this triggered serious reservations. In the Middle East, we should give serious thought to such a delicate and intricate issue.

### Modalities with Special Emphasis on Verification

A nuclear weapon free zone in the Middle East presupposes that the parties to it may have already adhered to the NPT. All Arab states are parties to the NPT except Algeria, Oman, and the United Arab Emirates. Algeria on a number of occasions reiterated its intention to join the NPT, but its internal strife seems to have prevented it from doing that so far. Iran is also a party. Israel would be expected to adhere to the NPT if it joins a nuclear weapon free zone in the Middle East.

The main obligations of the parties to such a zone would be similar to those undertaken in the NPT, plus an obligation to guarantee the complete absence of nuclear weapons on their territories in the established zone. Moreover, the zone should also benefit from negative guarantees similar to those secured by the parties of the Treaty of Tlatelolco, i.e., the non-use or threat of use of nuclear weapons against the states in the zone. In working out the different provisions of the zone, negotiators may wish to benefit from the experience gained in negotiating the Treaty of Tlatelolco and the Treaty of Rarotonga for the establishment of a nuclear weapon free zone in the South Pacific.

One of the most difficult and delicate issues to deal with will be the verification issue. As in the case of the Treaty of Tlatelolco, IAEA safeguards should be applicable in the case of a nuclear weapon free zone in the Middle East. The IAEA is already involved in studying the

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<sup>8</sup> Moataz M. Zahran, *Towards Establishing a Mass-Destruction-Weapon-Free Zone in the Middle East*, Institute for Diplomatic Studies, Ministry of Foreign Affairs of the Arab Republic of Egypt, October 1992, p. 26.

application of safeguards in the Middle East.<sup>9</sup> In its report to the General Conference of the IAEA in September 1993, the IAEA Secretariat reported the responses and comments of some states of the region.<sup>10</sup> The common denominator in the responses so far received by the Agency is the central role to be played by the IAEA. In one of the responses, the establishment of a regional authority and the creation of a regional inspectorate to work jointly with the IAEA following the conclusion of a peaceful settlement in the Middle East were suggested. These suggestions seem to follow the example of OPANAL established by the Treaty of Tlatelolco to oversee the proper implementation of treaty provisions, especially verification.

Meanwhile, the Agency has entertained the idea of incorporating additional features to strengthen its safeguards system by introducing regional or mutual inspection by the parties. This latter type of verification has been adopted by Argentina and Brazil, an example that could be followed in other parts of the world to build up confidence and enhance assurances. Another concept that could be of great advantage is the use of soil, air, and water sampling to enhance confidence in the absence of undeclared nuclear activities.

The IAEA organized a workshop in Vienna in May 1993 on the modalities and the methods of applying safeguards in a future nuclear weapon free zone in the Middle East.<sup>11</sup> The objective was to assist the Middle Eastern experts in learning the different modes of verification.

Israel's adherence to such a zone or to the NPT would be a special case. An inventory of nuclear material accumulated over the years should be done to guarantee that all nuclear material is accounted for. The adherence of South Africa to the NPT and the signing of the safeguards agreement with the Agency, which were followed by the revelations about South Africa's nuclear weapon capabilities dismantled before its adherence to the NPT, should be a lesson in the case of future adherence of Israel to the NPT or a nuclear weapon free zone or a zone free of weapons of mass destruction in the Middle East. There is a trend favoring discounting past inventory to encourage hesitant countries to join the nonproliferation regime. In the case of Israel, such an approach

<sup>9</sup> *Technical Study on Different Modalities of Application of Safeguards in the Middle East*, IAEA-GC (XXXIII)/887, August 29, 1989.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Application of IAEA Safeguards in the Middle East*, IAEA GC (XXXVII)/1072, September 6, 1993.

would be self-defeating. It would sow the seeds of the future dismantling of the regime. In the Middle East, we shall have to be cautious.

With regard to chemical weapons, the modalities and verification system should be greatly guided by the 1993 draft CWC. The Convention introduces new verification techniques, including prompt access by inspectors and challenge inspections.

As for biological weapons, the modalities of the Biological Weapons Convention of 1972 should be of great use in establishing a zone free of weapons of mass destruction. However, the verification system of the 1972 Convention is extremely primitive. That is why in 1991, during the third review of the 1972 Convention, an ad hoc group of governmental experts was formed to identify and examine potential verification measures from a scientific and technical standpoint. One of the ideas entertained was the drafting of a special protocol dealing with verification and compliance. The ad hoc group completed its work in September 1993, and a report was circulated to all states parties to the Convention. A majority of parties asked for a special conference. A preparatory committee met on April 11, 1994, in Geneva, and the special conference is expected to meet in September 1994.<sup>12</sup>

### Future Perspectives

The objective of establishing a nuclear weapon free zone and a zone free of weapons of mass destruction in the Middle East is not and has never been in the realm of futuristic dreams, however bleak and desperate the situation in the Middle East seemed to be. The breakthrough in the peace process, however meager it may appear to some, engenders hope that one day the negotiators will dwell in depth on all aspects pertaining to the establishment of the two zones.

The Multilateral Working Group on Arms Control and Regional Security of the Madrid Conference offers the best opportunity to proceed with the establishment of the two zones. It might be difficult to expect much without a political settlement of the Arab-Israeli conflict. However, time should not be wasted. An early examination and discussion of the various and intricate aspects in the establishment of the two zones would pave the way for more progress later on.

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<sup>12</sup> *Modalities for the Application of Safeguards in a Future Nuclear-Weapon-Free Zone in the Middle East, An International Atomic Agency Workshop, May 4-7, 1993.*

The reservoir of knowledge and experience existing in this field and the studies undertaken by the United Nations, the IAEA, and non-governmental groups should all be drawn upon by government officials involved in the peace process. For example, there are lessons to be learned from the Iraqi case. The IAEA and the UN Security Council Special Commission gained great experience in the dismantling of weapons of mass destruction.

The road toward the establishment of the zones is bumpy, but with a political will the destination can be reached. Others have succeeded in Antarctica, Latin America, and the South Pacific.

We ought to be reminded that South Africa, on the road to majority rule, abandoned nuclear weapons, which facilitated the establishment of a nuclear weapon free zone in Africa. It is hoped that Israel, on the road to a just and comprehensive peace settlement in the Middle East, would give up its nuclear option, which would lead not only to the establishment of a nuclear free zone but to the more ambitious objective of establishing a zone free of weapons of mass destruction in the Middle East.

Finally, there is some thinking about a new study, within the United Nations, on the establishment of a zone free of weapons of mass destruction in the Middle East including nuclear weapons, which will certainly benefit from the 1990 UN study on a nuclear weapon free zone in the Middle East.

The conclusion of the CWC of 1993 and the ongoing attempts to introduce effective verification methods with regard to the Biological Weapons Convention should constitute an important background for the new study. Needless to say, a number of Middle Eastern states have not yet adhered to the NPT or to the aforementioned two conventions. Like the 1990 UN study, a new UN study should examine ways and means to overcome the difficulties and to encourage all states of the region to follow a multifaceted and interdisciplinary regional approach in eliminating and controlling all weapons of mass destruction. The United Nations should also, through the General Assembly, contemplate interim measures similar to those prescribed by General Assembly resolutions on a nuclear weapon free zone in the Middle East.



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## Effects of a Special Nuclear Weapon Materials Cut-Off Convention

*Waldo E. Stumpf\**

The collapse of the Cold War has brought a new world order, which is having major effects on many areas of international relations, not the least of which is the area of nuclear nonproliferation. Since 1990, the nuclear nonproliferation regime has experienced many new opportunities but has also had to face demanding challenges. Among the more positive developments are:

- South Africa's renunciation of its nuclear deterrent program; its subsequent accession to the Nuclear Non-Proliferation Treaty (NPT) on July 10, 1991, as a *de facto* non-nuclear weapons state (NNWS)<sup>1</sup>; its admission as a full member of the Zangger committee in 1993; and its becoming an observer to the Nuclear Suppliers Group in April 1994.
- Brazil's ratification on May 11, 1994, of the amended (1967) Treaty of Tlatelolco, after Chile and Argentina became full parties to this treaty on January 18, 1994.
- China and France's accession to the NPT.
- Brazil and Argentina's soon-to-be-realized application of full-scope safeguards through the Quadripartite Safeguards Agreement with the International Atomic Energy Agency (IAEA) through the Brazilian-Argentine Agency for Accounting and Control of Nuclear

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<sup>1</sup> Waldo E. Stumpf, "South Africa's Nuclear Weapons Programme" in Kathleen Bailey, editor, *Weapons of Mass Destruction: Costs Versus Benefits* (New Delhi: Manohar Press, 1994).

Materials (known by its Spanish acronym ABACC). These safeguards came into effect on March 4, 1994.

- Algeria's announcement on December 21, 1993, and Argentina's announcement, also in December 1993, of their intention to accede to the NPT.
- Africa's very strong moves to establish a regional treaty during the year of 1994, declaring the whole of Africa a nuclear weapon free zone.
- Some of the newly independent states of the former Soviet Union accession to the NPT; notably Georgia, Belarus, and Kazakhstan, the latter acceding to the NPT on February 14, 1994.
- The establishment of the Strategic Arms Reduction Treaty-I (START-I) and -II, leading, at long last, to partial adherence by the nuclear weapon states (NWS), as parties to the NPT, to their binding commitment under Article VI of this treaty to an "... early cessation of the nuclear arms race."

On the negative side, one can include:

- Unfortunate developments with two NPT signatories, Iraq and North Korea.
- Refusal by India, Pakistan, and Israel to join the NPT.
- Delay by Ukraine in joining arms control measures despite the fact that the Ukrainian Parliament (the Rada) confirmed its intention on February 3, 1994, to ratify START-I and accede to the NPT as a NNWS.
- Failure of the NWS, as parties to the NPT, to meet their binding commitment under Article VI of this treaty "... to pursue negotiations in good faith on early measures .... at an early date to nuclear disarmament, and on a treaty on general and complete disarmament under strict international control."

Both the positive and negative events led to three new broad initiatives within the nuclear nonproliferation regime.<sup>2</sup> The first set of initiatives concerns reinforcement of conventional safeguard arrangements through approaches that may also lead to cost reductions. Examples of measures to improve safeguards include: unattended verification systems, digital image transmission, randomization principles, optical surveillance interfaced with electronic sealing, multi-camera surveillance

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<sup>2</sup> B. Pellaud, "IAEA Safeguards: Status, Challenges and Opportunities," *IAEA Symposium on International Safeguards, Vienna, March 14-18, 1994*.

systems, core discharge monitors for onload refueled power reactors, and the integrated verification system being developed in Germany.

A second, related set of initiatives is to strengthen and streamline safeguards beyond the legal limits of current safeguard agreements. Some measures are being investigated by the IAEA—the so-called “Program 93+2”—and may include innovative techniques, such as environmental sampling to detect undeclared activities or facilities. Others, aimed at increasing the confidence of the world community in compliance with international commitments, may include confidence-building measures going beyond existing safeguard requirements. For example, possible additional safeguards and security measures are under consideration for the storage of South Africa’s inventory of highly enriched uranium (HEU) recovered from the dismantled nuclear devices.<sup>3</sup>

The third set of initiatives is to broaden the nuclear nonproliferation contract to cover additional measures, including:

- A special nuclear weapon materials cut-off convention.
- An international HEU and plutonium regime in which safeguards will apply to all weapons-usable material not required for military defense purposes.
- A comprehensive test ban treaty on all further nuclear explosives testing.
- Strengthened and more widely applied export controls through instruments such as the Zangger Committee and the Nuclear Suppliers Group.
- Greater transparency on civil international transfers of nuclear materials and related equipment and materials through the IAEA’s voluntary Universal Reporting System.

Although the nuclear nonproliferation regime is facing severe tests and even threats to its credibility, the overall balance of events and new initiatives since the end of the Cold War is probably more on the positive than the negative side. Should the world’s political leaders succeed in speedily bringing the new conventions or treaties into operation, thus furthering the ultimate aim of the NPT of a world free of nuclear weapons, the balance would be even more favorable. The NPT, however, must stand as the basis of the international nuclear nonproliferation regime and should be the source of all subsequent conventions or treaties in the nuclear area. These measures may supplement the NPT but may never supplant it.

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<sup>3</sup> Offer made in writing by South Africa to the IAEA in November 1993.

### Special Nuclear Materials Cut-Off Convention

South Africa was probably the first state after the end of the Cold War to take an irreversible step toward a weapons fissile materials cut-off when operations of its pilot enrichment plant (the Y plant), in which HEU was produced for use as fuel in its SAFARI isotope production reactor as well as the nuclear deterrent devices, were terminated on February 1, 1990. Dismantling of the high-enrichment end of the cascade started immediately and was completed within a short period. The rest of the plant has been regularly inspected by the IAEA since November 1991, after South Africa acceded to the NPT and implemented a comprehensive safeguards agreement with the IAEA. Continued operation of the Y plant for HEU production only for SAFARI, although legally permitted by the NPT, did not make economic sense and would certainly have made South Africa's already arduous journey toward full acceptance within the NPT more difficult. It was therefore never seriously contemplated.

In September 1993, the United States joined others in a proposal for an international convention prohibiting any further production of HEU and plutonium for nuclear explosive purposes or outside international safeguards. The purpose of such a convention would be to strengthen the international nuclear nonproliferation regime and provide a constraint on the production of weapons-usable nuclear material through the additional weight of a binding international commitment. This initiative by the United States should be welcomed although only as a very first step toward a fully inclusive nuclear nonproliferation regime and toward full adherence by the NWS to their commitment to eventual, full, nuclear disarmament under the NPT.

The main undertakings of such a special nuclear materials (SNM) cut-off convention (COC) for weapons-usable materials should be a binding agreement by signatories to:

- Terminate operations and refrain from any further production of SNM intended for explosive devices.
- Refrain from providing assistance to any other state to produce SNM for the proscribed purposes.
- Accept nondiscriminatory international safeguards to verify the undertaking.

It is to be noted that the COC will not prohibit the production of HEU or plutonium for peaceful uses under international safeguards. Although the United States has committed itself to a "no reprocessing for peaceful uses" policy and would have preferred this policy to be universally

accepted, the reality of commercial reprocessing plants such as THORP, Le Hague, and the well-known Japanese energy security concerns has led the United States to accept the exclusion from the intended convention of HEU or plutonium production for peaceful purposes under safeguards.<sup>4</sup>

The major objection to the NPT is the differentiation it makes between the NWS and the NNWS, binding the latter while merely expressing pious hope with respect to the obligations of the former. All international instruments are, of course, products of their time, and during the Cold War, the chances of a nondiscriminatory agreement to limit nuclear proliferation on a global basis were minimal. Seen from a modern perspective, however, the major structural weaknesses of the treaty are its division of the world into a handful of "haves" as compared to an overwhelming majority of "have-nots," and the continued failure of the NWS to fulfill their obligations under Article VI of the NPT.

The COC offers an opportunity to reduce the NPT's discriminatory effect and to treat all participants alike from the time that it enters into force. Clearly, universal membership is a crucial element to ensure global commitment to its principles. This in no way understates the pressures on the NWS in deciding on their participation in the convention. That is why it is encouraging that the United States seems to now have accepted the principle of nondiscrimination, at least in this intended convention.

China, on the other hand, appears to presently oppose such a binding commitment as evidenced by its firm refusal at the April 1994 meeting of the Conference on Disarmament in Geneva to participate in the establishment of a special committee to negotiate a COC. The willingness of some NNWS to take such a binding and irreversible step appears equally uncertain. In April 1994, both India and Pakistan firmly rejected an approach on this matter by the US special envoy, Deputy Secretary of State Strobe Talbot. The position of Israel is equally unclear. A difficult and lengthy period of negotiations probably lies ahead before the establishment of a COC becomes possible.

#### *Verification Measures*

Verification of adherence to the provisions of the COC will have to be internationally credible and nondiscriminatory. The technical difficulty of achieving fully effective verification for cases in which, for example, a

<sup>4</sup> John Rich, "US Fissile Material Initiatives—Implications for the IAEA," *IAEA Symposium on International Safeguards*, Vienna, March 14–18, 1994.

small cascade for high enrichment of uranium can be operated clandestinely, should not be underestimated. Since it is unlikely that new machinery needs to be created for verification purposes, this implies IAEA involvement through existing or a new type of safeguards agreement. Openness and transparency will have to be sought through appropriate wording in the convention, but such a commitment to transparency will still depend on the political will of states party to the treaty.

#### *Types of Facilities Covered by the Convention*

Although the convention will focus on operational facilities for the production of HEU and the separation of plutonium, it cannot be limited to these if it is to achieve international credibility. Other facilities that have to be included are:

- Unsafeguarded enrichment facilities that presently produce only low-enriched uranium (LEU) but that could be, or even have been in the past, converted to HEU production. A good example of such a dual purpose plant was South Africa's Y plant. Although primarily intended for HEU production for SAFARI fuel and the nuclear devices, this plant was switched to LEU production between June and December 1986 for the first four locally produced lead test assemblies for the Koeberg power station. It is open to question whether *any* unsafeguarded enrichment or reprocessing facility could be excluded—probably not, if the convention is to be fully effective. This question alone will require some very careful negotiation when the convention is drafted.
- Unsafeguarded and shutdown enrichment or reprocessing projects. It is inconceivable that facilities that could secretly be restarted for weapons fissile materials production in the future could remain undeclared or outside the scope of such a convention. South Africa's Y plant is a typical example of such a facility. Although this plant ceased operations on February 1, 1990, and decommissioning was started immediately, it was nevertheless included in South Africa's initial declaration of nuclear materials and facilities after acceding to the NPT on July 10, 1991. This plant is being further dismantled fully under the safeguards agreement with the IAEA.
- Plants utilized for the regular recycling of weapons plutonium to chemically remove unwanted decay products, although they may not strictly speaking be utilized for new weapons plutonium production. The international community will have to be satisfied that no new production of unsafeguarded weapons plutonium is

secretly undertaken in such facilities. The problem is compounded when such facilities are dual purpose and are also utilized for plutonium production for peaceful purposes under the COC. The application of safeguards under the COC during production campaigns of weapons plutonium recycling will be very difficult and may render safeguards ineffective under the COC.

### *Scope of the Convention*

The point above on historical facilities immediately raises the question of whether this convention could redress one of the major deficiencies of the NPT. The NPT and its INFCIRC/153 type of safeguard agreements only look *forward* from the date of accession to the NPT. The declared inventory of nuclear materials and facilities under the safeguards agreement is, practically, a "snap-shot" in time and does not cover previous or historical projects, programs, or facilities, or historical flows of nuclear materials.

The case history of South Africa's entry into the NPT has highlighted this particular problem in the treaty, and a similar situation should be avoided from the start in drafting the COC. It has already led to the inclusion of such a "historical revelation of projects and programs" clause by signatories in the draft treaty of an African nuclear weapon free zone. This may, of course, be a very delicate point in some NWS and in states—such as India, Pakistan, and Israel—who are still outside the NPT. Ignoring this problem, however, will not make it disappear and will, in the end, be to the detriment of the aims of the convention.

Although the SNM cut-off convention is intended to place a cap on further production of weapons fissile material and is, therefore, per definition only forward-looking, the completeness of the inventory of declared facilities at this starting point will have to be ascertained to the satisfaction of the international community. This will almost automatically require some delving by the IAEA into the past. If this does not become possible within the COC, the IAEA's task of verifying this convention may be very difficult. The move by the international community from a position of "trust" to "trust but verify," is a necessary outcome of events in Iraq and North Korea and will also have to underpin the COC.

For this purpose, some form of guaranteed additional access by the IAEA—additional to that foreseen by INFCIRC/153 type agreements—should be carefully considered. Elements of challenge inspections, as outlined by the Chemical Weapons Convention, could be used to allow managed access. Special inspections as presently used in type 153 agreements

are a recipe for confrontation, as events in Iraq and North Korea have borne out, and should be avoided. In turn, the IAEA would have to guarantee the absolute maintenance of the confidentiality of information gained during such access. It may well be that present IAEA practices and procedures concerning the confidential treatment of information will have to be significantly strengthened.

### Which States should be Members?

Potential signatories of the special nuclear weapon materials cut-off convention fall into three groups: NNWS already party to the NPT, NNWS still outside the NPT, and NWS now all parties to NPT. Implementing the convention in the latter two groups of states will provide particular challenges.

The implementation of verification measures in NNWS already party to the NPT should present no problems that have not already been experienced within the NPT. These states should already comply fully with the aims of the convention. The existing INFCIRC/153 type of safeguard agreements should suffice; they even exceed the requirements of the new convention in safeguarding all the HEU and plutonium stockpiled before the new convention comes into force. While problems such as with Iraq and North Korea would, therefore, not be any different even within the new convention, it should be possible, with hindsight, to include pre-emptive provisions in the COC to deal with them. Ideally, this could extend to undertakings by signatories of the COC of full openness and transparency, thereby giving the IAEA virtually a guaranteed freedom of access equal to visit anywhere, anytime.

Do NNWS already parties to the NPT need to become signatories of a COC? The answer is obviously yes, even if only as a token of universal acceptance of the aims of the convention. Without NNWS already parties to the NPT, the COC would have as members only NNWS still outside the NPT, such as India, Pakistan, and Israel, and the NWS. This might lead to non-NPT states claiming a special status somewhere between NNWS and a *de jure* NWS. This should be avoided.

Should the new convention come into force, strong international pressure probably will be exerted on these states to accept, as a first step, limitations on vertical proliferation. They will not be able to argue that the agreement is discriminatory, nor will they easily be able to justify expanding their nuclear weapons capabilities in the new world of the

1990s. A number of difficult questions, however, will have to be dealt with upon the implementation of this convention in these states:

- Will signature of this convention give these states recognition of a quasi-NWS status? This should be strongly guarded against, as it may cause irreparable harm to the NPT. The NPT, even with its deficiencies and imperfections, must remain the cornerstone of nuclear nonproliferation.
- Should these states be allowed to "bargain" themselves into such a convention through bilateral or multilateral nuclear arms reduction negotiations with one or more of the superpowers? This surfaced, reportedly, with India at the recent Conference on Disarmament in Geneva during April 1994.<sup>5</sup> This should, likewise, be dealt with carefully not to give these states a *de facto* NWS status.
- Should verification of this convention in these particular states be carried out by any organization other than the IAEA? This could imply instruments such as a specially created bilateral commission between two neighboring states with no international involvement. Given the sensitivity of some states in seeing this convention as the "thin edge of the wedge" to eventually force them into the NPT, this may become an issue. Even this should be strongly resisted. The IAEA is the agency set up by the international community for verification measures on nuclear nonproliferation, and it should be fully utilized for this purpose. At most, a tripartite or quadripartite arrangement (as in South America) with the IAEA as one of the parties could be accepted. This implies that a safeguards agreement such as the INFCIRC/66 type or its equivalent be made applicable on all the operating and even nonoperating or shut-down facilities, but excluding HEU or plutonium inventories that were produced before the convention came into force.

HEU or plutonium that is still produced under this convention must be under safeguards and intended for peaceful uses only. This may imply duplication of storage facilities by the state concerned into two distinct, controlled areas, one under safeguards and the other unsafeguarded. "Swapping" of material between these two areas should not be possible and should be addressed in the relevant safeguards agreement.

<sup>5</sup> View put forward by an Indian nongovernmental delegate to the Conference, "The Dynamics of Proliferation: Developing Weapons of Mass Destruction," organized by the Matthew Bridgeway Center for International Security Studies of the University of Pittsburgh, held in Pittsburgh on March 16 and 17, 1994. This same view was also recently presented by the Indian delegation to the Disarmament Conference in Geneva, April 1994.

Although it is generally accepted that the above issues may be sensitive and could lead to unique proposals, most NNWS within the NPT, especially South Africa, will watch very closely for preferential treatment being applied to these states. South Africa followed the NPT route without any preconditions and would expect the same to apply to other countries. Although it is accepted that we do not live in an ideal world, the ideal approach to achieve the aims of this convention would still be via the NPT with full adherence to the aims of this treaty by both NWS and NNWS alike.

### The NWS

The key to acceptance of this cut-off convention by the NNWS still outside the NPT must surely lie in its demonstrated universality. This will pose certain challenges to the implementation process within the NWS. Some of these have been briefly touched on earlier. Other issues include placing NWS facilities under safeguards and the withdrawal of weapons-usable material from safeguards.

#### *Facilities Placed Under Safeguards*

NWS are not obliged under the NPT to place any of their facilities under safeguards. Some NWS, such as the United States, have voluntarily accepted safeguards on some of their facilities, with the exception of those directly involved with defense work. Historically, the IAEA has typically selected between 1 and 2% of the 230 nuclear facilities offered by the United States for safeguarding. Due to budgetary constraints within the IAEA, however, even this token gesture by the United States had to be abandoned and currently no US facility is under active IAEA safeguards.<sup>6</sup>

For the COC to achieve any measurable degree of acceptance and international credibility, such token safeguards measures within the NWS will not suffice. The convention will have to bind all parties, including the NWS, to a firm and irreversible obligation to place their applicable facilities under permanent safeguards. The IAEA, on the other hand, will have to exercise its safeguards function on these facilities in a visible and credible way, including regular reporting to its Board of Governors and the General Conference. To enable it to do so, member states may have to accept significant budgetary and manpower increases of the IAEA.

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<sup>6</sup> T. S. Sherr, "The US Nuclear Regulatory Commission's Program for International Safeguards," *IAEA Symposium on International Safeguards*, Vienna, March 14-18, 1994.

### *Withdrawal of Weapons-Usable Material from Safeguards*

Although the COC will not cover weapons fissile material produced before it comes into effect, any weapons-usable material produced thereafter will have to be for peaceful purposes only and will have to be placed under permanent safeguards.

The present type 153 safeguard agreements that both the NWS and NNWS, as parties to the NPT, have with the IAEA, however, allows the withdrawal of nuclear materials from safeguards for use in a nonproscribed military activity (e.g., submarine propulsion) upon a commitment by the state to the IAEA that "... the material will be used only in a peaceful nuclear activity and will not be used for the production of nuclear weapons or other nuclear explosive devices."

Under the NPT, the ongoing verification of such an undertaking by NWS (or NNWS) upon withdrawal of weapons-usable material from safeguards is not called for. Under the COC, however, undertakings of this nature will have to be verified on an ongoing basis by agreement with the IAEA if international credibility is to be achieved. The possible misuse of this "withdrawal option" under the NPT by NWS (or NNWS), to supplement inventories of weapon materials in a clandestine manner, within the COC will have to be prevented. This implies an amendment to the existing type 153 safeguard agreements, a new type of safeguards agreement, or a specific clause to this effect within the COC.

### **Excess Weapons Fissile Materials**

Although the cut-off convention as currently envisaged will specifically not cover weapons fissile materials produced *before* the date the COC comes into effect, the question remains of what should happen to the very significant quantities of previously produced weapon materials that are not needed for defense requirements. The United States has taken the lead among the NWS by beginning a process that will lead to placing under IAEA safeguards all *excess* US fissile material. (Initial quantities of US plutonium scrap to be safeguarded, are reportedly about 7 metric tons.<sup>7</sup>) The United States intends to cooperate closely with the IAEA to establish inspection measures to provide assurance to the international community that this material will not be used again in nuclear weapons. This step by the United States is to be commended. It promotes

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<sup>7</sup> *Nucleonics Week*, April 14, 1994, p. 1.

nuclear nonproliferation in general, and it strengthens the role of the IAEA. The proposed COC could be adapted to make allowance for existing SNM stockpiles of NWS not required for defense purposes and for those of the NNWS who are still not prepared to accede to the NPT. This may not be the best alternative but it is one that is worth exploring in the interest of nonproliferation.

South Africa was the first and is still the only country in the world that has taken the step of placing all previous weapons HEU under permanent safeguards by the IAEA; it did so as a result of accession to the NPT. South Africa's intention to enhance international confidence in its storage and use of this material may serve as a guideline for the future.

This HEU of South Africa will be utilized in the SAFARI reactor for fuel and HEU target material for large-scale medical Mo-99 isotope production, single crystal silicon irradiation for semiconductor manufacture, and the coloring by irradiation of topaz and other semiprecious stones. Commercial contracts of all of these applications are being processed at present, and for that reason the power output of the reactor has recently been increased to 10 MW and will be increased to 20 MW in the near future. This HEU is stored in a vault that is sealed by the IAEA and is inspected by the agency on a biweekly basis. Furthermore, the vault has surveillance cameras and complies fully with the requirements of the International Convention on the Physical Protection of Nuclear Materials, of which South Africa is a signatory.

Although international concerns on the proliferation risk posed by this material are not necessarily shared, these concerns are well understood by South Africa and are being addressed, together with the IAEA, by considering the possible further strengthening of safeguards on this material. These measures, as a confidence-building exercise, could go far beyond the requirements of the IAEA's safeguards agreement, and exploratory discussions with the IAEA have already been initiated. They could include:

- Special on-line surveillance systems coupled to the IAEA in Vienna.
- Peer reviews of security measures applied to the storage vault.
- A "two-key" type of physical control system to allow material movement only in the physical presence of a specified representative. This already occurs to a large extent with South Africa's HEU. Due to the very frequent inspections of the vault by the IAEA, material withdrawal for use in SAFARI is organized to coincide with these inspection visits.

Finally, South Africa has also made an offer to the IAEA that, should the concept of an international "bank" for plutonium or HEU ever come into being (finding a host country is probably the biggest stumbling block), South Africa would be prepared to consider the deposition of its HEU to such international storage, provided subsequent access for peaceful purposes is assured.

### **Added Responsibilities of the IAEA**

Recent events in the nuclear nonproliferation regime, together with the added responsibilities likely to be assumed by the IAEA, such as the cut-off convention, the safeguarding of excess weapons fissile material, and a comprehensive test ban, could strain its already stretched resources to the breaking point. Whereas the IAEA spent about US \$2200 per significant quantity (SQ) of nuclear material for the application of safeguards in 1981 (at current prices and exchange rates), this has dropped by as much as 60% to only US \$850 per SQ at present.<sup>8</sup> Although some of this decrease is probably due to greater effectiveness in the application of safeguards as well as a volume-unit-cost effect, concern that the integrity of the system may become compromised owing to financial constraints should not be ignored.

The offer by the United States to increase its own contributions to the IAEA to cover costs of safeguarding its excess weapons fissile material sets a valuable precedent. These additional costs may be substantial and have been estimated at about \$80 million per annum for safeguarding nearly all ex-weapons and civilian nuclear materials of the United States. Countries experiencing economic difficulties, such as Russia or the newly independent states of the former Soviet Union, may feel unable to do the same. If so, such confidence-building measures are unlikely to become universal very soon. An interim financial solution will have to be found. Ideally, an internationally agreed upon levy on the dismantling of nuclear weapons and the subsequent conversion of the nuclear material to commercial use could be considered for strengthening the IAEA's safeguards budget. It seems to be a great pity that now, after the end of the Cold War, real progress in the area of nuclear nonproliferation may become hampered by lack of financial resources. This should be a high-priority agenda item with the Board of Governors and the General Conference of the IAEA in the near future.

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<sup>8</sup> *Nucleonics Week*, February 3, 1994, p. 14.

### Conclusion

Many real and very delicate issues of general concern will have to be addressed in the drafting and subsequent implementation of an international convention on the cut-off of special nuclear materials intended for weapons use. Given the political will of all parties to address these issues in an open and transparent way and to find nondiscriminatory solutions, there is every reason to believe that such a convention will contribute significantly to a permanent reversal of the nuclear arms buildup in many states during the Cold War. International trust and confidence cannot be achieved by unilateral commitments of single states, such as South Africa alone, or by a group of states, such as between Argentina and Brazil, but, in the end, will depend on a fair and inclusive relationship based on universal reciprocity and mutual understanding.

The long held ideal of reducing and eventually eliminating the nuclear arsenals of the world, as embodied in Article VI of the NPT and so clearly beyond reach until very recently, may come a small step closer to reality through the cut-off convention by placing a cap on the production of further weapons fissile materials. The leaders of the world have been presented with an opportunity to demonstrate real statesmanship toward a safer world for all its people. This opportunity should not be allowed to lapse.

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## The UK View of NPT Renewal: Problems and Prospects

*J. Brian Donnelly\**

When I last spoke on the subject of the Nuclear Non-Proliferation Treaty (NPT) to an audience at Rhodes House in Oxford, I was taken to task by a distinguished former Minister and Foreign Affairs spokesman for the Labor party, Lord Kennett, for suggesting that the conclusion of the NPT in 1968 represented the beginning of the nonproliferation and disarmament world as we now know it. Lord Kennett quite rightly pointed out that the issue of nonproliferation had much longer and deeper roots.

As someone who is perhaps by temperament more of an historian than a political scientist, this set me to thinking about how this subject might have been addressed in the past. My starting point is somewhat arbitrary, but 850 years ago, in 1139, Pope Innocent II outlawed the crossbow as being "hateful to God and unfit for Christians." One hundred and fifty years later the subject of concern would have been the longbow, which was a particularly British weapon. The English co-opted Welsh bowmen and used them to fight first the Scots and then the French. The battle of Falkirk Woods in 1298 demonstrated the overwhelming superiority of the longbow over the crossbow. Its rate of delivery was 3-5 times that of the crossbow, and it had the ability to penetrate a four-inch piece of oak or steel armor. It was to prove decisive in the Hundred Years War.

Had we been meeting 150 years later, following the fall of Constantinople in 1453, the subject would have been the destructive fire-power of

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the cannon, which the Ottomans had used to full effect for the first time. Two hundred years ago, we might have talking about the way in which the rifle had altered warfare. Invented in 1470, the rifle had languished for 300 years having also been banned by the Church as a "weapon of the devil" and found to be too expensive, heavy, and difficult to load. But a technological breakthrough produced the "Kentucky" rifle, which was used by American riflemen to devastating effect against British muskets at the Battle of Saratoga in 1777.

By the end of the last century, we would have turned our attention to the machine gun. In 1898, Kitchener had used the Maxim machine gun to horrific effect at the Battle of Omdurman. Winston Churchill, who was present, reported twenty thousand Sudanese dead. Experience of the First World War was to confirm the lethality of this weapon, and it is sobering to think that probably more have been killed in war by the machine gun than by any of the weapons of mass destruction that preoccupy us today.

My point in making this short historical detour is to underline the risk that, if we do not succeed in extending the NPT, the weapon system that preoccupies us here today—with all the peculiar devastation and horror it can inflict—may become a commonplace weapon tomorrow. If there is a lesson from the history of warfare, it is that, as mankind has developed scientifically and technologically, so too have the weapons systems we have used against one another. The NPT represents, above all, an attempt to check this particular strand of evolution. It is not a perfect instrument; it may not be the best that could be devised, but it is one that we have in place, and one that is working. It is against this background that we should examine its imperfections.

### The Problems

What are the difficulties that we face? The implicit deal at the heart of the NPT was that non-nuclear weapon states undertook not to acquire nuclear weapons, while the nuclear weapon states undertook to pursue negotiations in good faith on effective measures relating to ending the nuclear arms race, nuclear disarmament, and a treaty on general and complete disarmament. In addition to this, the non-nuclear states were guaranteed the right to pursue peaceful uses of nuclear energy, and to transfer technology on reasonable conditions.

It is now something of a cliché to say that the NPT is the cornerstone of the nuclear nonproliferation regime. But the British Government

firmly believes that the treaty has created an indispensable framework of reassurance for the widespread use of nuclear energy for peaceful purposes as well as a framework for successful results in the fields of nuclear arms control and disarmament. Without a durable NPT, it is questionable whether these results could be sustained. Our clear policy therefore is to work for the indefinite and unconditional extension of the NPT in 1995.

But, that said, we recognize that the NPT has not yet fulfilled all the hopes of its creators. Among the parties to the treaty, four main problems are raised:

- The treaty still has not attracted universal support.
- It has suffered from compliance problems.
- Not enough has been done to promote peaceful uses of nuclear energy.
- Insufficient progress has been made toward nuclear and general disarmament.

As we approach 1995, it is important to face up to these problems and to develop policies to deal with them.

### *Universality*

The NPT is the most widely supported arms control treaty ever. Currently, 164 states are party to it, and it continues to gain new adherents—the most recent being Kazakhstan and Georgia.

Because the treaty has established an international norm against nuclear proliferation, its influence extends even beyond its parties. We welcome, for example, the recent moves by Argentina, Brazil and other Latin American countries to bring the Treaty of Tlatelolco fully into force. We hope this will eventually lead to all Latin American countries becoming parties to the NPT itself. In this connection, I was greatly heartened in April 1994, when at a meeting of the Nuclear Suppliers Group in Madrid, Argentina took its place as a full member for the first time and reaffirmed its intention to accede to the NPT by 1995. It is significant that South Africa was also present in Madrid as an observer, with the expectation of joining the Nuclear Suppliers Group in the course of this year.

There are important absentees. The refusal of India, Pakistan, and Israel to accede, and the question mark over the willingness of Ukraine to do so represent particular challenges. It may be unrealistic to expect the first three to accede prior to the 1995 NPT Review and Extension Conference. The political problems in the Middle East and South Asia

are acute and deeply rooted. Accession to the NPT is only likely to be agreed as part of wider regional security negotiations, supported as necessary by the international community. The nuclear issue in Israel will eventually be addressed as part of the Middle East peace process. The United States has recently relaunched its initiative to persuade India and Pakistan to enter regional security negotiations in which nuclear issues would be on the table. The United Kingdom supports that and has made clear its willingness to participate in such negotiations. As part of these negotiations, it is reasonable to ask whether the nuclear option, which these states seek to retain, genuinely enhances their security, or whether it aggravates their problems and threatens the stability that they wish to achieve. Obviously, we shall try to persuade them that the latter is closer to the truth.

The case of Ukraine is standing proof of the old adage that prediction is always difficult, particularly about the future. Ukraine repeatedly stated its intention to accede to the NPT, but the Rada (the Ukrainian parliament) has repeatedly shown reluctance to do so. Whether the effect of elections will ease the process is difficult to say. The United Kingdom has been working hard with the United States and Russia to meet the various concerns that the Ukrainians have raised. As part of this, we have indicated a willingness to provide a common security assurance to Ukraine, together with the United States and Russia, when Ukraine accedes to the treaty. We wait to see whether this will be enough.

### *Compliance*

As for compliance problems, I will not dwell on Iraq, save to say that it has been a salutary shock for all of us and has lead directly to the reinforcement of export controls throughout most of the major nuclear suppliers. This is most evident in the new dual-use regime of the Nuclear Suppliers Group. It has also lead to significant improvements in the safeguards system of the International Atomic Energy Agency (IAEA). The British Government is committed to both.

More recently we have the challenge to the integrity of the NPT posed by North Korea's failure to meet its obligations under its safeguards agreement with the IAEA. The negotiations over the last twelve months with North Korea have not yielded a satisfactory outcome.

There are those who believe strongly that the United States, as the principal interlocutor of the North Koreans, has not been tough enough, and that the international community should, collectively, have taken

firmer action. The British Government recognizes the frustration of those who argue this case, but does not subscribe to this criticism. The compliance problem is very serious; its implications should not be underestimated. If compliance cannot be ensured, faith in the NPT risks being eroded. It is therefore vital that we support the IAEA in this issue, as we support the United Nations Special Commission in Iraq. But, in the case of Korea, we have judged that we can only move as fast as the regional powers are prepared to support. We also have the singular difficulty of anticipating North Korean behavior. The death of Kim Il Sung has not helped in this regard.

It is better to keep a foot in the door and to sustain the pressure to push it wider than to have it slammed in our faces. But any final settlement of the issue must include the full transparency of North Korea's past, present, and future nuclear programs so that no other NPT parties can point to special treatment and seek similar dispensation for themselves. We cannot afford to give the impression that the terms of the NPT and its associated safeguard agreements represent an *à la carte* menu from which parties can make a choice.

We should not despair of the NPT because of these compliance problems. The large mass of parties are fulfilling their obligations in good faith. The international community is taking firm action both to deal with the problems that do exist and to lessen the prospects of similar problems occurring again. This is only possible because of the NPT and the framework it provides for pursuing these matters. The answer to the problem of compliance is not to decry the utility of the NPT; it is to strengthen its monitoring and verification regime and to support the work of the IAEA in implementing it. That is firm UK policy.

### *Peaceful Uses*

A third type of criticism of the NPT is that it has not done enough to promote the peaceful uses of nuclear energy. It is undeniable that the application of nuclear energy for peaceful purposes has not proved to be the panacea that some in the 1960s believed that it might be. But it is hardly fair to place the blame for this at the door of the treaty. It reflects a reappraisal of the economic case for nuclear power.

What the treaty and associated IAEA safeguards have done is provide the framework of reassurance, which is essential to international trade in nuclear materials and equipment for peaceful purposes. Without this framework, international cooperation in this area would be far more difficult than it is today. Indeed it is hard to see how it would exist at all.

A related criticism is that the additional conditions imposed by the Nuclear Suppliers Group run counter to the spirit if not the letter of Article IV of the treaty. The Nuclear Suppliers Group does not believe this to be the case, but acknowledged in April 1994 the sensitivity of many countries on this score and agreed on a new outreach program designed to increase the transparency of the working of the group and to reassure countries with legitimate nuclear programs that they will not be treated unfairly. The example of many highly industrialized countries demonstrates that neither safeguards nor export controls need stand in the way of thriving nuclear power programs. Nor are they expensive; on the contrary, they are a very small price to pay for the reassurance they provide.

#### *Arms Control*

The fourth and perhaps most prominent criticism of the treaty by some of its adherents is that there has been inadequate progress toward the NPT's aspirations for nuclear and general disarmament; and, in particular, that the nuclear powers have failed to implement their obligations under Article VI.

It will come as no surprise when I say that we look at Article VI in a different light. The truth, surely, is that it was the NPT that created the political framework for all the arms control efforts of the last 25 years, particularly the nuclear arms control efforts. It was no accident, for example, that the United States and the then Soviet Union announced their intention to begin bilateral talks with regard to their nuclear weaponry on the very day the NPT was opened for signature. It is undeniable that progress since then has seen many alarms and excursions. However, in the last few years, we have seen the fruits of these efforts and of the Cold War's end.

By comparison with the situation in 1968 when the NPT was signed, the changes in the nuclear balance in recent years have been truly astonishing. The Intermediate-Range Nuclear Forces and the Strategic Arms Reduction Treaties are being implemented, and we can look forward to the reduction of the stockpiles of the two superpowers to a fraction of what they were in recent years. Can it really be argued that this is not substantial progress or that it would have been possible without the NPT?

The United Kingdom has always maintained only the minimum strategic nuclear deterrent required for its security needs. The United Kingdom did not depart from that policy at the height of the Cold War, and will not depart from it now. The level of the UK deterrent has been

answer a confident "yes" to that question. Some countries will suggest a shorter or conditional extension, but (and you may regard me as a cock-eyed optimist) I take heart from the fact that these countries do not rule out indefinite extension *a priori*. And, moreover, countries such as Italy and Germany, which strongly opposed an indefinite treaty in 1968, are now among the strongest supporters of indefinite extension. So I believe indefinite extension remains a realistic and attainable aspiration, and one from which we should not be deflected.

### Conclusion

There may be a tendency to become preoccupied with the alternatives to indefinite extension of the NPT. It is true that the arguments for alternatives or "fall backs" have the seductive charms that are always associated with soft options. The siren song calling for "twenty-five more years" should be ignored. We should not settle for second best. The Nuclear Non-Proliferation Treaty continues to reflect the common interest of all of us. Its value and its credibility are higher now than when it was signed in 1968. Future events are unlikely to diminish its importance. In 1995, the treaty can be extended indefinitely, and British policies on nonproliferation between now and then will be directed to this end. Whenever we think of the difficulties that lie before us, we should also remember the depressing historical progression that led us to this juncture, and the dreadful prospect if we fail—I am sure we will not.