

NUCLEAR NON-PROLIFERATION: REVISITING THE BASICS

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In little more than half a century, the age of nuclear weapons has witnessed the manufacture of more than 125,000 nuclear warheads -- most packing a greater explosive force than the "Little Man" device used at Hiroshima. Nuclear weapons testing has resulted in over 2000 nuclear detonations - in the atmosphere, in space, underwater and underground. Despite the ending of the Cold War, non-proliferation and disarmament challenges abound in all categories of "weapons of mass destruction" -- nuclear, biological and chemical -- and one enduring legacy of the Cold War is a glut of weapon-usable fissile material, in the form of high enriched uranium and plutonium. And while we have not reached the predictions of the 1960s -- of an eventual 15 to 20 nuclear-weapon States -- the unfortunate reality 40 years later is that at least eight countries are believed to possess nuclear weapons, and the goal of a nuclear-weapon-free world remains elusive.

The 1970 Treaty on the Non-Proliferation of Nuclear Weapons (NPT), with 188 States party, represents the cornerstone of the global nuclear non-proliferation and disarmament effort -- and despite recent challenges, it has never been more relevant than it is today. But if we are to move forward, I believe it is essential that we revisit a number of the basic assumptions and features of the



existing regime, and consider a number of new approaches.

Addressing the Asymmetry of "Have's and Have-Not's". A key assumption at the core of the NPT was that the asymmetry between nuclear-weapon States and non-nuclear-weapon States would gradually disappear. Different interrelated commitments were undertaken by two distinct groups of States: for the five nuclear-weapon States -- that is, States that had manufactured and detonated a nuclear weapon before 1 January 1967 -- a commitment to divest themselves of those weapons through "good faith" negotiations; and for all other States, a commitment not to acquire nuclear weapons, and to accept IAEA verification of all their peaceful nuclear activities, in return for access to peaceful nuclear technology.

But the record on upholding those commitments is mixed. Global access to the benefits of

peaceful nuclear technology -- related to energy generation, human health, water management, food production, and environmental restoration -- has indeed made significant progress, through the technology transfer efforts of the IAEA and others.

And the nuclear non-proliferation regime has overall been successful -- but with some shortcomings which I will address later. Progress has also been made on the nuclear disarmament front, but much more remains to be done. Nuclear disarmament strategies have for the most part focused on the negotiation of bilateral nuclear arms control agreements between the holders of the two largest nuclear arsenals, and a few multilateral agreements designed to curb the quantitative and qualitative development of nuclear weapons.

With the end of the Cold War as an impetus, some progress was made in the early- and mid-1990s, but the process unfortunately slowed in the latter part of the decade. While the START I Treaty, which entered into force in 1994, made significant cuts in the level of deployed strategic weapons, START II, signed in 1993, has been abandoned.

Efforts to end nuclear weapons development achieved

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an important milestone with the conclusion of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) in September 1996. But the pace of progress has been sluggish among the 44 countries whose ratification is required for the treaty to enter into force -- and the rejection of the CTBT by the US Senate in 1999 was a distinct setback. Negotiation of a Fissile Material Cut-Off Treaty (FMCT) continues to languish in Geneva, more than seven years after agreement was reached on a mandate.

These problems can be traced in general to the continuing reliance on the doctrine of nuclear deterrence and the lack of an overall disarmament strategy. In some cases -- for example, the CTBT and the Biological and Toxin Weapons Convention -- progress has faltered in part because of perceived doubts about the credibility of the respective verification regimes. These regressions have led to stagnation in the disarmament process and have put a damper on hopes for further progress.

The 2000 NPT Review Conference, building on the package of decisions and resolutions that led to the indefinite extension of the NPT in 1995, resulted in a number of encouraging commitments, not least the "unequivocal undertaking" by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals. But a scant two years later, we have moved sharply away from those commitments, with a number of the "13 steps" toward nuclear disarmament -- such as "irreversibility," "START II, START III and the ABM Treaty," further "unilater-

al" reductions in nuclear arsenals, "increased transparency," "further reduction of non-strategic nuclear weapons," and "regular reports" on the implementation of Article VI of the NPT -- left without concrete follow-up actions and in some cases discarded.

This is not to say that there have been no encouraging signs. In mid-2002, the Russian and US Presidents signed a treaty to further reduce their deployed strategic nuclear warheads to 1700 and 2200, respectively, by the end of 2012, and agreed to remove additional unspecified amounts of fissile material from military use. And at their June 2002 Summit, the G8 Heads of State established a Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, and made a commitment to raise up to \$20 billion over the next ten years to fund, *inter alia*, the disposition of excess weapons-origin fissile materials.

But in every fundamental aspect, the asymmetry remains between what US President Kennedy referred to as the "have's and have-not's." Moreover, some nuclear-weapon States have reversed direction, by stressing the continuing value of nuclear weapons in defense of national security interests, including discussions of the feasibility of developing new types of nuclear weapons, and scenarios for the use of nuclear weapons against non-nuclear-weapon States.

In my view, the longer this asymmetry is perpetuated, the more it will become a threat to the very foundation of the non-proliferation regime. As the Canberra Commission stated a few years ago, the present situa-

tion "cannot be sustained, [because] the possession of nuclear weapons by any State is a constant stimulus to other States to acquire them." While it may be unrealistic to expect complete nuclear disarmament in the very near future, it is essential that incremental steps be taken by all parties, which would signal a willingness to reduce the volume of and dependence on nuclear weapons, in fulfillment of existing commitments.

A crucial step in moving towards nuclear disarmament will be to re-examine the longstanding doctrine of "nuclear deterrence." This doctrine remains deeply entrenched in the national security strategies of all the nuclear-weapon States, and continues to be relied on by many non-nuclear-weapon States, through the so-called "nuclear umbrella" arrangements, as an important feature of their security portfolio.

Indeed, irrespective of whatever deterrent effect nuclear weapons achieved during the Cold War, they are progressively losing their value as a currency of power -- particularly in preventing local conflicts and in dealing with threats posed by sub-national terrorist groups. Given that the only perceived legitimate use of nuclear weapons is for the ultimate survival of a State, nuclear-weapon States should at the very least be able to move faster towards bringing their weapons inventory to a bare minimum.

Strengthening the Verification Regime. The discoveries of a clandestine nuclear weapon programme in Iraq after the 1991 Gulf War made it painfully clear that the IAEA verification system, with its focus on declared nuclear activities and

its limited rights of access to information and sites, was not adequate for the IAEA to provide the comprehensive peaceful use assurances required under the NPT. This stark realization prompted the international community to significantly expand the IAEA's verification rights. These new rights were incorporated into a 1997 protocol additional to safeguards agreements, with a request for all States to subscribe to it.

For non-nuclear-weapon States with both a safeguards agreement and an additional protocol in force, the IAEA is now able to provide credible assurance not only about the diversion of declared nuclear material but, equally important, about the absence of undeclared nuclear material and activities. Regrettably, however, many States have not taken the necessary steps to conclude the required safeguards agreements with the Agency, let alone the additional protocol: 49 non-nuclear-weapon States party to the NPT are still without safeguards agreements, and since 1997, when the Model Additional Protocol was adopted, only 28 such additional protocols have entered into force. Clearly, more work needs to be done to ensure that States take their non-proliferation obligations more seriously; however, I should note that some non-nuclear-weapon States are hedging on their willingness to conclude required additional protocols to their safeguards agreements, by pointing to the lack of progress on nuclear disarmament. Naturally, without safeguards agreements, the Agency cannot perform any verification activities or provide any assurance of non-proliferation. And for

States without additional protocols, IAEA rights of access remain essentially the same as in pre-Iraq days. For the IAEA to provide the required assurances, it must have the required authority.

It is clear that the success of the IAEA verification regime will depend heavily on achieving universal adherence to the required safeguards agreements and additional protocols by all non-nuclear-weapon States party to the NPT. The Agency must also have adequate financial resources; despite our growing responsibilities, the safeguards budget, as well as the rest of the Agency's budget, for that matter, has been frozen for over a decade-and-a-half as the result of a blanket zero real growth policy imposed on all United Nations system organizations, irrespective of their responsibilities, priorities or modes of operation. This situation, if continued, will inevitably undermine the Agency's ability to conduct credible verification. Fortunately, recently, a number of Member States - including the USA - have recognized the importance of increasing IAEA resources, and are now advocating such an increase.

The IAEA verification regime would also benefit from closer co-operation with Member States in the area of information sharing. Irrespective of what information States might hold relevant to possible non-compliance with non-proliferation obligations, it is only through the IAEA that such information can be corroborated through inspection and conclusions drawn. The value of receiving timely information from States about alleged cases of non-compliance cannot therefore be

overemphasized. I can report that good progress is being made in developing a *modus operandi* for the Agency to receive relevant information in a timely manner, while protecting the confidentiality of information, on the one hand, and respecting the independence of the Agency, on the other.

Consistency in Addressing Non-Compliance. The aspect of non-proliferation that receives the most attention relates to compliance questions -- currently, the situations in Iraq and the Democratic People's Republic of Korea (DPRK).

Iraq. In a recent editorial to the Washington Post, I clarified what I see as the purpose and value of weapons inspections in Iraq. (*See box, page 7.*) The inspection activities that came to an abrupt halt in December 1998 had successfully thwarted Iraq's efforts to develop a nuclear weapons programme. We had neutralized Iraq's nuclear programme. We had destroyed, removed, or rendered harmless all its facilities and equipment relevant to nuclear weapons production -- mostly by the end of 1992. We had confiscated Iraq's weapon-usable material -- essentially research reactor fuel -- and by February 1994 had completed its removal from the country. And while we did not claim that we had absolute certainty, we were confident that we had not missed any significant component of Iraq's nuclear programme.

In December 1998, the IAEA and UNSCOM inspection activities in Iraq were brought to a halt, with a military strike imminent. While satellite monitoring and other analytical work has continued since that time, no remote analysis can replace

inspections, nor can it enable us to reach conclusions about what has occurred related to nuclear weapon development in Iraq in the intervening four years. The only way to establish the facts is through inspection.

With the adoption 8 November 2002 of Security Council resolution 1441, we have since resumed our inspection activities in Iraq and Hans Blix and I led an advance team of inspectors to Baghdad in late November. The success of inspections in Iraq will in my view depend on five interrelated prerequisites: (1) immediate and unfettered access to any location or site in Iraq, and full use of all the authority granted to us by the Security Council -- including the additional authority provided for in the new resolution; (2) ready access to all sources of information -- including timely intelligence information; (3) unified and unequivocal support from the Security Council, with the affirmed resolve to act promptly in case of non-compliance -- this, in my view, is the best support that inspectors could have and the best deterrence against non-compliance; (4) active co-operation from Iraq, with a sustained demonstration of its stated willingness to be transparent and to enable inspectors to fulfil their mission without any conditions attached; and (5) the preservation of the integrity and impartiality of the inspection process, free from outside interference, to ensure that conclusions are accepted as objective and credible by all parties. Efforts by national governments to infiltrate the inspection process are ultimately counter-productive, because they lead to the destruction of the very fab-

ric of the process, let alone its credibility.

I would hope and trust that, empowered with the appropriate authority and provided with the necessary information, inspectors should be able to verify effectively the disarmament of Iraq. In my view, the use of force should clearly be the last resort and not the first option. But regardless of how events unfold in the foreseeable future, inspections will be the key, in the long haul, to ensuring that clandestine efforts to develop nuclear weapons -- in Iraq or elsewhere -- are detected and thwarted. There is no certainty, for example, that a new regime in Iraq, democratic or otherwise, would automatically renounce unconventional weapons, if such renunciation were perceived to be inconsistent with its threat perception. It is essential, therefore, that we make every effort to see to it that inspection -- which is central to the entire nuclear arms control effort -- succeeds both in Iraq and everywhere else. This requires that we continue to learn from our past experience, that we refine the system, and above all that we continue to work together towards that goal.

DPRK. The DPRK acceded to the NPT in December 1985, but its safeguards agreement did not enter into force until April 1992, six years after its NPT accession. Shortly afterward, in 1993, the DPRK was declared by both the IAEA and the Security Council to be in non-compliance with its safeguards agreement. This is because the Agency has not been provided with the necessary access to information and locations to be able to verify that the DPRK

has made a complete and correct declaration of its nuclear material that is subject to Agency safeguards.

Our estimation is that the work required to verify the correctness and completeness of the DPRK's initial declaration could take up to three to four years, assuming full co-operation by the DPRK. In addition to being a basic obligation under the DPRK's safeguards agreement, this verification work is a prerequisite for the delivery of key nuclear components under the Agreed Framework between the USA and the DPRK -- delivery that could begin as soon as mid-2005. I have therefore continued to urge the DPRK to agree to the initiation of this verification process.

Recent information has suggested that, during the past few years, the DPRK has been working, in addition, on a programme to produce high enriched uranium. We have asked the DPRK to confirm these reports, and offered to discuss at a senior level these and all other issues relevant to their coming into compliance with their non-proliferation obligations, which require that all nuclear material in the country be declared and be subject to IAEA safeguards. (Among other developments in late 2002, the IAEA Board of Governors adopted a resolution that endorsed the Agency's ongoing efforts and urged full compliance by the DPRK.)

As you are aware, comparisons continue to be made between the different approaches adopted with respect to Iraq and the DPRK -- two countries in violation of their non-proliferation obligations. Various explanations have been advanced for

these differences in approach. Obviously, the two situations differ and are highly complex, and it is understandable that incentives and disincentives -- "the carrot and the stick" -- have to be used with differing emphases. However, I believe that while differing circumstances may necessitate asymmetric responses, in the case of non-compliance with non-proliferation obligations, for the credibility of the regime, the approach in all cases should be one and the same: zero tolerance.

Consolidation of the Regime. In parallel with the above, we should continue to explore pragmatic ways to strengthen the non-proliferation regime. A case in point is the approach to the three remaining countries outside the non-proliferation regime. In my view, we should not continue to treat these States only as "outsiders", but rather induce them to act as partners in the global effort to consolidate the non-proliferation regime and to make progress in nuclear disarmament.

A good example lies in the area of export controls. Both India and Pakistan continue to operate some nuclear reactors and related facilities that are subject to IAEA safeguards, yet -- due to export controls -- neither country is able to secure much-needed nuclear safety equipment and technology. Rather than focusing exclusively on a policy of denial, we must search for opportunities for engagement, through, *inter alia*, the application not only of sanctions but also of incentives. For example, in exchange for receiving nuclear safety assistance -- an exception foreseen under the guidelines of the Nuclear Suppliers Group (NSG) -- such

States might commit themselves to follow the NSG guidelines and to actively support the CTBT and FMCT.

Working on New Approaches to Security. My final theme relates to the fundamental issue of security. To understand how to move forward, I believe we must examine not only the symptoms but also the underlying causes -- the "drivers" and motivations that give rise to nuclear proliferation. Why, for example, is the Middle East an area of recurring proliferation activity, as opposed to, say, Scandinavia? Clearly, it is the situation of enduring conflict and tension that creates this potential. The same might be said of South Asia, another "hotbed" of proliferation concern.

In some regions, basic security concerns have been largely resolved -- through the "nuclear umbrella" arrangements to which I referred earlier and through regional arrangements and accommodations. And thus, in regions where security concerns have been addressed, there is little or no "demand" for weapons of mass destruction. But it should come as no surprise that regions facing a security deficit and unresolved conflict are also the regions with a continuing "demand".

In each of these problematic regions, the conflicts and proliferation concerns have been around for some time -- in some cases sheltered or ignored. In such a regional context, the possession by one country of weapons of mass destruction provides a clear stimulus for their acquisition by others. Thus, for each of these regions, discussions of regional security cannot be de-linked from the settlement of regional disputes

and must be addressed in parallel, in a comprehensive manner that takes into account the security concerns of all. A perfect security for one party may be a perfect insecurity for another.

One strategy currently emerging involves greater reliance on regional systems of security, like the one that has been developed in Europe. How effective these systems will be remains to be seen. However, in my view, the feasibility of moving forward -- not only on proliferation concerns but also towards meaningful cuts in current nuclear arsenals -- depends critically on our ability to develop credible alternative security strategies, strategies that do not include nuclear deterrence as a feature, strategies that are functional and upon which all States can rely with confidence.

To this end, there is an urgent need to re-energize the collective security system of 1945, as prescribed in the United Nations Charter, through a broader definition of the concept of threats to international peace and security, to encompass not only military threats but also threats that relate to the lack of good governance and the usurpation of people's sovereignty, to the desperate need for economic and social development, and to the denial of human rights. Equally important, there is an urgent need for Security Council reform to better reflect the changing realities of recent decades, and to enable the Council, through clearly defined "rules of engagement," not only to respond but also to prevent threats to international peace and security. Areas of reform could include: a functioning mechanism for the settlement of disputes -- including as

INSPECTIONS ARE THE KEY

As the chief nuclear inspector for ensuring Iraq's disarmament, I believe it is critical at this defining moment to make clear the purpose and value of weapons inspections in Iraq. Inspections by an impartial, credible third party have been a cornerstone of international nuclear arms control agreements for decades. Where the intent exists to develop a clandestine nuclear weapons program, inspections serve effectively as a means of both detection and deterrence.

From 1991 through 1998, the International Atomic Energy Agency, empowered by the U.N. Security Council with broad rights of inspection, succeeded in thwarting Iraq's efforts to develop nuclear weapons -- the most lethal weapons of mass destruction. As President Bush stated in Cincinnati on 7 October 2002: "Before being barred from Iraq in 1998, the International Atomic Energy Agency dismantled extensive nuclear weapons-related facilities."

We neutralized Iraq's nuclear program. We confiscated its weapon-usable material. We destroyed, removed or rendered harmless all its facilities and equipment relevant to nuclear weapons production. And while we did not claim absolute certainty, we were confident that we had not missed any significant component of Iraq's nuclear program.

The problem arose in 1998, when all inspections were brought to a halt, with a military strike imminent. While satellite monitoring and analytical work have continued since then, no remote analysis can replace inspections, nor can it enable us to reach conclusions about what has occurred in relation to nuclear weapons development in Iraq in the intervening four years. The best way to establish the facts is through the return of inspectors to Iraq.

After four years, the door to inspections has finally reopened, and we should be taking advantage of that opportunity. The success of inspections in Iraq -- in eliminating not only nuclear weapons, but also biological and chemical ones -- will depend on five interrelated prerequisites:

1. Full and explicit authority for inspection, which means immediate and unfettered access to any location in Iraq -- including presidential sites -- and practical working arrangements

for communication, transportation and other logistics to ensure that inspectors can operate safely and effectively.

2. Ready access to all sources of information, including the freedom to interview relevant Iraqi personnel without intimidation or threat of retribution to those individuals, and access to information from other states as well as information gained through aerial monitoring and other inspection activity.

3. Unified and robust support from the U.N. Security Council, with the affirmed resolve to deal promptly and energetically with any noncompliance or lack of cooperation on the part of Iraq. This is the best deterrence to ensure Iraq's compliance.

4. Preservation of integrity and objectivity in the inspection process. There must be a fair and impartial inspection regime, free of outside interference, to ensure that our conclusions are accepted as credible by all parties.

5. Active cooperation by Iraq, including a sustained demonstration by the government of its stated willingness to be transparent and to allow inspectors full access to carry out their mission. This effort could be further facilitated (and the inspection process shortened) if Iraq were to take the initiative -- not only with passive compliance, but also with active cooperation -- by, for example, coming forward with a full and "final" declaration of its weapons-related equipment and activities.

Concurrent with the inspections in Iraq, strong action should be taken worldwide to ensure the physical protection of nuclear material, with effective control of weapons-relevant exports and vigilant border monitoring to detect any attempts at illicit smuggling.

Regardless of how events unfold in the near future, inspections will be the key, over the long haul, to ensuring that clandestine efforts to develop nuclear weapons in Iraq or elsewhere are detected and thwarted.

I would make a twofold appeal: to the government of Iraq, to provide the absolute cooperation that the world is demanding; and to the international community, to give inspections a chance before resorting to other alternatives. -- *Essay by Dr. ElBaradei published in the Washington Post, 21 October 2002.*

appropriate the resort to international adjudication and arbitration; a smart system of sanctions for dealing with non-compliance, adaptable to different regimes and different situations; readily available and better equipped UN forces to contain and manage incipient disputes; and agreed limitations on the use of the veto power.

Conclusion. Notwithstanding the challenges I have outlined today, I continue to believe strongly in the contributions that the multilateral treaty regimes make in preventing further proliferation and use of weapons of mass destruction. It is worth recalling the words of General Omar Bradley, spoken virtually half

a century ago: "We've unlocked the mysteries of the atom and forgotten the lessons of the Sermon on the Mount. We know more about war than we know about peace." I trust that we will all continue to work together to prove that we have learned some lessons since General Bradley spoke those words. □