

THE NUCLEAR PROLIFERATION REGIME: THE WAY AHEAD

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by

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Article VI Forum: A Creative Initiative
Securing and Strengthening the NPT

Middle Powers Initiative and
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Introduction

No one who has seen the victims, the film footage or photographs of the aftermath of the destruction of Hiroshima and Nagasaki at the end of World War II can fail to be horrified by the devastation that was wrought by the use of nuclear weapons.

To date, Hiroshima and Nagasaki thankfully remain the only instances in which nuclear weapons have been used, and while it is difficult to speak of any good coming out of such ruin, it has always been hoped that the atomic bombing of Hiroshima and Nagasaki stand as constant reminders of why preventing the further use and proliferation of such weapons – and why nuclear disarmament leading to a nuclear-weapon-free world – is of utmost importance for the survival of humankind and planet Earth.

The International Atomic Energy Agency born out of President Eisenhower's "Atoms for Peace" vision, came at a time when the

horrifying consequences and images of Hiroshima and Nagasaki were still fresh.

Through its safeguards and verification system in support of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and other similar non-proliferation agreements, the IAEA has done a great deal of work to help stem the tide of nuclear proliferation, while ensuring that the benefits of the peaceful uses of nuclear energy are made available to all those who want them.

While the Agency can effectively verify compliance with non-proliferation undertakings, the value of these efforts can be better realized if they are reinforced by all other components of the nuclear non-proliferation and arms control regime, and accompanied by the political will and dialogue among concerned States to address underlying issues of security and confidence building with a view to achieving a system of collective security that no longer relies on nuclear weapons.

A world without nuclear weapons remains a far-off goal and the world continues to be burdened with nearly thirty thousand nuclear warheads. The Comprehensive Nuclear-Test-Ban Treaty has not entered into force, the negotiation of a global treaty on the verified production ban on fissile material for nuclear weapons has not started, and nuclear disarmament and non-proliferation commitments remain unfulfilled..

Despite these continuing challenges, there are symbols of hope and indicators of the path to follow – the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is almost universal, and nuclear-weapon-free zones cover all of the landmass of the southern hemisphere.

New Challenges

Recent events have placed the NPT and the nuclear non-proliferation and nuclear disarmament regime supporting it under unprecedented stress, exposing some of the inherent limitations of political commitment to abide by its obligations and responsibilities. The problem lies not so much in the NPT itself, but in the lack of full

implementation of non-proliferation and disarmament commitments undertaken under the Treaty and in the undermining of efforts to strengthened the Treaty's review process.

The implications of a failed 2005 NPT Review Conference, in the current context, is that this may pave the way for greater involvement and interventions by certain States acting coalitions or through the UN Security Council, on the grounds that the multilateral machinery has ground to a halt, the NPT does not work; hence given threats to international peace and security, such States might argue that there is no option but for the Security Council to take the necessary actions. Such an outcome would not be accidental but a result of some deliberate maneuvering.

Many may blame the States for “fiddling while Rome burns”, as they disputed procedural arrangements – but this would be inappropriate. The real fault lies elsewhere. Given the severity of challenges to the non-proliferation regime, it is instructive that only the Russian President sent a message to the Conference. None except Japan deemed it necessary to send a Foreign Minister to the Conference. The calls for action by the UN Secretary General and the IAEA Director General went unheeded, even though both clearly pointed to the challenges, the required responses and the costs of failure.

NPT Review Conferences have failed before but the Treaty has survived as a dynamic international legal instrument. Another failure will not kill the Treaty, nor should such a failure be allowed to become an excuse for some to act outside the norms of multilateral regimes, because the failure is not a failure of the institution or the forum, but a failure of political will, commitment and leadership.

It is a stark reality that it is not possible to negotiate and implement a *new* global nuclear non-proliferation treaty – any new such treaty would be an improvement on the present NPT – therefore the only practical option is to strengthen the integrity and authority of the NPT.

Fundamental differences of opinion remain on how to deal with these challenges and the ever growing menace to our survival. Should

we opt for diplomacy or for preemption? What are the relative merits of collective versus unilateral action? Is it more effective to pursue a policy of containment or one based on inclusiveness?

These are not new questions, by any measure. But they have taken on renewed urgency as nations struggle, both regionally and globally, to cope with an extended array of conflicts, highly sophisticated forms of terrorism, and a growing threat of weapons of mass destruction.

We need to revisit some of the basic assumptions and features of the current nuclear non-proliferation regime, and equally to consider new approaches to international security.

Vulnerabilities and challenges of the NPT regime

The NPT remains, and will continue to remain, the global anchor for humanity's efforts to curb further nuclear proliferation and achieve additional reductions in nuclear weapons leading to nuclear disarmament. Despite flaws in the implementation of the Treaty, there is no doubt that the NPT continues to provide important security benefits — by providing the assurance that, in the great majority of non-nuclear-weapon States, nuclear energy is not being misused for weapon purposes. Although the NPT is sometimes perceived as a Western project, its benefits extend across any North-South or East-West geopolitical divide. The NPT is also the only binding agreement in which all five of the nuclear-weapon States have committed themselves to move forward on effective measures relating to nuclear disarmament.

These realities have heightened awareness of vulnerabilities in the NPT regime: the acquisition by more and more countries of sensitive nuclear know-how and capabilities; the uneven degree of physical protection of nuclear materials from country to country; the limitations in the scope of the IAEA's verification authority — particularly in countries without additional protocols in force; the continuing reliance on nuclear deterrence; the ongoing perception of imbalance between the nuclear haves and have-nots; and the sense of insecurity that persists, unaddressed, in a number of regions, most worryingly in the Middle East and the Korean Peninsula.

In the past decade and a half, the international security landscape has changed. With the dissolution of the Soviet Union, the Cold War rivalry disappeared. But the failure to establish the once much vaunted 'new world order' – by effectively addressing security concerns that persisted after the disappearance of the bipolar world or emerged in its aftermath – has resulted instead in a sort of “new world instability”. Many ethnic and religious tensions, held in check during the Cold War, have erupted to the fore – and in many cases have turned into civil wars, further complicated by multiple protagonists from the outside.

Longstanding conflicts have also continued to fester, most notably on the Korean Peninsula, in the Middle East and in South Asia, with escalating tensions and in some cases increasing hostilities. Violence by sub-State actors has also risen to appalling new levels, and has resulted in the emergence of new types of conflicts that cannot easily be deterred by traditional means. An increasing polarization between the Western and Muslim cultures has emerged in the wake of September 2001 and July 2005. And while more than 30 States continue to be party to NATO or other alliances and explicitly depend upon nuclear weapons, many other countries continue to face a sense of insecurity because of these and other new security threats.

Rather than trying to understand these changes in the international security landscape and adapting to the new threats and challenges – and harnessing the opportunities afforded by an increasingly globalized world to build an equally global security system – the trend has been towards inaction or late action on the part of the international community, selective invocation of norms and treaties, and unilateral and “self-help” solutions on the part of individual States or groups of States. Against this backdrop of insecurity and instability, it should not come as a surprise to witness a continued interest, particularly in regions of tension, in the acquisition of nuclear weapons or other weapons of mass destruction. Four undeclared nuclear programmes have come to the fore since the early 1990s.

For the five countries recognized as nuclear-weapon States under the

NPT, their nuclear arsenals are increasingly becoming either a focal point for resentment or cynicism among the nuclear “have-nots”, or, worse, a model for emulation for States that wish to pursue clandestine WMD programmes, hoping that this will bring them security and enhanced status.

It is the height of irony that, in today’s security environment, the only actors who presumably would find the world’s most powerful weapons useful — and would deploy them without hesitation — would be an extremist group. A nuclear deterrent is totally ineffective against such groups; they have no cities that can be bombed in response, nor are they focused on self-preservation. But even as we take urgent measures to protect against nuclear terrorism, we remain sluggish and unconvinced about the need to rapidly rid ourselves of nuclear weapons.

Why? The answer is that the international community has not been successful, nor tried hard enough, to date in creating a viable alternative to the doctrine of nuclear deterrence as the basis for international security. Nuclear weapons will not go away until a reliable collective security framework exists to fill the vacuum. The aftermath of the Cold War should have served as the logical lead-in to such an effort. The resulting changes to the international security landscape have been obvious; it is only that we have not acted smartly to adapt to these changes.

Lessons learnt

Before discussing specific proposals for moving forward, I would like to focus on some of the lessons we at the IAEA have learned from recent experience in verifying undeclared nuclear programmes – mainly in Iraq, Iran, Libya and North Korea.

1. Verification and diplomacy, used in conjunction, can be effective

Perhaps the most important lesson is the confirmation that verification and diplomacy, used in conjunction, can be effective. When international inspections are given adequate authority, aided by

all available information, backed by a credible compliance mechanism, and supported by international consensus, the system works. The Iraq experience demonstrated that inspections – while requiring time and patience – can be effective even when the country under inspection is providing less than active cooperation. All evidence to date indicates that Iraq's nuclear weapon programme had been effectively dismantled in the 1990s through IAEA inspection and had not been regenerated since.

But inspections are only of value when the results are accepted in good faith and taken into account in future action. Unfortunately, the Iraq inspection process was not given the time required, nor were its findings given due recognition. It is true that the record and mode of behaviour of Saddam Hussein's regime did not inspire much confidence; but it is also true that we had not seen any clear and present danger involving resumption of prohibited nuclear activities, after months of intrusive inspection.

Inspections in Iran over the past years also have been key in uncovering a nuclear programme that had remained hidden since the late 1980s – and in enabling the international community to have a far more comprehensive picture of Iran's nuclear activities than at any time before. In September 2005, the IAEA Board of Governors found that Iran's many failures and breaches to comply with its NPT safeguards agreement constitute non-compliance, in the context of Statute Article XII.C; the history of concealment of Iran's nuclear activities, the nature of these activities, issues brought to light in the course of the Agency's verification of declarations made by Iran since September 2002 and the resulting absence of confidence that Iran's nuclear programme is exclusively for peaceful purposes have given rise to questions that are within the competence of the Security Council, as the organ bearing the main responsibility for the maintenance of international peace and security. The Board will address the timing and content of the report required under Article XII.C and the notification required under Article III.B.4.

In February 2006, the Board in its resolution requested the Director General to report to the Security Council of the United Nations the

steps required of Iran by the Board and to report to the Security Council all IAEA reports and resolutions, as adopted, relating to this issue. The Board also requested the Director General to report on the implementation of this and previous resolutions to the next regular session of the Board, for its consideration, and immediately thereafter to convey, together with any Resolution from the March Board, that report to the Security Council.

On 6 February 2006, the Director General transmitted to the Council all IAEA reports and resolutions, as adopted, relating to the implementation of NPT safeguards in Iran.

The latest IAEA report on the implementation of Iran's NPT safeguards agreement concluded *inter alia* as indicated in November 2004, and again in September 2005, all the declared nuclear material in Iran has been accounted for. Although the Agency has not seen any diversion of nuclear material to nuclear weapons or other nuclear explosive devices, the Agency is not at this point in time in a position to conclude that there are no undeclared nuclear materials or activities in Iran. The process of drawing such a conclusion, under normal circumstances, is a time consuming process even with an Additional Protocol in force. In the case of Iran, this conclusion can be expected to take even longer in light of the undeclared nature of Iran's past nuclear programme. In order to clarify the remaining uncertainties, Iran's full transparency is still essential.

2. *Maximum restraint is required before resorting to military force*

Secondly, we need to exercise maximum restraint before resorting to military force. In 1841, the US Secretary of State, Daniel Webster, characterized preemptive military action as being justified only when the prospect of an attack made clear that "the necessity of that self-defence is instant, overwhelming, and leaving no choice of means, and no moment for deliberation". Naturally, times have changed, but the exhortation for restraint expressed in those words still remains valid. The Iraq experience should tell us that unless extreme conditions exist to justify pre-emptive action against a suspected weapons of mass destruction programme, diplomacy in all its forms,

including maximum pressure, coupled with credible international verification, should be the primary avenue of choice. Loosely defining what justifies pre-emptive action by individual nations could become an invitation for all countries to use force in a variety of situations, and could render a severe setback to the United Nations Charter's effort to limit the use of force to cases of self-defence of the type Webster described, and to enforcement actions specifically authorized by the Security Council.

2. Increased verification authority makes a difference

The Agency's experience in Iraq before the first Gulf War, and its recent experience in Iran and Libya, have also highlighted the importance to verification of the additional protocol – that is, the supplement to safeguards agreements with the IAEA that provides the Agency with significant additional authority with regard to both information and physical access. Without the authority provided by the protocol, the IAEA's ability to draw conclusions is mostly limited to the non-diversion of nuclear material already declared, with little authority to verify the absence of undeclared nuclear material and activities.

The “any time, any place” verification authority granted by the Security Council in the case of Iraq was extraordinary, and it is not likely that countries would voluntarily grant the IAEA, or any other inspection system, such blanket rights of inspection.

4. Sensitive nuclear technology is relatively widespread

Recent experience has taught a clear lesson regarding the accessibility to nuclear technology. The technical barriers to mastering the essential steps of uranium enrichment and plutonium reprocessing – and to designing nuclear weapons – have eroded over time, which inevitably leads to the conclusion that the control of technology, in and of itself, is not an adequate barrier against further proliferation.

Some estimates indicate that 40 countries or more now have the know-how to produce nuclear weapons, which means that if they have the required fissile material – high enriched uranium or plutonium – we are relying primarily on the continued good

intentions of these countries, intentions which are in turn based on their sense of security or insecurity, and could therefore be subject to rapid change. Clearly, the margin of security this affords is thin, and worrisome.

In fact, a country might choose to hedge its options by developing a civilian nuclear fuel cycle — legally permissible under the NPT — not only because of its civilian use but also because of the “latent nuclear deterrent” value that such a programme could have, both intrinsically and in terms of the signal it sends to neighboring and other countries. The unspoken security posture could be summarized as follows: “We have no nuclear weapons programme today, because we do not see the need for one. But we should be prepared to launch one, should our security perception change. And for this, we should have the required capacity to produce the fissile material, as well as the other technologies that would enable us to produce a weapon in a matter of months.” Obviously, the narrow margin of security this situation affords is worrisome.

3. Inadequacies of the present export control system

International efforts to limit the spread of technology through the use of export controls have left much to be desired.

Perhaps the most disturbing lesson to emerge from the IAEA’s work in Iran and Libya is the existence of extensive clandestine nuclear supply networks, which clearly thrived on demand. The relative ease with which A.Q. Khan and his international associates were able to set up and operate multinationally, clearly demonstrates the inadequacy of the present export control system. Nuclear components designed in one country could be manufactured in another, shipped through a third (which may have appeared to be a legitimate user), assembled in a fourth, and designated for eventual turnkey use in a fifth.

The fact that so many companies and individuals could be involved is extremely worrying. And the fact that, in most cases, this could occur apparently without the knowledge of their own governments, clearly points to the inadequacy of national systems of oversight for sensitive

equipment and technology.

The present system of nuclear export controls relies on informal arrangements that are not only non-binding, but also limited in membership, and many countries with growing industrial capacity are not included. Moreover, at present there is no linkage between the export control system and the verification system. Export control information is not systematically shared with the IAEA, nor even fully among the members of the Nuclear Suppliers Group.

To be clear: even a verification system making use of the authority under the additional protocol may not reliably detect low levels of clandestine nuclear activity, such as that conducted in Iran and Libya for many years, unless at the very least supported and supplemented by the sharing of actionable information from an effective system of export controls – as well as by high quality intelligence information, where applicable.

4. Inaction by and division of the UN Security Council sends the wrong signal

Finally, the evolution of the North Korean situation particularly over the past two years carries an equally disturbing lesson. For 12 years, the Democratic People's Republic of Korea (DPRK) has been in non-compliance with its NPT safeguards and non-proliferation obligations. In January 2003, the DPRK capped its non-compliance by declaring its withdrawal from the NPT. Naturally, the Agency reported the situation to the United Nations Security Council. But now, more than two years later, the Security Council has not even reacted. This lack of response, this inaction, may be setting the worst precedent of all, if it conveys the message that acquiring a nuclear deterrent, by whatever means, will neutralize any compliance mechanism and guarantee preferred treatment. It also shows that reporting safeguards infractions to the Council per se does not necessarily resolve the problem, it might even exacerbate it. Of course, the Agency has been following the negotiations in the context of the Six-Party talks with great interest and we stand ready to work with the DPRK — and with all others — towards a solution that

addresses the needs of the international community to ensure that all nuclear activities in the DPRK are exclusively for peaceful purposes, as well as addressing the security needs of the DPRK. It would be advisable, to have the verification authority of any resolution of the DPRK nuclear issue vested in the Agency – the IAEA would be in a position to provide credible verification of both the dismantling of nuclear weapon-related infrastructure as well as of other nuclear activities.

In common with the international community as a whole, the Security Council was also deeply divided in its views in the run-up to what the UN Secretary General described as “the invasion” of Iraq — and, after years of collective decisions on Iraq, the Council’s role and authority was set aside by the decision of the Coalition to take military action. But one lesson has been made very clear by the Iraq experience: when the international community and the Security Council are divided on matters of war and peace, everyone loses.

6. Insecurity breeds proliferation

It is instructive that nearly all nuclear proliferation concerns arise in regions of longstanding tension. In other words, nuclear proliferation is a *symptom*, and these symptoms will continue to persist and worsen as long as we leave unaddressed the underlying *causes* of insecurity and instability — such as chronic disputes that continue to fester, and unresolved security concerns and deficits.

While the Agency can use verification effectively to bring to closure questions of compliance with legal and technical requirements, the long term value of these efforts can only be realized to the extent that they are reinforced by all other components of the non-proliferation regime, and followed by the necessary political dialogue and commitment among concerned States to address underlying issues of insecurity, and to build confidence and trust.

To deal with these challenges, a number of initiatives are required.

1. We should, first of all, **re-affirm the goals we established for**

ourselves in 1970 under the NPT, affirmed in 1995 and re-affirmed in 2000, and send a clear-cut message that our commitment to these goals has not changed. We remain committed to ridding the world of nuclear weapons. We have zero tolerance for new States developing nuclear weapons, and we should ensure that all countries have the right to use nuclear technology for peaceful purposes. There are three essential aspects to this commitment.

First, a concrete roadmap for verified, irreversible nuclear disarmament, complete with a timetable, should be put in place. Thirty years after the enactment of the NPT, with the Cold War ended and nearly 30 000 nuclear weapons still available for use, it should be understandable that many non-nuclear-weapon States are no longer willing to accept as credible the commitment of nuclear-weapon States to their NPT disarmament obligations.

It is regrettable that two measures that have been seen as essential steps towards nuclear disarmament, and have been the focus of the nuclear disarmament community for many years, have been either aborted after considerable progress or failed to move forward at all. This refers to the failure to ratify and bring into force the Comprehensive Nuclear-Test-Ban Treaty and the lack of negotiations on an internationally verifiable Fissile Material (Cut-off) Treaty. With a disarmament roadmap in place, both of these measures should be revived.

In July 1996, the International Court of Justice (ICJ) declared unanimously that the obligation of nuclear-weapon States, under Article VI of the NPT, to “pursue [disarmament] negotiations in good faith”, is a dual obligation that also includes the obligation “to bring to a conclusion” these negotiations. “The obligation involved here is an obligation to achieve a precise result – nuclear disarmament in all its aspects.”

By contrast, in some quarters there is a move to advocate research on the development of advanced nuclear weapons purportedly to increase the “credibility” of nuclear deterrence. It is hard to reconcile the opinion of the ICJ, underscoring the obligation to “bring to a

conclusion” negotiations on disarmament, with supporting the exploration of new types of nuclear weapons more than 30 years after entry into force of the Treaty establishing this obligation. But more important, if such efforts proceed, it is hard to understand how we can continue to ask the nuclear “have-nots” to accept additional non-proliferation obligations – and to renounce any sensitive nuclear capability as being adverse to their security. As stated by Director General ElBaradei, the continuing pursuit of asymmetric and divisive policies - such as “the early bird gets the nukes”; pitting the interests of so-called “civilized” nations against “uncivilized” ones; failing to bridge the gap between those inside and outside the regime; and promoting policies that do not take into account the security of all – is unsustainable, counterproductive and contributes to exacerbating not solving the problems.

Clearly, the development of a security system that does not depend on nuclear deterrence or nuclear weapons will be a prerequisite to a roadmap for effective nuclear disarmament. Until the international community fully engages on the development of such a system, achieving complete nuclear disarmament will remain in the realm of rhetoric.

Second, any new adjustment to the regime must include India, Pakistan and Israel at the negotiating table. Without their inclusion in and commitment to this broad non-proliferation, disarmament and security reform, our efforts will fail. None of the three States has joined the NPT, and their development of nuclear weapons or nuclear weapon capability has been outside of the current nuclear non-proliferation regime. Yet their status as known or presumed holders of nuclear weapons has clearly contributed to tensions in their respective regions.

The logical point for bringing India and Pakistan into the arms control process would be as part of this global “disarmament roadmap”. In the case of Israel, this could also be achieved as part of a new security and disarmament structure in the Middle East that would go hand-in-hand with the peace process in that region.

Third, the authority and integrity of the NPT must be ensured. The Treaty now allows any member to withdraw with three months notice. Any nation invoking this escape clause is almost certainly signaling its intent to develop nuclear weapons, which inevitably has serious implications for international peace and security. This provision of the Treaty should be curtailed. As the drafters of the Treaty envisaged, any notification of withdrawal should prompt an automatic review by the Security Council.

It is with regret that we all noted the inability of the States Party to the NPT, at their recently concluded Review Conference in New York, to agree on how to strengthen the implementation and promote the universality of the Treaty. The lack of substantive agreement is particularly dsheartening, given the urgent challenges we face, and the opportunity afforded by the Review Conference. Despite the outcome of the Conference, these challenges are still here and must be addressed. The United Nations summit in September failed to mention nuclear non-proliferation and nuclear disarmament and thus squandered an opportunity to address some of these urgent challenges.

2. We must **strengthen the IAEA's verification authority** *inter alia* by making the additional protocol to comprehensive safeguards agreements, an integral part of the Agency's safeguards system in connection with the NPT. In recent years, the additional protocol has proven its worth. With better access to information and locations, we get better results.

The whole purpose of verification is to build confidence. In cases where proliferation concerns exist, States are urged to be maximally open and transparent. Even if such measures go beyond a State's legal obligations, they pay valuable dividends in restoring the confidence of the international community.

Much effort was recently expended – and rightly so – to persuade Iran and Libya to give the IAEA broader rights of inspection, by accepting the authority provided to the Agency by the additional protocol. But the Agency should have the right to conduct these

broader inspections in all countries. As noted before, experience has shown that verification of the NPT's safeguards obligations in a credible manner requires the authority provided by the additional protocol. To date, 69 States out of the 184 non-nuclear-weapon States party to the NPT have an additional protocol in force, and 37 such States still lack a safeguards agreement.

The strengthening of the Agency's safeguards system to deal effectively with evolving proliferation challenges should be an ongoing process. In the same way as the Agency's Board of Governors established a committee in 1996 to consider how to address the weaknesses in the safeguards system, last June the Board set up a new Advisory Committee on Safeguards and Verification to explore how the safeguards system could be further strengthened. Areas that could be addressed could include more information sharing, the use of new emerging technologies, enhancing the Agency's independent analytical capabilities, and ensuring that the Agency has an adequate and uniform legal authority to conduct credible verification.

The Secretariat has also recently drawn Member States' attention to a remaining weakness in the safeguards system, namely, the problems posed by "Small Quantities Protocols" to comprehensive safeguards agreements. Consultations with States have already commenced with a view to addressing this deficiency and it is hoped that the Board at its next scheduled meeting in mid-September will decide to do away with the SQP and call on all States with operational SQPs to conclude additional protocols.

3. We must **improve and universalize controls over the export of sensitive nuclear material and technology**. The nuclear export control system should be binding rather than voluntary, and should be made more widely applicable, to include all countries with the capability of manufacturing sensitive nuclear related items. It should strike a balance between ensuring effective control and preserving the rights of States to peaceful nuclear technology. And as prescribed in April 2004 by Security Council resolution 1540, it should ensure effective national control over sensitive items, and criminalize the

actions of individuals and companies involved in efforts to acquire nuclear weapons.

The discussion on establishing export controls to deny access to sensitive elements of the nuclear fuel cycle has come a full circle with the present interest in promoting multilateral approaches to the nuclear fuel cycle, *inter alia* involving assurances of supply of nuclear fuel as well as the possibility of the take back of spent fuel, to promote further growth in nuclear energy, provide energy security and assurances of non-proliferation. It is increasingly clear that the new challenges to the nuclear non-proliferation regime require a fresh approach and response. Any attempt to strengthen the regime by further denial of technology – including tightening the cartel-based export control mechanisms – holds little likelihood of success. The days of the Cold War system of cartel-based, non-transparent, export controls based on strategies denial may well have run their course, it is time to focus on developing a multilateral treaty-based, universal export control system that involves the participation of all States, relies on the rule of international law and accountability, and provides for both the assurances of non-proliferation and assurances of access to civilian uses of nuclear technology.

The aim should be easier access to non-sensitive technology and stronger control over the most sensitive parts. Practical arrangements should be put in place to ensure that relevant nuclear export information is shared with the IAEA, in a timely manner, to assist the Agency in carrying out its verification responsibilities.

4. We need **better control over proliferation sensitive parts of the nuclear fuel cycle**: activities that involve uranium enrichment and plutonium separation. As experience has shown, effective control of nuclear materials is the "choke point" to preventing nuclear weapons development. Without question, improving control over facilities capable of producing weapon-usable material will go a long way towards establishing a better margin of security.

We should be clear: there is no incompatibility between tightening controls over the nuclear fuel cycle and expanding the use of peaceful

nuclear technology. In fact, by reducing the risks of proliferation, we could pave the way for more widespread use of peaceful nuclear applications.

The recent High-Level Panel on Threats, Challenges and Change urged negotiations without delay on an arrangement, under the IAEA Statute, for the Agency to serve as a guarantor of two fuel cycle related services: the supply of fissile material for fuel, and the reprocessing of spent fuel. The assurance of supply - the guaranteed provision of reactor technology and nuclear fuel to users that satisfy agreed non-proliferation requirements – is clearly a prerequisite for any additional controls on the fuel cycle to be accepted.

The High-Level Panel also urged that, while this arrangement is being negotiated, a voluntary time-limited moratorium on new fuel cycle facilities be put in place – a proposal the Director General also made at the NPT Review Conference. Such a moratorium would signal the willingness of the international community to address this vulnerability in the regime. It would also provide an opportunity for analysis and dialogue among all parties.

Last year the Director General appointed an international group of experts to examine various approaches for the future management of the fuel cycle. Their findings were released in February this year and provide an extensive look at the world's civil nuclear fuel cycle, citing five approaches to strengthen controls over fuel enrichment, reprocessing, spent fuel repositories and spent fuel storage. The group's report is available on the Agency's public website. As a follow-up, representatives from Russia, the United States, France and other countries met in July 2005 at a Moscow conference to examine multilateral approaches to the nuclear fuel cycle from organizational and technical aspects.

On 25 January 2006, Russian Federation President Vladimir Putin proposed an initiative on promoting peaceful uses of nuclear energy, as a part of Russia's emphasis on energy security, that will be discussed further at the G8 Summit in St. Petersburg next July. This proposal also envisages the establishment of international nuclear

fuel centres providing nuclear power reactors, fresh nuclear fuel and take-back of spent fuel.

The Global Nuclear Energy Partnership (GNEP) launched by the US, on 6 February 2006, as a part of its Advanced Energy Initiative, has the stated aim of devising a comprehensive strategy to deploy new nuclear technologies for energy production, while minimizing proliferation and security risks, thus contributing to the growth of nuclear energy worldwide in support of lower emissions and energy security.

5. We must **secure, control, minimize and eliminate weapon-usable nuclear material.**

Multiple international and regional initiatives are underway to help countries improve their physical protection of nuclear material. The International Convention on the Suppression of Acts of Nuclear Terrorism has just been adopted by the General Assembly. Parties to the *Convention on the Physical Protection of Nuclear Material* have amended the Convention to broaden its scope.

We should work to help countries stop using weapon-usable material (separated plutonium and high enriched uranium – HEU) in their civilian nuclear programmes. Approximately 100 facilities in 40 countries, primarily research reactors, still use HEU for peaceful purposes – for example, to produce radioisotopes for medicine. Research reactors and critical assemblies in use worldwide should be converted to use only low enriched uranium.

The US-led “Global Threat Reduction Initiative” contains objectives very much in line with some aspects of these proposals, and the IAEA has been contributing, through its own programmes, to this initiative. In June, Norway will be hosting an international workshop on minimization and elimination of HEU in civilian use – this is a part of the Norwegian initiative on strengthened international co-operation on nuclear disarmament and non-proliferation that was launched last fall by a group of seven countries – Australia, Chile, Indonesia, Norway, Romania, South Africa and the United Kingdom.

In parallel, we should eliminate all the weapon-usable nuclear material

now in existence. Around the globe, all stocks of HEU – which could be converted for weapons use by State or sub-State actors – should be eliminated, by “down-blending” these stocks to low enriched uranium for use in civilian reactors to generate electricity - a “megatons to megawatts” approach that builds on the successful Russia-US model.

The manner in which to eliminate plutonium stocks is still an open question - whether to burn the plutonium in mixed-oxide (MOX) fuel to generate electricity, or to mix it with high-level radioactive waste for disposal in a vitrified form – but this too is a matter that should be resolved and acted upon with urgency.

The Russian Federation, the United States and the IAEA undertook the Trilateral Initiative in September 1996 to investigate the technical, legal and financial issues associated with IAEA verification of weapon-origin fissile material released from defence programmes in the two States. A Joint Working Group was established to carry out the investigations, reporting annually to the Ministers and the Director General and seeking their guidance and approval for future activities. This Sixth (and last to date) Progress Report submitted by the Joint Working Group, in September 2002, describes the progress achieved during the period from September 2001 through September 2002. The Joint Working Group recommended to the Director General and the Ministers that the technical, legal and financial issues associated with a potential role for the IAEA in verifying weapon-origin fissile material is considered as manageable, and thus, the Agency and the States may proceed to establish such arrangements consistent with their national programmes.

As the principal work under the original mandate was completed, future work was expected to proceed under a new mandate that would allow preparations to proceed towards implementation in relation to the Plutonium Management and Disposition Agreement (PMDA) and other bilateral agreements between the two States. The future work plan would depend upon that mandate and would be developed as soon as the new mandate was stipulated. No further progress has been achieved since September 2002 nor has any

nuclear material been placed under IAEA monitoring under the Trilateral Initiative.

Progress achieved thus far: development of a Model Legal Framework; development of technical concepts and equipment -- contracts for the production of an Attribute Verification System with information barriers for plutonium with classified characteristics utilizing neutron multiplicity counting and high-resolution gamma-ray spectrometry (AVNG) system, for associated reference material, and for test & evaluation.

6. International verification efforts must be backed by an **effective mechanism for dealing with non-compliance**. In this, both the NPT and the IAEA Statute make clear the reliance on the Security Council.

Whether it is a case of non-compliance or of withdrawal from the NPT, the Council must consider promptly the implications for international peace and security, and take the appropriate measures.

The Security Council must be able and ready to engage effectively in both preventive diplomacy and enforcement measures, with the tools and methods in place necessary to cope with existing and emerging threats to international peace and security. These should include: mechanisms for preventive diplomacy to settle emerging disputes; "smart" sanctions that can target a government without adding misery to its citizens; and adequate forces to deal with the foreseeable range of situations - from maintaining law and order, to monitoring borders, to combating aggression.

For some years now, efforts to achieve Security Council reform have been mostly focused on the question of whether additional countries should be given a permanent seat. Such a change would be helpful in making the Council more representative of today's global realities, and in removing the current correlation — in that the same five countries recognized under the NPT as nuclear weapon States hold the five permanent seats on the Security Council.

Increasing the effectiveness and relevance of the Security Council is an essential step towards a functional system for collective security.

Such a system is the only alternative to the reliance that some nations, including nuclear weapon States and their allies, now place on nuclear deterrence — in a "good guys versus bad guys" approach that inevitably leaves some nations seeking to achieve parity. A functional system for collective security is the only alternative to the current hodge-podge of approaches to addressing security issues — ranging from inaction or late action on the part of the international community, to unilateral and "self-help" solutions on the part of individual States or groups of States.

With a viable system of collective security in place, policy makers and political leaders may find it easier to make progress on the nuclear arms control front, such as bringing into force the Comprehensive Nuclear Test Ban Treaty, and negotiating an internationally verifiable Fissile Material (Cut-Off) Treaty.

7. Finally, we should **use all mechanisms within our reach to address the security concerns of all**. Clearly, not every State sees its security as assured under the current NPT regime.

As we have seen, the means to achieving security are often region specific. In some regions, security has been advanced by the creation of nuclear-weapon-free zones. The use of security assurances would also help to reduce security concerns. The DPRK is a clear case in point.

In the broader context, these measures to improve security must be accompanied by an unequivocal commitment to the *development* component. Nuclear science plays a key role in economic and social development.

Nuclear energy generates 16% of the world's electricity in 30 countries - including seven developing countries - with almost no greenhouse gas emissions. Radiotherapy is widely used to combat cancer. Other nuclear techniques are used to study child malnutrition and fight infectious diseases. Nuclear research produces higher yielding, disease resistant crops for farmers. We cannot abandon the promise that these and other advanced nuclear technologies hold for addressing the needs of the developing world.

Nuclear-weapon States continue to rely on nuclear weapons, in part because they have as yet developed no alternative to nuclear deterrence. However, we must seek a solution. In order to accelerate the complete elimination of all nuclear weapons, we must channel our creativity and resources towards the development of an alternative system for collective security, in which nuclear deterrence does not figure.

For non-nuclear-weapon States, one of two conditions can exist. In some cases, they have become dependent on their alliances with nuclear-weapon States - under a security umbrella that also rests on nuclear deterrence. In other cases, States feel insecure and unprotected because of the absence of such an alliance or umbrella. Here, too, we must find a solution. We must do our utmost to create a collective security system that is inclusive and equitable.

This multilateral dialogue in which we are engaging is much like democracy. It is slow, unwieldy, and at times frustrating — but it is far superior to any other approach, in terms of the prospects of achieving equitable and therefore durable security solutions. In short, it remains the best - if not the only - option.

We should aim for the legal regime related to nuclear weapons to be transformed into a "peremptory norm" of international law - a norm that is part of our collective conscience - not dependent on any particular treaty. In short, as with the ban on slavery or genocide, the renunciation of such weapons should be universal and permanent. This legal norm, however, cannot be contemplated without an agreed disarmament roadmap, and clear subscription to that roadmap by all States possessing nuclear weapons.

8. Finally, work to achieve consensus on these proposals should proceed with the initiation of an expanded **public dialogue**. Organizations like your own, the Middle Powers Initiative and the Netherlands Institute for International Relations, are well placed to refine these proposals and ideas, and to bring them to the attention of governments and opinion leaders. As I indicated earlier, we should work to further stimulate public discourse on these ideas, at all levels

of civil society, to make the global community understand that our survival is at stake - but that we can, in fact, solve the international security dilemma, including the nuclear dilemma, within our generation and within our own time.

Conclusion

With the continuing erosion of the effectiveness and even the legitimacy of the present arms control and security structure, we must have the wisdom and the foresight to understand - as has been aptly stated - that "as we are collectively menaced, so we must collectively act." I repeat that it is time to abandon the unworkable notion that it is morally reprehensible for some countries to pursue nuclear weapons, but morally acceptable for others to rely on them. Our aim must be clear: a security structure that is based on our shared humanity and not on the ability of some to destroy us all.

For centuries, perhaps for millennia, security strategies have been based on boundaries: city walls, border patrols, and the use of racial and religious groupings or other categories to separate friend from foe. Those strategies no longer work. The global community has become interdependent, with the constant movement of people, ideas and goods. Many aspects of modern life — global warming, Internet communication, the global marketplace, and yes, the war on terrorism — point to the fact that the human race has walked through a door that cannot be re-entered.

Leadership must be focused on restoring and strengthening the credibility of multilateral approaches to resolving conflicts and threats to international security — conflicts and threats ranging from preserving the environment to ensuring respect for human rights, working for sustainable development, and controlling weapons of mass destruction — which, in our globalized world, can only be resolved through a collective and multilateral approach, in which competing interests and powers can be contained and harmonized. The system of collective security hoped for in the United Nations Charter has never been made fully functional and effective. This must be our starting point.

As stated by the IAEA Director General, we have come to a fork in the road: either there must be a demonstrated commitment to move toward nuclear disarmament, or we should resign ourselves to the fact that other countries will pursue a more dangerous parity through proliferation. The difficulty of achieving our ultimate objective — the elimination of all nuclear weapons — should by no means be underestimated. But at the same time, it should not be used as a pretext for failing to start the process of drastic reductions in existing nuclear arsenals, and simultaneously to explore the development of collective response mechanisms that will be needed against any future clandestine nuclear proliferation efforts.