Eliminating nuclear weapons — or at the very least reducing their numbers — stands among the most important challenges of the 21st century. Progress will require effective verification mechanisms, so that any violation or non-compliance with nuclear arms-control agreements is detected, especially those that could jeopardize international peace and security.

The International Atomic Energy Agency (IAEA) — which already performs valuable verification functions — could play an even greater role in years ahead to help the world control and bury nuclear weapons. This article offers a group of proposals regarding possible new roles for the IAEA in the field of nuclear non-proliferation and disarmament. They include steps for the verification of nuclear material from dismantled weapons now in the arsenals of the world’s military nuclear powers.

Nuclear Safeguards

The IAEA was constituted in 1957 to promote the peaceful use of nuclear energy, but under strict international verification measures. The initial IAEA safeguards system to ensure the peaceful use of nuclear energy suffered a significant transformation in the 1970s. This transformation was tied to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which entered into force in 1970.

One objective then was to establish confidence in the verification mechanism. It aimed to detect any deviation or the non-authorized use of safeguarded nuclear materials, equipment, facilities, information and knowledge, including that acquired by any IAEA Member State through the organization, or through the cooperation with other States.

It is important to stress that the former and current IAEA safeguards system — including the Additional Protocol adopted by the Board of Governors in the 1990s — does not have the objective of impeding the military use of the nuclear materials, equipment, facilities, information and knowledge. The system works only to detect any violation or non-compliance with the obligations and commitments assumed by States having IAEA safeguard agreements under the NPT. In my view, the IAEA safeguards system is now facing five major obstacles:

➊ The lack of universality of the NPT;
➋ Political decisions of the USA in the field of disarmament, particularly in the field of nuclear disarmament;
➌ The limited application of the IAEA safeguards system among its Member States and NPT State Parties;

10 Steps Toward Trust

The world’s regime against nuclear weapons can be strengthened. In the views of Mr. Pedraza, ten confidence-building measures could help States reinforce it.

1 An agreement to withdraw the combat readiness of all nuclear weapons of any type and power;

2 The safe dismantling of all nuclear weapons and the storage of all nuclear warheads separated from their delivery systems while awaiting future destruction;

3 Restarting negotiations between the USA and Russia on nuclear arms reductions, and extending the talks to other nuclear-weapon States when US and Russian nuclear arsenals are cut to 90% of their current levels;

4 A binding international agreement for all nuclear-weapon States that forbids the use or threat of use of nuclear weapons against any NPT State;
Burying the Nuclear Sword

The world’s regime against the spread of nuclear weapons faces serious obstacles. A stronger IAEA could help States overcome them.

- The status of the Comprehensive Test Ban Treaty, which has yet to enter into force; and
- The failure of the Conference of Disarmament to conclude negotiations on the Agreement for the Prohibition of the Production of Fissionable Material for Nuclear Weapons and for Other Nuclear Explosive Device (the so-called cut-off agreement) and the adoption of any other measure to move forward nuclear disarmament at the multilateral level.

These obstacles have been evident in practice. The NPT has no internal mechanism to respond to a potential breach of its provisions. This is left to the IAEA Board of Governors. If the Board finds grounds for non-compliance that warrants further action in the interests of international peace and security, it has the obligation to inform the United Nations Security Council.

Since the 1990s, the IAEA has reported three serious cases of non-compliance to the Security Council. They have involved Iraq, the Democratic People’s Republic of Korea (DPRK, North Korea), and Iran. Concerning Iraq, the Security Council approved the application of military and economic sanctions against the country. Concerning Iran, the Security Council adopted economic and political sanctions against the country, and presently is considering further measures. Concerning the DPRK, the Security Council has not adopted political, military or economic sanctions. Six-party talks involving the DPRK, Republic of Korea, China, Japan, Russia and the USA have reached agreements on their road of negotiation, including the shutdown of specified nuclear facilities with the verification of IAEA inspectors.

Reinforcing Nuclear Safeguards

In 1997, the adoption of the Additional Protocol to IAEA safeguards agreements enlarged the scope of nuclear verification. All NPT States have the obligation to sign and ratify the Additional Protocol, which grants the IAEA broader inspection rights, including the right to visit facilities beyond those that a State has declared in line with its NPT safeguards agreement.

However, it is important to stress that the strengthened IAEA system does not include so-called challenge inspections — such as those found in the global verification system for chemical weapons.

- Exchanging information regarding all types of nuclear weapons in military arsenals, without exception;
- Applying IAEA safeguards to all fissionable and other nuclear materials for the production of nuclear weapons;
- Definitive suspension of all nuclear tests, while awaiting entry into force of the Comprehensive Nuclear Test Ban Treaty;
- Withdrawal of all nuclear weapons deployed in the territory of a third non-nuclear-weapon country;
- Deleting from all military doctrines any and all reference to the use of nuclear weapons; and
- Suspending production and testing of intercontinental multiple warhead ballistic missiles and cruise missiles that can carry nuclear warheads.
In my view, this shortcoming should be remedied as part of work to further strengthen IAEA safeguards for nuclear non-proliferation and disarmament. The work includes a set of confidence-building measures that in my view should be considered by States, including those that already possess nuclear weapons. (See box, ‘Ten Steps Toward Trust’).

Challenge Inspections

IAEA Member States should consider so-called challenge inspections in any future modification of the safeguards system, in order to expand the scope of the ‘special inspection’ that the Director General can already request under existing provisions. Such challenge inspections would expand upon measures incorporated in the Additional Protocol, and in my view would reduce considerably the risk of nuclear proliferation.

Eliminating Nuclear Weapons

NPT non-nuclear-weapon States should use all possible and appropriate international fora, including the IAEA, the United Nations General Assembly and the NPT Review Conferences, to press all nuclear-weapon States (China, France, Russia, UK, USA, Israel, Pakistan, India, as well as North Korea) to accelerate progress toward the elimination of nuclear weapons. They should be pressed to begin, as soon as possible, the implementation, step-by-step, of a set of confidence-building measures, in order to create the necessary conditions to initiate, in the near future, a negotiation process toward the complete elimination, once and for all, of all nuclear weapons.

No Nukes for Old Enemies

A 2007 poll, conducted in the US and Russia, finds robust support for a series of cooperative steps to reduce nuclear dangers and move toward the global elimination of nuclear weapons.

Large majorities of Americans and Russians favor taking nuclear weapons off high alert, sharply cutting the numbers of nuclear weapons, banning the production of weapons-grade nuclear material, and — once advanced methods of international verification are established — undertaking the complete elimination of nuclear weapons.

These steps correspond to key elements of a plan for A World Free of Nuclear Weapons, developed by a bipartisan group that includes two former US secretaries of state (George Schultz and Henry Kissinger), a former US defense secretary (William Perry) and the former chairman of the US Senate Armed Services Committee (Sam Nunn) — sometimes called the Reykjavik Revisited plan. Some have been included in recent legislation, such as a bill introduced in the US Congress by Senators Chuck Hagel and Barack Obama (S.1977).

A systematic, global endeavor to eliminate nuclear weapons has also been endorsed by former Russian President Mikhail Gorbachev, then-British Foreign Secretary Margaret Beckett, and US Presidential candidates.

The WorldPublicOpinion.org poll was developed in conjunction with the Center for International and Security Studies at the USA’s University of Maryland (CISSM) and fielded by Knowledge Networks in the US and the Levada Center in Russia.

The goal of eliminating all nuclear weapons, established in the world’s Nuclear Non-Proliferation Treaty (NPT), is endorsed by 73% of Americans and 63% of Russians. Around 79% of Americans and 66% of Russians want their governments to do more to pursue this objective. In the USA, majorities of both Democrats and Republicans agree on these points, although the Democratic majorities are larger.

Steven Kull, Director of WorldPublicOpinion.org, commented: “In contrast to the growing tension between their governments, publics in the US and Russia show enthusiasm for dramatic cooperative steps to reduce the nuclear threat.”

John Steinbruner, director of CISSM noted: “Current US security policies do not reflect underlying public opinion.”

One of the first steps called for in the Reykjavik Revisited plan is to take nuclear weapons off high alert so as to increase warning time and reduce the danger of their accidental or unauthorized use. Eight in ten Americans and two in three Russians favor this.

Challenge Inspections

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and all nuclear production facilities in the possession or under their jurisdiction or control.

**Counting Weapons**

All nuclear-weapon States should prepare, or update, an inventory of all their nuclear weapons and related production facilities located within their territories, or under their jurisdiction or control.

**Controlling Nuclear Materials**

All nuclear-weapon States should prepare, or update, an inventory of all their nuclear weapons and related production facilities.

**Military Stocks**

All nuclear-weapon States should place all military stock of fissionable materials, including materials from dismantled nuclear weapons, under IAEA surveillance; this would create the indispensable confidence that these materials will not revert back to military use. Again, this should be done before beginning negotiations for the destruction of all nuclear weapons and related production facilities.

**Global Oversight**

All nuclear-weapon States should obtain and maintain accurate information on world sources of uranium and thorium, and bring them under international control before beginning negotiation for the destruction of all nuclear weapons and related production facilities.

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**American and Russian Publics Strongly Support Steps to Reduce and Eliminate Nuclear Weapons**

A system for verifying international compliance, 64% of Americans and 59% of Russians would favor taking all nuclear weapons off high alert.

The UN Disarmament Committee recently voted 124-3 in favor of total de-alerting with the US, France and Britain opposed.

Deep cuts in nuclear arsenals also receive robust support. Nearly nine out of ten Americans and 65% of Russians endorse the US-Russian Strategic Offensive Reductions Treaty (SORT) to reduce the number of active nuclear weapons in each arsenal to about 2,000 weapons by the end of 2012. In fact, most Americans (71%) and Russians (55%) favor reaching this level even sooner.

Furthermore, 71% of Americans and 58% of Russians favor reducing their arsenals to significantly less than 2,000 weapons. Majorities of both Americans (59%) and Russians (53%) would even support cutbacks to 400 nuclear weapons each (38% of Americans and 21% of Russians are opposed). This would make the US and Russian arsenals comparable to those of other nuclear powers.

Most Americans (92%) and Russians (65%) believe that an international body, such as the UN, would need to monitor and verify compliance with such deep reductions.

Americans and Russians also favor concrete steps to increase the transparency between the nuclear powers. Majorities in both the US (75%, with 22% opposed) and Russia (52%, with 24% opposed) favor an agreement among all nuclear powers to share information about the number of nuclear weapons and the amount of weapons-grade nuclear material they each have.

Support is strong for the Comprehensive Test Ban Treaty (CTBT), which prohibits nuclear explosive testing and thus makes it more difficult for countries to develop or improve nuclear weapons. Eight in ten Americans and Russians approve of their country’s participation in this treaty. Indeed, 56% of Americans believe, incorrectly, that the US is already a member of the treaty. Russia ratified the treaty in 2000 but the US Senate voted against ratification in 1999.

Ideas for exerting international control over nuclear-weapons grade material — a means to prevent the proliferation of nuclear weapons or terrorist acquisition of a dirty bomb — get wide endorsement. Two-thirds of Americans and 55% of Russians favor an international ban on any further production of fissile material suitable for nuclear weapons.

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Nuclear-Free Road Map
A concrete plan for the future elimination of all nuclear weapons should be elaborated, discussed and, if possible, approved by the NPT Review Conference in 2010, with the purpose of facilitating the destruction of all nuclear weapons and related production facilities.

Since the NPT’s entry into force, the world has moved forward in efforts to curb the spread of nuclear weapons. It has seen a significant decrease in the number of nuclear weapons, particularly those in the hands of the USA and Russia.

This multi-step roadmap should be elaborated in line with a set of principles that I have previously defined and whose negotiation and implementation would engage the IAEA.

It is my conviction that it is completely unacceptable for a small group of countries (around 4.6% of the total membership of the UN) to impose upon the rest of the international community its conditions in the field of nuclear non-proliferation and nuclear disarmament. This stands in clear violation of international commitments and obligations, freely assumed in the framework of the NPT.

Future of the NPT
Since the NPT’s entry into force, the world has moved forward in efforts to curb the spread of nuclear weapons. It has seen a significant decrease in the number of nuclear weapons, particularly those in the hands of the USA and Russia. The treaty also has helped reduce, in one way or another, the danger of an NPT nuclear-weapon State actually using nuclear weapons in a military conflict. Additionally, the Treaty has made the dissemination of nuclear weapons more difficult internationally.

There is no doubt that the NPT’s sustainability — as well as the lifetime of the world’s overall regime against nuclear weapons — depends upon a number of conditions. They include a brake on the number of countries possessing sensitive nuclear technologies and installations capable of producing nuclear weapons; and a commitment by these countries to allow other NPT States to use these facilities on a commercial basis that is fair and non-discriminatory.

The IAEA can play key roles in regional or multilateral approaches to the nuclear fuel cycle. In my view, the IAEA should support the establishment of international or regional centers for the enrichment of uranium, the reprocessing of spent nuclear fuel, and the final disposal of spent nuclear fuel. These would be on hand for NPT States that require such services. At the same time, the IAEA should support proposals to stop the establishment of any new reprocessing and enrichment facilities until such time as an agreement on this issue is reached internationally.

Upto now, the NPT stands among the most accepted international treaties in history, having 188 countries as parties. Even so, the Treaty (as negotiated in the 1960s) authorizes 2.7% of its State Parties to possess nuclear weapons for national defence and security against military aggression. This represents a strong incentive to other countries to try to access these weapons for similar reasons.

The international community must be aware of this reality and demonstrate its readiness to strengthen the world’s regime — both to stop proliferation of nuclear weapons and to achieve nuclear disarmament in a realistic and reasonable period.

What Limits the NPT?
The NPT has limitations which prevent the achievement of these objectives. They can be summarized as follows:

- The NPT lacks provisions to compel its recognized nuclear-weapon States (China, France, Russia, UK, and USA) to destroy all their nuclear weapons and related production facilities in a realistic but defined period, under international supervision.

Among the NPT’s different provisions, only one calls for all nuclear-weapon States (as well as other State Parties) to begin negotiations in good faith with the ultimate goal to achieve nuclear disarmament. The Treaty does not specify when these negotiations should begin or finish, or when the destruction of all nuclear weapons, their delivery systems and related production facilities. Neither does it say how this process would be supervised and by whom, among other specific questions.

Perhaps the international community should consider discussions on a convention that sets a timetable for the destruction of all nuclear weapons in the near future.
The NPT relies on the application of IAEA safeguards to verify the peaceful uses of nuclear energy in States that do not possess nuclear weapons. The Treaty does not have its own verification system. Neither is the IAEA the legal depositary of the NPT — the Agency has its own Statute and responsibilities, with governing bodies that set the budget and programmes.

This does not mean, of course, that another international organization is needed to verify compliance with the NPT. However, some experts consider that the establishment of such an organization could be a realistic option — one that should be considered thoroughly by the international community for the Treaty to play the role for which was adopted.

A State can withdraw from the NPT citing its supreme national interests, even without providing assurances to the international community about the use of the nuclear materials, installations, equipment, technology, knowledge and information that it acquired while a party to the NPT.

The NPT lacks an internal mechanism to consider alleged systematic violations or non-compliance of a State Party with its Treaty obligations. Such cases are funneled through the IAEA Board of Governors, which can refer cases that affect global peace and security to the UN Security Council.

In my view, these limitations seriously impair the Treaty’s power to influence and move forward the nuclear disarmament process at the multilateral level.

The NPT has no provisions that specifically prohibit nuclear trade or the transfer of sensitive advanced nuclear technology and equipment from the standpoint of nuclear proliferation, between NPT States and other States.

So how can we curb the chance that an NPT State indirectly or directly supports the development of a military nuclear programme elsewhere? In short, stronger international measures are needed.

Nuclear Trade. NPT States should adopt, as soon as possible, additional measures to explicitly prohibit nuclear trade and the transfer of sensitive advanced nuclear technology and equipment between NPT States and other States; the measures could take effect within three years of their adoption.

Veto Powers. The five permanent members of the Security Council (China, France, Russia, UK, and USA) should refrain from using their veto during the consideration of any case involving the possible violation or non-compliance with nuclear non-proliferation and disarmament treaties and agreements, including cases in which they themselves may be involved.

Such a proposal, if adopted by the Security Council, would be a positive sign of the body’s willingness to shed elements of a discriminatory character, at least with respect to issues concerning NPT obligations and commitments.

Challenging Road Ahead

Over the coming months and years, States will be faced with important decisions shaping the world’s regime to control nuclear technology and the IAEA’s role within that regime. Proposals sketched here seek to draw more attention to serious problems that, once solved, will lead to a safer nuclear world.

NPT States should adopt, as soon as possible, additional measures to explicitly prohibit nuclear trade and the transfer of sensitive advanced nuclear technology and equipment between NPT States and other States; the measures could take effect within three years of their adoption.

As States move toward the next NPT Review Conference in 2010, new opportunities will open to move forward on nuclear proliferation and disarmament issues at the multilateral level. Additionally, the IAEA’s own study of its evolving role over the coming decade will cast valuable light on proposals outlined here to make the Agency a stronger player on the international nuclear landscape.

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