

Written Testimony

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**Before the United States House of Representatives
Committee on Foreign Affairs,
Subcommittee on Terrorism, Nonproliferation & Trade**

At a Hearing Entitled

**“Saving the NPT and the Nonproliferation Regime in an Era of Nuclear
Renaissance”**

July 24, 2008

Chairman Sherman, Ranking Member Royce, and distinguished members of the Subcommittee, thank you for the opportunity to speak with you about “Saving the NPT and the Nonproliferation Regime in an Era of Nuclear Renaissance.”

Forty years ago this month, the United States joined 61 other nations in signing the Nuclear Nonproliferation Treaty (NPT). The NPT has, since its entry into force in 1970, been at the heart of international efforts to prevent the spread of nuclear weapons. During its first twenty-five years, the NPT played a central role as nuclear nonproliferation efforts met with remarkable success. In 1963, President John F. Kennedy predicted as many as "fifteen or twenty" states could possess nuclear weapons by 1975. In fact, the number of states possessing nuclear weapons grew by only one (from six to seven) between 1970 and 1995.

By May 1995, when an NPT Review Conference voted to extend the treaty in perpetuity, a robust nuclear nonproliferation regime had arisen, with the NPT at its forefront, that seemed to have succeeded in converting the acquisition of nuclear weapons from an act of national pride into an act of international outlawry.

The last dozen years have been less successful for the nuclear nonproliferation regime. The first major step in the decline of the nuclear nonproliferation regime

involved a set of Indian and Pakistani nuclear weapons detonations in 1998. Although India and Pakistan were not parties to the NPT, their flagrant proliferation, and the world's weak response, shook the NPT and did considerable damage to the nuclear nonproliferation regime. In 2003, North Korea announced both that it was withdrawing from the NPT and that it possessed nuclear weapons. In 2006, North Korea announced that it had successfully conducted a nuclear detonation. The sanctions imposed on North Korea by the United Nations Security Council in response were minimal. Over the course of the last several years, Iran has been proceeding virtually unhindered towards a nuclear weapons capability. In the last two-and-a-half years, at least 13 countries in the Middle East have announced new or revived plans to pursue or explore nuclear power programs.¹ For most of these countries, nuclear power programs make no economic sense but seem instead to be a response to Iran's nuclear program. The UN Secretary-General's High-level Panel on Threats, Challenges and Change has warned that, "We are approaching a point at which the erosion of the non-proliferation regime could become irreversible and result in a cascade of proliferation."

What has caused this dangerous decline of the nuclear nonproliferation regime and what can be done to save it?

The NPT represents a grand bargain struck between two groups of states: the five states (China, France, Russia, the United Kingdom, and the United States) that had manufactured and exploded a nuclear device prior to January 1, 1967 (nuclear-weapon states, or NWSs), and states that had not manufactured and exploded a nuclear device by that date (non-nuclear-weapon states, or NNWSs). The three basic elements of the bargain involve nonproliferation, the sharing and development of nuclear energy technology for peaceful purposes, and disarmament.

The primary reasons for the dangerous decline of the nuclear nonproliferation regime include a lack of political will to effectively sanction proliferators, International Atomic Energy Agency (IAEA) verification and monitoring authorities that are too weak to promptly and reliably catch proliferators, the increased availability of nuclear weapon and associated technology, and a sense that the nuclear-weapon states, and particularly the United States and Russia, have not lived up to their disarmament commitments.

I know that the testimony by Pierre Goldschmidt, a former Deputy Director General of the IAEA, very thoughtfully and appropriately focuses on actions that can be taken by the international community in order to strengthen the non-proliferation regime. As a former U.S. government nuclear lawyer, I am going to try to focus as much as possible in my remarks on specific steps that the U.S. Congress could take in order to strengthen the non-proliferation regime in an era of increased foreign interest in nuclear power.

¹ See, for example, NUCLEAR PROGRAMMES IN THE MIDDLE EAST: IN THE SHADOW OF IRAN (IISS: May 2008).

I. Effectively Sanction Proliferators

A. The Iranian Example

Iran's nuclear program is by far and away the number one threat to the vitality of the nuclear nonproliferation regime. As Elihu Root, the 1912 Nobel Peace Prize laureate, Secretary of State, and first President of the American Society of International Law, stated almost a century ago, "International laws violated with impunity must soon cease to exist."

In 2002, it was discovered that Iran had engaged in an 18-year pattern of noncompliance with its obligations to report all its nuclear activities. Over those eighteen years, Iran built major nuclear facilities without telling the IAEA. Iran has still not come clean with respect to its activities during those years. More recently, the United Nations Security Council, in three Security Council Resolutions, has issued and reiterated an order, binding under international law, that "Iran shall without further delay suspend" various "proliferation sensitive nuclear activities" including "all enrichment-related and reprocessing activities, including research and development" and "work on all heavy water-related projects, including the construction of a research reactor moderated by heavy water." Rather than comply with this legally binding Security Council mandate to cease the production of nuclear fuel by enrichment and other methods, Iran has openly and admittedly accelerated its enrichment activities. As recently as yesterday, Iranian President Ahmadinejad vowed that Iran would not "step back an inch" from these prohibited activities.

Iran's advancing nuclear program is dangerous for a number of reasons, including concern that the Iranian leadership's apocalyptic messianism and exaltation of martyrdom may make it impossible to deter Iran from using, or enabling its terrorist proxies to use, nuclear weapons; the risk of rogue elements in Iran's fragmented government taking it upon themselves to transfer nuclear arms to terrorist or other allies; and worry that an Iranian "nuclear umbrella" would make Iran an even more self-confident sponsor of terrorism. An equally important danger of Iran acquiring a nuclear arsenal, a danger most relevant to the topic of today's hearing, is that many of Iran's neighbors in the Middle East might feel compelled to follow suit.

The fear that an Iranian nuclear arsenal will unleash a cascade of proliferation across the Middle East has been heightened by the number of Arab states (at least thirteen) that have in the last two-and-a-half years announced new or revived plans to pursue or explore nuclear power. An editorial in the Egyptian government daily newspaper *Al-Ahram* put it as follows: "Iran's nuclear capability . . . will spur many powers in the region to develop a nuclear program."² Such a cascade of proliferation in the Middle East would likely lead to the worldwide collapse of the already tottering

² H. Avraham, Middle Eastern Media Research Institute, *Inquiry & Analysis Series – No. 277, Arab Media Reactions to Iran's Nuclear Project*, May 23, 2006 (quoting editorial in *AL-AHRAM*, Apr. 16, 2006); see also Roe Nahmias, *Mubarak Hints: We'll Develop Nukes*, *ynetnews.com*, Jan. 5, 2007 (stating that Egyptian President Mubarak hinted that if Iran proceeds to attain nuclear weapons, Egypt will follow suit).

nuclear non-proliferation treaty regime. In addition, the proliferation of nuclear weapons in the Middle East tinderbox, with its border disputes, religious fanaticism, ethnic hatreds, unstable governments, terrorist groups, and tendency for conflicts to spiral out of control, seems likely to result in a nuclear war that would be exceedingly costly in both human life and economic terms.

Unfortunately, the international community has thus far responded with remarkable passivity to the grave dangers posed by the Iranian nuclear program. The sanctions imposed on Iran by the international community thus far are much weaker than the sanctions which stopped the Iraqi and Libyan nuclear weapons programs. Indeed, the Iran sanctions are thus far weaker than the sanctions imposed by the Security Council on South Africa in response to apartheid, on Liberia and Cote D'Ivoire during their civil wars, Sierra Leone in response to its May 1997 military coup, the Federal Republic of Yugoslavia during the Bosnian crisis, and Haiti in response to its 1991 military coup.

Due to its ideology, the value to the Iranian regime of engaging in nuclear proliferation is particularly high. Yet, the price the international community has exacted from the Iranian regime for its violations has thus far been remarkably low. Security Council Resolutions 1737, 1747, and 1803 are too weak to coerce Iran into compliance, contain Iran's ability to advance its nuclear weapons program, or deter other states from following Iran's lead and developing their own nuclear weapons program. This is unfortunate, because Iran's heavy dependence on foreign trade – including especially on imports of refined petroleum -- leaves it highly vulnerable to strong economic sanctions.

There are several steps that Congress can take to help convince Iran's leadership that the price for its nuclear program has become too high, that the risk from sanctions to the regime's survival has become so great that the regime is better served by halting its nuclear program rather than further risking its grip over the Iranian people. These include passage of legislation, such as that currently pending, that would 1) tighten U.S. federal sanctions against Iran and 2) encourage other countries and businesses to tighten their sanctions against Iran – including by facilitating state and local divestment from foreign companies doing business with Iran, divesting federal pensions from such companies, acting to prevent diversion of sensitive items to Iran, conditioning the proposed U.S.-Russia nuclear cooperation agreement, and expanding the Iran Sanctions Act (as H.R. 2880 would expand it) to apply to foreign companies that provide Iran with refined petroleum.

Preventing Iran from developing a nuclear arsenal is the most important contribution we can make to saving the NPT and the nonproliferation regime in an era of nuclear renaissance. An additional step we could take to dissuade potential future proliferators would be to pre-set sanctions for proliferation.

B. Pre-set Sanctions for Proliferation

Pierre Goldschmidt, my fellow panelist today, has set out a very thoughtful approach to pre-setting sanctions for proliferation. United Nations Security Council

sanctions on proliferators are currently imposed on a case-by-case basis after the proliferation has come to light. In contrast, legislatures set penalties for criminal violations on a generally applicable basis ahead of time. Pre-setting proliferation sanctions while the identity of the violator is still unknown might help 1) avoid vetos by P-5 members whose companies would lose an especially large share of trade with a particular proliferant state, 2) avoid the prospect of proliferants attempting to use bribes or threats of violence to dissuade Security Council members from voting for sanctions, and 3) contribute to deterring future proliferation, for example because by announcing in advance types of sanctions that would affect specific groups within target states, those groups would be spurred into lobbying against proliferation even before sanctions were imposed.

The most effective way to pre-set such sanctions is probably, as Pierre suggests, for the Security Council to pass a resolution expressing its intent to impose particular sanctions for specified future proliferation activity. Although the initial resolution could not legally constrain the contents of subsequent resolutions, it would set an important political baseline. As another alternative, the P-5 could reach an agreement between themselves to support specified sanctions on proliferators in particular future circumstances. It is far from clear, however, that such an advance commitment would inevitably lead to the imposition of stronger sanctions. The League of Nations Charter provided that "should any Member of the League resort to war ... all other Members of the League" would immediately subject the warring member to comprehensive economic sanctions, but League members nevertheless failed to impose sanctions in response to blatant aggression. Pre-set sanctions might ultimately prove to be an important advance – and **Congress should consider expressing support for pre-set sanctions in a “sense of Congress” resolution** -- but they seem unlikely to dissuade proliferation on their own.

II. Strengthening IAEA Verification and Monitoring Authorities

The NPT and its principal verification tool, the so-called “comprehensive safeguards agreement,” were developed in the 1960s and 1970s, when the technology for constructing a nuclear weapon was not widely available and the greatest proliferation risks were thought to be from technologically advanced "countries like Germany and Sweden, democratic states that were fairly open."³ With such countries, it was relatively easy to both trust and verify.

Today, more than sixty years after the Hiroshima and Nagasaki detonations, detailed descriptions of how to construct a nuclear weapon are widely available, including over the Internet. It is relatively easy to create every part of a nuclear weapon except the weapons-grade fissile material - highly enriched uranium (HEU) or plutonium - at the weapon's core. From a technological perspective, then, only the acquisition of

³ See Wade Boese, Paul Kerr & Daryl G. Kimball, Reviving Disarmament: An Interview with Hans Blix, *Arms Control Today*, July-Aug. 2006, at 7, 56, available at http://www.armscontrol.org/act/2006_07-08/BlixInterview.asp?print (quoting Hans Blix, former IAEA Director General).

weapons-grade fissile material stands between most states (and sophisticated terrorist groups) and manufacturing a nuclear weapon.

Civilian nuclear power technology and the nuclear technology needed to develop weapons-grade fissile material overlap considerably. Any nuclear power program that operates fully independently (with a "full fuel cycle") includes technology readily adaptable to the production of weapons-grade fissile material. The fuel cycle stages most readily adaptable to producing such material are the enrichment and reprocessing stages. Yet, under NPT Article IV as currently interpreted, state parties (including NNWSs) are not prohibited from possessing enrichment or reprocessing technology, or even weapons-grade nuclear material, so long as the technology and material are "for peaceful purposes" and "in conformity with articles I and II" of the NPT. As IAEA Director General El Baradei puts it: "under the current regime ... there is nothing illicit in a non-nuclear-weapon state having enrichment or reprocessing technology, or possessing weapon-grade nuclear material."⁴ The overlap between civilian and military nuclear technologies poses a key challenge facing the nuclear nonproliferation regime: the ease with which a state - in the guise of conducting a peaceful nuclear weapons program - can acquire either weapons-grade fissile material or the technologies necessary for its production.

The NPT's principal tool for detecting cheating by member states on their nonproliferation obligations is the comprehensive safeguards agreement, which NPT Article III requires each NNWS to conclude with the IAEA for the purpose of "verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons." Although NPT Article III requires that state parties "shall conclude" safeguards agreements with the IAEA, thirty NPT state parties have yet to conclude such safeguards agreements. In the absence of such agreements, the IAEA has no authority to carry out inspections in these countries.⁵

The IAEA's model for the comprehensive safeguards agreement is contained in an IAEA document usually referred to as INFCIRC/153. Under INFCIRC/153 safeguards agreements, parties must report to the IAEA on their nuclear facilities and the nuclear material that moves through them. The INFCIRC/153 agreements are significantly flawed, however, in that they contain no effective mechanism for the IAEA to assess whether the reports are complete. The agreements operate on the assumption that all states declare all relevant facilities and materials.

The verification shortcomings of the comprehensive safeguards agreement prompted the IAEA to issue a model protocol in 1997 to be appended to the INFCIRC/153 agreements (the Additional Protocol). The Additional Protocol expands the IAEA's access rights and requires parties to submit a broader range of information to

⁴ Mohamed El Baradei, *Towards a Safer World*, *Economist*, Oct. 18, 2003, at 48.

⁵ http://www.iaea.org/Publications/Factsheets/English/nptstatus_overview.html. Although many of the countries without safeguards seem unlikely to develop nuclear weapons programs in the foreseeable future, one country on the list - Saudi Arabia - is considered a strong candidate for acquiring nuclear weapons should Iran do so.

the IAEA about their nuclear programs. As the IAEA explained: "While the chief object of safeguards under INFCIRC/153 is to verify that declared nuclear material was not diverted, the chief object of the new measures ... is to obtain assurance that the State has no undeclared activities."⁶ The IAEA did not make adherence to the Additional Protocol mandatory for NPT members, however, and some two-thirds of the 189 NPT member states, including many states of proliferation concern, have yet to join. States of potential proliferation concern which did not have the Additional Protocol in force as of May 30, 2008, included Algeria, Belarus, Brazil, Egypt, India, Iran, Iraq, Malaysia, Morocco, Pakistan, Saudi Arabia, Sudan, Syria, Tunisia, Venezuela, and Yemen.⁷

If it is not subject to an Additional Protocol (and even more so if it is not subject to a comprehensive safeguards agreement), an NPT member state currently weighing whether to develop nuclear weapons would inevitably calculate the likelihood of getting caught cheating as slim. Iran managed to conceal nuclear facilities, materials, and activities from the IAEA for eighteen years before an Iranian dissident group revealed them in 2002. Libya successfully hid its nuclear weapons program from the IAEA for over a decade. Iraq also kept a nuclear weapons program secret from the IAEA for more than a decade, coming within six months of a nuclear bomb before Iraq invaded Kuwait in 1990. Yet the IAEA still frequently must depend for verification on the weak tools contained in the INFCIRC/153 safeguards agreements. Enhanced verification and monitoring authorities, such as those contained in the Additional Protocol, would significantly improve the IAEA's capabilities to detect violations.

Unfortunately, the NPT is nearly impossible to amend formally. With the exception of its 1995 extension, the treaty has not been formally amended since its entry into force. Of the seven NPT Review Conferences since the treaty's entry into force, three - those in 1980, 1990, and 2005 - were so contentious they ended without even an agreed concluding statement. The near-impossibility of formally amending the NPT is due in part to this contentiousness which has beset the treaty's formal review mechanism. An even greater obstacle is NPT Article VIII.2, which requires that any amendment be approved by "the votes of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency." In other words, every member of the IAEA Board of Governors has a veto over any NPT amendment. In 2008, there are thirty-five members of the IAEA Board of Governors, including several countries with questionable commitment to nonproliferation.

The simplest and speediest way to make legally binding changes to the nuclear nonproliferation regime is through a UN Security Council resolution. Passage of a Security Council resolution requires the support of nine of the fifteen Security Council members, including the concurring votes (affirmative vote or abstention) of the five

⁶ IAEA, International Nuclear Verification Series: The Evolution of IAEA Safeguards, at 27, IAEA Doc. IAEA/NVS/2 (Nov. 1998).

⁷ IAEA, *Strengthened Safeguards System: Status of Additional Protocols*, http://www.iaea.org/OurWork/SV/Safeguards/sg_protocol.html [hereinafter IAEA, Strengthened Safeguards System].

permanent members of the Council. "Amending" the nuclear nonproliferation regime through a UN Security Council resolution would be consistent with an important new Security Council practice: the adoption under Chapter VII of "global legislative resolutions" that impose universally binding obligations of general application for an indefinite period of time on all UN member states in response to threats of a global nature.⁸ The IAEA's ability to spot violations of the NPT could be significantly enhanced through a new Security Council resolution imposing on all NPT parties the IAEA authorities contained in the INFCIRC/153 and currently optional Additional Protocol agreements.

In the absence of such a resolution, the U.S. and its partners in the Nuclear Suppliers Group should agree not to transfer nuclear technology to NPT countries that have not adopted the Additional Protocol. U.S. law could also be changed to require that U.S. nuclear exports to NPT member states must be based on the willingness of such states to adopt the Additional Protocol. Such requirements would provide countries that have not yet adopted the Additional Protocol with an incentive to do so. In addition, although many key countries have yet to adopt the Additional Protocol, it is not too soon to begin thinking about IAEA verification procedures that go beyond the Additional Protocol and would further strengthen the IAEA's ability to detect proliferant activity. As Henry Sokolski points out, even the Additional Protocol is a far from perfect tool. One option for a more intrusive verification procedure, a variant of which has been thoughtfully set forth by Pierre Goldschmidt, is to require, perhaps via a "global legislative resolution," that a state party announcing its withdrawal from the NPT be subject to 1) highly intrusive verification measures to prove that it had not already embarked on a nuclear weapons program and 2) a requirement that all materials and equipment made available to such a state, or resulting from assistance provided to it, under IAEA safeguards be forthwith frozen and as soon as possible removed from that state under IAEA supervision.

I recommend that Congress consider amending U.S. law to require that U.S. nuclear exports to NPT member states be based on the willingness of such states to adopt the Additional Protocol. Congress should also consider declaring its support for NSG policies to require recipient adherence to the Additional Protocol and for development and implementation by the IAEA of additional more rigorous verification procedures. In addition, Congress should require that the Executive

⁸ This new practice is distinct from more traditional resolutions, which impose binding obligations that seek to address, and last for the duration of, a particular dispute or situation. The two preeminent examples of "global legislative resolutions" are Security Council resolutions 1373 and 1540. Resolution 1373, unanimously adopted on September 28, 2001, obligated all states to take various measures to combat terrorism, including preventing the financing of terrorist acts, freezing terrorist funds, refraining from providing "active or passive" support to terrorists, and denying safe haven to terrorists. Resolution 1373 filled a gap in international law left by stalled efforts to negotiate a comprehensive convention against international terrorism and the failure by many states to become party to the twelve existing international conventions and protocols related to terrorism. In drafting Resolution 1373, the Council drew provisions from those existing anti-terrorism conventions and made them binding on all states. Resolution 1540, unanimously adopted in April 2004, effectively filled several gaps in the NPT, including the NPT's failure to fully prohibit assisting terrorists to acquire nuclear weapons and failure to require physical protection of sensitive nuclear materials.

Branch finish as soon as possible the steps it must take to complete the U.S.'s own ratification of the Additional Protocol.⁹ Furthermore, Congress should, as Henry Sokolski suggests, require the Executive Branch to periodically provide a classified report on what the IAEA can and cannot successfully safeguard on a country by country basis, how sound the IAEA's standards are for safeguarding, and what specific steps might enable the IAEA to meet these standards where they currently cannot meet them.

It is important to note that both a geographic expansion of safeguards agreements and the expected increase in the number of nuclear power plants may sap the limited resources of the IAEA. In addition, because the IAEA has been kept at zero real budget growth for all but one year of the last two decades or so, the IAEA's labs, including its Safeguards Analytical Laboratory, have not kept up with technological advances. Furthermore, IAEA financial planning has been hampered by the U.S.'s regularly being behind on its assessed dues to the IAEA. A recent report by a prominent international commission on the future of the IAEA sensibly recommended that the international community increase the IAEA's budget by some \$80 million per year for the next several years. **I recommend that Congress work to double the IAEA budget in the next four years (increasing the U.S. annual share to about \$225 million) and direct that the United States pay its IAEA dues on time each year.**

III. Minimizing the Proliferation Risk of Increased Availability of Nuclear Materials and Technology

A. Securing Nuclear Weapons Materials

The Cooperative Threat Reduction program, initiated by Congress in the Nunn-Lugar legislation, has been a great success. However, more needs to be done both in the former Soviet Union and elsewhere to reduce the threat from nuclear weapons grade fissile material. The following are some things Congress should consider doing in order to facilitate the strengthening and expansion of the Cooperative Threat Reduction program:

- “Notwithstanding” Authority -- Although many restrictions on the CTR program have been lifted in recent years, the program is still prohibited from undertaking work in certain sanctioned countries. It would be a pity if important cooperative threat reduction work were held up pending enactment of a legislative exemption. In contrast to CTR, the much smaller Nonproliferation and Disarmament Fund (NDF) has authority to operate “notwithstanding” any other provision of law. However, the NDF operates with management, expertise and resource limitations, some of which have been referenced by the Government Accountability Office and the State Department Inspector General. **Congress should consider**

⁹ The Senate advised in 2004 of its consent to U.S. ratification of the Additional Protocol and passed implementing legislation for the U.S. Additional Protocol in 2006, but the Executive Branch has yet to complete the steps necessary to submit the U.S. instrument of ratification to the IAEA.

authorizing CTR to operate “notwithstanding” any other provision of law, perhaps with a short notify-and-wait requirement if Congress feels the need to retain some check on new CTR initiatives.

- Authority to Accept Contributions – As part of the G-8 Global Partnership and other initiatives, the Executive Branch has been encouraging its allies to contribute financially to cooperative threat reduction activities. Some countries would prefer to contribute to U.S.-managed projects rather than initiate and manage their own. However, the Defense Department is not currently authorized by Congress to accept funds from other countries and co-mingle them with CTR funds without penalty. In contrast, Congress has authorized such contribution receipt authority for some specific DOE programs, including Second Line of Defense and GTRI. **Congress should consider providing the Defense Department with analogous authority to accept contributions for its CTR work.**
- Sustainability of U.S.-Funded Nuclear Security Upgrades – The GAO and others have expressed grave concern about the willingness of the Russian and other governments to sustain U.S.-funded nuclear security upgrades once U.S. funding has been drawn down. Other agencies and entities that provide foreign assistance, such as USAID, private donors, and foreign governments, have presumably given a lot of thought and hopefully developed useful mechanisms for promoting sustainability after the conclusion of donor funding. **Congress should require the Executive Branch to undertake a study which examines how other foreign assistance providers maximize sustainability and devises specific steps to be taken by CTR to maximize the sustainability of its programs.**
- Low Penalties for Nuclear Material Trafficking -- Nuclear material security depends both on physical barriers to theft and also deterrence of potential thieves. Nuclear smuggling networks can include principals, corrupt officials, and middlemen who transport nuclear material, forge export licenses and customs slips, and engage in other black market activities. For individuals and businesses that engage in or facilitate illicit smuggling of fissile material and related nuclear components for financial reasons, the choice to do so will depend in part on the magnitude of the penalty if caught. Russian law’s currently low criminal penalties for nuclear material trafficking¹⁰ could more effectively deter nuclear material trafficking if they were increased. For example, Article 188 of Russia’s Criminal Code imposes penalties of no more than ten years’ imprisonment for smuggling weapons of mass destruction.¹¹ Of even greater concern from a deterrence perspective are the extraordinarily low sentences, often entirely suspended, actually imposed by Russian authorities on those convicted of nuclear

¹⁰ Igor Khripunov & James Holmes, eds., NUCLEAR SECURITY CULTURE: THE CASE OF RUSSIA, Chapter VII (“Enforcement as Deterrent”) (University of Georgia Center for International Trade and Security, December 2004), available at <http://www.uga.edu/cits/documents/pdf/Security%20Culture%20Report%2020041118.pdf>.

¹¹ Id.

smuggling.¹² UN Security Council Resolution 1540 of April 2004 requires all member states to detect, deter, prevent and combat nuclear smuggling. Resolution 1540 also “recognizes that some States may require assistance in implementing the provisions of this resolution within their territories and invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure, implementation experience and/or resources for fulfilling [Resolution 1540’s] provisions.” **Congress should require the Executive Branch to energetically assist Russia and other countries with improving their capacities, including their laws, targeting nuclear smuggling.**

- Need for Improved Material Protection, Control & Accounting Regulations -- Although Russia has developed a considerable body of laws and regulations governing nuclear safety and security, there is still considerable room for improvement. A detailed analysis by the University of Georgia’s Center for International Trade and Security found that Russia’s nuclear regulations are too often obsolete and in urgent need of updating, frequently contradictory, sometimes ambiguous (thus leaving unacceptably wide discretion for interpretation), pervaded by unnecessary technical jargon that makes them difficult to understand, and too often lack specific and detailed practical instructions for handling critical tasks.¹³ Russian Federation MPC&A regulations also fail to preclude the most high-risk categories of nuclear material from being accessed or handled by single individuals. In contrast, the U.S. nuclear complex requires application of the prophylactic two-person rule with respect to all access to or handling of the highest-risk categories of nuclear material. UN Security Council Resolution 1540 of April 2004 requires all member states to develop and maintain “appropriate effective” measures to account for and secure sensitive nuclear materials in production, use, storage and transport as well as to develop and maintain appropriate effective physical protection measures. The National Defense Authorization Act for FY 2008 includes a sense of Congress provision and a reporting requirement relating to the security of nuclear weapons and related equipment outside of the United States, including a statement that the President should work with other countries to ensure that effective and enforced regulations are in place. The United States should reach agreement with other key stakeholders on what the essential elements of appropriate effective measures are and then work to encourage and if necessary assist all states to put those essential elements in place. **Congress should continue to press for the effective use of Resolution 1540 as a tool for assisting Russia and other countries to put effective domestic controls in place to prevent the theft, diversion or spread of sensitive nuclear materials. If necessary, Congress should provide funding in support of such an effort to establish and implement effective global nuclear security standards.**

¹² Id.

¹³ Id. at Chapter VI (“MPC&A Legal and Regulatory Framework”).

B. Minimizing the Risk from Increased Availability of Civilian Nuclear Materials and Technology

The IAEA projects that nuclear power may grow by 15-45% by 2020 and by 25-95% by 2030. There are several important steps Congress can take to help minimize the risk from the increased availability of civilian nuclear materials and technology. Just as Resolution 1540 is an exceptionally valuable tool for helping countries to protect nuclear weapons material itself, Resolution 1540 is also an exceptionally valuable tool for helping countries to develop domestic controls that will minimize the risk of civilian nuclear materials and technology being diverted to develop nuclear weapons material. In addition, Congress can facilitate the following steps to help minimize the risk:

- **Fuel Bank – Congress should continue its support for an IAEA fuel reserve that would be used to provide fuel assemblies to any country that is denied fuel delivery for purely political reasons and has chosen not to engage in its own enrichment or reprocessing. In doing so, Congress should seek to ensure that it does not encourage more states to get into developing nuclear power programs sooner than market forces would otherwise suggest.** There are currently economic disincentives for countries to produce their own nuclear fuel. It is currently much more expensive for a country to produce its own nuclear fuel than to purchase it from highly efficient foreign suppliers such as the Urenco consortium. An IAEA fuel reserve should help convince countries that they do not need their own nuclear fuel production facilities for energy security purposes. Once an IAEA fuel reserve arrangement is in place, countries nevertheless insisting on producing their own nuclear fuel will have the burden of proving that their motivation is not in fact the option of producing nuclear weapons.
- **Phase out Civilian Use of Highly Enriched Uranium – The United States must continue to remove HEU from vulnerable reactor sites around the world and expedite the process of converting to LEU, which is less proliferation-sensitive, or shutting down, those reactors that currently use HEU. Congress should support the phase out of civilian use of Highly Enriched Uranium both overseas and here in the United States, including by phasing out U.S. exports of HEU.**

IV. Living Up to Disarmament Commitments

Article VI of the NPT specifies that “Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.” Many non-nuclear weapon states have long accused the NPT nuclear weapons states, and particularly the United States, of not acting in good faith to make progress towards nuclear disarmament. While it seems unlikely that this perception of U.S. failure to hold up its end of the NPT bargain has directly contributed to any country proliferating, the

perception has clearly made it harder for the U.S. to gain support in international fora for its efforts to isolate proliferators. The following are specific steps that Congress could take to increase the perception and enhance the reality of U.S. movement towards the goal of nuclear disarmament:

- CTBT -- The most important short-term step that the United States can take towards the goal of nuclear disarmament is to ratify the Comprehensive Test Ban Treaty. To date, 138 states have ratified the CTBT, including France, Russia, and the UK. For the CTBT to come into force it must be ratified by ten more specified states including the United States. The argument for ratifying the CTBT is even stronger today than it was when the Senate rejected the Treaty in 1999, as significant progress has been made in the U.S. capability to detect foreign noncompliance with the Treaty and ensure confidence in the reliability of our nuclear deterrent in the absence of nuclear testing. **Congress should work with the next President to ratify the CTBT.**
- Fissile Material Control – The United States should lead the way towards negotiation of a verifiable treaty ending the production of fissile material for weapons purposes. **Congress should encourage the Executive Branch to energetically pursue a Fissile Material Control Treaty.**
- No Development of Nuclear Weapons – **Congress should not authorize the development of new types of nuclear weapons.**
- Extend START – The U.S.-Russia Strategic Arms Reduction Treaty (START) expires on December 5, 2009. Both sides fulfilled their START reductions several years ago, but they continue to employ the treaty’s monitoring and verification regime to conduct inspections and exchange data on their deployed strategic nuclear forces. **Congress should urge the President to extend the START Treaty’s monitoring and verification provisions.**
- Further Reduce Nuclear Arsenals – The United States must work with Russia on a binding verifiable arms control agreement to as soon as possible reduce the size of our nuclear arsenals to the lowest possible number consistent with our security requirements and global commitments. Such reductions should, to the extent possible, be made irreversible. The United States should also explore with Russia ways to reduce or eliminate deployments of tactical nuclear weapons in Europe. The United States should also set nuclear disarmament as an explicit long-term goal while remaining cognizant that several of our closest allies, such as Japan, may have thus far refrained from developing their own nuclear arsenals in part because they feel protected by a U.S. nuclear deterrent umbrella. **In support of these goals, Congress could, for example, pass a resolution asserting its “sense” that the United States should work with Russia on such a binding verifiable arms control agreement, explore with Russia ways to reduce or eliminate deployments of tactical nuclear weapons in Europe, and adopt nuclear disarmament as a long-term goal.**

There is obviously a lot of work to be done if we are to maximize our chances of saving the NPT and the nonproliferation regime in an era of nuclear renaissance. One key obstacle to quickly, efficiently and effectively implementing as many of these steps as possible is the lack of sustained high-level leadership on nonproliferation in the Executive Branch. In Public Law 110-53, the Implementing Recommendations of the 9/11 Commission Act of 2007, Congress mandated the establishment within the Executive Office of the President of an office to be known as the “Office of the United States Coordinator for the Prevention of Weapons of Mass Destruction Proliferation and Terrorism.” The Coordinator is to be appointed by the President, by and with the advice and consent of the Senate, and to have various responsibilities and authorities as set forth in the Act. Establishment of this position could be a very useful step towards ensuring that United States nonproliferation policy is comprehensive, well-coordinated, matches resources to priorities, identifies and corrects gaps and overlaps, overcomes obstacles and seizes new opportunities, and does not suffer from the wasteful inefficiencies and turf battles of the past. Unfortunately, the Administration has thus far refused to appoint such a Coordinator or create such an office. **Congress should consider pressuring the Administration, including by withholding funds if necessary, to obey the law and appoint the Coordinator and create the office.**

V. Conclusion

The nuclear nonproliferation regime worked well for its first 25 years, converting the spread of nuclear weapons from an act of national pride into an act of international outlawry. Today, however, the nuclear nonproliferation regime is on the verge of collapse.

The regime as it exists now has little remaining capacity to coerce, contain, or deter violations. An NPT member state currently considering whether to develop nuclear weapons can only conclude that the IAEA's verification and monitoring authorities are too weak to promptly and reliably catch it cheating and, even if it is caught, it will receive light sanctions at worst. If the nuclear nonproliferation regime is not soon enhanced, it is likely to collapse, with grave consequences for international peace and security.

The nuclear nonproliferation regime is at a tipping point, with its viability in the balance. If a nuclear 9/11, or a series of them, someday occurs, it will be because the international community failed to enforce and repair the nuclear nonproliferation regime while it still could. The time to act is now. Humanity's future may depend on it.