

# top ten results

Participants at the June 2007 Carnegie International Nonproliferation Conference were asked to identify top solutions to current and future nonproliferation challenges. Based on their responses and our review of the conference proceedings, here we describe:

**Top 3 Upcoming Challenges to the Nonproliferation Regime**

**Top 3 Best New Policy Proposals**

**Top 4 High Impact Ideas to Implement by 2010**

Speakers and attendees at the conference represented the heart of the international community of experts, journalists, and government officials and the diversity of international interests and perspectives on nonproliferation. Over 800 experts attended, from thirty-three countries:

Argentina	France	Nigeria
Australia	Germany	Norway
Austria	Indonesia	Poland
Belgium	India	Russia
Brazil	Iraq	Slovakia
Canada	Israel	South Africa
China	Italy	South Korea
Czech Republic	Japan	Sweden
Denmark	Mexico	Turkey
Egypt	Pakistan	United Kingdom
Finland	Netherlands	United States

International and regional organizations including the International Atomic Energy Agency, the United Nations, the Comprehensive Test Ban Treaty Organization, the European Union and the League of the Arab States also were represented.

# 3 Upcoming Challenges



## 1. Proliferation Networks Continue After A.Q. Khan

Some officials claim that the infamous A.Q. Khan proliferation network has been shut down. Yet, there were more participants in this network than have been identified—technology providers, machine-shop operators, brokers. Some of those who were identified have not been detained. Many are not in jail or even subject to prosecution. It is impossible to know whether blueprints for components or for a nuclear weapon have been distributed to actors that either were not in the original network or were undetected. Moreover, Pakistan still relies on a procurement network to maintain and enhance its nuclear weapon arsenal. This is how the original A.Q. Khan network began; there are no guarantees that today's importing network might not become tomorrow's distributor to other buyers. Among the indications that elements of the Khan or successor networks persist are the ongoing queries that trade brokers in Dubai and elsewhere make to European (and presumably other) suppliers of proliferation-sensitive materials and equipment. Who are the would-be buyers? How will governments, alone or, more ambitiously, through the UN Security Council (UNSC), prevent undeclared transactions and deter illicit procurement?

## 2. To Have or Have Not: The Nuclear Renaissance Sequel

For decades the tension between nuclear “haves” and “have nots” has impaired the strength of the nonproliferation regime. Today, as excitement over a nuclear energy renaissance grows, non-nuclear-weapon states in the developing world declare large ambitions to build civilian nuclear capacity. They suggest that advanced nuclear technology countries' support of their projects will test the nonproliferation bargain.

There are major unexplored risks and delusions here: the talk of a massive expansion of nuclear energy is not based squarely on industrial and commercial realities. The most advanced suppliers lack the capacity to meet the projected demand for new nuclear power plants. This is due to limitations on construction personnel and engineers,

materials, and financing. Confronted by this shortage, advanced suppliers will prefer countries with adequate industrial infrastructure and nuclear safety culture and sell to the least risky buyers (in terms of their payment, political stability and proliferation risks). Those left behind may cite this as another example of the discriminatory nature of the nonproliferation regime and its failure to deliver on promises.

Alternatively, new technology providers could step into the supply market—for example, India or China among others. While this may help meet greater demand, these providers may offer reactors that are objectively less advanced, safe and proliferation resistant than the state of the art. What kinds of safety, physical protection, and export control standards will these suppliers and their governments adhere to? A world of new suppliers working with new buyers is one with unknown and highly sensitive implications. More broadly, many complex issues must be worked out to make a nuclear renaissance an age of cooperation and security rather than one of conflict and proliferation.

## 3. Fuel Assurances: A Solution Looking for a Problem?

The international community is exploring mechanisms to assure supply of nuclear fuel so that states will have incentives to forego developing uranium enrichment and plutonium separation capabilities of their own. Many states like the idea of incentives, but they reject new rules that would prohibit them from acquiring any category of new technology. But U.S. and Russian proposals seem to offer fuel supply only in return for a state's commitment not to acquire fuel-cycle capabilities. The key developments to watch will be whether the IAEA can realize a longer-reaching goal of multilateralizing facilities; whether a potential nuclear renaissance fuels greater need for enrichment and reprocessing; whether the U.S. Global Nuclear Energy Partnership stimulates national enrichment and reprocessing programs rather than diminishing the desire for indigenous capacity; and whether the Nuclear Suppliers Group will establish acceptable criteria for addressing further restrictions in supplying enrichment and reprocessing-related equipment. Will it be necessary, as one participant suggested, to convert all existing enrichment and reprocessing facilities to multilateral control?

# 3 Best New Policy Proposals



## 1. Mobilize the Business Community to Report Suspicious Procurement Inquiries and Tighten Nuclear Material Security.

The good news is that many businesses recognize suspicious procurement orders and refuse to fill them. The bad news is that information about failed attempts is largely an untapped resource in the fight against proliferation. A representative of the international business community on the panel discussing illicit nuclear trade described how his company now routinely forwards to the IAEA inquiries it receives from potential purchasers of equipment that could have sensitive nuclear uses. These inquiries usually come from trading companies of the kind that were used extensively in the A.Q. Khan network, but which also could be completely legitimate.

Forwarding the information is as easy as the click of a computer key and helps the IAEA build databases and other capacities to analyze, track and investigate potential proliferation networks and suspicious national programs. Voluntary forwarding of inquiries also builds a nonproliferation culture within companies and can become a deterrent to illicit operators. As tempting as it might be to try to mandate such reporting, perhaps as an extension of UN Resolution 1540, the conference discussion suggested that care should be taken first to work with relevant businesses to build a norm and understand how to promote best practices. The IAEA Director General could explore ways to encourage such information sharing, as authorized under Article VIII of the IAEA Statute.

Another key area for information exchange is among nuclear plant operators (reactors, enrichment, reprocessing, fuel fabrication plants) on best practices for nuclear security. This could be important particularly if nuclear energy expands according to optimistic projections.

## 2. Increase the Costs of Noncompliance with IAEA Safeguards and Withdrawal from the NPT.

The key mechanism would be a legally binding UNSC resolution under Chapter VII of the UN Charter that would require a standard set of actions when the IAEA reports a state's non-compliance. These actions could include giving the IAEA authority for enhanced verification to help resolve noncompliance where a state is not fully cooperative. Such a resolution—which could require the suspension of sensitive nuclear fuel cycle activities and the continuity of safeguards even if a state withdraws from the NPT—would make the consequences of noncompliance concrete and immediate. Many states in the NPT chafe at the idea of making withdrawal from the NPT more difficult, but this solution would be invoked only when a state is declared noncompliant with its nonproliferation obligations.

## 3. Strengthen the Euro's Leverage as a Nonproliferation Tool.

The U.S. has adopted policies to cease doing business with banks and other financial institutions that deal with entities involved in terrorism or proliferation. Iranian banks, for example, have been denied access to the U.S. financial system, and European and Japanese financial institutions have withdrawn from investment relationships in Iran so as not to be barred from doing business in the U.S. Illicit actors will be tempted to respond by switching from dollar-based business to euro-denominated trade and investment. The U.S. and the European Union should coordinate their financial levers to enforce international norms and rules. This would require mutual adjustments to overcome historic differences on the imposition of sanctions. Washington must be prepared to reassure Europe that multilateral financial sanctions would be implemented with great judiciousness, while Europe must demonstrate greater resolve to enforce compliance with nonproliferation rules. Given the horrors and cost of war, it should be a priority to develop the peaceful power of coordinated dollar and euro sanctions. If the U.S. and the E.U. develop a satisfactory mechanism, Japan should be encouraged to bring the yen into it.

# 4 High Impact Ideas



## 1. It's the CTBT, Stupid.

Nearly every speaker emphasized that the CTBT is the most salient indicator of whether the core nuclear nonproliferation bargain can be sustained. This is an old issue and it is easy to dismiss those who focus on it as old thinkers who have not kept up with the times. But the CTBT is an old issue precisely because it is so important in the bargain that 184 states made to forego acquiring nuclear weapons. The CTBT indicates whether states are willing to uphold their commitments to reduce the role of nuclear weapons. Its implementation would stop the steep plunge in international confidence in the nonproliferation regime. U.S. ratification of the treaty would pressure other states that also have not ratified to clarify their nuclear policies to the rest of the world—including China, India, Egypt, Israel, and Iran.

## 2. Don't Waver In Obtaining Iran's Compliance.

Iran's continuing refusal to comply with IAEA obligations and legally binding UNSC resolutions undermines the effectiveness of a rule-based system for managing nuclear technology and threatens international peace and security.

To change Iran's behavior, the permanent members of the UNSC must remain united. Iranian elites expect U.S. and European criticisms. But when Russia, China, India and other major powers stand together, Iranians worry that their government has gone too far. Changes in Iran's nuclear activities will only occur when Iranians themselves insist on them. Therefore, even if maintaining unity requires slower tightening of sanctions on Iran than some advocate—unity is worth the frustration.

Iran is legally obligated to temporarily suspend its uranium enrichment activities until it provides the information and transparency necessary for the IAEA to resolve whether Iranian nuclear activities have been exclusively peaceful. Iran spuriously claims this legal obligation is a violation of its nuclear rights. International policy makers should focus on the core problem: Iran's compliance requires both suspension and transparency. To encourage this, the UNSC should declare that an Iranian admission of past or present military nuclear activities will not prompt new reprisals.

UNSC Resolution 1747 clearly states that existing sanctions would be lifted as long as Iran suspends all enrichment and reprocessing-related activities. After (not before) Iran comes into compliance, negotiations should focus on how Iran could resume enrichment-related activities in ways that maximize international confidence in their peaceful nature.

## 3. Develop New U.S.-Russian Initiatives To Reduce Risks of Nuclear Exchange.

The numbers and alert levels of U.S. and Russian nuclear forces far exceed any feasible threat to either nation's security; indeed, they now increase the threat they were designed to reduce. Leaders of the Russian and U.S. military commands responsible for these forces could readily devise reciprocal measures to significantly reduce risks of accidental or inadvertent nuclear crises, if their leaders ordered them to do so. Presidents Bush and Putin should task U.S. Strategic Command and the Russian Strategic Rocket Forces commanders to produce—with a deadline—recommended measures to take all nuclear forces off hair-trigger alert.

## 4. Take Disarmament Seriously. Elaborate Prerequisites for Verifiably and Securely Eliminating Nuclear Arsenals.

Participants at the conference—most dramatically U.K. Foreign Secretary Margaret Beckett—emphasized the importance of facing the disarmament question more than any other issue. Some argued that complete abolition is impossible, thus the task is to identify feasible and security-enhancing steps to lower the number and salience of nuclear weapons without abandoning nuclear deterrence completely. Others argued for a straightforward negotiation and implementation of a treaty prohibiting nuclear weapons worldwide. The recommendation here is for leading states with and without nuclear weapons to take up this web of questions with an earnestness and spirit of inquiry that has never before been evident.

## CONFERENCE PROCEEDINGS

Please visit [www.carnegieendowment.org/npp](http://www.carnegieendowment.org/npp) for highlights, transcripts of each session, video and photos from the 2007 Carnegie International Nonproliferation Conference: Tomorrow's Solutions.

## ABOUT THE CARNEGIE ENDOWMENT

The Carnegie Endowment's Nonproliferation Program is an internationally recognized source of knowledge and policy thinking on efforts to curb the spread and use of nuclear weapons. Carnegie's analysis consistently stays at the forefront of proliferation developments (e.g., on Iran, North Korea, South Asia, and Russia) and nonproliferation policy debates (e.g., on national fuel cycle capabilities or regime enforcement). In Washington, Moscow, Brussels, New Delhi, and increasingly in Beijing, the program hosts public and private seminars, speeches, and workshops, where leading officials and experts seek to overcome obstacles to reducing the danger of nuclear war. The program works publicly and behind-the-scenes in active Track II diplomacy to promote solutions to challenges such as the Iranian nuclear case, U.S.-Russian threat reduction cooperation, new approaches to managing the nuclear fuel cycle, and the future of nuclear disarmament.

Every eighteen months, Carnegie convenes the Carnegie International Nonproliferation Conference, widely considered to be the premier event in its field and attracting over 800 government officials, policy and technical experts, academics, and journalists from around the world.

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