In the debate about nuclear non-proliferation, a new approach is now required. While the current focus on “tipping points” and “proliferation cascades” is warranted and understandable, a much more subtle and pervasive challenge lies in shifting our approach to non-proliferation within the context of globalization.

The international community exerts a great deal of attention to rogue regimes that may seek to leverage their very membership of the Nuclear Non-Proliferation Treaty (NPT) to attain nuclear weapons capability. In addition, warranted concern exists about these states being a source for other states or non-state actors to attain weapons, materials, or know-how.

The threat that garners the least attention, however, arises from the state (or sub-state) actors who unwittingly contribute to proliferation due to insufficient capacity to adequately keep within their borders the know-how and technology, which then may slip into the wrong hands.

The forces of globalization render such approaches increasingly inadequate. Today, the savvy rogue scientist or terrorist need only find the weakest link among the developed world’s export control regulations, suborn compliant (read: complicit) bureaucrats, or manipulate the gaps that exist in a developing country’s dual-use capabilities to exploit the many loopholes in the existing network of multilateral export control arrangements. Only by addressing holistically the underlying conditions in each state that permit bad actors to proliferate with impunity can an effective international non-proliferation strategy be achieved.

The traditional reliance on limiting access to technologies has not only exacerbated the North-South dynamic. Continued adherence to this approach will ultimately undermine progress toward nuclear disarmament. Rather than perpetuating a discriminatory approach focused on restricting technological know-how and hardware, the international community must recognize the dynamics rendering this approach increasingly ineffective and counterproductive. Addressing these dynamics will require a commitment to widespread capacity building to achieve a framework for global technology governance. United Nations Security Council Resolution 1540, a sweeping mandate focused on addressing the threat of non-state actors, offers an opportunity to realize this fundamental shift in our non-proliferation strategy.

The need for a holistic approach

The dominant global players have long depended on a top-down, state-centric approach to addressing proliferation challenges. Particularly, in the realm of nuclear proliferation, this approach has hinged on a discriminatory regime limiting access to advanced technologies to the traditional “haves” of the world.

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Technology bans no longer effective

Early divisions over access to technology mirrored the ideological conflict and economic fault lines of the world at the time. During the Cold War, one dimension was an East-West divide between the Coordinating Committee for Multilateral Export Controls (COCOM) and the Soviet bloc in the sharing of technology. The other dimension remains as a key source of grievance in the North-South dynamic—a remnant of colonialism and continued marginalization of the global South within the international economic order. While COCOM has been relegated to history’s dustbin, continued marginalization of the global South in our export control policies undermines universal support for and adherence to the non-proliferation regime. The forces of globalization present a formidable test of addressing proliferation challenges through arrangements aimed at restricting access to advanced technologies. Whereas the state once held a monopoly on the means of mass destruction, this can no longer be taken for granted. The state is still highly relevant, but it is no longer necessarily the ultimate bulwark against the spread of technology.

The pace of technological advances combined with near unbridled diffusion, the lowering of barriers and increasing trade, the accelerating transport and communications capabilities, and financial liberalization comprise a confluence of factors that increasingly defy the wherewithal of any state or existing multilateral organization to offer effective solutions.

Recent cases, especially that of the Pakistani scientist, A.Q. Khan, with his vast black market network of nuclear suppliers, illustrate not only a democratization of the proliferation challenge from the state to the individual level, but also a dramatic expansion of the geographic dimension of the problem. Dual-use technologies associated with a nuclear weapons program are increasingly widespread. More ominous yet, new enrichment capabilities contained within the space of a small office will allow concealment of weapons-related activities that would confound even the most rigorous inspections regime; “smart” sanctions risk being impotent while pervasive sanctions could create a public relations disaster. A myopic focus and a short-term strategy that ignores these realities while relying on antiquated tools will ultimately fail.

The increasing power and potential role of non-state actors looms large in any analysis of both the threats and solutions to today’s proliferation challenges. Non-state actors encompass not only the Al Qaeda devotee with violent ambitions, but also industry actors in relevant technological areas as well as nongovernmental organizations. While A.Q. Khan is emblematic of the potential damage inflicted by a “rogue scientist,” it is worth reflecting on the fact that he operated in concert with a network of commercial actors from Europe to Africa to Malaysia.

While international terrorist groups represent the threats associated with the “democratization of violence” ushered in by globalization, other nongovernmental organizations demonstrate an ability, by way of examples, to elevate human rights, push for the elimination of landmines, and respond to environmental challenges worldwide. Whereas governance capacity within states will remain the foundation for achieving long-term non-proliferation objectives, industry and other nongovernmental organizations must increasingly work in concert with governments to address the burgeoning proliferation challenges and will be key agents in providing comprehensive, effective solutions.

Civilian nuclear capacity set to grow sharply

Today, the spread of sophisticated dual-use technologies represents a particularly difficult policy conundrum, especially in the context of energy security. This same widespread availability of advanced technologies has afforded progress in many of the poorest countries of the world. Access to affordable energy has made these advances possible and remains the lynchpin to economic development. Experts forecast a 75 percent growth in electricity demand by the year 2025 with even greater increases by mid-century, and a disproportionate amount of that growth is anticipated in the developing world.

This reality, in conjunction with concerns about climate change, is making civilian nuclear power more attractive to a larger number of countries than ever before. An increase from 30 nuclear power-using states to as many as 50 or 60 by the year 2050 is a distinct possibility. Moreover, the geographic distribution of new countries expressing an interest in nuclear energy is telling, including 12 Middle Eastern and North African states, seven in Southeast Asia, and five in Central and Southern Asia. None of the political rhetoric regarding the so-called nuclear “renaissance” underscores the governance gap relevant to adequately controlling this anticipated global expansion.
In particular, an unprecedented global commitment to shoring up loopholes in the non-proliferation regime is a prerequisite for devising workable solutions to the widespread availability of enrichment and reprocessing capabilities. Beyond this, however, without assurance of a minimal standard of institutional, legal, and regulatory capacities by new nuclear energy aspirants, the poorly managed spread of nuclear technology to many of these states could spell disaster for the non-proliferation regime—not only because of latent capabilities, but also resulting from diversion or theft not sanctioned by the state.

Not only must nuclear supplier states give some serious thought to what standards should apply to states’ non-proliferation commitments, but with only six major nuclear power suppliers in the world, the need for industry to play a key role in controlling proliferation comes to the fore. Industry’s participation in providing solutions to widespread availability of critical technologies could help to mitigate the immediate risks while the international community devises appropriate standards and focuses on capacity building in weak states to address these proliferation risks.

**Technology governance: United Nations Security Council Resolution (UNSCR) 1540**

In the wake of the A.Q. Khan incident, the UN Security Council unanimously adopted Resolution 1540. The resolution attempted to address the inadequacies of existing treaty measures and the specific challenge of weapons of mass destruction (WMD) proliferation by non-state actors in one all-encompassing directive. The resolution requires all UN member states to implement an array of non- and counter-proliferation measures. The resolution includes 12 points obligating all UN member states to legislate and enforce laws that prohibit any non-state actor from manufacturing, acquiring, possessing, developing, transporting, transferring, or using nuclear, chemical, or biological weapons and their means of delivery. It also calls on them to develop and maintain effective physical protection measures, border controls, and law enforcement efforts to address illicit trafficking as well as the export of sensitive items from their territory. In short, the Security Council legislated obligations for technology governance to prevent WMD proliferation in every UN member state.

The resolution’s emphasis on non-proliferation assistance must be underscored. As 1540 imposes a demanding suite of obligations on all states, any state lacking the legal and regulatory infrastructure, implementation capacity, or resources may request assistance from those states in a position to provide needed assistance. In addition to the obvious inability for a large number of states to implement and enforce such measures, the resolution has not yet engendered the requisite conceptual shift from piecemeal efforts and ad hoc technical assistance—such as border security, export controls, and legislative drafting—to the more all-encompassing, systemic institutional, legal, and regulatory capacities necessary for effective and sustainable achievement of the resolution’s objectives.

Effective implementation of 1540 will require donor states to recognize the role that traditional development assistance plays in helping states achieve minimal standards of governance and orchestrate our development and security assistance to maximum effect. Not only does this greatly expand the type of tools necessary to realize our non-proliferation objectives, facilitating attainment of such governance capacities entails a “whole of government” approach. Namely, donor states must apply the full range of foreign policy tools to effectively address the conditions in weak or failed states in order to promote stability and economic progress.

Although strategy documents have repeatedly noted that weak states can pose grave dangers in today’s international security environment, fashioning coherent responses to the wide-ranging and systemic problems that plague the vast majority of states presents a substantial challenge to the traditional donor community. At the same time, the clear alignment of humanitarian and security interests in addressing the governance gap should prompt the international community to swift and unprecedented action.

A focus on global technology governance, rather than reliance on denying access to technology, materials, and know-how, is necessary not only to address the confluence of terrorism, technology diffusion, and the spread of nuclear energy. Such a shift in our approach is a requisite parallel track toward eventual nuclear disarmament. Incremental or even radical steps toward nuclear disarmament alone will not erase the longstanding historic grievances of colonization, economic exploitation, and the like—technology denial being viewed as only one facet of deliberate, orchestrated structural oppression by many states of the global South. Regardless of where responsibility for underdevelopment lies, this perception will continue to hinder universal support for the non-proliferation regime.
North and South have obligations

In order for the non-proliferation agenda to achieve vital political momentum and eventual universal acceptance and support, UNSCR 1540 should be embraced as an opportunity to move away from discriminatory approaches to trade in technology and make a long-term commitment toward addressing the governance gap. At the same time, the burden must not be borne exclusively by the North. A necessary shift in perception and a corresponding assumption of responsibility for their vital role in today’s security agenda is required by states of the global South as well.

A renewed commitment toward realization of Article VI commitments under NPT must be accompanied by recognition on the part of the nuclear “haves” that globalization has rendered technology denial increasingly futile. The eroding utility of discriminatory regimes requires that the international community begin focusing on providing assistance to attain minimal standards of technology governance worldwide.

Only through achievement of such minimal governance capacities can we attain assurances that states (or non-state actors) are not unwittingly contributing to proliferation due to insufficient financial controls, inadequate border security, nonexistent or anachronistic trade controls, and the like. In addition, the criminalization of proliferation activities will only be as efficacious as the legal framework, policing capacities, and judicial competencies at hand. Assistance geared toward attainment of good governance as a first-order priority helps overcome problems of political will that continue to hinder implementation of the resolution and fosters the necessary ownership of the assistance to bolster sustainability. Most importantly, only when the perceived injustices of the past are as distant as the focus on discriminatory trade practices that exacerbate those perceptions can the international community move in concert to combat the potential scourge of rampant nuclear proliferation.

The non-proliferation regime is at a crossroads. Not only can the existing regimes, even with a more robust and targeted verification authority, not achieve the desired non-proliferation objectives, but the dynamics at play beyond and below the state will confound even the most serious effort to apply traditional approaches to today’s non-proliferation challenges.

Sustainable implementation of UNSCR 1540 must be embraced by both the North and South as an opportunity for long-term, mutually beneficial engagement in a shared future.

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