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## The Strategic Challenge of Border Security

MICHAEL A. WERMUTH AND K. JACK RILEY

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Testimony presented before the House Homeland Security Committee,  
Subcommittee on Border, Maritime and Global Counterterrorism on March 8,  
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***The Strategic Challenge of Border Security***

**Before the Committee on Homeland Security**  
**Subcommittee on Border, Maritime and Global Counterterrorism**  
**United States House of Representatives**

**March 8, 2007**

**Introduction**

Madam Chair, and Members of the subcommittee, thank you for giving RAND the opportunity to address the critical issue of securing our borders as part of the broader effort to secure the U.S. homeland. I have here with me today Jack Riley, Associate Director for RAND's Infrastructure, Safety, and Environment research unit.

We have been asked to focus our remarks today on the maritime aspect of border security. We should, however, note at the outset that no single piece of border security—air, land, or sea; people or cargo; transportation modes; technology; intelligence; law enforcement; trade and other economic considerations; and more—can truly be addressed separately.

And while issues of security from terrorist attacks is certainly a major concern that drives many border security considerations, there are other critical, "daily" issues involving criminal activities, including trafficking in drugs, the smuggling of weapons and other illegal contraband, and human trafficking. In addition, as we improve one aspect of border security, increased security concerns may shift to another aspect. For example, if initiatives to stem illegal activity across our land borders become more successful, we could see a decided shift in security threats to the maritime domain. Those issues must form an integral part of border security programs. Moreover, all must be considered in the context of a strategic security framework, of which border security is only one part.

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<sup>1</sup> The opinions and conclusions expressed in this testimony are the author's alone and should not be interpreted as representing those of RAND or any of the sponsors of its research. This product is part of the RAND Corporation testimony series. RAND testimonies record testimony presented by RAND associates to federal, state, or local legislative committees; government-appointed commissions and panels; and private review and oversight bodies. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

The maritime challenges to border security are enormous. Every day, over 30,000 maritime cargo containers pass through U.S. ports. In addition, more than 4 million automobiles imported annually enter U.S. ports along with other bulk and break-bulk cargo not carried in containers, such as oil, natural gas, hundreds of cruise ships annually.

The people and cargo that cross our borders are the economic lifeblood of the nation. Decisions about security at the border have the potential to affect the livelihood of millions of Americans and a significant portion of the U.S. economy. More than \$2 trillion of goods annually—over \$1.3 billion a day—pass in and out of U.S. ports, representing almost 25 per cent of the U.S. Gross Domestic Product.

Some specific questions that arose in the most recent hearing of this subcommittee included the value of the proposed 700 mile fence along the US-Mexican border and whether 6000 new Border Patrol agents (for a total of 18,000) is sufficient for the task of guarding the nation's borders. In addition, there have been repeated attempts to require the screening of each container entering a U.S. port. These kinds of questions address important pieces of the overall picture of border security, but they do not address the comprehensive question with which we believe the Congress – and the public – is most concerned: do we have adequate border security? An honest answer to that question would be “we don't know.”

### **Managing Border Security Risk**

Our overarching objective should be to manage the risks associated with our borders effectively and efficiently. Risk has to be the common metric, otherwise we are comparing unlike concepts, and we therefore cannot choose rationally among options. What, then, do we mean by risk? Risk is function of three components: a credible *threat* of attack on a *vulnerable* target that would result in unwanted *consequences*. Risk only exists if terrorists want to launch an attack, if they have the means to do so successfully, and if the attack exploits a vulnerable target in ways that result in deaths, injuries, disruptions, or other outcomes that adversely affect U.S. society.<sup>2</sup> And while much of the focus on border security from terrorist attacks is on containers, there are other issues in the maritime arena—cruise ships and ferries, as examples—that should not be overlooked.<sup>3</sup>

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<sup>2</sup> Our approach to terrorism risk management, especially as it applies to the allocation of resources, is contained in Henry Willis, et al., *Estimating Terrorism Risk*, MG-388, RAND, 2005, available at [http://www.rand.org/pubs/monographs/2005/RAND\\_MG388.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG388.pdf).

<sup>3</sup> See Michael Greenberg, et al., *Maritime Terrorism, Risk and Liability*, MG-520, RAND, 2006, available at <http://www.rand.org/pubs/monographs/MG520/>.

Since 9/11, we have developed numerous innovative approaches to border security in securing the borders. Key innovations include: the Container Security Initiative (CSI), which increases container inspections at foreign ports; the Customs-Trade Partnership Against Terrorism program, the CBP voluntary government-business initiative to build collaborative relationships between border agencies and those private sector elements in the global supply chain; the 24-Hour Advance Cargo Manifest Rule, which requires carriers to submit a complete cargo manifest to CBP at least 24 hours prior to cargo loading if that vessel is calling directly on a U.S. port; the REAL ID Act and the emerging implementation of a Transportation Worker Identification Credential Program (a joint effort of the Transportation Security Administration and the U.S. Coast Guard), which should help to limit the ability of terrorists to procure and use false identification; and the development of fast lane programs that let certain shippers participate in special security activities, which allow them to move commerce rapidly over international borders.

As well intentioned as these and other programs are, however, individual programs have not been integrated into, and measured against, a comprehensive risk reduction framework. Many have not been evaluated against a clear set of metrics, and have not been viewed as part of a comprehensive, systematic approach even to border security much less to the broader security equation. Despite the passage of the Maritime Transportation Security Act of 2002,<sup>4</sup> the promulgation of a National Strategy for Maritime Security, and numerous Presidential directives with implications for border security (including Homeland Security Presidential Directives 3, 4, 6, 7, 11, 14 and Homeland Security Presidential Directive 13, specifically on maritime security), we do not yet have the comprehensive, risk-based, fully integrated national *border control* strategy. As a result, we cannot answer basic questions about where investment in border security overall or for specific aspects of border security is most urgently needed and how large those investments should be.

To illustrate more concretely the need for a national border control strategy, consider one proposed activity – mandatory inspection of all cargo containers entering the U.S. – that Congress has repeatedly made efforts to have implemented. RAND’s research has shown that such a program could be expensive and add to congestion at the ports if not implemented with innovative application of technologies and processes that allow learning and improvement as the extent of container inspections increase.<sup>5</sup>

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<sup>4</sup> Public Law 107-292, November 25, 2002.

<sup>5</sup> See Susan Martonosi, et al., “Evaluating the Viability of 100 Per Cent Container Inspection at America’s Ports,” reprinted with permission from *The Economic Impacts of Terrorist Attacks*, edited by Harry W. Richardson, Peter Gordon, James E. Moore II, pp. 218-241, Copyright © 2005 Edward Elgar Publishing, available at <http://www.rand.org/pubs/reprints/RP1220/>; and Henry Willis, et al., *Evaluating the Security of*

These findings do not mean that a program of 100 percent container inspection is totally without merit, only that before adoption it should be compared to the merits of other policies, such as adding an additional 6,000 Border Patrol agents, or putting up a 700 mile fence, or the use of unmanned aerial vehicles and other technologies. Unfortunately, we cannot draw conclusions about the relative worth of such programs for three reasons. First, most of the alternative investments to the policy of 100 percent container inspection have not been evaluated. Thus, there is very little evidentiary basis about which policies to pursue and at what levels of investment. Second, virtually no work has been done to understand the degree to which individual programmatic or policy options mutually reinforce – or undermine – other individual policy options. In other words, we need to know the degree to which our policies work together to provide robust, defense-in-depth at the border. Third, and most importantly, we have very little understanding of how individual policies and suites of policies combine to affect risk reduction. Thus, even though the individual policy of 100 percent screening may logically target the *vulnerability* of cargo containers, we still need to understand how – or if – it contributes to overall risk reduction (taking into consideration the *threat* and *consequence* components) before investing in it.

### **Toward a National Border Control Strategy**

Thus, the task of establishing a national border control strategy is urgent. What would an effective national border control strategy look like? An effective strategy will include the following:

#### **The establishment of quantified benchmarks, and performance and effectiveness metrics.**

Benchmarks and metrics will help us understand which programs are working, which ones merit additional investment, and which ones should be deemphasized. It is important that there be true measures of effectiveness and not simply an enumeration of outputs. As an example, RAND staff recently completed an analysis on security at shopping malls that identified specific steps that mall owners and operators could take to improve their security against terrorism.<sup>6</sup> These security measures were arrayed in order of their cost-effectiveness where the metric used was the number of lives saved by the security measure in a hypothetical attack scenario. That same methodology could be used to measure the costs and benefit of each component of a border security system, as well as the cumulative costs and benefits of the system as a whole.

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*the Global Containerized Supply Chain*, TR-214, RAND, 2004, available at [http://www.rand.org/pubs/technical\\_reports/TR214/](http://www.rand.org/pubs/technical_reports/TR214/).

<sup>6</sup> Tom LaTourrette, et al., *Reducing Terrorism Risk at Shopping Centers: An Analysis of Potential Security Options*, TR-401, RAND, 2007, available at [http://www.rand.org/pubs/technical\\_reports/TR401/](http://www.rand.org/pubs/technical_reports/TR401/).

RAND staff also studied the costs and effectiveness of arming civilian airliners with defensive mechanisms to counter the use of shoulder-fired missiles also known as MANPADS (Man-Portable Air Defense Systems). That comprehensive analysis determined that it was premature to deploy a missile defense system without further, in-depth analysis, including an examination of alternative technologies and missile control strategies.<sup>7</sup> As it becomes more difficult to increase homeland security spending in real terms, it becomes increasingly important to invest in programs that fill critical security gaps in a cost-effective manner.

**The development of a comprehensive border technology roadmap.** There is no shortage of new and potentially useful technologies for use in border security. Technologies exist, for example, to combat the threat that surface-to-air missiles pose to civilian aircraft. RAND's 2005 evaluation found, however, that current technologies could be evaded easily, were relatively costly compared to the overall threat and consequences of such an attack, and offered little protection against future generations of such missiles that terrorists might acquire over the near term. One way to ensure that we are producing technologies that better meet our needs is to develop a technology roadmap that identifies the pressing border security challenges that need to be resolved. With this roadmap, the public and private sectors can structure their investment in technologies that will yield high payoffs, address mission-relevant functions, provide essential capabilities and over a policy-relevant time horizon. When building the technology roadmap, we should be careful not to prescribe technology as the most critical component of a national border control strategy.

The potential for failures in technological systems, including the possibility that terrorists or other criminal elements could find ways to defeat or avoid them, argues strongly for robust systems of technological and non-technology means. RAND has just completed a set of studies for the S&T Directorate of DHS that explored the ways terrorist groups have overcome defensive measures in the past highlighting the danger of relying on technology alone for protection.<sup>8</sup> And technologies that are used must be able to be integrated into a unified border security system so they do not result in technological stovepipes that complicate rather than improve overall security.

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<sup>7</sup> James Chow, et al., *Protecting Commercial Aviation Against the Shoulder-Fired Missile Threat*, OP-106-RC, RAND, 2005, available at [http://www.rand.org/pubs/occasional\\_papers/OP106/](http://www.rand.org/pubs/occasional_papers/OP106/).

<sup>8</sup> See, for example, Brian A. Jackson, et al., *Breaching the Fortress Wall: Understanding Terrorist Efforts to Overcome Defensive Technologies*, MG-481-DHS, RAND, 2007, available at <http://www.rand.org/pubs/monographs/MG481/>.

**The integration of planning and coordination among border security entities.** Numerous entities in DHS have border security responsibilities and capabilities, including TSA, Customs and Border Protection, Immigration and Customs Enforcement, and the U.S. Coast Guard. Further evaluation is necessary in order to determine how effectively those organizations are operating and can operate collectively. In addition, other DHS entities have responsibilities that must be part of a comprehensive, department-wide approach to effective border security, including the Assistant Secretariat for Intelligence and Analysis, the Under Secretariat for Science and Technology; the Under Secretariat for Preparedness (as that entity may be reorganized or renamed); and the Under Secretary for Administration. DHS should develop comprehensive operational plans that clearly articulate the roles, missions, responsibilities, coordination and communications line among the various players. There is an analog to the process by which combating commands in the department of defense develop comprehensive operational plans. In addition, there are numerous entities outside DHS that have some stake in or cognizance over border security, including the maritime aspect: The FBI and other Department of Justice entities; the Departments of Agriculture, of State, and of Commerce; the Department of Defense; the Director of National Intelligence; and others. Moreover, there needs to be a better long-range planning, programming, and budgeting process for major elements of DHS. Our work for decades for entities in the Department of Defense suggests that attempts to improve similar processes for that department could have application in DHS, including something akin to the Quadrennial Defense Review.

**The creation of plans for managing the border during crises.** Numerous games and exercises, including our own simulation of a nuclear incident at the Port of Long Beach, have demonstrated that border security incidents have great potential to significantly disrupt border activity. When – and it is probably when, not if – border security fails, the borders will almost certainly be closed. An overlooked but important aspect of border security is how we will manage the consequences of the shutdown and, more importantly, how we will manage the reopening of the border. This is no academic exercise. The attacks of 9/11 resulted in lengthy closings of U.S. land, air and sea borders.

**The coordination of border security with comprehensive immigration and border management policies.** Effective border management requires more than capability to intercept illicit cargo and people. It also requires understanding how measures put in place for security affect how goods and people move across our borders. The effects that these policies have on our population have the potential to affect dramatically our economy and the fabric of our society.

**Privacy and other civil rights implications.** Nothing we are suggesting would necessarily impinge on the privacy or civil liberties of Americans. Programs for border security must always consider the effects of implementation on these critical issues.

### **Role for the Congress**

The most critical role for Congress at this juncture is to focus on ensuring that the grand strategy on border security – and the ability to measure progress against it – is in place. Congress should place relatively less emphasis on mandating specific programs in the realm of border security until the urgent issue of the overall architecture is addressed. To that end, this subcommittee, the full committee and others with jurisdiction over DHS and other relevant agencies activities and funding should push toward a consensus with the Department and other stakeholders on the development of a national border security strategy.

There is no denying that in other aspects of major policy planning – especially in the establishment of a national transportation security policy – the Department has been relatively slow in responding. One reason that the Department struggles with developing these strategic frameworks is that it has no high-level leadership dedicated to policy development across the diverse and sprawling empire of DHS and with the other entities that have border security responsibilities and interests. In other cabinet agencies, such as the Department of Defense (DoD), there is an Under Secretary for Policy. At DoD the Under Secretary is charged to “consistently provide responsive, forward-thinking, and insightful policy advice and support to the Secretary of Defense, and the Department of Defense, in alignment with national security objectives.”<sup>9</sup>

Congress should give serious consideration to supporting the establishment of a similar high-level position at the Department of Homeland Security, one that vests that person with the responsibility for taking the “long view” and helping DHS develop strategic policies that integrate across the different operational elements of the Department and with other agencies, including international governments and private sector interests. Not insignificantly, such an under secretary would also be a critical point of interaction with the academic, research and development communities. These communities – of which RAND is a part – often struggle to interact with the operational elements of DHS. The operational elements are focused on getting things done, while the academic and research communities are often focused on longer-term

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<sup>9</sup> Office of the Under Secretary of Defense for Policy, <http://www.dod.mil/policy/index.html>, accessed March 3, 2007.

challenges such as evaluating, measuring, and assessing. That said, deeper integration of these communities into the DHS strategy-setting process is vital, and the establishment of a position with these responsibilities is perhaps the most effective way to make this happen.

## **Summary**

We have significantly underinvested in developing, evaluating, and refining a comprehensive and integrated border security strategy. We have invested in numerous border security programs and initiatives but the impacts and cost effectiveness of virtually all of these initiatives is poorly understood. A truly comprehensive strategy—one that can guide the effective implementation of its key national goals—must include the essential elements that we have described: a robust system of metrics and evaluation; a forward-thinking technology roadmap; better planning and coordination, including border management during crises; and a comprehensive approach to border management and immigration issues. Only through such an approach are we likely to avoid “single points of failure” in our border security. We are, at this point, far from having such an overarching strategy.