

# CRS Report for Congress

Received through the CRS Web

## **Border and Transportation Security: The Complexity of the Challenge**

**March 29, 2005**

Jennifer E. Lake, William H. Robinson, and Lisa M. Seghetti  
Domestic Social Policy Division

# Border and Transportation Security: The Complexity of the Challenge

## Summary

Border and transportation security is a pivotal function in protecting the American people from terrorists and their instruments of destruction. This report uses a series of graphical presentations to form one possible framework that might assist policy makers in understanding the complex nature of border and transportation security. It is the first in a three-part series of CRS reports that make use of analytical frameworks to better understand complex problems in border and transportation security and cast them in terms that facilitate the consideration of alternative policies and practices. (CRS Report RL32840, *Border and Transportation Security: Selected Programs and Policies*, the second report in the series discusses selected programs and policies currently in place to address these issues. The third and final report in the series is CRS Report RL32841, *Border and Transportation Security: Possible New Directions and Policy Options*.)

Border and transportation security is an important component of the overall homeland security effort. This effort can be seen as a series of concentric circles or screens, with the outer screen being that of preventative efforts launched *outside* the country—for example, interdicting or arresting terrorists and their weapons abroad *before* they reach the United States. The next screen is interdiction in the border and transportation security system. This series of screens then moves through progressively smaller circles ending with emergency preparedness and response. Congressional concern over homeland security began with broadly defined efforts to learn more about the nature of the terrorist threat, and then moved to much more specific actions following the attacks on September 11, 2001. Congressional interest continues, however, in broader, more strategic approaches.

The search for border and transportation security is a complex task. For example, internationally shipped cargoes travel in various conveyances on a variety of infrastructures, through a number of places, are held in the custody of numerous people and organizations, and can involve up to 40 separate documents to complete the journey from the source zone to the distribution zone. This report suggests that if the border can be envisioned not merely as a physical boundary but rather as a flexible concept that allows for the possibility that the border begins at the point where goods or people commence their U.S.-bound journey, a significantly wider array of options for border management policies becomes available.

What follows are a series of graphical presentations intended to assist policy makers in visualizing the flow of people and goods across the borders that, when combined with a discussion of current border policies (discussed in the second report in this series), may be useful in seeking new directions for more effective border management policies (discussed in the third and final report in the series). This report will not be updated.

## Contents

Introduction .....	1
Definition of Border Security and the Scope of the Report .....	2
Functions of a Conceptual Framework .....	2
The Role of Border and Transportation Security in Homeland Security .....	3
(1) Discovery and Interdiction of Terrorist Action Emanating from Abroad .....	3
(2) Interdiction at the Border and in the Transportation Sector .....	3
(3) Defending Against Catastrophic Terrorism Inside the United States ...	4
(4) Protection of Critical Infrastructure and Populations .....	4
(5) Emergency Preparedness and Response .....	4
The Goals of Border Security (Re-Conceptualizing the Border) .....	4
Trends in Thinking About the Concept of “Borders” .....	5
Developing a Possible Typology for the Policy Maker .....	7
Geographic .....	8
Movement of Goods and Cross-Border Movement of People —	
Three Principal Flows .....	8
Movement of <i>Goods</i> from Place to Place (Places in the Logistics Chain) .....	9
Movement of <i>Custody</i> from Person to Person (Actors in the Logistics Chain) .....	10
Movement of <i>information</i> or documents .....	11
Legitimate and Illegitimate Cross-border Traffic .....	14
Conclusion .....	15

## List of Figures

Figure 1. Geographic Zones .....	8
Figure 2. Cargo — Movement of Goods From Place to Place .....	9
Figure 3. Cargo — Movement of Custody from Person to Person .....	11
Figure 4. Movement of People .....	12
Figure 5. Movement of Goods and People .....	14

# Border and Transportation Security: The Complexity of the Challenge

## Introduction

There is consensus that Border and Transportation Security (BTS) is a pivotal function in protecting the American people from terrorists and their instruments of destruction. The adequate provision of BTS is an extremely complex endeavor given the scope of U.S. borders, and the volume of traffic flowing across them. As described by Admiral James Loy, former Deputy Secretary of the Department of Homeland Security (DHS):

We must secure nearly 7,500 miles of land border with Canada and Mexico, across which more than 500 million people, 130 million motor vehicles, and 2.5 million rail cars pass every year. We also patrol almost 95,000 miles of shoreline and navigable waters, and 361 ports that see 8,000 foreign flag vessels, 9 million containers of cargo, and nearly 200 million cruise and ferry passengers every year. We have some 422 primary airports and another 124 commercial service airports that see 30,000 flights and 1.8 million passengers every day. There are approximately 110,000 miles of highway and 220,000 miles of rail track that cut across our nation, and 590,000 bridges dotting America's biggest cities and smallest towns. That is just a thumbnail of the vast infrastructure that supports the largest and most efficient economy in the world — with more than \$11 trillion in Gross Domestic Product.<sup>1</sup>

This report utilizes several graphical presentations to better understand the points of vulnerability in the BTS system, before discussing one, integrated approach. It should be noted that the approach in this report is but one of a number of possible approaches to this issue. This report is the first in a three-part series of CRS reports that make use of analytical frameworks to better understand complex problems in BTS and cast them in terms that facilitate the consideration of alternative policies and practices. (CRS Report RL32840, *Border and Transportation Security: Selected Programs and Policies*, the second report in the series discusses selected programs and policies currently in place to address these issues. The third and final report in the series addresses possible approaches and policy options that might be explored by Congress in searching for higher levels of BTS, and is entitled CRS Report RL32841, *Border and Transportation Security: Possible New Directions and Policy Options*.)

---

<sup>1</sup> Remarks by former Deputy Secretary of Homeland Security James Loy at the National Cargo Security Council Annual Convention, *Homeland Security Monitor*, June 15, 2004. Available at [<http://www.dhs.gov/dhspublic/display?theme=44&content=3719&print=true>].

## Definition of Border Security and the Scope of the Report

In this report (and the other two reports in the series), “BTS” is taken to mean all efforts by the U.S. government and other actors to interdict terrorists and their weapons of destruction at the U.S. “border” and in the nations’s transportation system. Initially, it starts with direct intervention to prevent threats and interdict dangerous people and goods at the U.S. border itself (in terms of ports of entry at land, sea or air terminals). Protection efforts at the border are extended to encompass both such *extra*-border activities as targeting and pre-inspection of people and cargo in originating ports around the world, *cross-border efforts between ports of entry* by the Border Patrol, as well as *intra*-U.S. efforts to intercept people and goods as they are shipped inland from their original port of arrival (or from internal U.S. sites). The latter involves using the internal enforcement tools of the Federal Bureau of Investigation (FBI), Immigration and Customs Enforcement (ICE), and other law enforcement agents.

While the report treats the BTS role in preventing and interdicting other threats that may occur *inside* the United States, it only does so as it relates to the transportation sector as a means of delivering the terrorist or threat or as a target itself. This report does not address domestic intelligence or law enforcement efforts directed at terrorists inside the country in depth, although the second report in the series does discuss aspects of intelligence and enforcement related to immigration and border policy. Finally, this report focuses almost exclusively on what comes *in* via the border, and not so much on what goes *out* (except the effort to prevent terrorists and their activities from being transshipped to our allies abroad). The report employs several policy frameworks for arraying complex phenomena to help in both understanding and analyzing the myriad activities that are embraced in the search for greater BTS.

## Functions of a Conceptual Framework

Conceptual frameworks can be important aids to achieving greater understanding of underlying problems, as well as framing more effective solutions. Criteria for a good policy framework include:

- Does it help the analyst or policymaker understand and provide structure to a complex phenomenon?
- Does it help focus on important dimensions of policy design?
- Does it help generate additional hypotheses for possible future action?
- Does it offer guidance for prioritizing actions?

With these criteria in mind, we now turn to a discussion how BTS fits into the larger concept of homeland security.

## The Role of Border and Transportation Security in Homeland Security

The homeland security effort can be seen as a series of concentric circles or screens, with the outer screen being that of preventive efforts launched *outside* the country. The continuum of activities to provide homeland security then moves through progressively smaller circles starting from more distant efforts to closer and more localized measures. Thus, the process starts with prevention abroad and progresses through the other stages as needed:

### **(1) Discovery and Interdiction of Terrorist Action Emanating from Abroad**

The earlier that terrorists and/or their weapons are known and interdicted (even before coming to the United States), the lower the danger to the country and its people. With so many targets of opportunity in such a large and open society, it is virtually impossible to protect them all. Hence, the importance of enhanced *intelligence* to learn the identities of terrorist groups and individuals, as well as their motives, planned actions, targets, weapons, and timing. This effort (and any follow-on interdiction abroad) could be further enhanced with the use of effective *diplomacy* in marshaling the support and cooperation of other countries, even to the point of using joint *police and/or military force* to contain the danger abroad before terrorist missions are launched on U.S. soil. This is stage one, the first screen in terms of reach and importance for success in the rest of the mission to prevent attacks and damage to people and property. It includes related policy efforts to prevent the proliferation of weapons of mass destruction, in an attempt to deny terrorist access to the most devastating weapons. If this first stage is overlooked, the screening at the border could lack focus and be overwhelmed by the sheer volume of dangerous travelers and materials.

### **(2) Interdiction at the Border and in the Transportation Sector**

If terrorists and weapons of mass destruction cannot be quarantined abroad, then it is up to the second screen of BTS efforts to interdict bad people and/or bad things at the border. If they get past the border, then they must be picked off at other access points as they are transported into the interior of the country. Once again, given the inherent vulnerability of nearly 300 million people living in a free and open society, and millions of physical targets of opportunity in the nation's infrastructure, it is paramount that this interception phase be as effective as possible. The lion's share of resources in the new DHS is indeed focused on this target with approximately 60% of the budget (and over 85% of the Department's manpower) committed to this goal. Key actors in this effort are the Bureau of Customs and Border Protection (CBP), including the Border Patrol (BP); the Coast Guard (CG); and the Transportation Security Administration (TSA).

### **(3) Defending Against Catastrophic Terrorism Inside the United States**

This stage has many dimensions. In part, it is designed as a reminder to policy analysts that BTS efforts extend beyond actions at the border. There are domestic intelligence and law enforcement capabilities that can be exploited if terrorists get past the border and outside the reach of other transportation security efforts. These include domestic intelligence components of the FBI, ICE, the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), as well as the law enforcement capabilities of these agencies and their state and local counterparts — which are combined in roughly 100 localized Joint Terrorist Tracking Task Forces (JTTFs).

### **(4) Protection of Critical Infrastructure and Populations**

If the three previous screens were penetrated, there would be little standing in the way of attack on vulnerable populations or infrastructures. It is possible to “harden” these targets to some extent, but there are so many targets and terrorists are so opportunistic that this phase of the screen can offer little more than tight control at critical sites, and a very thin net over the rest. Special targeted measures can be taken to protect clear targets such as nuclear power and chemical plants, as well as other power plants, oil refineries, etc. The government can encourage the development of sensors and other warning devices to alert and provide some measure of protection to the population against certain forms of chemical or biological weapons. Finally, citizens can be informed and advised about protective actions they might take.

### **(5) Emergency Preparedness and Response**

If all else fails, we must be prepared to (1) minimize the damage and loss of life from an attack, (2) alleviate the effects of injury and destruction, and (3) continue to operate effectively as a society in re-building efforts. While this phase would occur at the end of the process, it is receiving increased policy attention because the other forms of protection can never be perfect or complete. Thus, while funding is greatest for BTS (and for the military in its operations related to terrorism), we cannot overlook the preparedness and response stage of protection because of the irreducible level of vulnerability that will always remain. In an atmosphere of risk and uncertainty, prudent investors will seek to diversify their portfolios — in this case, to build overlapping layers of protection.

With this framework as context, the report narrows its focus to BTS.

## **The Goals of Border Security (Re-Conceptualizing the Border)**

This section of the report aims to provide an understanding of border security — redefined later in this report as “good border management.” To further this understanding, this section offers several graphical presentations of border security.

At the end of the report, we synthesize these concepts into a single, more comprehensive framework.<sup>2</sup>

## **Trends in Thinking About the Concept of “Borders”**

Border research has become multi-disciplinary in focus. Political scientists, geographers, sociologists, economists, and a variety of others have contributed much to research and have offered a variety of constructs and avenues of approach to the notion of borders. Prior to the September 11, 2001 terrorist attacks in the United States, the thinking often focused on several trends that challenged the prevailing concept of borders strictly defined by the boundaries of the nation-state including (1) geopolitical watersheds such as the end of the Cold War, or the launch of the Schengen Treaty in Europe; (2) increasing economic integration in the global economy; (3) increasing integration of border towns and so-called ‘border regions’; and (4) the developing boundary-less virtual societal space created through the Internet. These challenges all seemed to be leading towards a world where borders became evermore permeable to all sorts of things (people, goods, ideas, identities), inexorably tied to the changing place of the nation-state, and perhaps becoming increasingly irrelevant. In the aftermath of September 11, 2001, these ideas are being reevaluated, particularly in the United States where, as seen above, border security (or good border management) forms an integral part of the national strategy for providing homeland security.

In broad terms, good border management seeks to balance the competing (but not necessarily conflicting) goals of (1) facilitating (and even expediting) access for people and goods that are both needed and desired; with (2) interdicting and stopping ‘bad’ people and ‘bad’ things from entering the country. The key to success in this endeavor is the ability to accurately and efficiently identify high-risk passengers and cargo, target them for inspection, and prevent the entry of dangerous goods and people without impeding the flow of legitimate cross-border traffic. The task for the policy maker is to identify and promote those policies which will enhance the efficacy of the filters employed for these tasks.

More specifically, the border enforcement agent or inspector is ultimately engaged in an identification and verification process. It is an effort to determine the identity of the people or cargo requesting entry, and to verify the legitimacy of the request for entry. There are many debates about how best to do this. The current entry processing procedures for both people and cargo are complex, and involve numerous steps each of which presents both an opportunity for interference or for interception. Identifying the first step in this process is a challenging endeavor, for reasons that will become ever clearer throughout the course of this series of reports. In the case of cargo, is the first step when the goods first leave the factory where they were produced? Or is the first step when the goods are placed on the conveyance (ship, aircraft, traincar, truck) that will ultimately deliver them to the United States?

---

<sup>2</sup> This single comprehensive framework is but one possible framework that could be formulated; other studies have offered other typologies. For example, regarding cargo and supply chain security see, Henry H. Willis and David S. Ortiz, *Evaluating the Security of the Global Containerized Supply Chain* (RAND Corporation, 2004).



In the case of people, is the first step when the individual applies for a passport from their own country? Or is the first step when they apply for a visa to enter the United States?

The 'last' step in this process is easier to pinpoint as it is the inspection at the port of entry. One of the vexing questions confronting policy makers is what actually constitutes an inspection? Does a review of entry documents alone constitute an inspection? Or does something physical have to occur, for example taking fingerprints, or taking an x-ray of a container? Does the inspection mean that the inspector must physically open up and look inside every container to verify its contents? Compounding the problem is the seeming interchangeability of the terms 'inspection' and 'screening.' Typically, the term 'inspection' is used to denote some level of examination of a person or a good, and as noted above can entail a number of different actions.<sup>3</sup> The term 'screening' generally is used when referring to applying a filter or a 'screen' to information or characteristics of cargo and people seeking entry. The screen is typically designed to match either certain known criteria with information about the entering cargo or person; or to flag certain patterns, characteristics, or indicators, as high risk attached to the entering cargo or person. Does calling for 100% inspection of cargo containers mean the same thing as calling for 100% screening of goods and people? The level of inspection or screening (in whatever context these terms are used) is likely to remain a significant part of the border security debate for the foreseeable future.<sup>4</sup> Clear definitions of terms are essential to clarifying these issues.

In sum, what does good border management look like? Recent experience has illustrated with remarkable clarity what it should *not* look like. In the immediate aftermath of September 11, 2001, the borders of the United States were essentially shut down. All air traffic into the United States was either cancelled or diverted (including both commercial passengers and cargo). The U.S. Customs Service went to its highest state of alert. On the land border, this meant that every vehicle entering the United States from Canada and Mexico was searched, causing delays of up to 16 hours at some border crossings in Michigan and New York.<sup>5</sup> These delays resulted

---

<sup>3</sup> The concepts of primary and secondary inspection can further complicate the discussion. As would be expected, a primary inspection consists of some set of standard examination protocols that are applied to every shipment of cargo or person seeking entry into the country. It follows then that the secondary inspection is a further set of protocols applied to those shipments or people, which for a variety of possible reasons were unable to be satisfactorily processed during the primary inspection.

<sup>4</sup> Recently, some have called for 100% screening or inspection of air cargo, see, for example, Caitlin Harrington, "Unchecked Boxes: Markey Pushes for Screening of All Air Cargo," *CQ Homeland Security — Border Security*, Oct. 18, 2004; others have called for international shipping standards to require shippers and terminals to develop a system to screen 100% of containers worldwide. See Caitlin Harrington, "New Maritime Cargo Security Programs Vulnerable to Terrorists, Flynn Says," *CQ Homeland Security — Border Security*, Oct. 14, 2004.

<sup>5</sup> Remarks of Customs and Border Protection Commissioner Robert Bonner, Sept. 12, 2004, at the Customs World London Summit, accessed at [<http://www.cbp.gov/xp/cgov/>]  
(continued...)

in significant economic losses, in particular to those industries, such as the auto industry, that rely on just-in-time shipping to keep their production lines running. By September 13, DaimlerChrysler reportedly announced the closure of one of its manufacturing plants on the following day; and on September 14, Ford announced that it would have to close five plants during the ensuing week.<sup>6</sup>

What follows are a series of conceptualizations to assist the policy maker in developing a redefined understanding of the border that includes good border management.

## **Developing a Possible Typology for the Policy Maker**

Border management is an extremely complex task. As the second report in the part series will illustrate,<sup>7</sup> even the current U.S. border management regime with its bevy of institutions, policies, and programs can seem overwhelmingly complex and difficult to approach in a systematic way.

Seemingly simple notions such as what is the border; where is it; and when should we be concerned about it are not as straight forward as they appear on the surface. The first two questions, the *what* and the *where* of the border, are related and somewhat interdependent. For example, if the *what* of the border is simply the physical geographic boundary and limited to U.S. ports of entry, then the *where* and the *when* are self explanatory: people or goods enter the United States when they have physically crossed the territorial boundary, and they need not be addressed until they reach the border. This approach to border control might work in a situation where the flow of cross-border traffic was small, and the resources available to process this traffic were plentiful. However, the current environment for securing U.S. borders is far more complicated, as noted above in the Introduction with the statement of Admiral James Loy, former Deputy Secretary of the DHS.

If the border is envisioned not merely as a physical boundary but rather as a flexible concept that allows for the possibility that the border begins at the point where goods or people commence their U.S.-bound journey, a significantly wider array of options for border management policies becomes available. What follows are a series of conceptualizations intended to assist in answering the above questions and when combined with a discussion of current border policies, may be useful in seeking new directions for more effective border management policies. It is

---

<sup>5</sup> (...continued)

newsroom/commissioner/speeches\_statements/09212004\_customs\_world.xml].

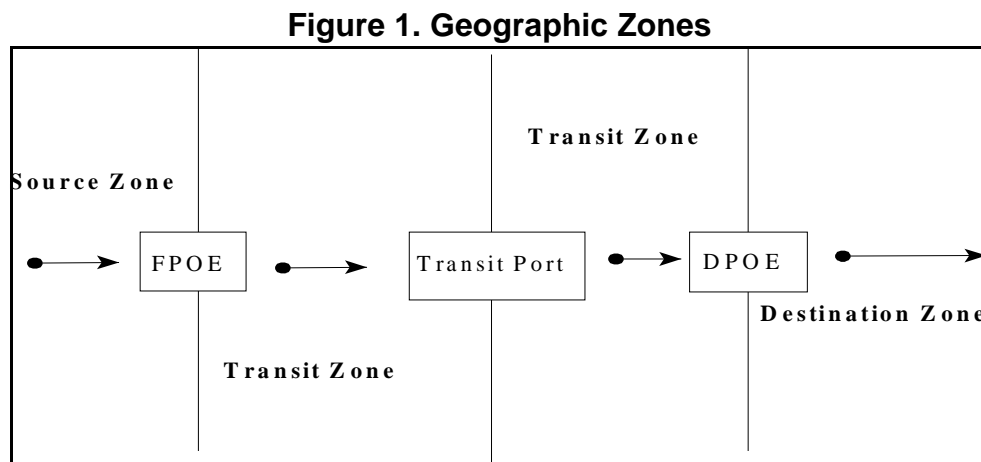
<sup>6</sup> Stephen Flynn, "The False Conundrum: Continental Integration versus Homeland Security," in Peter Andreas and Thomas J. Biersteker, eds., *Rebordering North America* (New York: Routledge, 2003), p. 115.

<sup>7</sup> See CRS Report RL32840, *Border and Transportation Security: Selected Programs and Policies*, by Lisa M. Seghetti, Jennifer E. Lake, and William H. Robinson.

important to note that this series of conceptualizations is cumulative, in the sense that each one builds off of the concepts illustrated in the previous section.

## Geographic

This approach illustrates the path that goods or people travel to enter the United States. The path is divided into zones: source zone (country of origin); departure zone (foreign port of entry/exit (FPOE)); the transit zone (between country of origin and the destination country); the arrival or approach zone (domestic port of entry (DPOE)); and the destination zone (interior of the destination country). **Figure 1** should be viewed left to right, and illustrates the zones that people or goods travel through from country of origin to country of destination. **Figure 1** is designed to accommodate a variety of travel situations. In the case shown, travelers and cargo proceed through another country or countries en route to the United States, including the case where travelers and cargo stop in intermediate countries, or ports through which cargo is transhipped. However, direct travel from source country to destination can also be visualized by mentally eliminating the transit zones and port from the figure.



**Source:** Congressional Research Service (CRS)

**Note:** FPOE = foreign port of exit, and DPOE = domestic port of entry.

With land-based modes of transportation, there is no transit zone between the country of origin and destination country.

## Movement of Goods and Cross-Border Movement of People — Three Principal Flows

Another way of envisioning the border is offered by the Organization for Economic Cooperation and Development (OECD). The OECD presented a conceptualization (specifically dealing with the shipment of vessel-borne containers) which may prove useful. The OECD's approach identifies three principal flows in the international movement of goods:

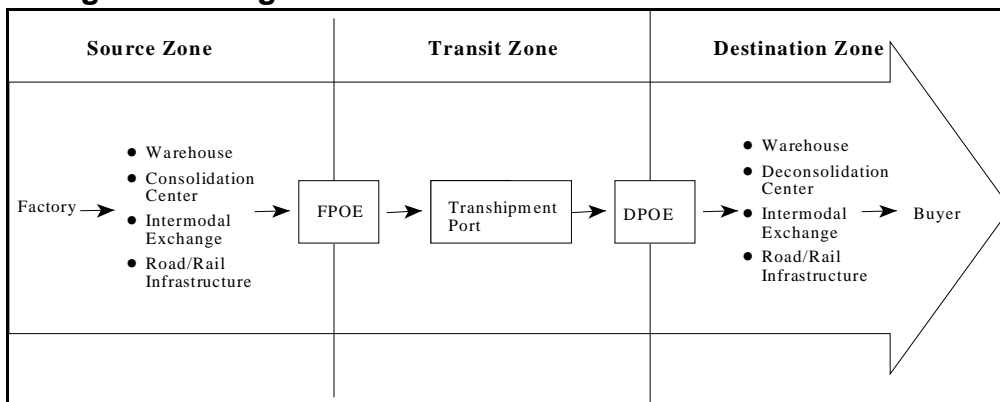
- the movement of *goods from place to place* (logistics chain);
- the movement of *custody from person to person*; and

- the movement of *information* or documents.<sup>8</sup>

The principal point to take away from these illustrations is that in order to secure cargo shipments from terrorists (or criminals for that matter) it is necessary to secure a wide range of potential targets — including people, places, conveyances, and pieces of information. Internationally shipped cargoes travel in various conveyances on a variety of infrastructures, through a number of places, are held in the custody of numerous people and organizations, and can involve up to 40 separate documents to complete the journey from the source zone to the distribution zone. **Figures 2-4**, and the accompanying text illustrate this complex process.

**Movement of Goods from Place to Place (Places in the Logistics Chain).** On its journey from the country of origin to the destination country, cargo moves through the hands of numerous actors in a variety of places. **Figure 2** illustrates the case of cargo being transported between countries in maritime containers. Cargo begins its journey in the source zone, at the factory. From the factory, the cargo may travel by truck, rail, or air, to reach the FPOE (departure zone) in the country of origin. During this leg of the journey, the cargo may be warehoused for export at a later date; it may stop at a consolidation center where it may be combined with other cargoes to comprise a full-container’s (truckload’s, railcar’s) worth of shipments; and it may be transferred from one mode of transportation to another (from rail to truck for example) before reaching the port of exit. Once at the port (departure zone), the cargo is transferred to the ocean-going vessel that will take it across the transit zone. The cargo may pass through another port in the transit zone before reaching the final port of entry in the destination country. From the port of entry in the destination country (DPOE) (arrival zone), the cargo may travel to the distribution zone by truck or by rail to be (1) warehoused for distribution at a later date; or (2) de-consolidated and perhaps re-consolidated for transport to the buyer. A variety of actors are involved in each of these places in the logistics chain, possessing ‘custody’ of the cargo on its journey.

**Figure 2. Cargo — Movement of Goods From Place to Place**



**Source:** CRS analysis of OECD figures in *Security in Maritime Transport*.

**Note:** FPOE = foreign port of exit, and DPOE = domestic port of entry.

<sup>8</sup> Organization for Economic Cooperation and Development, *Security in Maritime Transport: Risk Factors and Economic Impact*, Directorate for Science, Technology, and Industry, July 2003, pp. 23-28.

However, the movement of maritime containers is likely the most complex case. Air cargo shipments move in a similar manner, though the time it takes for a shipment to travel from the source to the destination zone is typically measured in hours rather than the days and even weeks for maritime shipments. Air cargo shipments can move by more than one mode of transportation to a consolidator or directly to an airport; shipments may be consolidated with others into air cargo containers (which are smaller than sea containers and configured to maximize storage space in the cargo holds of aircraft); cargo may pass through a transit airport on its way to the destination airport; once at the destination airport the air cargo may be transported offsite to a consolidated freight station and de-consolidated, transferred to a truck or a rail car and moved to the final destination.

In contrast to shipments moving by sea or by air, the time it takes land-border shipments to travel from the source to destination zone can be measured in hours, if not minutes. One facet of the land border environment has been the advent of highly integrated ‘just-in-time’ (JIT) shipping. JIT is particularly prominent in the automotive industry where for example on the northern border: seats for General Motors (GM) cars arrive at the GM plant in Detroit, MI less than an hour after being assembled and sent across the Peace Bridge in Windsor, Ontario, Canada.<sup>9</sup> In other cases, where smaller or less frequent shipments are required, they travel from the factory to a consolidator who consolidates less-than-truckload (LTL) shipments into a complete container, and transports them across the border. Another unique facet of truck transport prevalent along the *southern* border is the process of ‘drayage’ where short-haul trucks ferry cargo back and forth across the border.<sup>10</sup> This adds another transfer phase to the process where drayage is used, as an extra carrier is involved.

For shipments crossing the border by rail, the flow is also similar, in that the factory shipments may be placed directly into railcars (as is the case with some auto plants for example) or they may be transported by truck to a consolidator or to an intermodal rail facility where shipments (complete or consolidated) are placed in railcars for shipment across the border.

**Movement of Custody from Person to Person (Actors in the Logistics Chain).** Each cargo shipment begins with a buyer and an originating shipper, typically the manufacturer. Intermediaries such as buying agents and freight forwarders are the most frequently utilized intermediaries between the originating shipper and the ocean carrier. Freight forwarders can provide multiple services needed to transport cargo from factory to port: transport; warehousing; consolidation; etc. However, other actors can provide these services individually as well. These include customs brokers, truck and rail carriers, warehouse agents, consolidators, etc. Thus, cargo shipments can be held by a number of different actors on the journey to the port of exit (in the case of **Figure 3**, the FPOE). Once at the port, the cargoes pass through the control of the customs authority and are transferred

---

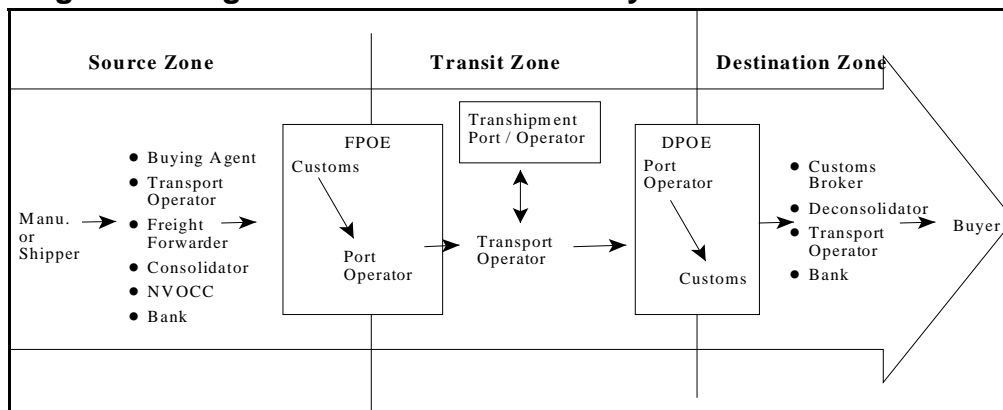
<sup>9</sup> CRS Site Visit, Detroit-Windsor Dec. 2003.

<sup>10</sup> For more information on drayage, see CRS Report RL31738, *North American Free Trade Agreement (NAFTA) Implementation: the Future of Commercial Trucking Across the Mexican Border*, by Robert S. Kirk and John F. Frittelli.

to the port operator, who then transfers them to the maritime carrier for transport through the transit zone. Upon arrival at the port of entry in the destination country, the process is reversed. The cargo passes through the custody of the port operator, the customs authority, and possibly to customshouse brokers or de-consolidators to the transport operator, and finally to the buyer.

It is important to note that there are in reality two sets of actors involved: those who hold what could be termed as *documentary* custody, the people in the offices at each of the places outlined in **Figure 3** who handle the paperwork side of the transaction; and those actors who have *physical* custody or are in physical proximity to the cargo itself (the warehouse and dock workers, longshoremen and truck drivers, etc.). Each of these groups of people present different risks to the flow of cargo, and require different policies to address these risks.

**Figure 3. Cargo — Movement of Custody from Person to Person**



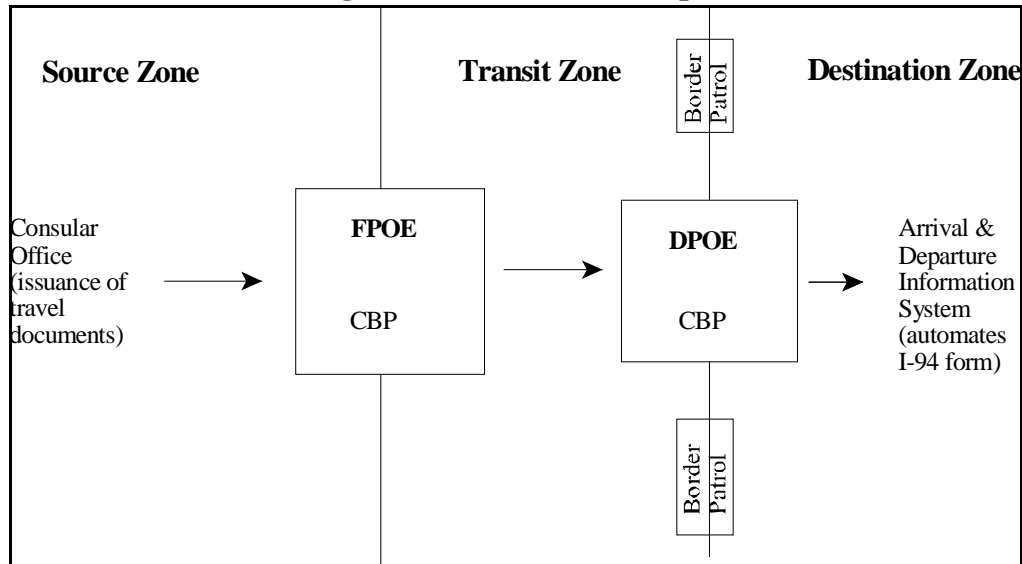
**Source:** CRS analysis of OECD figures in *Security in Maritime Transport*.

**Note:** FPOE = foreign port of exit, and DPOE = domestic port of entry, NVOCC = non-vessel operating common carrier.

**Movement of information or documents. People** — Individuals traveling to the United States require a series of documents in order to arrive in the country legally. **Figure 4** illustrates the movement of people from the source zone to the destination zone. Foreign nationals not already legally residing in the United States who wish to come to the United States generally are required to obtain a visa to be admitted. Foreign nationals from a Visa Waiver country who seek temporary admission into the United States for business or pleasure do not need a visa, however, such foreign nationals are required to possess a passport.<sup>11</sup> As now required by law, all travel documents must include biometric identifiers. However, there is concern that the lag in time before full implementation of the biometric requirement could pose opportunities for terrorists.<sup>12</sup>

<sup>11</sup> The Secretary of Homeland Security, in consultation with the Secretary of State, has some discretion to waive the documentary requirements under the Immigration and Nationality Act for certain foreign nationals. See also CRS Report RL32221 *Visa Waiver Program* by Alison Siskin.

<sup>12</sup> By Oct. 2004, all visas issued by the United States and by Oct. 2005, all passports issued (continued...)

**Figure 4. Movement of People**

**Source:** CRS.

**Note:** FPOE = foreign port of exit, and DPOE = domestic port of entry.

Prior to obtaining a visa, all aliens must undergo admissibility reviews performed by State Department consular officers abroad. Once they have been issued a visa and prior to their admission to the United States, all aliens must submit to an inspection, which includes an admissibility review, at a U.S. port of entry. These reviews are intended to ensure that they are not ineligible for visas or admission under the grounds for inadmissibility spelled out in the Immigration and Nationality Act (INA).

*Goods* — Just as with people who seek to enter the United States, goods entering the country are also accompanied by a set of documents. As noted above, there are many stages and actors through which cargo can pass before arriving in the United States. The OECD notes that some imports can require as many as 40 separate documents in order to complete the journey from the point of origin in the source zone to the destination. Each time a shipment changes hands from person-to-person or place-to-place (as illustrated by **Figures 2 and 3**) it requires documentation. The required documentation generally includes two primary sets: commercial documents that move cargo from each private sector actor (carrier, broker, freight forwarder, consolidator, driver etc.); and customs entry documents which contain information that can be used both for security and commercial compliance screenings.

Generally, goods cannot legally enter the commerce of the United States until CBP has released them. Importers or their agents (e.g., customs brokers) are required to file entry documentation with CBP for each importation regardless of whether or

---

<sup>12</sup> (...continued)

by a Visa Waiver country must use biometric identifiers.

not duty must be paid on the merchandise. To expedite clearance of their goods, importers often file documents electronically and pay the bonds before the merchandise arrives at the port of entry. Entry documents include proper bills of lading, entry forms, invoices, and evidence of the right to make entry. Customs also collects information from manifests for security purposes, including data about the shipper, importer or consignee, and information concerning the nature of the merchandise. The data contained in these documents gives CBP necessary information to target and screen high-risk shipments both for security and for commercial entry purposes. CBP inspectors examine goods for admissibility (regarding any commercial or compliance issues) before releasing them into commerce. Goods are also inspected for security purposes including terrorist weapons; illegal narcotics; and other contraband.

**Figure 5** integrates the information contained in the previous figures (bearing in mind that at the land borders, the transit zone is eliminated). **Figure 5** also illustrates the path that visitors requiring a visa to enter the country take: from the U.S. Embassy abroad, through the FPOE, perhaps to a transit port, and finally to the DPOE. It shows all of the different people, places, and zones through which cargo or individuals can pass en route to the United States from a foreign country.

In addition to the points of vulnerability discussed above, the OECD highlighted a series of related risk considerations relative to ocean-borne cargo shipping.<sup>13</sup> These factors include risks that arise from: the cargo itself; the vessels carrying the cargo; the people associated with the cargo and the vessels; and the money involved in shipping activities. This set of risk factors is also adaptable to other modes of transportation, including planes, trucks, rail cars, etc. *Cargo shipments* present a risk in that they can be used to smuggle weapons (conventional, chemical, biological, radiological or nuclear weapons), other types of contraband, or people (as in immigrant smuggling in vessel containers, potential terrorists, etc.). This risk is possible not only for vessel-borne containers, but also for containers transported by plane, truck containers, or even rail cars. The *vessel, or conveyance* itself, presents several risks in that it could (1) be a target itself, (2) be used to launch an attack, or (3) be used as a weapon (as in the case of the 9/11 attacks). *People* present a risk factor in that terrorists could attempt to gain access to a conveyance by, for example joining a vessel crew, working at a dock or port, or by traveling as a passenger. The *money* risk factor lies outside the scope of this report.

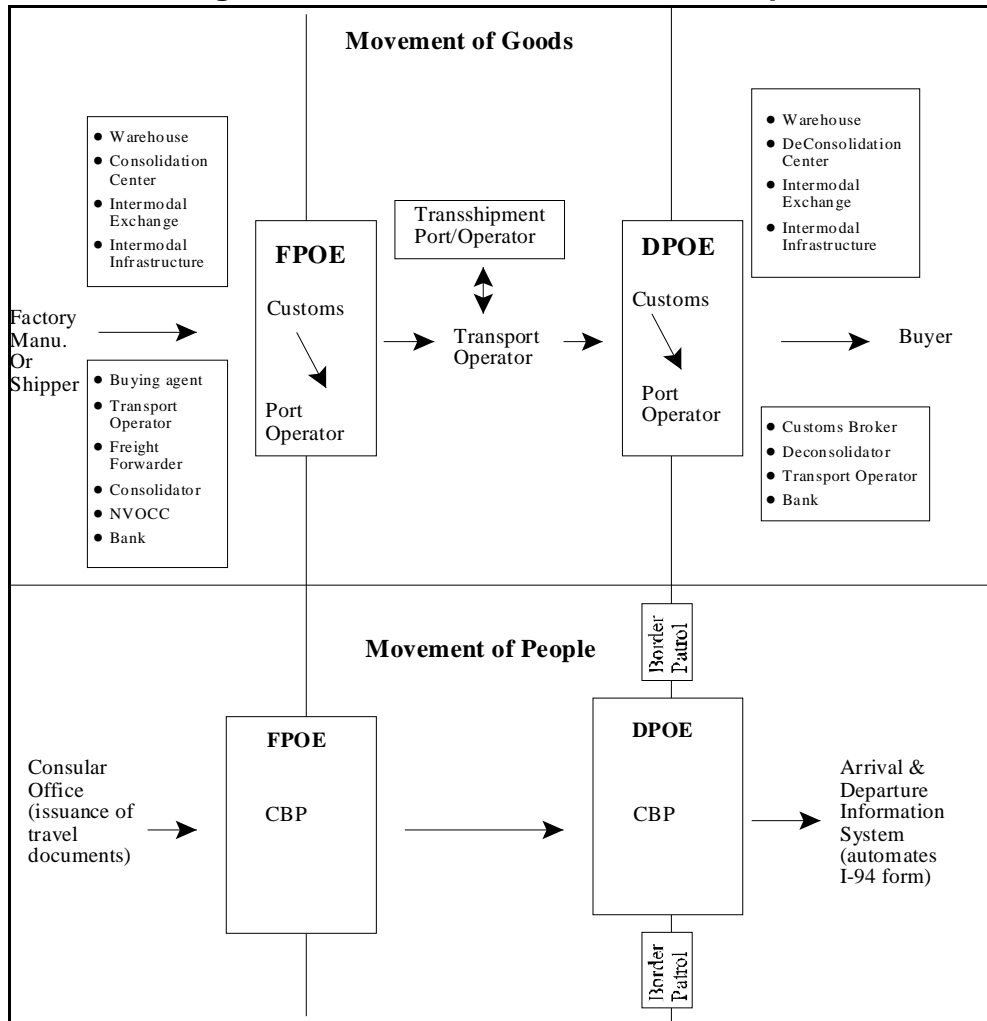
It is important to note that border management is not necessarily a zero-sum game. Policies designed to increase the security of cross-border traffic need not result in delays and inefficiencies at the border. Border processes and policies are usually judged for their efficacy in advancing the twin goals of expediting legitimate traffic and impeding illegitimate traffic.

---

<sup>13</sup> Organization for Economic Cooperation and Development, *Security in Maritime Transport: Risk Factors and Economic Impact*, Directorate for Science, Technology, and Industry, July 2003, p. 7.



**Figure 5. Movement of Goods and People**



**Source:** CRS and CRS analysis of OECD figures in *Security in Maritime Transport*.

**Note:** FPOE = foreign port of exit, and DPOE = domestic port of entry.

## Legitimate and Illegitimate Cross-border Traffic

Primarily, this report has built one possible typology based upon legitimate flows of people and cargo across the border. Though running as an undercurrent throughout the report, it is important to explicitly acknowledge the illegitimate flows of people and contraband that enter the country. Smuggling takes many forms and involves many types of commodities, from cigarettes to drugs to weapons to people.

Two primary issues of concern to federal law enforcement that are increasingly discussed in testimony at congressional hearings are: the potential interchangeability of smuggling networks; and their possible nexus with terrorist networks.<sup>14</sup> The same

<sup>14</sup> See, for example, U.S. Congress, House Select Committee on Homeland Security, Subcommittee on Infrastructure and Border Security, and House Government Reform (continued...)

groups that smuggle cigarettes across the border today may smuggle drugs or weapons across tomorrow. The same group providing fraudulent documentation to illegal immigrants today, might be doing business with terrorists tomorrow. The concern is that these groups are becoming more sophisticated; more flexible; and increasingly willing to specialize. For example, one could envision a ‘transportation’ network, with no real ties to the exporting or importing criminal group. This transportation network might be contracted on a shipment-by-shipment basis to transport (smuggle) goods or people into the country. Criminals and terrorists can and do manipulate and interfere with legitimate cargo to smuggle people and contraband into the country. They also bypass the legitimate processes and ports altogether, bringing their goods across between ports of entry.

The illegal flows of cargo could have a very different pattern than the ones discussed in this report. On the other hand, they could deviate at certain points, and become parallel again at others. This report has provided a series of graphical representations to assist in developing a general understanding of the flow of goods and people across the border as it applies to both legal and illegal crossings.

## Conclusion

Achieving adequate BTS is an extremely complex task. The conceptual frameworks outlined in this report are meant to assist the policy maker in understanding the legitimate flows of people and goods entering the country. As acknowledged earlier in the report, legitimate flows are but part of the picture: criminals and terrorists can and do manipulate and interfere with legitimate cargo to smuggle people and contraband into the country. They also bypass the legitimate processes and ports altogether, bringing their goods across between ports of entry. Understanding the flow of people and goods into the United States is a first step to assessing current efforts, and developing new options and next steps.

As noted earlier, this report is the first in a series of three reports addressing the issue of BTS. The second report in the series (CRS RL32840, *Border and Transportation Security: Selected Programs and Policies*) discusses selected current policies and programs in operation to improve at least some aspect of BTS. These policies are grouped in a framework that suggests types of possible policy actions:

- pushing the border outwards to intercept unwanted people or goods before they reach the United States;
- hardening the border through the use of technology and the presence of more agents at the border;

---

<sup>14</sup> (...continued)

Committee, Subcommittee on Criminal Justice, Drug Policy and Human Resources, *Hearing on Homeland Security Departments Counternarcotics Mission*, 108<sup>th</sup> Cong., 2<sup>nd</sup> sess., July 22, 2004; U.S. Congress, Senate Judiciary Committee, Subcommittee on Crime, Corrections, and Victim’s Rights, *Hearing on Alien Smuggling and Human Trafficking*, 108<sup>th</sup> Cong., 1<sup>st</sup> sess., July 23, 2003; U.S. Congress, Senate Foreign Relations Committee *Hearing on U.S.-Mexico Relations*, 108<sup>th</sup> Cong., 2<sup>nd</sup> sess., Mar. 23, 2004.

- making the border more accessible for legitimate trade and travel;
- strengthening the border through more effective use of intelligence; and
- multiplying effectiveness through the engagement of other actors in the enforcement effort (including engaging Canada, Mexico, state and local law enforcement resources, and the private sector).

Security of people and cargo destined for the United States requires a complex set of policies that engage actors from each of the geographic zones (foreign governments, private sector actors, and other U.S. government agencies). These relationships and policies must also take into consideration requirements unique to the different modes of transportation (air, vessel, truck, and rail). Policies could, for example, encompass the entire journey from the source zone to the destination zone; or policies could focus distinctly on a particular zone/place/actor in the journey. Or, a layered approach may be employed that involves nearly all of the constructs identified in **Figure 5** (*viz.*, people, conveyances, cargo, places, routes, etc.). The transit zone in the maritime environment poses a unique challenge for cargo security. This is because there is no single governing body responsible for regulating the zone. Organizations like the World Customs Organization (WCO) and the International Maritime Organization (IMO) have adopted measures and are working towards developing strategies to harmonize customs procedures and increase maritime security, but the standards and conventions developed by these institutions must be adopted by individual governments for them to have any real authority.

The third report in the series, CRS Report RL32841, *Border and Transportation Security: Possible New Directions and Policy Options* builds on the first two reports, and offers possible new directions and policy options that spring directly from the analytical frameworks contained within those reports