

**CURRENT AND EMERGING
AIR CARGO SECURITY
AND FACILITATION ISSUES**

**Maria Buzdugan, Institute of Air and Space Law,
McGill University, Montreal**

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the requirements of the degree of masters of law**

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ABSTRACT

“Current and Emerging Air Cargo Security and Facilitation Issues”

By

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In the wake of September 11th and following an overemphasis on passenger air travel security, the air cargo system potentially has become the primary target for terrorists. States have undertaken various regulatory approaches that involve technology and operational measures aimed at addressing the perceived security threats in the air cargo industry. This thesis presents both an overview of the potential risks and best security practices identified within several international, regional and national initiatives, including the “authorized economic operator” and “secure supply chain” mechanisms. The main challenge in designing an adequate security system appears to be ensuring that security improvements are in accord with the time-sensitive realities of air cargo industry and do not unduly interfere with trade flow. It is argued that only an international approach based on best available cargo security practices could adequately and efficiently address the current and emerging air cargo security vulnerabilities.

Dans le prolongement des événements du « 11 Septembre » qui ont entraîné un renforcement des mesures de sécurité relatives au transport aérien de passagers, le transport aérien de marchandises est devenu une cible potentielle pour les terroristes. Afin de prévenir toute menace sur la sécurité de ce type de transport, les Etats ont promulgué diverses lois concernant aussi bien les aspects techniques que les aspects opérationnels du transport aérien de marchandises. Le présent mémoire donne un aperçu général des risques potentiels et des meilleures mesures de sécurité tels qu’identifiés dans les diverses initiatives nationales et internationales, y compris les mécanismes de “l’opérateur économique approuvé” et de “la chaîne d’approvisionnement sécurisée”. Le défi principal pour établir un système de sécurité efficace est d’assurer un équilibre entre les améliorations de la sécurité et les réalités de l’industrie du transport aérien de marchandises afin de ne pas interférer indûment avec les échanges commerciaux. Ce mémoire a pour objectif de démontrer que seule une approche internationale harmonisée, fondée sur les meilleures mesures de sécurité régissant le transport aérien de marchandises, serait appropriée et suffisamment efficace afin de résoudre les problèmes actuels et futurs relatifs à la sécurité de ce type de transport aérien.

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I. EXISTING AND EMERGING AIR CARGO SECURITY AND FACILITATION ISSUES AND CONCERNS

A. Introduction

Air cargo transportation system is designed to provide fast and efficient shipment of goods,¹ two features that make it highly vulnerable to potential security threats. Similar to other components of the aviation system, the proper functioning of air cargo transport affects the economic vitality not only of the aviation industry, but also of the national and international high-value, “just-in-time”² supply chain that serves many other industries.³ In the new fast-cycle logistic era, air cargo enables businesses, regardless of their location, to connect distant markets and global supply chains in an efficient, expeditious, and reliable manner.⁴ Due to increased market demands, in recent years the volume of cargo transported by air grew significantly and, as will be shown below, is expected to continue to grow at a pace that will surpass in the foreseeable future the growth of the passenger air travel. In brief, transportation of goods by air has become an essential component of contemporary world economy.

¹ For the purposes of this paper, “air cargo” takes the definition provided by the International Air Transport Association as being the equivalent of “goods”, meaning any property carried or to be carried on an aircraft except mail or other property carried under terms of an international postal convention, or baggage carried under a passenger ticket and baggage check, but includes baggage moving under an air waybill or shipment record. International Air Transport Association (IATA), Glossary of IATA e-freight terms”, online: IATA website <http://www.iata.org/whatwedo/glossary_iata_e-freight.htm> (date accessed: 1 June 2005). Note that many other definitions include in the meaning of “cargo” mail. See for example, US Federal Aviation Administration (FAA) definition according to which cargo includes freight, express packages, and mail.

² “Just in time” (JIT) concept refers to a manufacturing and distribution system that relies on meeting immediate needs, as opposed to carrying large inventories “just-in-case.” Boeing, *World Air Cargo Forecast (WACF) 2004/2005*, online: Boeing website <http://www.boeing.com/commercial/cargo/WACF_2004-2005.pdf> (date accessed: 30 July 2005) [hereinafter Boeing Air Cargo Forecast Report] at 100.

³ Transportation Security Administration, “Air Cargo Strategic Plan” (November 2003), online: TSA website <www.tsa.gov/public/display?theme=44&content=0900051980069bfe> (date accessed: 16 June 2005) [hereinafter TSA, Air Cargo Strategic Plan].

⁴ Kasarda and Sullivan [forthcoming 2006] show that air cargo plays a lead role in the growth of trade, foreign direct investment and gross domestic product (GDP). According to this study, air cargo is not just a trade facilitator, it is a trade creator that contributes to the economic competitive advantage. Nations with good air cargo connectivity have competitive trade and production advantage over those without this capacity. John D. Kasarda and David L. Sullivan, “Air Cargo, Liberalization, and Economic Development” (2006) XXX *Annals of Air and Space Law* [hereinafter Kasarda and Sullivan].

In this context, vulnerabilities in air cargo security place at risk the entire air transportation system if exploited by terrorists and could prove extremely harmful to the global economy and well being of the international community.⁵

In the past, the main security measures in air cargo transport were focused on ensuring security to high value shipments and taking special handling precautions with regard to dangerous and hazardous goods. However, since the Lockerbie disaster⁶ and the terrorist attacks of September 11, 2001, the air cargo security is facing an entirely new array of security risks, such as placing explosives in cargo shipments or using the air transport equipment as a weapon in terrorist attacks. In the wake of September 11th, the overemphasis on enhancing security of passenger air travel has left the air cargo system more vulnerable and a likely target for terrorists.

While aviation security has preoccupied national and international fora for a number of years, leading to the adoption of several important air security conventions under the auspices of the International Civil Aviation Organization and the European Union, more recently, an increased need to address potential threats to aviation industry, motivated the adoption of various security regulations, mostly at the national and regional level. Some of these measures deal with aviation security in general, while others address specific cargo transportation needs, with some focusing expressly on carriage of cargo by air. The global scope of air cargo transport and the threats to its security, however, raises the question of whether an international approach based on harmonized best cargo security practices would be both appropriate and feasible to adequately address the current and emerging air cargo security vulnerabilities rather than national and regional initiatives.

Since most security regulations can result in significantly adverse impact upon the air cargo industry, especially given their debilitating effect on shipment

⁵ *Ibid.*

⁶ Reference is made to the 21 December 1988 crash of Pan Am flight 103, a Boeing 747, over Lockerbie, Scotland.

transit time, accommodation of facilitation and security by regulatory measures therefore becomes a vital task for both trade and security authorities world wide. The main challenge in designing an adequate security system is to ensure that security improvements are responsive to the time-sensitive realities of air cargo industry.⁷ In addition to focusing on specific elements of air cargo security, given the close dependence of participants in the international trade supply chain, another related issue is whether and how it would be possible to provide better security throughout the international supply chain.

This study explores possible approaches to harmonizing air cargo security standards and potential implementation challenges that should be taken into account when designing such common approach. The first part of the study provides a background of air cargo industry characteristics which will assist in understanding the nature of the security threats in this industry, followed by a review of selected air cargo security risks and vulnerabilities identified by government and industry reports, as well as potential measures to mitigate the risks and address the vulnerabilities.

The second part of the study summarizes the status of relevant international, regional, and national regulatory initiatives aimed at ensuring air cargo security while taking into account trade facilitation issues. It should be pointed out that this review does not intend to provide an exhaustive analysis of the wide variety of security and facilitation measures already in place; instead, it focuses on modern regulatory trends in the area of cargo security and facilitation.

The third part of the study addresses the feasibility of an international approach to air cargo security and facilitation and makes several proposals which integrate, according to the author, the best practices identified in national, regional, and international regulations with the potential for universal application. In this context, the estimated benefits and costs of, as well as challenges to the implementation of such measures are discussed.

⁷ Boeing Air Cargo Forecast Report, *supra* note 2 at 4.

Such an analysis should prove useful not only to academics interested in recent developments in the field of air transport security, but also to the policy-makers and managers of the air cargo industry by providing them with an overall picture of the current state of regulations and challenges in this important economic area, as well as with suggestions for designing an internationally acceptable set of standards to govern air cargo security.

B. Air Cargo Industry Statistics and Characteristics

1. Industry Statistics

Airlines provide different types of cargo services. Scheduled-passenger carrying airlines⁸ usually carry freight as extra cargo on passenger flights.⁹ Many such airlines provide also express cargo service.¹⁰ The express carriers provide both express and standard freight carriage as well as some charters.¹¹ According to statistics provided by the United States (US) Office of Aviation and International Affairs, on average, 39 per cent of the freight is carried on board passenger aircraft, 32 per cent on board express carriers, 24 per cent by scheduled all-cargo aircraft, and 5 per cent by charters.¹² Airlines are financially dependent

⁸ For the purposes of this thesis, the term “passenger aircraft” refers to both commercial passenger aircraft and “combination aircraft” in which the fuselage is configured to accommodate both passengers and cargo. The term “all-cargo aircraft” refers to aircraft transporting only cargo.

⁹ Typically, about one-half of the hull of each passenger aircraft is filled with cargo. United States General Accounting Office, Report to Congressional Requesters: Aviation Security. Vulnerabilities and Potential Improvements for the Air Cargo System, GAO-03-344 (December 2002) [hereinafter GAO Report] at 6.

¹⁰ Express refers to cargo with a guaranteed or time-definite service component (often that includes a refund of all or a portion of the payment made for same service if the advertised delivery time is not met). Express carriers are usually characterized as “integrated carriers” due to the fact that, in addition to carrying airport-to-airport, time-definite cargo, they also provide many other services, such as door-to-door pickup and delivery. Boeing Air Cargo Forecast Report, *supra* note 2 at 99-100.

¹¹ Charter are non-scheduled operations. For freight, charters may involve a shipper hiring an aircraft for a specific flight or a freight forwarder or other air carrier hiring aircraft for non-scheduled transport operations. Bureau of Customs and Border Protection, Department of Homeland Security, Regulatory Impact Analysis. Advanced Electronic Filing Rule (13 November 2003) online: Customs website <http://www.customs.gov/linkhandler/cgov/import/communications_to_industry/advance_info/ria_electronic_filing.ctt/ria_electronic_filing.pdf> (date accessed: 15 May 2005) [hereinafter Advance Electronic Filing Rule Regulatory Impact Analysis] at 8.

¹² Aviation Industry Data, Office of Aviation and International Affairs, online: US Department of State website <<http://ostpxweb.ost.dot.gov/aviation/international-series/monitoring.htm>> (date accessed: 15 July 2005).

on cargo transport, which carries, on average, higher profit margins than passenger traffic,¹³ accounting approximately for 15 per cent of total traffic revenue.¹⁴

Air carriers transport billions of tons of cargo each year. The volume of cargo carried by air is steadily increasing, despite the downturn in the aviation industry in recent years.¹⁵ If the worldwide air cargo traffic in 2003 was of 156.5 billion RTKs,¹⁶ by 2023 it is estimated to grow to 518.7 billion RTKs,¹⁷ meaning that the traffic will more than triple in the next 20 years.¹⁸ In this context it should be noted that more than 77 per cent of total air cargo traffic (measured in RTK) is carried by non-US airlines, which have outpaced the growing rate of scheduled freight of US carriers for quite some time.¹⁹ A recent report by the US Department of Transport anticipates that, in the coming years, the amount of freight transported by air will increase faster than the number of passengers, thus adding to the growing importance of air cargo.²⁰

It is also significant that, in the year 2000, air cargo accounted for 29.7 per cent of international trade by value, surpassed only by maritime shipping which accounted for 37 per cent of the import/export value of cargo.²¹ In the United States, the 2003 data show that while air freight accounted for 0.6 per cent of US

¹³ S. Rept. 108-38, *Air Cargo Security Improvement Act: Report of the Committee on Commerce, Science, and Transportation on S. 165*. United States Senate, 108th Congress, 1st Sess. (11 April 2003) [hereinafter S. Rept. 108-38].

¹⁴ Boeing Air Cargo Forecast Report, *supra* note 2 at 2.

¹⁵ For example, during fiscal year 2000, about 12.2 billion revenue ton miles of freight were transported in the United States by air. A revenue ton mile (RTM) is one ton of cargo transported one mile. GAO Report, *supra* note 9 at 2.

¹⁶ Revenue ton kilometer (RTK) is one ton of cargo transported one kilometer.

¹⁷ Boeing Air Cargo Forecast Report, *supra* note 2 at 13.

¹⁸ *Ibid.* at 4 and 13.

¹⁹ Boeing Air Cargo Forecast Report, *supra* note 2 at 8 and 14.

²⁰ See US Department of Transportation prognosis according to which air cargo (measured in revenue ton miles) carried by US commercial air carriers is expected to grow annually through 2013 by about one percentage point more than that forecasted for passenger travel (measured in revenue passenger miles). DOT data analyzed in GAO Report, *supra* note 9 at 6.

²¹ Pocket Guide to Transportation Statistics, Bureau of Transportation Statistics, US DOT, "Air Data from US Department of Commerce, Census Bureau, Foreign Trade Division" (2003).

exports and 0.3 per cent of imports by weight, it accounted for 34.4 per cent of exports and 23.4 per cent of imports by value.²²

2. Air Cargo Industry Characteristics

The needs and circumstances of air cargo carriers can differ considerably from passenger carriers, as well as from carriers using other modes of transportation. When compared to air passenger carriers, for example, backload is not nearly as consistent in the air cargo markets as it is in the passenger markets. While passengers usually fly round trips, shippers rarely buy roundtrip tickets, as goods usually terminate at a point of distribution or consumption.²³ Many cargo carriers scramble to find routes allowing a second or third stop to make routes more profitable.²⁴ The difference between the nature of cargo and that of passengers is also a major factor. If passengers are unique (identifiable by their ID), ambulatory, have reasonably uniform size and shape and are of uniform substance, cargo is ubiquitous, is incapable of managing itself, can vary vastly in size, weight and shape, and can be of varied substances and structures, sometimes of hazardous or perishable nature.²⁵

Another important characteristic of air cargo is its intermodal nature.²⁶ In fact air cargo transport is almost never a solely airport-to-airport service. Rather, it represents only one component of a transportation infrastructure that links the shipper and consignee. Land transport (usually trucking, occasionally rail) has the inherent ability to provide door-to-door and factory-to-distribution center

²² *Ibid.*

²³ Kasarda and Sullivan, *supra* note 4.

²⁴ *Ibid.*

²⁵ Daniel Gadow, "Air Cargo Security: An Overview", online: The International Trade Association of Greater Chicago website: < <http://www.itagc.org/ppt/2005-Global-Supply-Chain-Security/Air-Cargo-Security.ppt> > (date accessed: 15 July 2005).

²⁶ In the case of passenger transportation, the multimodalism intervenes only in very few cases (as for example the use of Thalys rail system to connect passengers from Brussels to Paris airport) and the passenger enters the air carrier's responsibilities at the embarkation airport. European Commission, Directorate General for Energy and Transport, "Consultation Paper. Freight Transport Security" (Brussels, 23 December 2003) [hereinafter EC, Freight Transport Security Consultation Paper].

service, a feature that air transport alone cannot match.²⁷ Consequently, airlines have long used trucking services registered with their own flight number as a means of extending their networks and providing additional route and scheduling flexibility.²⁸

When compared to other means of carriage of goods, the differences appear to stand out in terms of the nature of goods transported and costs. Given the dimensional constraints of cargo aircraft cabins, goods of extraordinary sizes are impossible to accommodate, whereas in maritime transport, whatever does not fit into the hold can be loaded on deck.²⁹ In addition, air transport is expensive (i.e., the cost price per kilogram of consignment carried by air is higher than when carried by land or sea).³⁰ However, the main advantage of speed maintains air cargo in the business as a strong competitor, especially in regard to valuable and perishable goods.³¹

In terms of its structure, the air cargo system may be characterized as a complex distribution network that handles a vast amount of freight and links manufacturers and shippers to freight forwarders to airport sorting and cargo handling facilities where shipments are loaded and unloaded from aircraft.³² In addition to the air carrier, cargo transportation by air involves many participants, including manufacturers and shippers (some of whom are routinely engaged in international trade, others only occasionally), freight forwarders who consolidate

²⁷ Boeing Air Cargo Forecast Report, *supra* note 2 at 40.

²⁸ These are called the "truck flights", also known as "road feeder service", referring to cargo transported by surface means (usually by truck) on an airway bill. Boeing Air Cargo Forecast Report, *supra* note 2 at 101.

²⁹ Jean Louis Magdelenat, *Air Cargo Regulation and Claims* (Toronto and Vancouver: Butterworths, 1983) at 6 [hereinafter Magdelenat].

³⁰ This explains why air freight represents a much smaller share of freight moved between the US, Canada and Mexico, as well as within the European Union, due to availability of lower cost and relatively high-speed truck and rail alternatives. Advance Electronic Filing Rule Regulatory Impact Analysis, *supra* note 11 at 5-6.

³¹ Magdelenat, *supra* note 29, at 6.

³² Bartholomew Elias, Congressional Research Service (CRS) Report for Congress, Air Cargo Security (updated January 13, 2005), online: Federation of American Scientists website <www.fas.org/sgp/crs/RL32022.pdf> (date accessed: 17 July 2005) [hereinafter CRS Report, Air Cargo Security] at 1.

shipments and deliver them to the air carriers,³³ and providers of storage facilities that accommodate cargo until it is placed aboard an aircraft.³⁴

The above review of some of the air cargo industry characteristics provides an idea of why the air cargo system poses significant challenges for aviation security.

C. Risks and System Vulnerabilities in Air Cargo Transportation

Numerous industry and government studies have identified vulnerabilities in the security procedures of some air carriers and freight forwarders, including the adequacy of background checks for persons handling cargo.³⁵ In addition, the air cargo system is vulnerable to a number of potential security threats including hijacking and/or sabotage of the aircraft, criminal activities such as placing explosives aboard aircraft, smuggling, theft, illegal shipments of hazardous materials, and tampering with cargo during land transport from the point when freight leaves a shipper to the airport or at the cargo-handling facilities of air carriers and freight forwarders.³⁶ Such security weaknesses in the system create serious risks and can have major economic impact. As will be illustrated below, breaches in transportation security in general already cost the global economy billions of dollars every year. In addition, a major terrorist attack involving a key element of transport infrastructure could have devastating consequences for the international economy (loss of life and property, interruption of trade, costs of diverting traffic). Experience to date reveals three main types of risks against air cargo:

³³ Although a shipper may take its cargo directly to the air carrier, business data in the United States for example shows that about 80% of shippers use freight forwarders. TSA data cited in GAO Report, *supra* note 9 at 4.

³⁴ *Ibid.* at 3.

³⁵ For example, in the US, TSA inspectors have discovered numerous security violations made by air carriers and freight forwarders during routine inspections of their facilities. GAO Report, *supra* note 9 at 8.

³⁶ For example, the National Cargo Security Council estimates that cargo theft among all modes of transportation that occurs in such locations amounts to more than \$10 billion losses in merchandise each year. Moreover, the Federal Bureau of Investigations estimates that the majority of cargo theft in the US occurs in cargo terminals, transfer facilities, and cargo-consolidation areas. GAO Report, *supra* note 9 at 8-9.

placing explosive devices in air cargo; cargo crime, including theft and smuggling; and aircraft hijackings and sabotage.³⁷

1. Placing explosive devices in air cargo

It is estimated that the risk of undetected explosive devices placed in air cargo represents a major threat to aircraft security, given that cargo screening and inspection is currently not as extensive as is the screening of passengers and their luggage. Cargo carried by passenger aircraft may be particularly attractive to terrorists, who had targeted such aircraft in the past. For example, the December 1988 crash of Pan Am flight 103 over Lockerbie, Scotland, was caused by an explosive device placed in a baggage container in the airplane hold, and the June 1985 crash of Air India flight 182 off the coast of Ireland showed evidence of an explosive device most likely placed in checked baggage.³⁸ The US Transportation Security Administration estimates that the likelihood of a terrorist bombing of a passenger aircraft is between 35 and 65 per cent based on 2002 intelligence reports, and it is believed that cargo is likely to become the primary target for terrorists in the short term.³⁹ The current vulnerabilities in the air cargo system make this security threat of particular concern.⁴⁰

2. Cargo Crime

Such crimes involve theft of goods transported as cargo and smuggling of contraband and counterfeit goods through the air cargo distribution network.⁴¹ Business data show that direct losses due to reported cargo theft across all modes of transportation range between 10 and 25 billion dollars annually in the United

³⁷ It should be noted that this paper does not deal with security issues posed by air transport of hazardous goods.

³⁸ Canadian Aviation Bureau Safety Board. Aviation Occurrence, Air India Boeing 747-237B VT-EFO, Cork, Ireland 110 Miles West, 23 June 1985.

³⁹ Reports have suggested that al Qaeda terrorists had an interest in bombing all cargo aircraft prior to September 11, 2001, and were planning to bomb US-bound cargo flights. National Commission on Terrorist Attacks Upon the United States. *The 9/11 Commission Report* (New York, NY: W.W. Norton & Company, 2004).

⁴⁰ It should be, however, noted that some experts consider that placing explosives in all cargo aircraft may be less appealing to terrorists because such an attack would not be likely to attract the media and public attention as would a bombing of a commercial passenger aircraft. CRS Report, Air Cargo Security, *supra* note 32 at CRS-5.

⁴¹ CRS Report, Air Cargo Security, *supra* note 32 at CRS-6.

States alone.⁴² This cost is ultimately borne by consumers through increased insurance and transport costs.⁴³ Although this percentage does not refer only to air transport, such type of threat to air cargo security has been demonstrated by investigations of cargo and baggage theft at JFK International Airport in New York, Logan International Airport in Boston, and Miami International Airport.⁴⁴ It was discovered that a large proportion of cargo crime was either committed by or with the assistance of cargo workers.⁴⁵

In addition to cargo theft, smuggling of contraband, counterfeit and pirated goods is another potential threat to air cargo due not only to their direct (i.e., undermining legal markets and reducing government tax and tariffs revenues) and indirect consequences as well. In most cases smuggling operations are orchestrated by organized crime and the proceeds from smuggling may provide support for terrorist activities.⁴⁶

3. Aircraft Hijacking and Sabotage

A series of hijackings in 1970s and 1980s served to concentrate security efforts on passenger threats rather than cargo.⁴⁷ The September 11, 2001 attacks have highlighted a shift in focus of terrorist activities, from hijacking to the suicidal destruction of aircraft in flight.⁴⁸ Because the emerging security measures aimed at preventing such hijackings are overwhelmingly focused on passenger aircraft, it could make all-cargo aircraft more attractive to terrorists seeking to hijack large airplanes.⁴⁹ Other potential risks include sabotaging aircraft's critical systems.

⁴² Moreover, it is believed that a large percentage of cargo theft is unreported. GAO Report, *supra* note 9.

⁴³ Chris Trelawny, "Cargo Security Procedure Generate Several Benefits through Simple but Effective Controls", ICAO Journal [September 2000] at 22 [hereinafter Trelawny].

⁴⁴ GAO Report, *supra* note 9.

⁴⁵ Department of Transportation, Office of the Inspector General, "Press Release: Six MIA Airport Employees Indicted for Stealing from Checked Passenger Bags" (11 December 2002).

⁴⁶ FIA International Research, Ltd., "Contraband, Organized Crime and the Threat to the Transportation and Supply Chain Function" (September 2001).

⁴⁷ Gadov, *supra* note 25.

⁴⁸ Trelawny, *supra* note 43 at 22.

⁴⁹ CRS Report, Air Cargo Security, *supra* note 32 at CRS-8.

Another perceived risk to both passenger and all-cargo aircraft is represented by the Shoulder-Fired Missile (also known as Man-Portable Air Defense Systems or MANPADS). This threat has prompted in the United States to undertake a study designed to evaluate the feasibility of adopting military anti-missile systems for use on passenger aircraft.⁵⁰

D. Balancing Security and Facilitation: Potential Measures to Mitigate Air Cargo Risks and Address System Vulnerabilities

Our analysis should start with a definition of terms. It should be noted that the concept of “security in transportation” has expanded from its previous definition of ensuring the delivery of cargo in good condition to its planned destination to a broader meaning which includes, in addition to a safe delivery, the prevention of any unauthorized use of the cargo or the transport means.⁵¹ From this perspective, security is seen as the combination of preventive measures and human and material resources intended to protect transport infrastructure, vehicles, systems and personnel against unlawful acts.⁵² Also, one has to distinguish between transportation safety and transportation security. While both safety and security have as common goal the protection of passengers, crew, cargo, and aircraft from harm, the main distinction is that safety focuses on protection from unintentional harm, while security focuses on intentional harm.⁵³

Although there is as yet no formal definition of “trade facilitation,” the UN/Economic Commission for Europe ECE defines it as the process of simplification and harmonization of international trade procedures and the information flow associated with them.⁵⁴

⁵⁰ John Frittelli, Congressional Research Service, *CRS Issue Brief for Congress. Transportation Security: Issues for the 109th Congress* (Updated 15 June 2005), online: US Department of State website < fpc.state.gov/documents/organization/49089.pdf > (date accessed: 15 July 2005) [hereinafter *Transportation Security: Issues for the 109th Congress Report*] at CRS-6.

⁵¹ Michael Bohlman, “Tightening Freight Transport Security” *ISO Focus* (January 2005) 13 at 13.

⁵² EC, Freight Transport Security Consultation Paper, *supra* note 26.

⁵³ Paul S. Dempsey, “Aviation Security: The Role of Law in the War Against Terrorism” (2003) 41 *Colum. J. Transnat’l L.* 649 at 662 [hereinafter Dempsey, “Aviation Security”].

⁵⁴ The International Air Cargo Association, John Raven, “Facilitation and Security in Air Transport” (March 2004), online: The International Air Cargo Association website <<http://www.tiaca.org/articles/2004/03/19/C3462ACE260A4A37A1C8B765C4D08196.asp>> (date

In recent years, air cargo security has risen fast as a controversial topic. Some observers have voiced concerns that, while 100% of baggage is required to be screened, only a relatively small amount of cargo transported by air is subject to screening and inspection.⁵⁵ It is believed that an overemphasis on allocating resources for screening airline passengers and their luggage has left the air cargo system vulnerable to security threats. Some critics argue that the implementation of recent security measures by several States and international organizations have focused too heavily on protecting aircraft from past terrorist attack scenarios – such as suicide hijackings and bombs placed in passengers’ luggage – while neglecting other potential security risks.⁵⁶ In particular, vulnerabilities of all cargo aircraft must not be underestimated.⁵⁷

Currently, there are two main positions regarding air cargo security. One holds that full screening of air cargo would be too costly and too disruptive to the air cargo industry to allow for successful implementation. The alternative position claims that full screening and enhanced security measures are needed to minimize as much as possible the risks associated with air cargo and maintain public confidence in air travel.⁵⁸

One of the main problems with any approach that would impose screening of all cargo is that any type of physical inspection or electronic screening would not be technically and logistically feasible at the present time without adversely impacting air cargo operations.⁵⁹ Since it is generally agreed

accessed: 1 June 2005) [hereinafter Raven].

⁵⁵ *Transportation Security: Issues for the 109th Congress Report*, *supra* note 50 at CRS-4.

⁵⁶ *Ibid.* at CRS-3.

⁵⁷ Trelawny, *supra* note 43 at 22.

⁵⁸ CRS Report, *Air Cargo Security*, *supra* note 32 at CRS-28. It is also argued that cargo needs to be inspected on all aircraft, and not just passenger carriers, because the added economic burden to passenger carriers is onerous to those carriers, both in added time to inspect its cargo and expense in the proper screening equipment. Such double standard would create an unfair competitive advantage to all-cargo carriers. *Ibid.*

⁵⁹ In fact, in 2002, TSA’s computer models estimated that if full physical cargo screening is implemented, only 4% of the daily volume of freight at airports could be processed due to the time that would be required to breakdown shipments, inspect them, and reassemble them for transport. Greg Schneider, “Terror Risk Cited for Cargo Carried on Passenger Jets; 2 Reports List Security Gaps,” *The Washington Post* (10 June 2002).

that full screening of all cargo carried by air is not currently feasible, most experts agree that a practical approach would involve the use of risk-managed cargo profiling procedures to identify shipments that may be considered of elevated risk and the application of physical inspection on so selected shipments.⁶⁰ In this context, several technology and operational initiatives have been suggested at national and regional level to enhance air cargo security and mitigate the terrorist and criminal threats.

Technology being proposed for improving air cargo security includes explosive detection systems and other cargo-screening devices and technology, tamper-resistant and tamper-evident packaging and containers, blast-resistant cargo containers and biometric systems for worker identification and access control to air cargo facilities.⁶¹ Operational or procedural initiatives include proposals to impose mandatory advance cargo information, expand the use of “authorized economic operator” and “secure supply chain”, improve physical security of air cargo facilities, increase oversight of air cargo operations, provide training for cargo workers, and tighten controls over access to aircraft during cargo operations.⁶²

The main controversy regarding the adoption and implementation of such measures is triggered by their potential adverse impact upon the air cargo industry. Many industry observers argue that any changes causing additional expense and delay to the air cargo system could lead to widespread disruption of national and international trade, both dependent on moving goods rapidly.⁶³ This is the main challenge that needs to be taken into account when addressing the adoption of security measures, i.e. to achieve a secure air cargo transportation system without unduly burdening the flow of cargo itself. In many - perhaps most - cases, aviation security needs call for measures that are in themselves

⁶⁰ CRS Report, Air Cargo Security, *supra* note 32 at CRS-29.

⁶¹ CRS Report, Air Cargo Security, *supra* note 32 at CRS-29.

⁶² A detailed analysis of possible security measures will be provided *infra*, Part III.

⁶³ S. Rept. 108-38, *supra* note 13.

counter-facilitative. It is estimated that a regulatory balance between facilitation and security measures is even more difficult to achieve in air transport than in any other means of transport.⁶⁴

The often invoked thesis that facilitation and security are just two sides of the same coin seems less believable in the current realities of aviation industry when the security aspects take almost always precedence.⁶⁵ Although the current situation is understandable and justifies heavy emphasis on security measures, a balanced regulatory approach is necessary for the very reason that neglect of facilitation issues indirectly fulfills the purpose of terrorists by stifling international trade.

The potential for achieving such a balance in practice may be inferred from the experience in implementation of emerging regional and national regulations. A review of some of these initiatives will provide a general idea of the type of issues that were addressed in connection with air cargo security and the degree of transferability of such approaches world-wide in an attempt to harmonize security responses to common air cargo threats.

⁶⁴ Raven, *supra* note 54.

⁶⁵ *Ibid.*

II. EXAMPLES OF INTERNATIONAL, REGIONAL, AND NATIONAL REGULATORY INITIATIVES ADDRESSING AIR CARGO SECURITY AND FACILITATION

A. International Initiatives to Set Common Standards in Air Cargo Security and Facilitation

1. International Civil Aviation Organization's Initiatives

The International Civil Aviation Organization (ICAO) was established by the Convention on International Civil Aviation⁶⁶ as a specialized agency of the United Nations in charge with coordinating and regulating international air transportation.⁶⁷ The primary purpose of ICAO is revealed in the preamble to the Chicago Convention which states that “the future development of international civil aviation can greatly help to create and preserve friendship and understanding among nations and peoples of the world, yet its abuse can become a threat to general security.”⁶⁸ Under the Convention, a major objective of ICAO is to “ensure the safe and orderly growth of international civil aviation throughout the world” and to “meet the needs of the peoples of the world for safe . . . air transport.”⁶⁹ In essence, the ICAO is given responsibility for regulating the many technical aspects of international civil aviation, with the main purpose of promoting aviation safety and security.⁷⁰

The States attending the Chicago Conference agreed on the need for uniform technical standards aiming at preserving aviation safety and security, and, for that purpose, authorized ICAO to regulate matters such as aircraft licensing, airworthiness certification, registration of aircraft, international

⁶⁶ *Convention on International Civil Aviation*, 7 December 1944, 15 U.N.T.S. 295, ICAO Doc. 7300 [hereinafter *Chicago Convention*].

⁶⁷ The ICAO came into existence on 4 April 1944, the date of entry into force of the Chicago Convention, and it began its operations in 1947. By 2005, the ICAO had 188 Member States, including virtually all nations with aviation capabilities.

⁶⁸ *Chicago Convention*, *supra* note 66, Preamble.

⁶⁹ *Ibid.*, Art. 44.

⁷⁰ Gerald Fitzgerald, “ICAO Now and in the Coming Decades” in Nicholas Matte ed., *International Air Transport: Law Organization and Policies for the Future* (1976) at 47, 52.

operating standards, and airways and communications controls.⁷¹ According to Dr. Michael Milde, former head of ICAO's Legal Bureau, the Chicago Convention created ICAO as "an international organization with wide quasi-legislative and executive powers in the technical regulatory field and with only consultative and advisory functions in the economic sphere."⁷² Since its inception, ICAO has adopted a number of "International Standards and Recommended Practices" ("SARPS"), standardizing safety, security, and navigation in air transportation.⁷³ ICAO standards are binding in the absence of a Member State's notice to the Council of its inability to comply.⁷⁴ On the other hand, recommended practices are viewed as merely desirable and Member States need not notify the Council of their intent to comply, although States are encouraged to act in accordance with these practices.⁷⁵

In addition, some of the most important multilateral instruments to aviation security, hijacking and terrorism were adopted under the ICAO's auspices.⁷⁶ Such are the Tokyo Convention,⁷⁷ which requires that the control over a hijacked aircraft be restored to the aircraft commander and passengers be permitted to continue their journey; The Hague Convention,⁷⁸ which declares hijacking to be an international "offense" and requires the State to which an aircraft is hijacked to extradite or prosecute the hijacker, and, if found guilty, to impose "severe penalties" on him; the Montreal Convention of 1971,⁷⁹ which expands the definition in civil aviation of "offense" to include communications of false information and unlawful acts against aircraft or air navigation facilities,

⁷¹ Robert Thornton, *International Airlines and Politics: A Study in Adaptation to Change* (Ann Arbor, MI: Programs in International Business, University of Michigan, 1970) at 32.

⁷² Michael Milde, "The Chicago Convention--After Forty Years" (1984) 9 Ann. Air & Space L. 119 at 122.

⁷³ *Chicago Convention*, *supra* note 66, Arts. 37 and 54(1).

⁷⁴ *Chicago Convention*, *supra* note 66, Art. 38

⁷⁵ Bin Cheng, *The Law of International Air Transport* (London, UK: Sweet & Maxwell Ltd, 1977) at 25.

⁷⁶ Dempsey, "Aviation Security", *supra* note 54 at 658.

⁷⁷ *Convention on Offences and Certain Other Acts Committed on Board Aircraft*, 14 September 1963, ICAO Doc. 8364.

⁷⁸ *Convention for the Suppression of Unlawful Seizure of Aircraft*, 16 December 1970, ICAO Doc. 8920.

⁷⁹ *Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation*, 23 September 1971, ICAO Doc. 8966.

and requires prosecution of the offender; the Montreal Protocol of 1988,⁸⁰ which expands the provisions of the 1971 Montreal Convention to airports; the Montreal Convention of 1991,⁸¹ which prevents the manufacture, possession, and movement of unmarked explosives. Although these conventions constitute major legal tools in addressing terrorist acts against aviation, their applicability is limited to the Contracting States,⁸² and of the 188 Members of the ICAO several have failed to ratify certain conventions, particularly the plastic explosives convention.⁸³

In addition, it should be mentioned that, following the shooting down of the Korean Airlines Flight 007 by Soviet fighters in 1983, ICAO adopted Article 3bis, which prohibits the use of weapons against aircraft as a codification of customary law.⁸⁴ Also, in 1974, the ICAO adopted Annex 17 to the Chicago Convention⁸⁵ which, in addition to incorporating several of the requirements of the Tokyo, Hague, and Montreal Conventions, imposes on States the obligation to establish a governmental institution for regulating security and establishing a national civil aviation security program, with the aim of preventing the presence of weapons, explosives, or other dangerous devices aboard aircraft. Annex 17 requires, *inter alia*, the checking and screening of aircraft, passengers, baggage, cargo, and mail.

A more detailed review of the above mentioned conventions follows.

⁸⁰ *Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation, Done at Montreal on 23 September 1971, 24 February 1988, ICAO Doc. 9518.*

⁸¹ *Convention on the Marking of Plastic Explosives for the Purposes of Detection, 1 March 1991, ICAO Doc. 9571.*

⁸² As of 2005, 179 States have ratified the Tokyo Convention, 179 have ratified the Hague Convention, 182 have ratified the 1971 Montreal Convention, 117 have ratified the 1991 Montreal Convention. The acceptance of these conventions by more States, representing a broad spectrum of economic powers, leads to the development of customary international law on the matter, resulting in enforceability of the provisions against both signatories and non-signatories. Nicholas Matte, *Treatise on Air-Aeronautical Law* (Montreal, QC: Center for Research in Air and Space Law, 1981) at 372 [hereinafter Matte, *Treatise on Air-Aeronautical Law*].

⁸³ Of ICAO's 188 member States, nine States have not ratified the Tokyo Convention, nine have not ratified the Hague Convention, six have not ratified the Montreal Convention, and 71 have not ratified the Convention on the Marking of Plastic Explosives for the Purpose of Detection of 1991. Nonetheless, ICAO members are obliged to comply with Annex 17 to the Chicago Convention, which incorporated several of the Tokyo, Hague, and Montreal Conventions' requirements. Dempsey, "Aviation Security", *supra* note 54 at 660.

⁸⁴ This article entered into force in 1998. As of August 2005, 128 States had ratified Article 3bis.

⁸⁵ *Chicago Convention, supra* note 66.

1.1. Tokyo Convention

The Convention on Offences and Certain Other Acts Committed on Board Aircraft⁸⁶ was initially aimed at addressing offenses committed on board aircraft in general, and did not focus expressly on hijacking.⁸⁷ The merit of this Convention is to establish the jurisdiction of the State of registry over offenses committed onboard aircraft, including acts of hijacking, irrespective of the location of the aircraft.⁸⁸ According to Article 11, the Contracting State in which a hijacked aircraft lands is obligated to “take all appropriate measures to restore control of the aircraft to its lawful commander”, to “permit its passengers and crew to continue their journey as soon as practicable” and return the aircraft and its cargo to the persons lawfully entitled to possession.⁸⁹

The Tokyo Convention has the merit of identifying the problems that threaten the security of an aircraft, but it was criticized for not providing a comprehensive framework for properly addressing these threats.⁹⁰ For example, the Convention does not create a clear obligation to prosecute or extradite an offender. In fact, Article 16 explicitly provides that the Convention creates no duty to extradite a hijacker.⁹¹ It was also noted that the Convention did not declare hijacking as an international crime.⁹²

In addition, the Convention's application is confined to unlawful acts committed on board the aircraft “in flight”, covering acts committed when “all its external doors [of an aircraft] are closed following embarkation until the moment when any such door is opened for disembarkation.”⁹³ It appears that an act of sabotage that occurs before the departure of the aircraft does not fall within

⁸⁶ *Tokyo Convention*, *supra* note 77.

⁸⁷ The issue of hijacking was added as an afterthought in Article 11 of the Convention. Michael Milde, “The International Fight Against Terrorism in the Air” in B. Cheng ed., *The Use of Airspace and Outer Space for All Mankind in the 21st Century* (1995) 141 at 146-47.

⁸⁸ *Tokyo Convention*, *supra* note 77, Arts. 1 and 3.

⁸⁹ *Ibid.*, Art. 11.

⁹⁰ *Matte*, *Treatise on Air-Aeronautical Law*, *supra* note 82 at 353.

⁹¹ *Tokyo Convention*, *supra* note 77, Art. 16(2).

⁹² Henry Steelman, “International Terrorism *Vis-à-Vis* Air-Hijacking” (1977) 9 Sw. U. L. Rev. 85 at 101.

⁹³ *Tokyo Convention*, *supra* note 77, Art. 5(2).

the scope of Tokyo Convention.⁹⁴ Nevertheless, despite its shortcomings, the Tokyo Convention provided the legal foundation for subsequent agreements dealing with hijacking.

1.2. The Hague Convention

The Convention for the Suppression of Unlawful Seizure of Aircraft⁹⁵ was ICAO's response to perceived need for a definition of unlawful acts against aircraft in the wake of an increased number of terrorist attacks against aircraft in the late 1960s.⁹⁶ This Convention was a remarkable milestone in the battle against hijacking because it rendered the unlawful seizure of an aircraft "by force or threat thereof or by any other means of intimidation" an international "offense", a term somewhat weaker than the term "international crime."⁹⁷ The Convention's most innovative step was to make the prosecution or extradition of the offender mandatory.⁹⁸

The Hague Convention places on the Contracting States three main obligations. First, they are to make the offense defined by the Convention punishable by "severe penalties" under their domestic law.⁹⁹ Second, the States must establish their jurisdiction because it is not conferred automatically.¹⁰⁰ The States that may assert jurisdiction include the State of registration of the aircraft, the State in which the aircraft lands with the offender on board, and the State of the principal place of business or permanent residence of the lessee of the aircraft.¹⁰¹ Third, if the State decides to not extradite the offender, it must prosecute him in the same manner as it would for any offense of a serious nature within the State.¹⁰² By requiring States to either prosecute or extradite, the Hague Convention aimed to

⁹⁴ Dempsey, "Aviation Security", *supra* note 54 at 665.

⁹⁵ *The Hague Convention*, *supra* note 78.

⁹⁶ Paul Dempsey, Robert Hardaway, and William Thoms, *Aviation Law and Regulation* (Lexis Law Pub., 1993) § 10.01 [hereinafter Dempsey et al.].

⁹⁷ *The Hague Convention*, *supra* note 78, Art. 2.

⁹⁸ *Ibid.*, Art. 1.

⁹⁹ *Ibid.*, Art. 2.

¹⁰⁰ *Ibid.*, Art. 4.

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*, Art. 7.

encourage States to initiate criminal proceedings against hijackers and, as a result, fewer States were to become available as “safe heavens.”¹⁰³

The Hague Convention has been criticized for its failure to define the term “severe penalties”, which means that domestic law will govern, leading to inconsistent punishments in different countries. Thus, the Convention was ineffective in its attempt to create a uniform system of prosecution of the offenders.¹⁰⁴ In addition, the Convention failed to address acts of terrorism preceding the flight.¹⁰⁵

1.3. Montreal Convention of 1971 and Montreal Protocol of 1988

In response to a surge of acts of aircraft sabotage¹⁰⁶ and in an effort to redress the deficiency in the Hague Convention which failed to deal with aircraft sabotage, in 1971, ICAO submitted to its member States the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation.¹⁰⁷ This Convention addresses the issues of airport security and aircraft sabotage prior to flight, declaring the following to be offences: (1) acts of violence likely to endanger the safety of an aircraft; (2) destruction of or serious damage to an aircraft or air navigation facilities; and (3) communication of false information that endangers the safety of an aircraft.¹⁰⁸

In many respects, the Montreal Convention of 1971 is similar to the Hague Convention. For example, under both conventions, Contracting Parties must

¹⁰³ Dempsey, “Aviation Security”, *supra* note 54 at 667 and 668.

¹⁰⁴ *Ibid.* at 667.

¹⁰⁵ The Convention applies to offenses on board an aircraft “in flight.” For the purposes of the Hague Convention “an aircraft is considered to be in flight at any time from the moment when all its external doors are closed following embarkation until the moment when any such door is opened for disembarkation.” *The Hague Convention*, *supra* note 78, Art. 2.

¹⁰⁶ For example, while in 1982, 50 per cent of the crimes against aircraft were terrorist acts, 40 per cent were explosions as a result of sabotage, and 6 per cent were onboard hijackings, in 1984, only 17 per cent of all explosions involving civil aviation took place on the aircraft. All others occurred in the airport or at airline ticket offices. Paul Dempsey, *Law and Foreign Policy in International Aviation* (Transnational Pub., 1987) at 357.

¹⁰⁷ *Montreal Convention of 1971*, *supra* note 79.

¹⁰⁸ *Ibid.*, Art. 1(1). In addition, a person who attempts such acts, or is an accomplice, is also deemed to have committed an offence. *Ibid.*, Art. 1(2).

punish the described offences by “severe penalties”¹⁰⁹ and must take “such measures as are necessary” to establish their jurisdiction over the offence and its participants.¹¹⁰

As was the case with the Hague Convention, the Montreal Convention has been criticized for its ambiguity regarding the meaning and applicability of “severe penalties” which are to be imposed for aircraft hijacking and other offences against civil aviation.¹¹¹ Such sanctions do not require prosecution or extradition; rather, they involve only an obligation to present the case to the appropriate authorities who decide, at their discretion, whether prosecution is appropriate.¹¹² Moreover, an overview of domestic procedures regarding prosecution of extradited offenders showed that there is no uniformity in State practice.¹¹³ Furthermore, the lack of a binding definition of the term “severe penalties” has allowed some States to circumvent drastic punishment of hijackers in some cases.¹¹⁴

In reaction to a series of bombing at airports in Frankfurt, Tokyo, Rome, Munich, and Vienna,¹¹⁵ the ICAO adopted the “Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation”¹¹⁶ which extended the provisions of the 1971

¹⁰⁹ *Hague Convention*, *supra* note 78, Art. 2; *Montreal Convention of 1971*, *supra* note 79, Art. 3.

¹¹⁰ *Hague Convention*, *supra* note 78, Art. 4; *Montreal Convention*, *supra* note 79, Art. 5.

¹¹¹ Claude Emanuelli, “Legal Aspects of Aerial Terrorism: The Piecemeal vs. the Comprehensive Approach” (1975) 10 *J. Int’l L. & Econ.* 503 at 510-11; Mark E. Fingerman, “Comment, Skyjacking and the Bonn Declaration of 1978: Sanctions Applicable to Recalcitrant Nations” (1980) 10 *Cal. W. Int’l L.J.* 123 at 127.

¹¹² Dionigi Fiorita, “Aviation Security: Have All the Questions Been Answered?” (1995) XX *Ann. Air & Space L.* 69 at 88.

¹¹³ Ruwantissa Abeyratne, “Some Recommendations for a New Legal and Regulatory Structure for the Management of the Offense of Unlawful Interference with Civil Aviation” (1998) 25 *Transp. L.J.* 115 at 116. This author identifies four problems with the Hague and Montreal Conventions: (1) not enough States are signatories; (2) there is no enforcement provision; (3) most political offenses are exempt from extradition; and (4) the obligations to search for and arrest suspects are not sufficiently rigorous. *Ibid.*, at 118-19.

¹¹⁴ Fingerman, *supra* note 110 at 127-28.

¹¹⁵ Ruwantissa Abeyratne, *Legal and Regulatory Issues in International Aviation* (Transnational Pub., 1996) at 326.

¹¹⁶ See *Montreal Protocol of 1988*, *supra* note 80.

Convention to airports. In essence, the Protocol prohibited acts of violence at airports and the destruction of airport facilities.¹¹⁷

1.4. Montreal Convention of 1991

Following the 1988 crash of Pan Am flight 103 over Lockerbie, Scotland, caused by plastic explosives, the UN Security Council passed Resolution 635 of 14 June 1989 which urged ICAO “to intensify its work . . . on devising an international regime for the marking of plastic and sheet explosives for the purpose of detection.”¹¹⁸ In quick response to this demand, ICAO submitted in 1991 to its member States the draft of the Convention on the Marking of Plastic Explosives for the Purpose of Detection, adopted in 1991.¹¹⁹ According to this instrument, the Contracting States are required to take “necessary and effective measures” to prevent the manufacturing of “unmarked” plastic explosives, and exert control over the possession and movement of such explosives and destroy existing stocks.¹²⁰ The drafters of the Convention decided not to include a definition of “plastic explosives” in the main body of the instrument; instead, they provided a description of such explosives in an Annex to the Convention.

This Convention represented an innovation in the field of international law because it provided for a unique obligation on behalf of the States not to manufacture a certain product unless a prescribed condition was fulfilled (i.e., the product is marked).¹²¹ In addition, the Convention provided for a very flexible mechanism for modifying the provisions contained in the Annex to the Convention, while respecting the rights of sovereign States.¹²²

¹¹⁷ *Ibid.*, Art. II.

¹¹⁸ S.C. Res. 635, U.N. SCOR, 2869th Mtg., U.N. Doc. S/RES/635 (1989). Prof. M. Milde noted that “this mandate to ICAO is a testimony of the high reputation established by the ICAO law-making mechanism with respect to its speed and efficiency”. Michael Milde, “The International Fight Against Terrorism in the Air” in B. Cheng ed., *The Use of Airspace and Outer Space for All Mankind in the 21st Century* (1995) 141 at 151.

¹¹⁹ See *Montreal Convention of 1991*, *supra* note 81.

¹²⁰ *Ibid.*, Art. III.

¹²¹ Marking the explosives with chemical elements enhances their detection by electronic equipment and search dogs. Michael Reisman, “International Legal Responses to Terrorism” (1999) 22 *Hous. J. Int'l L.* 3 at 22.

¹²² Michael Milde, Course Lecture in Public International Air Law (Institute of Air and Space

Without denying its merit for being the first agreement to regulate the manufacturing and export/import of plastic explosives, this Convention was criticized for not providing a comprehensive solution to a very serious threat, and representing only the first step in a broader spectrum of necessary legal measures.¹²³

1.5. Annexes to Chicago Convention

1.5.1. Air Cargo Security Standards and Recommended Practices – Annex 17

A series of terrorist attacks against aircraft in 1972¹²⁴ prompted the ICAO Council to adopt Annex 17, entitled Safeguarding International Civil Aviation Against Acts of Unlawful Interference.¹²⁵ Annex 17 reaffirms and elaborates specific obligations and procedures defined in the Tokyo, Hague, and Montreal Conventions.¹²⁶ According to this Annex, each member State of ICAO must provide for the safety of passengers and crew until their journey can be resumed;¹²⁷ it must detain an unlawfully seized aircraft that has landed on its territory, unless its departure is necessitated by the duty to protect human life¹²⁸ and it must promptly notify ICAO and the State of registry that an aircraft has been unlawfully seized, as well as the State whose citizens suffered fatalities or injuries, were detained as hostages, or were aboard the aircraft.¹²⁹

In addition, Annex 17 proposes preventive measures for aircraft, airports, passengers, baggage, cargo, and mail, as well as standards and qualifications for security personnel and responsive measures to acts of unlawful interference. It also requires that each member State has “as its primary objective the safety of passengers, crew, ground personnel and the general public in all matters related to

Law, McGill University, Montreal, 27 November 2003).

¹²³ Michael Milde, “Law and Aviation Security, Air and Space Law: De Lege Ferenda” in *Essays in Honour of Henri A. Wassenbergh* (1992) at 96.

¹²⁴ For example, a 1972 terrorist attack on an airport in Israel killed twenty people and wounded nearly one hundred others.

¹²⁵ *Chicago Convention*, *supra* note 66, Annex 17. First promulgated as a SARPS in 1974, Annex 17 has since been expanded and updated many times. The most recent, Amendment 10, to Annex 17 was adopted by the ICAO Council on 7 December 2001 in order to address challenges posed to civil aviation by the events of 11 September 2001. It became applicable on 1 July 2002.

¹²⁶ *Ibid.*, Ch. 5.

¹²⁷ *Ibid.*, § 5.2.1.

¹²⁸ *Ibid.*, § 5.2.4.

¹²⁹ *Ibid.*, § 5.2.5.

safeguarding against acts of unlawful interference with civil aviation.”¹³⁰ Each member State must develop a national civil aviation security program¹³¹ and establish a governmental institution dedicated to aviation security, which would develop and implement appropriate regulations.¹³² In addition, member States must develop a security training program,¹³³ share aviation threat information,¹³⁴ and otherwise cooperate with other States on their national security programs.¹³⁵

It should be noted that in ICAO’s understanding “security” represents “a combination of measures and human and material resources intended to safeguard civil aviation against acts of unlawful interference.”¹³⁶ Also, under its General Principles, Annex 17 includes a “Security and facilitation” heading which contains a recommendation for each State to arrange, whenever possible, for the security controls and procedures to cause a minimum of interference with, or delay to the activities of, civil aviation, provided the effectiveness of these controls and procedures is not compromised.¹³⁷

Annex 17 contains several standards and recommended practices addressing air cargo security with the aim of preventing explosives or incendiary devices from being placed onboard aircraft, either through concealment in otherwise legitimate shipments or through gaining access to aircraft via cargo handling areas.¹³⁸ Thus, States are required to ensure the protection of cargo, baggage, mail and operator’s supplies being moved within an airport.¹³⁹ In addition, States are required to subject to appropriate security control cargo,

¹³⁰ *Ibid.*, § 2.1.1.

¹³¹ *Ibid.*, § 3.1. Airports and aircraft operators must also establish security programs. *Ibid.*, § 3.2.1.

¹³² *Ibid.*, §§ 2.1.2., 3.1.2-3.1.3. In addition, States must create a national aviation security committee with the task of coordinating security activities between various governmental institutions.

¹³³ *Ibid.*, § 3.1.7. They also cooperate with other States in the development and exchange of training program information. *Ibid.* § 2.3.3.

¹³⁴ *Ibid.* § 2.3.4.

¹³⁵ *Ibid.*, § 2.3.2.

¹³⁶ *Ibid.*, Ch. 1.

¹³⁷ *Ibid.*, § 2.2.

¹³⁸ *Ibid.*, § 4.1.

¹³⁹ *Ibid.*, § 4.5.2.

courier and mail intended for carriage on passenger flights,¹⁴⁰ and to ensure that operators do not accept consignments of cargo on passenger flights unless their security has been accounted for by a “regulated agent”¹⁴¹ or that they are subjected to other security controls.¹⁴²

According to Annex 17, a “regulated agent” is defined as “[a]n agent, freight forwarder or any other entity who conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo, courier and express parcels or mail.”¹⁴³

In order to provide guidance to States in implementing effective national aviation security programs, ICAO developed air cargo security procedures that reflect a cost-effective and pragmatic approach and are based on three main principles:¹⁴⁴ first, it is imperative that aircraft operate from within a secure environment; second, every consignment must be subject to a certain degree of security control, with a maximum focus on screening of cargo whose security cannot be readily assessed before being placed on board a passenger aircraft; and third, once cargo received security clearance, it must be protected from interference.¹⁴⁵

The applicable security measures may be divided in two categories: active procedures for cargo clearance (e.g., use of X-ray equipment, hand searches, simulation chambers, explosive detectors and sniffer dogs to detect explosive devices that may have been placed in cargo),¹⁴⁶ and preventive measures, aimed at barring the placing into cargo any illicit or hazardous devices. It should be noted that the main rationale for preventive security measures is that if the consignment was packed in a secure environment and is kept secure thereafter, there is no need to search it. Guarantees of secure packing are usually

¹⁴⁰ *Ibid.*, § 4.5.2.

¹⁴¹ The concept of “regulated agent” was introduced in Annex 17 by an amendment which became applicable in 1997.

¹⁴² *Chicago Convention*, *supra* note 66, Annex 17, § 4.5.3.

¹⁴³ *Ibid.*, Ch. 1, Definitions.

¹⁴⁴ Trelawny, *supra* note 43 at 23.

¹⁴⁵ *Ibid.*

¹⁴⁶ *Ibid.*

considered to be provided by regular consignors that have a history of compliance with security measures. Such system-based approach is cost-effective and is estimated to provide for effective security.¹⁴⁷ In order for this system to work properly, it is necessary that it is regulated and inspected. ICAO recommends that both the aircraft operator and the regulated agent perform random checks on cargo declared as secure in order to determine that the information provided in the accompanying documentation is accurate. In case discrepancies are discovered, the consignment should be thoroughly screened or searched.¹⁴⁸ The proportion of cargo randomly inspected should depend on the perceived level of threat.¹⁴⁹ Although in many States, the responsibility of carrying out security measures rests mostly with aircraft operators, ICAO cargo security program allows the delegation of this responsibility from aircraft operators to regulated agents.¹⁵⁰ It should be added that ICAO also recommends that regulated agents be subject to inspection and supervision of appropriate national authorities. For example, regulated agents may be required to have their own security programs in place and some may be required to validate actively the security of their regular customers.¹⁵¹

1.5.2. Security Provisions in Other Annexes to Chicago Convention

Several other Annexes to the Chicago Convention address aviation security incidentally. For example, Annex 6 requires that the door of the flight crew compartment must be capable of being locked,¹⁵² and unlawful interference training programs must be available to aircraft crew members.¹⁵³ Annex 13 requires a Contracting State to notify the aviation security officials of the concerned State (usually the State of aircraft registry) if an aircraft of that State is

¹⁴⁷ *Ibid.*

¹⁴⁸ *Ibid.*

¹⁴⁹ *Ibid.*

¹⁵⁰ *Ibid.*

¹⁵¹ *Ibid.*, at 30.

¹⁵² *Chicago Convention*, *supra* note 66, Annex 6, § 13.1.

¹⁵³ *Ibid.*, § 13.3.1.

subject to unlawful interference.¹⁵⁴ Annex 14 recommends that the airport be fenced and lit, that security facilities have an independent power source, and that an isolated aircraft parking position be established.¹⁵⁵ Annex 18 addresses the transportation of dangerous goods by air.¹⁵⁶

1.5.3. Air Cargo Facilitation Standards and Recommended Practices – Annex 9

Annex 9 to the Convention on International Civil Aviation provides a set of standards¹⁵⁷ and recommended practices¹⁵⁸ applicable to the entry and departure of cargo carried by air.¹⁵⁹ This Annex stresses the need for the free flow of air cargo (including cargo in intermodal transportation) and for avoiding unnecessary delays.¹⁶⁰ Annex 9 also includes an obligation for the Contracting States to consult with air carriers and other parties concerned when adopting or amending regulations and procedures for the release and clearance of goods carried by air.¹⁶¹ The Annex contains three main categories of standards and recommended practices, first regarding cargo inspection, second addressing information required by public authorities, and third regarding simplified customs procedures.

¹⁵⁴ *Chicago Convention, supra* note 66, Annex 13, § 5.11.

¹⁵⁵ *Chicago Convention, supra* note 66, Annex 14.

¹⁵⁶ *Chicago Convention, supra* note 66, Annex 18. As mentioned above, this thesis does not address the security risks raised by the transport of dangerous goods.

¹⁵⁷ "Standard" is defined in the ICAO context as "any specification, the uniform observance of which has been recognized as practicable and as necessary to facilitate and improve some aspect of international air navigation, which has been adopted by the Council pursuant to Article 54 (l) of the Convention, and in respect of which non-compliance must be notified by Contracting States to the Council in accordance with Article 38." Annex 9 to the *Chicago Convention, General Information, 1 (a) Material comprising the Annex proper.*

¹⁵⁸ A "recommended practice" is defined by Annex 9 as "any specification, the observance of which has been recognized as generally practicable and as highly desirable to facilitate and improve some aspect of international air navigation, which has been adopted by the Council pursuant to Article 54 (l) of the Convention, and to which Contracting States will endeavour to conform in accordance with the Convention." Annex 9 to the *Chicago Convention, General Information, 1 (a) Material comprising the Annex proper.*

¹⁵⁹ ICAO, *Chicago Convention, supra* note 65, Annex 9, Ch. 4, "Entry and Departure of Cargo and Other Articles".

¹⁶⁰ *Ibid.*, § 4.2.

¹⁶¹ *Ibid.*, § 4.3.

(1) Standards Regarding Cargo Inspection

Annex 9 provides that Member States must not normally require the physical examination of cargo to be imported or exported. Instead, the States should use risk management to determine which goods must be examined and the extent of that examination.¹⁶² In order to facilitate the physical examination of goods to be imported or exported, the States must use modern screening or examination techniques, where practicable (actually this appears to be more a recommended practice than a standard).¹⁶³

(2) Standards Regarding Information Required by Public Authorities

Member States must not require more information than is deemed necessary by the public authorities to release or clear imported goods or goods intended for exportation.¹⁶⁴ Documents for the importation or exportation of goods, including the Cargo manifest¹⁶⁵ and/or air waybills, must be accepted when presented in electronic form transmitted to an information system of the public authorities.¹⁶⁶ In order to facilitate electronic data interchange, Member States must encourage all parties concerned to implement compatible systems and to use the appropriate internationally accepted standards and protocols.¹⁶⁷ In the case of intermodal transportation, electronic information systems for the release and clearance of goods should also cover their transfer between air and other modes of transport.¹⁶⁸

The operator or its authorized agent is responsible for the production and presentation of the Cargo Manifest and the air waybill, while the declarant has

¹⁶² *Ibid.*, § 4.5.

¹⁶³ *Ibid.*, § 4.6.

¹⁶⁴ *Ibid.*, § 4.9.

¹⁶⁵ The Annex 9 provides the information that must be contained in the cargo manifest, i.e., name of operator, marks of nationality and registration, flight number, date, air waybill number, number of packages, nature of goods (to be completed only when required by the State). ICAO, *Chicago Convention*, *supra* note 66, Annex 9.

¹⁶⁶ *Ibid.*, § 4.11.

¹⁶⁷ *Ibid.*, § 4.15.

¹⁶⁸ *Ibid.*, § 4.16.

the responsibility for the production and presentation of the other documents required for the clearance of the goods.¹⁶⁹

Member States are encouraged to remove, to the greatest extent possible, any requirement to manually produce supporting documents. Instead, States should establish procedures allowing the electronic submission of such supporting documents.¹⁷⁰ In addition, Annex 9 imposes on Member States the obligation to limit their requirements for export clearance documentation to a simplified export declaration¹⁷¹ and to provide for export cargo to be released up to the time of departure of an aircraft.¹⁷²

With regard to scheduling of cargo examinations, Annex 9 provides for the priority of examination of live animals and perishable goods and other goods which the public authorities accept are urgently required.¹⁷³

(3) Standards Regarding Simplified Customs Procedures

Simplified customs procedures must be provided in case of goods valued at less than a maximum below which no import duties and taxes are to be collected or if the goods are imported by an authorized person and are goods of a specified type.¹⁷⁴

The Annex contains also a recommended practice which introduces the notion of “authorized importers” who meet specified criteria, including an appropriate record of compliance with official requirements and a satisfactory system for managing their commercial records. For such importers, member States should establish special procedures based on the advance supply of information, which provide for the immediate release of goods on arrival.¹⁷⁵

¹⁶⁹ *Ibid.*, § 4.12.

¹⁷⁰ *Ibid.*, § 4.18.

¹⁷¹ *Ibid.*, Annex 9, Ch. 4, § 4.20.

¹⁷² *Ibid.*, § 4.21.

¹⁷³ *Ibid.*, § 4.25.

¹⁷⁴ *Ibid.*, § 4.27.

¹⁷⁵ *Ibid.*, § 4.28.

1.6. Summary Table of ICAO Standards and Recommended Practices Regarding Air Cargo Security and Facilitation

ICAO Standard or Recommended Practice	Issue	Core provision
Standard 4.1 Annex 9 Chicago Convention	Obligation of Contracting States to adopt and implement appropriate national regulations and procedures	Contracting States to the Chicago Convention have the obligation to adopt and implement appropriate national regulations and procedures in such a manner as to prevent unnecessary delays of air cargo operations
Standard 4.3 Annex 9 Chicago Convention	Obligation of Contracting States to consult with the parties concerned	Contracting States have the obligation to consult with air carriers and other parties concerned when adopting and implementing such regulations
Standard 4.5 Annex 9 Chicago Convention	Cargo inspection	Main standards regarding cargo inspection: physical examination of cargo should not be the rule; instead use of risk management to determine which goods must be examined and the extent of that examination; also use of modern screening or examination techniques is recommended
Standard 4.9 Standard 4.11 Standard 4.15 Annex 9 Chicago Convention	Information required by public authorities	Information required for releasing or clearing imported or exported goods must be limited to the one deemed necessary for these operations. See model cargo manifest. It must be accepted when presented in electronic format. Parties are encouraged to implement compatible systems
Standard 4.20 Standard 4.21 Standard 4.25 Annex 9 Chicago Convention	Release and Clearance of import and export cargo	States must limit their requirements for export clearance documentation to a simplified export declaration
Standard 4.27 Recommended Practice 4.28 Annex 9 Chicago Convention	Goods imported by authorized person	Simplified customs procedures must be provided if the goods are imported by an authorized person and are goods of a specified type. Authorized importers who meet specified criteria: appropriate record of compliance with official requirements and a satisfactory system for managing their commercial records.
Standard 4.5 Annex 17 Chicago Convention	Security Measures Relating to Cargo	States are required to ensure the protection of cargo, baggage, mail and operator's supplies being moved within an airport; to subject to appropriate security control cargo, courier and mail intended for carriage on passenger flights, and to ensure that operators do not accept consignments of cargo on passenger flights unless their security has been accounted for by a regulated agent or that they are subjected to other security controls.

2. World Customs Organization (WCO)'s Initiatives

2.1. Revised Kyoto Convention (RKC)

The WCO Council adopted the International Convention on the Simplification and Harmonization of Customs procedures (Kyoto Convention) (entered into force in 1974) with the aim of simplifying and harmonizing customs procedures in order to facilitate and encourage international trade. Recent technological advances and major changes in the global business environment triggered the need for an update of the original text of the Convention in order to adequately address current demands of international trade. As a result, the WCO Council proposed the Revised Kyoto Convention (RKC), as a blueprint for the development and modernization of customs procedures. The revised Kyoto Convention is not yet in force.¹⁷⁶

The General Annex to the revised Convention recommends to customs authorities the implementation of standard, simplified procedures, continuous development and improvement of customs control techniques, maximum use of information technology and initiation of partnerships between customs and trade, including the introduction of the "authorized trader" concept. The Revised Kyoto Convention stipulates simplified procedures for authorized consignors and consignees involved in the international trade of goods who have established good records of compliance with customs law. Such authorized traders may carry out specified customs operations on their premises, which enable them to send or receive the goods directly at their premises without having to present at the Customs office of departure or destination. The general authorization may be subject to conditions regarding the quantity of goods

¹⁷⁶ As of July 2005, 38 of the required 40 Contracting Parties have accepted the Amendments to the 1973 Kyoto Convention. WCO Instruments and Programmes - Customs Procedures and Trade Facilitation, *The Revised Kyoto Convention*, online: WCO website <http://www.wcoomd.org/ie/En/Topics_Issues/FacilitationCustomsProcedures/facil_wco_instruments.htm> (date accessed: 1 June 2005).

imported or exported or conditions involving compliance with a time limit for processing operations.¹⁷⁷

2.2. WCO's Framework of Standards to Secure and Facilitate Global Trade

In November 2004, the WCO's High Level Strategic Group proposed a strategy consisting of predetermined standards and best practices aimed at improving the security of the international trade supply while continuing to facilitate the movement of legitimate trade. The document called "Framework of Standards to Secure and Facilitate Global Trade"¹⁷⁸ sets among its objectives to define global standards providing supply chain security and facilitation, integrating the supply chain management for all modes of transportation, strengthening the co-operation between customs administrations as well as between customs and business, and ensuring that cargo moves seamlessly through secure international trade supply chains.¹⁷⁹

It is hoped that the Framework will provide a platform for the improvement of world trade and for a better defense against terrorism. By establishing one set of international standards, the Framework aims at ensuring uniformity and predictability and at reducing multiple and complex reporting requirements. Also, the implementation of these standards by many customs administrations will lead to an improved ability to detect and deal with high-risk shipments and increase efficiency in the administration of goods.¹⁸⁰

2.2.1. Main Elements of the WCO Framework

The WCO Framework consists of the four core elements. First, the Framework aims at harmonizing the requirements regarding advance electronic cargo information on inbound, outbound and transit shipments; second, it provides the

¹⁷⁷ *Revised Kyoto Convention* - Specific Annex F, Chapter 1, Guidelines on Inward Processing, Recommended Practice 11, and Chapter 2, Guidelines on Outward Processing, Recommended Practice 5.

¹⁷⁸ World Customs Organization, "Framework of Standards to Secure and Facilitate Global Trade" (June 2005), online: World Customs Organization website <<http://www.wcoomd.org>> (date accessed: 15 July 2005) at 2 [hereinafter, WCO Framework].

¹⁷⁹ *Ibid.* at 4.

¹⁸⁰ *Ibid.* at 5.

guidance for the definition and implementation by each country joining the Framework of a consistent risk management approach to address security threats; third, it recommends that sending nations assume the obligation to perform an outbound inspection of high-risk containers or cargo following a reasonable request from the receiving nation (such inspections should preferably involve non-intrusive detection equipment, such as large scale X-ray machines and radiation detectors); and four, it stresses the need for a clear definition of benefits that customs administration will provide to business that meets minimal supply chain security standards and best practices.¹⁸¹

2.2.2. The Two Pillars of the WCO Framework

The WCO Framework involves a “two-pillar” strategy aimed at ensuring an easier understanding of the standards and a smooth international implementation. The two pillars of the Framework consist of Customs-to-Customs network arrangements and Customs-to-Business partnership.¹⁸² With regard to implementation, the WCO Framework stresses the need for ensuring a capacity building system and adopting a phased approach to national implementation.¹⁸³

2.2.2.1. The Customs-to-Customs Network Arrangements

(a) Scope

The Customs-to-Customs network arrangements are aimed to promote “the seamless movement of goods through secure international trade supply chains”.¹⁸⁴ By allowing for a timely and accurate exchange of information through the use of advance electronic information, such network arrangements would allow customs administrations to more efficiently detect high-risk shipments and to improve the over-all controls along the international trade supply chain. The uniform application of the Framework by as many customs

¹⁸¹ *Ibid.* at 4.

¹⁸² *Ibid.* at 5.

¹⁸³ *Ibid.*

¹⁸⁴ *Ibid.* at 7.

administrations as possible will lead to the elimination of duplication and of multiple reporting requirements.¹⁸⁵

(b) Standards Regarding General Control Measures and Risk Assessment

Customs administrations are advised to apply the Integrated Customs control procedures as specified in the World Customs Organization's (WCO) Customs Guidelines on Integrated Supply Chain Management (ISCM Guidelines). In terms of categories of goods that are subject to customs control, Annex 1 of the Framework refers to all goods, including means of transport, which enter or leave the customs territory, according to the revised Kyoto Convention.¹⁸⁶ Customs officials have the authority to inspect cargo originating, transiting (including remaining on board), exiting, or being transhipped through a country.¹⁸⁷ Customs are advised to work with other competent authorities to conduct security assessments involving the movement of goods in international supply chain.¹⁸⁸

In terms of means of inspections, the customs are advised to use non-intrusive inspection (NII) equipment and radiation detection equipment is preferable, given a need to not disrupt the flow of legitimate trade.¹⁸⁹

Customs must establish a risk-management¹⁹⁰ system based on international best practice for identifying potentially high-risk containers.¹⁹¹ Risk indicators as contained in the WCO's Risk management Guide, the WCO Global Information and

¹⁸⁵ *Ibid.* at 6. Note that the technical standards set under Pillar 1 derive, *inter alia*, from the Revised Kyoto Convention (RKC), the Integrated Supply Chain Management (ISCM) Guidelines, and national programs. *Ibid.*, at 9 and Pillar 1, Standard 1, §§3.2, at 10.

¹⁸⁶ WCO Framework, *supra* note 178, Annex 1, Customs-to-Customs Network Arrangements, Technical Specification 1.2.1 to Pillar 1 at I/15.

¹⁸⁷ *Ibid.*, Standard 2.

¹⁸⁸ *Ibid.*, Pillar 1, Standard 1, §§3.2, at 10.

¹⁸⁹ *Ibid.*, Standard 3.

¹⁹⁰ Risk management is defined as "the systematic application of management procedures and practices which provide Customs with the necessary information to address movements or consignments which present a risk." WCO Framework, *supra* note 178, Standard 4.2.

¹⁹¹ *Ibid.*, Standard 5. High risk cargo is defined as that "for which there is inadequate information to deem shipments as low-risk, that tactical intelligence indicates as high risk, or that a risk-scoring assessment methodology based on security-related data elements identifies the shipments as high risk." *Ibid.*, § 1.2.2.

Intelligence Strategy, WCO Standardized Risk Assessment (SRA)¹⁹² and General High-Risk Indicators¹⁹³ could provide indicators for risk management.¹⁹⁴

In order to facilitate the risk assessment process there is a need for exchange of advance electronic information on cargo¹⁹⁵ and of a mutual recognition of controls, which translates in the need to agree on consistent control and risk management standards.¹⁹⁶ With the aim of reaching mutual recognition of controls, customs should be open to consider and apply joint targeting and screening procedures, use common sets of targeting criteria and compatible communication and/or information exchange mechanisms.¹⁹⁷ In addition, customs are encouraged to conduct outbound security inspections of high-risk containers, at the reasonable request of the importing country.¹⁹⁸ The customs administration of departure plays a very important role in taking all necessary measures to enable the identification of the consignment and to enable a ready detection of any unauthorized interference along the supply chain.¹⁹⁹ In order to ensure supply chain security from filling in the container to its release from customs control at destination, customs can apply a seal integrity program as provided in the General Annex to the RKC.²⁰⁰ Also, the customs are

¹⁹² The Standardized Risk Assessment document contains five risk indicator clusters for customs administrations, i.e.: Mode of transport, Revenue protection, Drugs and precursors, Security and Other prohibitions and restrictions. The clusters are further divided in several risk indicator chapters (WCO Framework, *supra* note 178, Standard 7.2).

¹⁹³ The WCO General High-Risk Indicator document contains indicators which set out standardized sets of targeting criteria for customs administrations to detect customs violations in a general manner. Such indicators refer to: Details of the carrier manifest, Identification of High-Risk country, Commodity and transportation factors that may indicate high-risk conditions, Known high-risk commodities used for concealment purposes, List of dangerous goods that may be potentially used in a terrorist attack and Factors which may reflect high-risk, such as container, importer/exporter and shipper.

¹⁹⁴ WCO Framework, *supra* note 178, Standard 4.4.

¹⁹⁵ *Ibid.*, Standard 6.

¹⁹⁶ *Ibid.*, Standard 1.3.

¹⁹⁷ *Ibid.*, Standard 7.

¹⁹⁸ *Ibid.*, Standard 11.

¹⁹⁹ *Ibid.*, Standard 1.2.3.

²⁰⁰ *Ibid.*, Annex I, Standard 1.2.4.

encouraged to use the Unique Consignment Reference (UCR) as provided in the WCO Recommendation on the UCR and its accompanying Guidelines.²⁰¹

Another important provision of the Framework contains requirements for customs personnel training and integrity. Thus, customs administrations and other competent authorities are encouraged to require programs that prevent lapses in employee integrity and to identify and combat breaches in integrity.²⁰²

(c) Standards Regarding Submission of Data

The WCO Framework contains provisions covering export goods declaration (EGD),²⁰³ cargo declaration,²⁰⁴ and import goods declaration.²⁰⁵ The export goods declaration must be submitted in electronic form to the customs authorities at export by the exporter or its agent. Such declaration must be submitted prior to the goods being loaded on the means of transport or the container used for their exportation, and must include certain information.²⁰⁶ The exporter has the *obligation to confirm to the carrier* in writing “preferably electronically”, that it has submitted an advance export goods declaration to the customs. If the export

²⁰¹ *Ibid.*, Annex I, Standard 1.2.5.

²⁰² *Ibid.*, Standard 10. See also WCO revised *Arusha Declaration* for guidelines for establishing anti-corruption systems within customs administrations.

²⁰³ WCO Framework, *supra* note 178, Annex I, Standard 1.3.1.

²⁰⁴ *Ibid.*, Annex I, Standard 1.3.2.

²⁰⁵ *Ibid.*, Annex I, Standard 1.3.3.

²⁰⁶ The EDG must contain the following information: Identification (name and address) of the *exporter* (the party who makes, or on whose behalf the export declaration is made, and who is the owner of the goods or has similar rights of disposal over them at the time when the declaration is accepted); Identification of the *consignor* (the party consigning goods as stipulated in the transport contract by the party ordering transport), if different from exporter; Identification of the *carrier* (the party providing the transport of goods between named points); Identification of the *importer* (the party who makes, or on whose behalf a customs clearing agent or other authorized person makes an import declaration, which may include a person who has possession of the goods or to whom the goods are consigned); Identification of the *consignee* (the party to which goods are consigned); Identification of the notify party (a party to be notified); *Delivery destination*, if different from importer’s or consignee’s address; Identification of a *country* through which goods are *routed* between the country of original departure and final destination; Identification of the *agent* (a party authorized to act on behalf of another party); *Tariff Code Number* (a code specifying a *type of goods* for Customs, transport, statistical or other regulatory purposes); Description of the *nature of a goods item*; United Nations *Dangerous Goods Identifier* (UNDG); Identification of the *type of packages*; *Number of packages*; *Total gross weight*, including packaging but excluding the carrier’s equipment for a declaration; Identification of *equipment* (e.g., container or unit load device); Identification of *equipment size and type* (i.e. size and type of piece of transport equipment); *Seal number*, if applicable and available; *Total invoice amount* declared in a single declaration; *Unique consignment reference (UCR)* number assigned to goods, both for import and export. WCO Framework, *supra* note 178, Annex I, Standard 1.3.1.

declaration was an incomplete or simplified declaration, the national law may allow for a supplementary declaration.²⁰⁷ The cargo declaration is submitted to the customs authorities at export or import by the carrier or its agent in electronic form and must contain certain information.²⁰⁸ For all modes of transport except maritime, the cargo declaration must be lodged prior to arrival of the means of transport at the customs office at export and/or import.²⁰⁹ A supplementary cargo declaration is possible, if allowed under the national law.²¹⁰ The Imports Good Declaration must be submitted in electronic form to the customs authorities at import by the importer or its agent. This document must contain the same information as the Export Good Declaration,²¹¹ and must be submitted prior to arrival of the means of transport at the first customs office. The exact timing is to be defined by national law after taking into account the geographical situation, the business processes applicable for different mode of transport and after consultation with the business sector and other customs administrations concerned.²¹² However, for purposes of maintaining a minimum level of consistency, given several national regulations already in place,²¹³ customs authorities are advised not to require the advance declarations to be submitted earlier than, in the case of air cargo, at the time of “wheels up” of aircraft for short haul flight and 4 hours prior to arrival at the first port in country of

²⁰⁷ *Ibid.*

²⁰⁸ Identification of the *place of loading* onto the means of transport being used for carriage; Identification of the *carrier* (the party providing the transport of goods between named points); *Equipment identification number*, if containerized; *Equipment size and type identification*, if containerized; *Seal number*, if applicable; Identification of *means of transport crossing the border* of the customs territory; *Nationality of the means of transport* used in crossing the border; *Conveyance reference number* (e.g., flight number); *Payment method* for transport charges; Identification of *Customs office* at which goods leave or are intended to leave the customs territory of dispatch; Identification of the *first port of arrival*; Identification of a *country* through which goods are routed between the country of original departure and final destination; *Date and time of arrival* at first port of arrival in customs territory; *Brief cargo description*; *Unique Consignment Reference number*. WCO Framework, *supra* note 178, Annex I, Standard 1.3.2.

²⁰⁹ *Ibid.*

²¹⁰ *Ibid.*

²¹¹ See *supra* note 206.

²¹² WCO Framework, *supra* note 178, Annex I, Standard 1.3.3.

²¹³ See for example US regulations regarding advance cargo electronic information, *infra* Part II.C.1.1.1.

destination, for long haul flights.²¹⁴ Note that the Authorized Supply Chain provides the possibility to integrate the export and import information details into *one single declaration* for export and import purposes.²¹⁵

As part of the integrated customs control chain, customs administrations along the supply chain must consider customs-to-customs *data exchange, especially for high-risk consignments* to assist risk assessment and facilitate release of the cargo.²¹⁶ Customs administrations should require advance electronic information on cargo and container shipments originating, transiting, exiting or being transhipped through their country in time for adequate risk assessment to take place.²¹⁷ Also, *digital signatures*, or Public Key Infrastructure (PKI) arrangements, can play an important role in securing the electronic exchange of information.²¹⁸

The WCO Framework also recommends that proper consideration is given to national laws addressing data privacy and data protection.²¹⁹ Customs administrations should also ensure that their respective *IT systems* are *interoperable* and are based on open standards. For example, the WCO Customs Data Model defines a maximum set of data for the accomplishment of export and import formalities.²²⁰ In addition, Governments are encouraged to develop co-operative arrangements between customs and other governmental agencies involved in international trade in order to facilitate the transfer of international trade data (*single window* concept—allowing the trader to submit the required information once at a single designated authority) and to exchange risk assessment information at both national and international levels.²²¹

²¹⁴ WCO Framework, *supra* note 178, Annex I, Standard 1.3.6.

²¹⁵ *Ibid.*, Annex I, Standard 1.16.

²¹⁶ *Ibid.*, Annex I, Standard 1.3.4.

²¹⁷ *Ibid.*, Standard 6. See also Kyoto ICT Guidelines for the application of automation for Customs (*Ibid.*, Standard 6.2).

²¹⁸ See WCO Recommendation (pending adoption in June 2005) concerning the electronic transmission and authentication of Customs and other relevant regulatory information. WCO Framework, *supra* note 178, Standard 6.7.

²¹⁹ *Ibid.*, Annex I, Standard 6.9.

²²⁰ *Ibid.*, Annex I, Standard 1.3.7.

²²¹ *Ibid.*, Annex I, Standard 1.3.8.

(d) Standards regarding Authorized Supply Chain

According to the WCO Framework, the Authorized Supply Chain is “a concept under which all participants in an international trade transaction are approved by customs as observing specified standards in the secure handling of goods and relevant information.”²²² Cargo passing from origin to destination through such secure channels should benefit from an “integrated cross-border simplified procedure.”²²³ Related to the concept of “Authorized Supply Chain” is the so-called “Authorized Economic Operator”, a concept elaborated under the Customs-to-Business Partnerships.

2.2.2.2. The Customs-to-Business Partnerships

The WCO Framework aims at establishing an international system for identifying private businesses that “demonstrate a verifiable willingness to enhance supply chain security”²²⁴ and offer a high degree of security in respect of their role in the supply chain. The Customs-to-Business partnership will allow the so-called “Authorized economic operators” (AEO)²²⁵ to benefit from faster processing of goods by customs which in turn will translate into savings in time and costs. The Framework sets forth the criteria by which businesses in the supply chain can obtain authorized status as a security partner. Such standards are:

1) AEOs must engage in a self-assessment process measured against pre-determined security standards and best practices to ensure that their internal policies and procedures provide adequate security safeguards for their shipments and containers until they are released from customs control at destination.²²⁶ A Customs-to-Business partnership program allows for flexibility

²²² *Ibid.*, Annex I, Standard 1.4.2.

²²³ *Ibid.*

²²⁴ *Ibid.*, §3.3, at 11.

²²⁵ Authorized economic operator (AEO) is defined by the WCO’s Integrated Supply Chain Model Guidelines under 2.1(g) as: “a party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national Customs administration as complying with WCO or equivalent supply chain security standards. Secure economic operators include, *inter alia*, manufacturers, importers, exporters, brokers, carriers, consolidators, intermediaries, ports, airports, terminal operators, integrated operators, warehouses, distributors.”

²²⁶ WCO Framework, *supra* note 178, Standard 1, Pillar 2 at 13.

and customization of security plans taking into account the AEO's business model. Customs administrations and AEO must determine jointly the appropriate partnership security measures that will be implemented and maintained by the AEO. Periodic reviews of the AEO's processes and facilities must be conducted.²²⁷

2) AEO should incorporate pre-determined security best practices into their existing business practices.²²⁸ Such measures will cover: security of buildings, access control of facilities, protection of trade sensitive data, personnel security programs, and guaranties for the integrity of a business processes and of all information used for cargo processing.

3) AEOs should maintain cargo and container integrity by facilitating the use of modern technology.²²⁹

The WCO sets also guidelines for the authorization process of the AEOs. Thus, custom administrations are encouraged to design, together with representatives from the trade community, a validation process or quality accreditation procedures offering incentives to business to ensure they see a benefit to their investment in good security systems and practices (including reduced risk targeting assessments and inspections, and expedited processing of their goods).²³⁰ Customs administrations should also mutually recognize the AEO status.

Furthermore, customs administration should regularly update private sector trade programs to promote minimum security standards and supply chain security best practices.²³¹ Also, the customs administrations should co-operate with AEOs to maximize security and facilitation of the international trade supply chain originating in or moving through their customs territory.²³²

²²⁷ *Ibid.*

²²⁸ *Ibid.*, Standard 2, Pillar 2 at 13.

²²⁹ *Ibid.*, Standard 4, Pillar 2 at 13. The 1972 *Customs Container Convention* and the 1975 *TIR Convention* are provided as guiding approaches to cargo security using modern technology. *Ibid.*

²³⁰ *Ibid.*, Standard 3, Pillar 2 at 13.

²³¹ *Ibid.*, Standard 5, Pillar 2 at 13.

²³² *Ibid.*, Standard 6, Pillar 2 at 13.

2.2.3. Ensuring Capacity Building Mechanisms

The drafters of the Framework recognize that effective capacity building is an important element in ensuring the widespread implementation of the standards. While some parts of the Framework can be implemented immediately and without significant additions to the current capacities, for the implementation of other parts in some countries the adoption of new legislation and building of new capacity will be necessary.²³³ Thus, the implementation of the standards will involve a *phased* process. WCO and more developed countries will have to provide some assistance in order to build the adequate capacity.²³⁴

²³³ *Ibid.*, at 4.

²³⁴ To define the stages of implementation, the WCO Secretariat and the High Level Strategic Group is in process of developing an Implementation Plan for the Framework Standards.

2.3. Summary Table of WCO Initiatives Regarding Air Cargo Security and Facilitation

WCO Standard	Issue	Core provisions
Standard 1 WCO Framework	Goods subject to Customs Control	All goods, including means of transport, which enter or leave the Customs territory
Standard 2 WCO Framework	Customs' authority	Authority to inspect cargo originating, transiting, exiting or being shipped through a country
Standard 3 WCO Framework	Cargo inspection	Non-intrusive inspection (NII)
Standard 4.2 Standard 5 Standard 1.3 WCO Framework WCO Standardized Risk Assessment (SRA) and General Risks Indicators	Risk assessment	Risk assessment based on international best practice for identifying potentially high-risk containers On-going process which implies ensuring the continuous consignment integrity and avoiding unnecessary duplication of controls Detecting high-risk cargo and containers shipment: use WCO High-Risk Indicators which refer to details of the carrier manifest, identification of high-risk country, commodity and transportation factors that may indicate high-risk conditions, known high-risk commodities used for concealment purposes, list of dangerous goods that may be potentially used in a terrorist attack and factors which may reflect high-risk, such as container, importer/exporter and shipper.
Standard 1.7 Standard 1.8 Standard 1.9 WCO Framework	Submission of data	Export Goods Declaration (EDG), the Cargo Declaration, and the Import Goods Declaration must contain only certain information
Standard 1.10 Standard 6.2 Standard 6.7 Standard 1.13 Standard 1.14 Standard 7 WCO Framework	Exchange of information and other forms of co-operation between customs administrations	Customs-to-Customs data exchange especially for high-risk consignments Require advance electronic information on cargo and container shipments originating, transiting or exiting their countries Ensure that their respective IT systems are interoperable Develop co-operative arrangements between customs and other governmental agencies in order to facilitate the transfer of international trade (the "single window" concept)
Standard 1 Standard 2 Annex 2 WCO Framework	Customs-to-Business Partnerships	The concept of "Authorized economic operators" (AEO) who benefit from faster processing of goods. AEOs must engage in a self-assessment process measured against pre-determined security standards and must incorporate security best practices into their existing business practices/ A Customs-Business partnership will allow for flexibility and customization of security plans. Customs administration together with representatives from trade community must design validation processes or quality accreditation procedures outlining also the benefits for the companies in joining the partnerships. Security issues to be taken into account: security of buildings, access control of facilities, protection of trade sensitive data, personnel security programs, guaranteeing the integrity of a business processes and of all information used for cargo processing AEOs should maintain cargo and container integrity by using modern technology Periodic reviews of the AEO's processes must be conducted

B. Example of Regional Regulatory Initiatives in Air Cargo Security and Facilitation

1. European Union

1.1. Multilateral Initiatives Regarding Aviation Security in General

States Members of the European Union went beyond the initiatives taken by the International Civil Aviation Organization by adopting in late 1970s two multilateral instruments, the European Convention on the Suppression of Terrorism,²³⁵ which provides that hijacking is not to be treated as “political offence”, which would justify a refusal to extradite of the perpetrator, and the Bonn Declaration of 1978,²³⁶ a joint statement of the G-7 leaders²³⁷ which reflected their governments’ intent to take action against any nation that refuses to fulfill its international obligations following a hijacking.

1.1.1. *The European Convention on the Suppression of Terrorism of 1977*

This Convention aims to ensure that perpetrators of acts of terrorism do not escape prosecution and punishment by negating the power of Contracting States to invoke the political offence exception²³⁸ in the case of hijacking and, thus, refuse extradition of perpetrators. Article 1 of the Convention enumerates several offences that are not deemed to be considered political offences for the purposes of extradition.²³⁹ However, in Article 5, the European Convention allows a State to refuse extradition if it has “substantial ground for believing” that the request for extradition had been made in order to punish a person for, *inter alia*, his/her political opinions.²⁴⁰

²³⁵ *European Convention on the Suppression of Terrorism*, 27 January 1977, Europe T.S. No. 90, reprinted in 15 I.L.M. 1272 (entered into force 4 August 1978) [hereinafter *European Convention of 1977*].

²³⁶ Joint Statement on International Terrorism, Pub. Papers 1308, July 17, 1978, reprinted in 17 I.L.M. 1285 [hereinafter *Bonn Declaration*].

²³⁷ The Group of Seven industrialized States was initially comprised of the United States, Canada, the United Kingdom, France, Germany, Italy and Japan. After the end of the Cold War, Russia became the eight member.

²³⁸ Note that the term “political offence” has no generally accepted definition and it is left to the States the authority to interpret this concept. Council of Europe, “European Convention on the Suppression of Terrorism. Explanatory Report”, online: European Council’s website<<http://conventions.coe.int/Treaty/EN/Reports/HTML/090.htm>> (date accessed: 15 June 2005).

²³⁹ *European Convention of 1977*, *supra* note 235, Art. 1.

²⁴⁰ Such other motives would include that person’s race, nationality, and religion. *Ibid.*, Art. 5.

Several basic obligations were defined in the Hague Convention,²⁴¹ and Montreal Convention of 1971,²⁴² such as exercising jurisdiction over an offence when the offender is present within that State's territory and either extraditing or prosecuting the offender.²⁴³

According to some critics, the European Convention suffers from a number of shortcomings,²⁴⁴ such as the fact that Article 13 allows a State, at the time of signing or ratifying the Convention, to reserve the right to refuse extradition with respect to any of the offences listed in Article 1 if that State unilaterally considers the offence triggering the extradition request to be politically motivated.²⁴⁵ Another limitation of the European Convention is that it does not provide for an enforcement mechanism other than the submission of disputes to arbitration.²⁴⁶

1.1.2. *The Bonn Declaration on Hijacking of 1978 (Bonn Declaration)*

On 17 July 1978, the G-7 member States issued a joint declaration, which although not a treaty *per se*,²⁴⁷ used strong language reflecting the intention of the signatories²⁴⁸ to cease immediately all flights to or from any State that fails either to return the hijacked aircraft or to prosecute or extradite a hijacker.²⁴⁹

The sanctions to be imposed by the signatories of the Bonn Declaration raise two interesting legal issues. First, the Declaration seems to assume that the obligation defined in the Tokyo and Hague Conventions to return aircraft and to extradite or prosecute hijackers is part of customary international law and thus binding on all States, regardless of whether they are parties to those conventions

²⁴¹ See *supra* Part II.A.1.1.2.

²⁴² See *infra* Part II.A.1.1.3.

²⁴³ *European Convention of 1977*, *supra* note 235, Arts. 6 and 7.

²⁴⁴ Dempsey, "Aviation Security", *supra* note 54 at 682.

²⁴⁵ *European Convention of 1977*, *supra* note 235, Art. 13. Note that four of the fourteen states that originally signed the Convention, i.e. France, Italy, Norway and Portugal, made such a reservation at that time.

²⁴⁶ Dempsey, "Aviation Security", *supra* note 235 at 682.

²⁴⁷ *Ibid.* at 682.

²⁴⁸ Note that collectively, the seven States parties to the Bonn Declaration account for about 70 per cent of world aviation traffic. *Ibid.* at 683.

²⁴⁹ Such obligations are provided by the *Tokyo, Hague and Montreal Conventions*. See *supra* Part II.A.1.

or not.²⁵⁰ While in retrospect this assumption might have been controversial at the moment of the Declaration,²⁵¹ in the recent years, it is generally accepted that aerial terrorism is prohibited under customary international law.²⁵² The other legal question is whether by imposing sanctions, as provided by the Declaration, the signatories would be in violation of their international obligations under the Chicago Convention, the Transit Agreement, and any applicable bilateral air service agreements. It follows that the State harboring the hijacker would be allowed to bring the sanctioning States before the ICAO Council under the dispute resolution provisions of the Chicago Convention.²⁵³ This was argued before the ICAO and the International Court of Justice in 1971 *Pakistan v. India* case, in which Pakistan brought a dispute before the ICAO Council after India prohibited Pakistani flights over its territory in retaliation against an event in which two Indian nationals hijacked an Indian aircraft, flew it to Pakistan, and blew it up, allegedly with the complicity of the Pakistani government.²⁵⁴ In 1976, after the International Court of Justice had held that ICAO had jurisdiction to resolve the dispute, the complaint was withdrawn before the ICAO Council ruled on the question.

It should also be mentioned that, although the Bonn Declaration has no binding power, it is deemed to have been effectively used to pressure South Africa, who formally associated itself with the Bonn Declaration, to prosecute several white mercenaries who hijacked an airplane from Seychelles in an

²⁵⁰ Dempsey, "Aviation Security", *supra* note 54 at 683.

²⁵¹ See for example, James Busuttil, "The Bonn Declaration on International Terrorism: A Non-Binding International Agreement on Aircraft Hijacking" (1982) 31 *Int'l & Comp. L.Q.* 474 at 480 arguing that "[i]t is not possible to say at this stage in the development of international law that the actions which trigger the Declaration sanctions are prohibited under customary international law." On the contrary, other argued that these obligations are part of customary international law, see, e.g., Kevin Chamberlain, "Collective Suspension of Air Services with States which Harbor Hijackers" (1983) 32 *Int'l. & Comp. L.Q.* 619 at 629-30.

²⁵² Dempsey, "Aviation Security", *supra* note 54 at 683.

²⁵³ Chamberlain, *supra* note 251 at 630. The author argues that there is no such violation and this seems to be the majority view at the present time as well.

²⁵⁴ The decision is analyzed at Paul Dempsey, "The Role of the International Civil Aviation Organization on Deregulation, Discrimination, and Dispute Resolution" (1987) 52 *J. Air L. & Com.* 529 at 563-67.

attempt to escape after their failed coup attempt in 1981.²⁵⁵ In 1986 the Members of G7 reaffirmed, in a joint statement, the principles of the Bonn Declaration by condemning international terrorism and encouraging collective countermeasures against terrorism and those who support it.²⁵⁶

1.2. Regulatory Measures Regarding Cargo Security and Facilitation in General

In July 2003, the European Commission presented before the European Parliament and Council a package of measures addressing customs security issues,²⁵⁷ based on fundamental concepts underlying the new security-management model for the EU's external borders, such as, for example, a harmonized risk assessment system.²⁵⁸

These new proposals aim at tightening the security around goods crossing international borders by involving more efficient and better-targeted checks. The anticipated results of such measures are expected to prove beneficial for customs authorities, the industry as well as the general public.²⁵⁹

The proposed measures address three major areas: advance information on goods,²⁶⁰ recognition of the status of Authorized Economic Operator (AEO) to reliable traders and rewarding them with trade facilitation benefits; as well as setting up a mechanism for developing uniform risk-selection criteria for controls, assisted by computerized systems.

²⁵⁵ Busuttill, *supra* note 251 at 474-75.

²⁵⁶ Text of Statements Adopted by Leaders of 7 Industrial Nations during the 1986 Tokyo Economic Summit, *NY Times* (7 May 1986) at 14.

²⁵⁷ These measures were included in two communications [Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee, "A simple and Paperless Environment for Customs and Trade", online: European Commission, Secretariat-General of the Commission website < http://europa.eu.int/prelex/detail_dossier_real.cfm?CL=en&DosId=184452 > (date accessed: 15 July 2005)] and a proposal for amending the Community Customs Code [Regulation (EC) no 648/2005 of 13 April 2005, published in the Official Journal of the European Union on 4 May 2005].

²⁵⁸ The security amendments to the Community Customs Code (Regulation (EC) no 648/2005 of 13 April 2005) have been published in the Official Journal of the European Union on 4 May 2005.

²⁵⁹ European Commission, Customs and Security, online < http://europa.eu.int/comm/taxation_customs/customs/policy_issues/customs_security/index_en.htm#cus_rel > (date accessed: 17 July 2005).

²⁶⁰ Communication to the Council and the European Parliament amending Community Customs Code (COM(2003) 452 of 24 July 2003).

For the development and implementation of these measures, the European Commission designed a set of provisions regarding activities forming part of the so-called Customs Security Programme.

1.2.1. Customs Security Programme

The foundation of this program is a balanced approach between control standards, which aim at securing the internal markets and the international supply chain, and trade facilitation. The basic elements of implementing security measures are: commonly agreed control standards, commonly agreed risk indicators, and close co-operation among major trading partners.²⁶¹ On the trade facilitation side, the main pillar is the Authorised Economic Operator Program that aims at providing simplified customs procedures and facilitation on security requirements to those traders that demonstrate the reliability of their efforts to secure their part of the international supply chains.²⁶²

1.2.2. Advance Information Cargo Requirements

The so-called Pre Arrival/ Pre Departure Declarations require traders to provide customs authorities with advance information on goods prior to import to or export from the EU.²⁶³ The European Union introduced in 1988 the Single Administrative Document (SAD), a standardized document, which replaced most of the customs declarations forms existing in member States of the EU and in Switzerland, Norway and Iceland. This document is required for exporting, importing or transporting "goods in transit" within the European Union or the European Free Trade Area. This documentary requirement aims at ensuring transparency of the national administrative requirements, rationalization and

²⁶¹ European Commission, Customs and Security, Customs Security Programme, online <http://europa.eu.int/comm/taxation_customs/customs/policy_issues/customs_security/index_en.htm#auth_eco> (date accessed: 17 July 2005).

²⁶² *Ibid.*

²⁶³ European Commission, Taxation and Customs Union, Pre Arrival/Pre Departure Declarations, online <http://europa.eu.int/comm/taxation_customs/customs/procedural_aspects/general/prearrival_predeparture/index_en.htm> (date accessed: 15 July 2005).

reduction of administrative documentation, decrease in the amount of requested information and standardization and harmonization of data.²⁶⁴

The legislation on the SAD was modernized in December 2003 in order to address the needs emerging from the increased use of information technology for customs declarations as well as the aim to attain further harmonization of data requirements throughout the European Union.²⁶⁵ These legislative changes translate into an overall reduction of data requirements by 26% and by 43 % of the elements that Member States can decide to require on a national basis (“optional” elements). The amount of data non-coded at EU level has dropped by 60 to 75 per cent according to the procedure concerned.²⁶⁶

1.2.3. Authorised Economic Operator (AEO) Programme

The AEO concept, introduced by the security amendments to the Community Customs Code,²⁶⁷ refers to a special status to be granted by member States of the European Union to economic operators that satisfy certain common criteria. Such common criteria relate to operators’ control systems, their financial solvency and compliance record.²⁶⁸ Important to note that member States are encouraged to mutually recognize the status of authorized economic operator granted by other member States, although such recognition does not automatically confer the benefits of simplified customs procedures in such other member States. However, it is recommended that, if the authorized economic operators meet all the specific requirements for a particular simplification, the

²⁶⁴ *Ibid.*

²⁶⁵ *EU Regulation 2286/03* (18 December 2003) which amends the Community Customs Code Implementing Provisions (Regulation 2454/93). There is also a corrigendum to Regulation 2286/03 in Official Journal L360, dated 7 December 2004.

²⁶⁶ *Ibid.*

²⁶⁷ See *Regulation (EC) no 648/2005 of 13 April 2005*, published in the Official Journal of the European Union on 4 May 2005.

²⁶⁸ European Commission, Customs and Security, Authorized Economic Operator, online <http://europa.eu.int/comm/taxation_customs/customs/policy_issues/customs_security/index_en.htm#auth_eco> (date accessed: 17 July 2005) [hereinafter AEO Strategic Paper]. Note that at the time of writing this document, the Commission was in the process of drafting specific provisions detailing the criteria for granting the AEO status, the authorization procedure and the potential benefits for the AEOs.

other member State should grant the use of that simplification.²⁶⁹ In deciding whether to grant certain simplifications to an AEO from another member State, the authorities of the member State confronted with such a request do not have to reevaluate the operators' control systems, financial solvency or compliance record, which were already evaluated by the member State that granted the status of AEO. Instead, the evaluation should focus on any other specific requirements that are pertinent for the use of the particular simplifications.²⁷⁰ Note that the use of simplification may also be determined by agreements between customs authorities of the member States.²⁷¹

1.3. Regulatory Measures Regarding Air Cargo Security and Facilitation

On 19 January 2003, a mandatory regulation in the field of aviation security became applicable to all EU member States, superseding national laws. Regulation (EC) No 2320/2002 of the European Parliament and of the Council of 16 December 2002²⁷² establishing common rules in the field of civil aviation security²⁷³ aimed at establishing common basic standards, based on standards contained in ICAO Annex 17 and recommendations of the European Civil Aviation Conference (ECAC) Document 30.²⁷⁴ Also, the Resolution aimed at setting up appropriate compliance monitoring mechanisms.

²⁶⁹ *Ibid.*

²⁷⁰ *Ibid.*

²⁷¹ See AEO Strategic Paper, *supra* note 268.

²⁷² Regulation (EC) No 2320/2002 of the European Parliament and of the Council of 16 December 2002 establishing common rules in the field of civil aviation security, Official Journal of the European Communities L 355 (30 December 2002), at 1-21.

²⁷³ According to this Regulation, "aviation security" means the combination of measures and human and natural resources intended to safeguard civil aviation against acts of unlawful interference.

²⁷⁴ ECAC Policy Statement in the Field of Civil Aviation Facilitation, ECAC/CEAC Doc No. 30 (Part I), 9th Edition (July 2003), as amended by DGCA/122 (Paris, 24-25 November 2004). This document contains guidelines for facilitation of air cargo, regarding customs treatment of air cargo and automation, pre-arrival processing and other miscellaneous provisions. For example, ECAC member States should encourage the electronic transmission of information required for the entry and departure of an aircraft (Annex I, Point 3.1), the introduction of arrangements to enable traders to submit all the information required by public authorities in connection with an import or export electronically at the same time, to the same address (Annex I, Point 3.1.3). Also, the document suggests that ECAC members to refrain from requiring the lodgement of the pre-arrival data before the aircraft has left the country of departure and should limit required data to

1.3.1. Regulation 2320/2002 on Common Rules in the Field of Civil Aviation Security

Resolution 2320/2002 is applicable to any airport located in the territories of the Member States of the European Union. The Annex to EU regulation 2320/2002 includes detailed rules addressing, *inter alia*, airport security, including access control and 100% staff screening, and cargo handling, screening and protection.

In addressing the issue of cargo, courier and express parcels, Annex 1 provides that all cargo intended to be carried on passenger or all-cargo aircraft must be subjected, before being placed on board the aircraft, to security controls carried out according to the rules set in this Annex.²⁷⁵

The regulation also sets the qualification of a “regulated agent”, defined as “an agent, freight forwarder or other entity that conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo.”²⁷⁶ A regulated agent must be designated, approved or listed by the appropriate authority and subject to specified obligations as defined by the appropriate authority.²⁷⁷

In terms of establishing criteria for security controls, the Annex provides that cargo will be allowed for transport by air only if:²⁷⁸

- (a) its reception, processing and handling was performed by properly recruited and trained staff
- (b) it was searched by hand or physical check or screened by x-ray equipment or subjected to simulation chamber or subjected to other

those necessary to identify the aircraft, the quantity and nature of the goods at arrival, accepting that this information may be ascertained from commercial documents (Annex I, Point 3.2.1.). In addition, ECAC member states should consider the introduction of simplified procedures for authorized persons allowing release of the goods on the provision of the minimum information necessary to identify the goods and permit the subsequent completion of the final goods declaration (Annex I, Point 3.3.1).

²⁷⁵ Regulation (EC) No 2320/2002, *supra* note 272, Annex, point 6.1.

²⁷⁶ *Ibid.*, Annex, Definitions.

²⁷⁷ *Ibid.*, Annex, point 6.2.

²⁷⁸ *Ibid.*, point 6.3 para. 1.

means, both technical and bio-sensory (e.g., sniffers, trace detectors, explosive detection dogs) so as to reasonably ensure that it does not contain any prohibited articles such as explosives or ammunition or flammable liquids.

Once such security controls have been carried out, the Regulation provides for an obligation to maintain the “sterility of the shipments”, whether on or off airport grounds, until such time as it is placed onboard aircraft and maintained until the departure of the aircraft.

Note that the security controls mentioned above are not required in respect of cargo received from a “known consignor,” defined as “the originator of property for transportation by air for his own account and who has established business with a regulated agent or air carrier on the basis of criteria detailed in this Annex.”²⁷⁹ In addition, no such security controls are required if a transshipment cargo is involved (provided that it is protected against interference at the transit point),²⁸⁰ or if the origin and handling conditions of the cargo ensure that it presents no security threat or it is cargo which is subject to regulatory requirements providing for an appropriate level of security protection.²⁸¹ It should be pointed out also that a transshipment cargo such as land or rail cargo which is has not been submitted to security controls at the point of departure or en route shall be screened and protected from unauthorized interference.²⁸²

According to this Regulation, a regulated agent or air carrier may recognize a consignor as a “known consignor” only if:²⁸³

(a) it establishes and registers the identity and address of the consignor and the agents authorized to carry out deliveries on its behalf, and

²⁷⁹ *Ibid.*, Annex, Definitions.

²⁸⁰ *Ibid.*, Annex, point 6.6.

²⁸¹ *Ibid.*, point 6.3, para 3.

²⁸² *Ibid.*, point 6.6.

²⁸³ *Ibid.*, point 6.4

(b) it requires the consignor to declare that it prepares consignments in secure premises and employs reasonable reliable staff in preparing the consignments and protects the consignments against unauthorized interference during the preparation, storage and transportation, and

(c) it requires the consignor to certify in writing that the consignment does not contain any explosives or incapacitating items as defined in the Attachment to the Annex²⁸⁴ and accepts that the package and contents of the consignment may be examined for security reasons.

Note that these criteria do not apply in cases where consignments can be positively identified for carriage only on all-cargo aircraft, provided that the known consignor has a confirmed *bona fide* business address and has previously shipped with the regulated agent or air carrier and has an established business relationship with the regulated agent or air carrier and ensures that all consignments are protected from unauthorized access until taken into custody of the air carrier.²⁸⁵

1.3.2. Regulation 622/2003 on Measures for the Implementation of the Common Basic Standards on Aviation Security

EU Regulation 622/2003²⁸⁶ contains the operations standards needed to ensure harmonized implementation of standards set forth in regulation 2320/2002. This regulation defined “National civil aviation security programme” as those regulations, practices and procedures adopted by the Member States according to Article 5 of regulation 2320/2002, to ensure civil

²⁸⁴ According to the Attachment to the Annex, “Explosives/Ammunition/Flammable Liquids/Corrosive” include “any explosive or incendiary components, which by themselves or in conjunction with other items can result in an explosion or fire. These include explosive materials, blasting caps, fireworks, gasoline, other flammable liquids, ammunition, etc., or any combination of these items, any corrosive or toxic substances, including gases, whether or not under pressure.” “Disabling or Incapacitating Items” are all tear gas, mace, and similar chemicals and gases whether in pistol, canister, or other container, and other disabling devices such as electronic stunning/shocking devices.”

²⁸⁵ Regulation (EC) No 2320/2002, *supra* note 272, Annex, point 6.5.

²⁸⁶ Commission Regulation (EC) No 622/2003 of 4 April 2003 laying down measures for the implementation of the common basic standards on aviation security, Official Journal of European Union L 089 (5 April 2003), at 9-10.

aviation security on their territory.²⁸⁷ The necessary measures for the implementation and technical adaptation of common basic standards regarding aviation security to be incorporated into such national civil aviation security programs are contained in the Annex to this Regulation and are not published.²⁸⁸

1.3.3. Regulation 1217/2003 on the Establishment of National Aviation Security Programmes

The EU member States have established National Aviation Security Programmes which incorporate the Community standards and ensure by means of established National Quality Control programmes that the monitoring and implementation of the National Aviation Security Programmes is carried out properly. The EU regulation 1217/2003²⁸⁹ establishes detailed requirements on how the National Quality Control Programmes shall be carried out and reporting of undertaken activities shall be reported to the European Commission. According to this Regulation, member States must provide the appropriate authority with necessary enforcement powers.²⁹⁰ The quality control program must contain all necessary monitoring measures to assess, on a regular basis, the implementation of the national civil aviation security program; it must address the following elements: organizational structure, responsibilities and resources, job descriptions and qualifications of all auditors responsible for carrying out the quality control program, operational monitoring activities, deficiency rectification activities, enforcement measures and communications and reporting of undertaken activities relating to the aviation security requirements compliance.²⁹¹

Monitoring of the implementation of the national civil aviation security program must be carried out in accordance with the quality control program, taking into account the threat level, type and nature of the operations, standard

²⁸⁷ *Ibid.*, Art. 2.

²⁸⁸ *Ibid.*, Art. 3.

²⁸⁹ *Commission Regulation (EC) No 1217/2003 of 4 July 2003 laying down common specifications for national civil aviation security quality control programmes*, Official Journal of European Union L 169 (8 July 2003) at 44-48.

²⁹⁰ *Ibid.*, Art. 3.

²⁹¹ *Ibid.*, Art. 4.

of implementation, and other factors and assessments which will require more frequent monitoring.²⁹² Compliance monitoring activities may be announced or unannounced.²⁹³ In addition, member States must submit annually a report to the European Commission on the measures taken to fulfill their obligations under this regulation and on the aviation security situation at the airports located in their territory.²⁹⁴ Also, member States must inform the Commission of best practices with regard to quality control programs, audit methodologies and auditors and the Commission must share this information with the other member States.²⁹⁵

1.3.4. Monitoring Compliance with Regulation 2320/2002

The European Commission undertakes the monitoring of the member States obligations as set forth in regulation 2320/2002.²⁹⁶ This includes a representative sample of airports and operators. The inspections take place in accordance with Regulation 1486/2003.²⁹⁷ According to this Regulation, each member State must ensure that, upon request, Commission inspectors have access to: (a) the national civil aviation security program, including the national civil aviation security training program, (b) the national civil aviation security quality-control program, (c) identified airports and air carrier security programs and (d) the results of audits conducted under Regulation 2320/2002.²⁹⁸ The Commission must give at least two months' notice of an intended inspection to the appropriate authority in whose territory the inspection is to be conducted.²⁹⁹ The inspections are to be carried out according to a standard methodology,³⁰⁰

²⁹² *Ibid.*, Art. 5.

²⁹³ *Ibid.*, Art. 7.

²⁹⁴ *Ibid.*, Art. 6.

²⁹⁵ *Ibid.*, Art. 11.

²⁹⁶ Regulation 2320/2002, *supra* note 272, Art. 7.

²⁹⁷ Commission Regulation (EC) No 1486/2003 of 22 August 2003 laying down procedures for conducting Commission inspections in the field of civil aviation security, Official Journal L 213 (23 August 2003), at 3-6.

²⁹⁸ Regulation No 2320/2002, *supra* note 272, Art. 4.

²⁹⁹ *Ibid.*, Art. 7.

³⁰⁰ *Ibid.*, Art. 9.

and within six weeks of completion of an inspection, a report must be communicated by the Commission to the appropriate authority.³⁰¹ In assessing the implementation of Regulation (EC) No 2320/2002, the following classifications may apply:³⁰²

- Fully compliant
- Compliant, but improvement desirable
- Not complaint, with minor deficiencies
- Not compliant, with serious deficiencies
- Not applicable
- Not confirmed

In case the inspection report identifies deficiencies, within three months of the date of dispatch of an inspection report, the appropriate authority must submit in writing to the Commission its answer to the report which must address the findings and recommendations and must provide an action plan, specifying actions and deadlines to remedy any identified deficiencies.³⁰³ Following receipt of an answer from the appropriate authority, the Commission may submit its comments or request further explanation to clarify all or part of the answer, or conduct a follow-up to check the implementation of remedial actions, with a minimum notice of two weeks, or initiate an infringement procedure in respect of the member State concerned.³⁰⁴ If an inspection discloses a serious deficiency which is deemed to have significant impact on the overall level of civil aviation security in the Community, the Community must immediately inform the appropriate authorities.³⁰⁵

³⁰¹ *Ibid.*, Art. 10(1).

³⁰² *Ibid.* Art. 10(3).

³⁰³ *Ibid.*, Art. 11.

³⁰⁴ *Ibid.*, Art. 12.

³⁰⁵ *Ibid.*, Art. 15.

1.4. Summary Table of EU Standards on Air Cargo Security and Facilitation

EU Standard	Issue	Core provision
Point 6.1, Annex 1, EC Regulation 2320/2002	Goods subject to security controls	All cargo intended to be carried on passenger or all-cargo aircraft
Annex, Definitions EC Regulation 2320/2002	Concept of "regulated agent"	A "regulated agent" is defined as "an agent, freight forwarder or other entity who conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo." Such agent must be designated, approved or listed by the appropriate authority and subject to specified obligations as defined by the appropriate authority.
Article 6.3, paragraph 1 of EC Regulation 2320/2002	Security controls	Cargo will be allowed for transportation by air only if (1) its reception, processing and handling was performed by properly recruited and trained staff and (2) it was searched by hand or physical check or screened by x-ray equipment or subjected to other means, both technical and bio-sensory so as to reasonably ensure that it does not contain any prohibited articles such as explosives or incapacitating items.
Article 6.3, paragraph 3 of EC Regulation 2320/2002	Cargo exempted from security controls	Cargo received from a "known consignor", it is a transshipment cargo (provided that it is protected against interference at the transit point), or it is cargo whose origin and handling conditions ensure that it presents no security threat or it is cargo which is subject to regulatory requirements providing for an appropriate level of security protection
Article 6.4 and Annex, Definitions of EC Regulation 2320/2002	Concept of "known consignor"	A "known consignor" is defined as "the originator of property for transportation by air for his own account and who has established business with a regulated agent or air carrier on the basis of criteria detailed in this Annex". A regulated agent or air carrier may recognize a consignor as a "known consignor" only if: (1) it establishes and registers the identity and address of the consignor and the agents authorized to carry out deliveries on its behalf, and (2) it requires the consignor to declare that it prepares consignments in secure premises and employs reasonable reliable staff in preparing the consignments and protects the consignments against unauthorized interference during the preparation, storage and transportation, and (3) it requires the consignor to certify in writing that the consignment does not contain any explosives or incapacitating items and accepts that the package and contents of the consignment may be examined for security reasons.
Article 5 of EC Regulation 2320/2002 EC Regulation 622/2003	National Aviation Security Programmes	The EU member States have established National Aviation Security Programmes which incorporate the Community standards and ensure by means of established National Quality Control programmes that the monitoring and implementation of the National Aviation Security Programmes is carried out properly.
Article 7 of EC Regulation 2320/2002 EC Regulation 1486/2003	Monitoring compliance	Each Member State must ensure that, upon request, Commission inspectors have access to the national civil aviation security program, including the national civil aviation security training program, the national civil aviation security quality-control program, identified airports and air carrier security programs.

2. Security and Prosperity Partnership of North America

This partnership was launched on 23 March 2005 by the Presidents of the United States and Mexico and by the Prime Minister of Canada, as a trilateral effort to enhance security and promote economic prosperity through greater cooperation and information sharing among the three countries.³⁰⁶ Based on the premise that security and economic growth are mutually reinforcing, this initiative proposes a number of ambitious security and prosperity agendas with specific timetables aimed at securing the shared borders of the Partner-States while facilitating the traffic of legitimate passengers and cargo and enhancing the competitive position of North American economies in the global market place.³⁰⁷

The security agenda of the SPP sets to achieve the implementation of the highest continent-wide security standards and streamlining of risk-based border processes by developing and implementing a common strategy to establish equivalent approaches to aviation security across North American continent without unduly burdening the flow of trade.³⁰⁸

With this aim, the three countries propose to define a cargo security strategy to ensure compatible screening methods for cargo prior to departure from a foreign port and at the first point of entry to North America, as well as a border facilitation strategy to build capacity and improve the flow of legitimate travelers and cargo at ports of entry within North America.³⁰⁹ In order to achieve

³⁰⁶ Security and Prosperity Partnership of North America, Report to Leaders (June 2005), SPP.GOV A North America Partnership website, online < http://www.spp.gov/spp/report_to_leaders/index.asp?dName=report_to_leaders> (date accessed: 30 June 2005).

³⁰⁷ Security and Prosperity Partnership of North America, Fact Sheet (June 27, 2005), SPP.GOV A North America Partnership website, online < http://www.spp.gov/spp/factsheet.asp?dName=fact_sheets> (date accessed: 30 June 2005).

³⁰⁸ Note that the States partners in the SPP agreed to trilaterally support, and to each promote implementation of the proposed WCO Framework of Standards to Secure and Facilitate Global Trade, discussed above. Security and Prosperity Partnership of North America, Report to Leaders (June 2005), SPP.GOV A North America Partnership website, online < http://www.spp.gov/spp/report_to_leaders/index.asp?dName=report_to_leaders> (date accessed: 30 June 2005).

³⁰⁹ Security and Prosperity Partnership of North America, Security Agenda (Published by the White House Office of the Press Secretary, March 23, 2005), SPP.GOV A North America Partnership website, online < http://www.spp.gov/spp/security_agenda/index.asp?dName=security_agenda> (date accessed: 30 June 2005).

these goals, the State partners commit to identify and deploy new technologies to advance their common security goals and facilitate the legitimate movements of people and goods across their shared borders.³¹⁰

More recently, within the framework of the Partnership, leaders from the three countries met in Ottawa to discuss measures for developing a single program to facilitate the free flow of passengers and cargo across the shared borders.³¹¹ The plan includes more than 300 proposals setting common security and economic regulatory measures, including improved security screening of individuals and goods entering and leaving North America as well as instant sharing of information on high-risk travelers and cargo.³¹² It is believed that the faster the task towards defining and implementing common regulatory standards is achieved, the more efficient North American continent would become in terms of trade and investment.³¹³

Although still in an incipient phase, once realized, such a regional approach might prove to be a useful testing ground for indicating the feasibility of specific multinational strategies to ensure air cargo security. The potential drawback of this initiative is that, given its proclaimed aim to promote North American economic competitiveness, it may lead to discriminatory treatment vis-à-vis other trade partners.

³¹⁰ The partners signed a Framework of Common Principles for Electronic Commerce with the purpose of promoting transparency and security and facilitate the acceleration of Information Communications Technologies by eliminating borders. Security and Prosperity Partnership of North America, Fact Sheet (June 27, 2005), SPP.GOV A North America Partnership website, online <http://www.spp.gov/spp/factsheet.asp?dName=fact_sheets> (date accessed: 30 June 2005).

³¹¹ Associated Press, "U.S., Canada, Mexico Make Security Pledge. Nations Promise to Tighten Border Watches, Expand Trade" (27 June 2005), MSNBC News website, online <<http://msnbc.msn.com/id/8379792/>> (date accessed: 30 June 2005).

³¹² Eric Beauchesne, "Plans Would Integrate North American Security, Trade", *The Gazette* (Montreal, 28 June 2005), A14.

³¹³ Beth Duff-Brown, "U.S., Canada, Mexico to Tighten Security", *The Washington Post* (28 June 2005), online: Washington Post website <<http://www.washingtonpost.com/wp-dyn/content/article/2005/06/28/AR2005062800284.html>> (date accessed: 30 June 2005).

3. Free and Secure Trade (FAST) Program between the United States and Canada

As a result of an agreement between Canada and the US to harmonize, as much as possible, their customs practices along their shared border, the Free and Secure Trade (FAST) program was created, with the objective to enhance the security and safety of both countries, while facilitating the legitimate cross-border trade. This program is a joint US-Canada initiative involving the Border Services Agency (CBSA), Citizenship and Immigration Canada, and the United States Bureau of Customs and Border Protection (CBP).

In order to end threats to public security and safety, while keeping their shared border open to the free flow of low-risk, legitimate trade, the US and Canada decided to adopt a common approach to risk management and establish partnerships with those in the trade community who have a history of compliance with customs requirements and are committed to the integrity of their supply chain management processes, using compatible and advanced technology.³¹⁴

FAST allows moving pre-approved eligible goods across the border quickly. It is a harmonized commercial process offered to pre-approved importers and carriers. Shipments for approved companies, transported by approved carriers, are cleared into either country with greater efficiency and certainty, and at a reduced cost of compliance.³¹⁵

Parties that are eligible to apply for participation in the FAST program are carriers and importers who have a demonstrated history of compliance with all relevant legislation and regulations, and have acceptable books, records and audit trails.³¹⁶

³¹⁴ Transport Canada, "Free and Secure Trade (FAST) Program", online: Transport Canada website < <http://www.tc.gc.ca/pol/en/tbwg/362.htm> > (date accessed: 1 July 2005).

³¹⁵ *Ibid.*

³¹⁶ US Customs and Border Protection, "Free and Secure Trade Program (FAST)", online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctpat/fast/ > (date accessed: 1 July 2005).

One of the main purposes of the FAST program is to achieve greater integrity in supply chain management process by offering expedited clearance processes to those carriers and importers who have enrolled in the C-TPAT program³¹⁷ or Canada's Partners in Protection (PIP).³¹⁸ In addition, FAST implements streamlined and, where appropriate, integrated registration processes for carriers and importers with the aim of minimizing administrative requirements while ensuring that only low-risk supply chain participants with secure business practices are granted the benefits of the FAST program.³¹⁹

C. **Examples of National Regulatory Initiatives Pertaining to Air Cargo Security and Facilitation**

1. The United States

Following a series of incidents involving its commercial aircraft, the United States became the leading promoter of strict aviation security measures, which more recently started to include also all-cargo air transportation. The increased concerns over air cargo security were initially triggered by the bombing of Pan Am flight 103 in 1983,³²⁰ which led to the passage of the Aviation Security Improvement Act of 1990.³²¹ This law required the Federal Aviation Administration (FAA), which at the time was generally responsible for oversight of civil aviation security, to undertake studies of the vulnerabilities in the civil aviation system and find effective systems of explosives detection to screen baggage and cargo.

³¹⁷ See *infra* Part II.C.1.1.4

³¹⁸ See *infra* Part II.C.2.2.2.

³¹⁹ US Customs and Border Protection, "Free and Secure Trade Program (FAST)", online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctpat/fast/ > (date accessed: 1 July 2005).

³²⁰ The 21 December 1988 crash of Pan Am flight 103, a Boeing 747, over Lockerbie, Scotland, was attributed to an explosive device placed in a baggage container in the aircraft's forward hold. United Kingdom Air Accidents Investigation Branch. *Report on the Accident to Boeing 747-121, N739PA at Lockerbie, Dumfriesshire, Scotland on 21 December 1988* (Aircraft Accident Report no 2/90 (EW/C1094)) (July 1990).

³²¹ P.L. 101-604.

The 1996 crashes of ValueJet flight 592³²² and TWA flight 800 led the White House to create a Commission on Aviation Safety and Security (known as the Gore Commission) with the task of assessing vulnerabilities of commercial aviation. The Commission recommended, *inter alia*, that FAA implement a comprehensive strategy to address the threat of explosives and other threatening objects in cargo and to work with industry to develop new initiatives in this area.³²³ Pursuant to these recommendations, the FAA created the Baseline Working Group and the Cargo Working Group, to consider ways to strengthen air cargo security.³²⁴

The devastating terrorist attacks of September 11, 2001 renewed national concerns with aviation security and led to strong regulatory responses. The Aviation and Transportation Security Act (ATSA),³²⁵ adopted in November 2001, transferred responsibility for aviation security from FAA to the newly established Transportation Security Administration (TSA) and mandated a federalized workforce of security screeners to inspect airline passengers and their baggage.³²⁶ With respect to the security of air cargo, ATSA contains two important provisions. The first deals with passenger aircraft and requires that TSA provide for the screening of all cargo that will be carried aboard commercial passenger aircraft.³²⁷ Second, ATSA mandates TSA to develop a strategic security plan for screening and inspections to ensure the security of cargo that is to be transported in all-cargo aircraft.³²⁸

³²² The 11 May 1996 crash of a ValueJet DC-9 in the Florida Everglades was most caused, according to the National Transportation Safety Board, by improperly carried oxygen generators which ignited an intense fire in one of the airplane's cargo holds. National Transportation Safety Board. *Aircraft Accident Report: In-Flight Fire and Impact with Terrain, ValueJet Airlines, Flight 592, DC-9-32, N904VJ, Everglades, Near Miami, Florida, May 11, 1996 (AAR-97/06)*.

³²³ GAO Report, *supra* note 9 at 7.

³²⁴ *Ibid.* at 8.

³²⁵ P.L. 107-71.

³²⁶ *Transportation Security: Issues for the 109th Congress Report*, *supra* note 50 at CRS-2.

³²⁷ P.L. 107-71, § 110.

³²⁸ *Ibid.*, § 10.

The increasing concern for all-cargo security was reflected in “Vision 100”³²⁹ which expanded the program that allows armed federal flight deck officers³³⁰ to include all-cargo pilots. In addition, the National Intelligence Reform Act of 2004³³¹ included several provisions addressing cargo security, such as the setting up of a pilot program for evaluating the deployment of blast resistant cargo containers,³³² promoting the development and deployment of enhanced air cargo security technology, and evaluating international air cargo threats. Note also that the Homeland Security Appropriations Act of 2005³³³ requires the tripling of the amount of cargo placed on passenger airplanes that is screened and inspected.³³⁴

Another important development took place in May 2003 when the Senate passed the Air Cargo Security Improvement Act,³³⁵ currently before the Subcommittee of House Committee on Transportation and Infrastructure.³³⁶ This Act would provide for several steps to enhance the security of air cargo, especially cargo aboard passenger aircraft. The Transportation Security Administration (TSA) would be required to develop a strategy to ensure that all air cargo is screened, inspected, or otherwise made secure. This strategy should also include a system for regular inspection of air cargo shipping facilities and a security training program for persons who handle air cargo. All-cargo carriers would be required to develop security plans approved by the TSA.³³⁷

³²⁹ P.L. 108-334.

³³⁰ According to the *Homeland Security Act of 2002* (P.L. 107-296), airline pilots may receive training allowing them to serve as armed federal flight deck officers.

³³¹ P.L. 108-458.

³³² It should be mentioned that the 9/11 Commission recommended the deployment of at least one hardened cargo container in each passenger aircraft to mitigate the potentially catastrophic effects of an explosion of a bomb carried in air cargo. National Commission on Terrorist Attacks Upon the United States. *The 9/11 Commission Report* (New York, NY: W.W. Norton & Company, 2004).

³³³ P.L. 108-334.

³³⁴ The *Department of Homeland Security Appropriation Act* for FY2005 calls for hiring 100 more TSA cargo inspectors and increases funding for research and development of air cargo security technologies to \$76 million, from \$30 million, the amount appropriated to TSA for air cargo security for FY2004.

³³⁵ S. 165. See S. Rept. 108-38, *supra* note 13.

³³⁶ Bill HR 2044, 109th Congress, 1st Sess.

³³⁷ S. Rept. 108-38, *supra* note 13.

In fact, in November 2003, the TSA commenced the implementation of its Air Cargo Strategic Plan, a multi-phased, risk-managed approach to strengthening air cargo security throughout the entire supply chain.³³⁸ The plan sets as goals the implementation of a layered solution that includes first, screening of all cargo shipments in order to determine their level of relative risk; second, working with industry and other federal agencies to ensure that 100% of items that are determined to be of high risk are inspected; third, developing and deploying new information and technology solutions, and four, implementing operational and regulatory programs that support enhanced air cargo security measures.³³⁹ In order to achieve these goals, TSA's strategy focuses on four major components: 1) enhancing the Known Shipper Program; 2) establishing a cargo pre-screening systems that allow identification of elevated risk cargo through prescreening and ensuring that 100 per cent of it is inspected; 3) launching extensive research and development programs for air cargo, and 4) partnering with stakeholders to implement additional measures such as enhanced background checks on persons with access to cargo and new procedures for securing aircraft between flights.³⁴⁰

Additional regulatory measures adopted by the United States pertain to air cargo security, some dealing with information requirements and others with government-businesses partnerships in enhancing cargo security. A review of several such initiatives follows.

1.1. Advance Cargo Information

Section 343(a) of the Trade Act of 2002 empowers the Bureau of Customs and Border Protection (CBP) to promulgate regulations that require electronic collection of cargo information by CBP prior to the cargo's arrival in or departure from the territory of the United States by any commercial mode of transportation

³³⁸ TSA, Air Cargo Strategic Plan, *supra* note 3.

³³⁹ *Ibid.*

³⁴⁰ *Ibid.*

(i.e., air, sea, rail or truck). The required information must include that which is determined to be reasonably necessary to enable the US customs to identify high-risk shipments, so as to prevent smuggling and ensure cargo security.³⁴¹ In December 2003, the US Customs and Border Protection (CBP) adopted a rule³⁴² for implementing mandatory advance electronic information on cargo entering and leaving the US. The rule provides for advance manifest regulations for all modes of transportation both in and out of the US and imposes different reporting requirements on the transport modes in terms of the time frame prior to arrival or departure that information would have to be filed and submitted to CBP; all filing would be electronic.³⁴³

In the case of import cargo arriving aboard an aircraft, CBP will collect such information through the Air Automated Manifest System (Air AMS), a component of the CBP Automated Commercial System (ACS).³⁴⁴ In terms of the time frame for submitting to CBP the required cargo information, the regulation provides for two situations:

(a) For aircraft coming from nearby foreign areas, defined as any foreign port or place in North America, Central America, South America (from north of the Equator only), the Caribbean, and Bermuda, the required cargo information must be received by CBP no later than the time of departure of the aircraft for the United States. Note that the trigger time is considered to be no later than the time that wheels are up on the aircraft and the aircraft is *en route* directly to the US.³⁴⁵

³⁴¹ US Customs and Border Protection, "Frequently Asked Questions: Inbound Only (All Modes) - Trade Act of 2002 Final Rule", online: US Customs and Border Protection website <http://www.customs.gov/linkhandler/cgov/import/communications_to_industry/advance_info/tpa_faqs.ctt/tpa_faqs080304.doc> (date accessed: 15 May 2005).

³⁴² The rule was published in the Federal Register, vol. 68, No. 234 (5 December 2003).

³⁴³ Advance Electronic Filing Rule Regulatory Impact Analysis, *supra* note 11.

³⁴⁴ International Air Transport Association (IATA), "Air Automated Manifest System. Frequently Asked Questions", online: IATA website <http://www.iata.org/NR/ContentConnector/CS2000/Siteinterface/sites/whatwedo/file/air_faq_cargo.pdf> (date accessed: 18 May 2005).

³⁴⁵ 68 Fed. Reg. 234, § 122.48a(b)(1).

(b) For aircraft coming from other foreign areas, other than those specified above, the required cargo information must be received by CBP no later than 4 hours prior to the arrival of the aircraft in the US.³⁴⁶

The incoming air carrier is always required to submit the Air AMS when there is commercial cargo aboard. In addition, the information supplied by the incoming carrier may be supplemented by additional information provided by other eligible parties³⁴⁷ if they qualify.³⁴⁸ Among the qualifications required, such a party must establish the communication protocol required by CBP for properly presenting cargo information through the approved data interchange system.³⁴⁹

In terms of the type of cargo information required to be submitted in an Air AMS, the Rule provides for mandatory information that must be submitted by the air carrier,³⁵⁰ as well as conditional information that must be transmitted only if it pertains to the inbound cargo.³⁵¹ In addition, for split shipments, i.e., when the incoming air carrier elects to transport cargo covered under a single consolidated air waybill on more than one aircraft, the carrier must report additional information, some of which is mandatory,³⁵² some conditional,³⁵³ for each air waybill covered under the consolidation.

³⁴⁶ *Ibid.*, § 122.48a(b)(2).

³⁴⁷ There are four categories of eligible parties that may voluntarily participate in Air AMS: an Automated Broker Interface (ABI) filer, i.e. the importer or its Customs broker; a Container Freight Station; an Express Consignment Carrier Facility; or an air carrier as identified by its carrier IATA code, that arranged to have the incoming air carrier transport the cargo to the US. *Ibid.*, § 122.48a(c).

³⁴⁸ *Ibid.*

³⁴⁹ *Ibid.*

³⁵⁰ Such mandatory information is: the waybill number, trip/flight number, carrier/ICAO code, airport of arrival, airport of origin, scheduled date of arrival, total quantity based on the smallest external packing unit, total weight, precise cargo description, shipper name and address, and consignee name and address. 68 Fed. Reg. 234, § 122.48a(d).

³⁵¹ Such conditional information is: consolidation identifier, split shipment indicator, permit to proceed information, identifier of the other party which is to submit additional air waybill information, in-bond information, local transfer facility. 68 Fed. Reg. 234, § 122.48a(d).

³⁵² Such mandatory additional information regards the master and house air waybill number, the trip/flight number, the carrier/ICAO code, the airport of arrival, the airport of origin, scheduled date of arrival, the total quantity of the cargo covered by the house air waybill based on the smallest external packing unit, the total weight of the cargo covered by the house air waybill, and description of cargo. 68 Fed. Reg. 234, § 122.48a(d)(3).

³⁵³ Such conditional additional information regards permit-to-proceed information, boarded quantity and boarded weight. 68 Fed. Reg. 234, § 122.48a(d)(3).

Non-compliance with the requirement for advance electronic air cargo information either by non-submission of information or submission of incorrect or incomplete information may result in denial or withdrawal of landing rights.³⁵⁴ In addition, CBP may delay issuance of a permit or special license to unlade cargo, and a term permit or special license to unlade already issued may not apply until all required information is received. CBP may also decline to issue a permit or special license to unlade, and a term permit or special license already issued may not apply, with respect to the specific cargo for which advance information is not timely received electronically.³⁵⁵

Similar provisions are in place for cargo exported by air from the United States. Thus, any commercial cargo that is to be transported out of the US by aircraft must electronically transmit to CBP certain cargo information.³⁵⁶ The time frame for presenting such data is no later than 2 hours prior to the scheduled departure time of the aircraft from the last US airport.³⁵⁷ In terms of the required cargo information, in addition to the currently collected commodity data contained in the Bureau of Census electronic Shipper's Export Declaration (SED),³⁵⁸ there is a requirement for mandatory submission of certain transportation data.³⁵⁹

The air carrier of outbound cargo has several responsibilities. First, it may not load cargo without first receiving from the USPPI (US Principal Party in Interest) or its authorized agent either the related electronic filing citation or an appropriate exemption statement for the cargo.³⁶⁰ Second, for cargo that CBP has

³⁵⁴ *Ibid.*, § 122.12.

³⁵⁵ *Ibid.*, § 122.12.38(g).

³⁵⁶ *Ibid.*, § 192.14(a).

³⁵⁷ *Ibid.*, § 192.14(b)(1). Note that this time frame is applicable only to shipments without an export license that require full pre-departure reporting of shipment data. *Ibid.* § 192.14(b)(2).

³⁵⁸ See Bureau of Census Regulations § 30.63, 15 CFR 30.63.

³⁵⁹ Such mandatory transportation data refers to the method of transportation, carrier identification, conveyance name, the country of ultimate destination, estimated date of exportation, and the port of exportation. 68 Fed. Reg. 234, § 192.14(c)(2).

³⁶⁰ *Ibid.*, § 192.14(c)(4)(i).

identified as potentially high-risk, the carrier, after being duly notified by CBP, will be responsible for delivering the cargo for inspection/examination.³⁶¹

1.2. Automated Commercial Environment (ACE) and the International Trade Data System (ITS) Programs

Automated Commercial Environment (ACE) and the International Trade data System (ITS) are two programs that focus on cargo import and export operations and provide a “single screen” for the international business community to interact with CBP and all government agencies on import/export requirements.³⁶² The ACE offers a Secure Data Portal which is a universal “window” or screen for all system users (CBP, trade and government agencies) into ACE. Through a single computer screen, users with the requisite authorization may have access to all transaction data for importers, exports, carriers, shippers, enforcement and targeting systems, as well as multi-agency information databases.³⁶³

By using ACE, CBP inspectors and other government officers have advance information on shipments, pre-arrival risk assessment, intelligence analysis and staged enforcement and thus are able to make more efficient decisions for processing imports. The ACE allows an expedited release process for carriers and shippers that have prefiled and have been pre-approved and been subject to enforcement prescreening and targeting. The ACE aims at providing both CBP and the business community with the means and technology necessary to ensure the security of supply chain management.³⁶⁴

1.3. The “Known Shipper” Program

In 1996, the White House Commission on Aviation Safety and Security urged the FAA’s Aviation Security Advisory Committee (ASAC) Security

³⁶¹ *Ibid.*, § 192.14(c)(4)(ii).

³⁶² US Customs and Border Protection, “ACE & Modernization: Overview of Key Features for the Trade”, online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/toolbox/about/modernization/ace/ace_fact_sheet.xml> (date accessed: 13 May 2005).

³⁶³ *Ibid.*

³⁶⁴ *Ibid.*

Baseline Working Group to formulate a series of recommendations aimed at strengthening aviation security, among which to be included provisions defining the concept of “known consignor.”³⁶⁵ Pursuant to FAA’s efforts to enhance air cargo security, a “known shipper” program was established, setting up procedures for air carriers and freight forwarders to review the security practices of known frequent customers and develop a cargo security plan for handling cargo from known and unknown shippers.³⁶⁶ A known shipper was considered one that has an established reputation of compliance and thus is “known” to the industry and to the FAA.³⁶⁷ The Known Shipper program allowed an air carrier or an indirect air carriers (IAC, also known as freight forwarders)³⁶⁸ to transport a consignment from a known shipper with no extra screening than an examination of the package exterior, while shipments from unknown shippers would be screened by X-ray or physically inspected before being placed aboard a passenger aircraft.³⁶⁹ In fact, IACs were not allowed to simply accept consignments from unknown shippers. Instead, if the IAC did not have an existing relationship with the trader seeing to ship goods, it had to follow established regulations to ensure the shipper’s business was trustworthy.³⁷⁰ It is interesting to note that, before September 11, 2001, the Department of Transportation Inspector General (IG) conducted several cargo security tests and found that air carriers and indirect air carriers were not always complying with their obligations under the FAA’s Known Shipper Program and that the FAA’s oversight system was not efficiently implemented to ensure compliance.³⁷¹

³⁶⁵ White House Commission on Aviation Safety and Security, *Final Report to President Clinton* (Washington, DC: The White House, 12 February 1997).

³⁶⁶ CRS Report, *Air Cargo Security*, *supra* note 32 at CRS-11.

³⁶⁷ S. Rept. 108-38, *supra* note 13.

³⁶⁸ An IAC is defined as any person or entity, excluding an air carrier, that engages indirectly in the transportation of property by air, and uses the services of a passenger air carrier. *Ibid.*

³⁶⁹ *Ibid.*

³⁷⁰ *Ibid.*

³⁷¹ *Ibid.*

The Aviation and Transportation Security Act transferred the oversight and implementation of the Known Shipper Program from the FAA to the TSA, which continues to rely on known shipper programs as a main risk-based tool for prescreening air cargo. Several recent regulatory changes adopted after September 11, 2001 affected the Known Shipper Program. Thus, for example, ATSA requires that only cargo from known shippers is to be accepted on passenger air carriers and all cargo from unknown shippers is to be diverted to all-cargo carriers.³⁷²

According to TSA, the process through which a shipper becomes “known” was strengthened and a national data base of known shippers was developed. Interesting to note that TSA estimates that, to date, about one-third of air carriers and indirect air carriers added themselves voluntarily to the list.³⁷³ Current regulatory proposals provide the creation of an industry-wide, standardized database of known shippers.³⁷⁴

1.4. The Customs-Trade Partnership Against Terrorism (C-TPAT)

The Customs-Trade Partnership Against Terrorism (C-TPAT) is based on public/private partnerships aimed at improving security along the entire supply chain, from the factory floor, to foreign manufacturers and vendors, land borders, and air and sea ports, while expediting border processing for legitimate shipments.³⁷⁵ The main purpose of the program is to enlist voluntary participation in the partnership and enhance the security “best practices” employed by participants in the international trade chain.³⁷⁶

³⁷² P.L. 107-71.

³⁷³ *CRS Report, Air Cargo Security*, *supra* note 32 at CRS-12.

³⁷⁴ Department of Homeland Security, Transportation Security Administration, “Air Cargo Security Requirements; Proposed Rule”, 69 Fed. Reg. 217, 65258-65291.

³⁷⁵ US Customs and Border Protection, “Securing the Global Supply Chain: Customs-Trade Partnership Against Terrorism (C-TPAT) Strategic Plan”, online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctpat/ > (date accessed: 14 May 2005).

³⁷⁶ US Customs and Border Protection, “Securing the Global Supply Chain: Customs-Trade Partnership Against Terrorism (C-TPAT). Frequently Asked Question”, online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctpat/ > (date accessed: 14 May 2005).

The partnership is available, *inter alia*, to all common commercial air carriers, including passenger and cargo air carriers and express consignment carriers, and to certain foreign manufactures. In the initial phases of the program implementation, only certain manufacturers from Mexico, Europe and Asia are allowed to apply for C-TPAT participation.³⁷⁷

The companies applying for participation in the C-TPAT program must develop and implement a sound plan to enhance security procedures throughout their supply chain. Procedures should be in place to protect against unmanifested material being introduced into the supply chain.³⁷⁸ Also, physical security of all buildings and rail yards must be ensured against outside intrusion. Access controls must be in place so unauthorized access to facilities and conveyances is prohibited.³⁷⁹ The companies must conduct employment screening and interviewing of prospective employee and include periodic background checks and application verifications so that to ensure personnel security. A security awareness program is provided to the employees, which should also offer incentives for active employee participation in security controls. In addition, the companies should ensure that the documents they emit are complete, legible, accurate, and submitted in a timely manner to Customs. Also, conveyance integrity must be maintained in order to protect against the introduction of unauthorized personnel and material.³⁸⁰

The US Customs authorities have developed a validation process meant to ensure that C-TPAT participants have effectively implemented the security measures outlined in their Security Profile. The validation process is conducted jointly by US Customs personnel and a representative of the industry participant.³⁸¹

³⁷⁷ US Customs and Border Protection, "Securing the Global Supply Chain: Customs-Trade Partnership Against Terrorism (C-TPAT) Strategic Plan", online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctp_at/ > (date accessed: 14 May 2005).

³⁷⁸ *Ibid.*

³⁷⁹ *Ibid.*

³⁸⁰ *Ibid.*

³⁸¹ US Customs and Border Protection, "Customs-Trade Partnership Against Terrorism (C-

The guiding principle of the C-TPAT program is partnership and it is carried out on a voluntary basis. Throughout the validation, the parties have an opportunity to discuss security issues and to share “best practices” in securing the international supply chain.³⁸² The order in which a C-TPAT participant’s profile will be selected for validation is based on risk management principles and may take into account information such as import volume, security related anomalies, strategic threat posed by geographic regions, or other risk related information. A validation process usually implies an on-site review of the participant’s C-TPAT supply chain security profile. Each validation is customized for the participant involved and focused on the company’s C-TPAT security profile. Validation findings are included in a final report that is shared with the C-TPAT participant.³⁸³

Depending on the findings of the validation process, the benefits provided to the participant under the C-TPAT program will be affirmed, or increased, or, if deficiencies are found, deferred until corrective action is taken to address identified vulnerabilities.³⁸⁴ Among the benefits of participation in the C-TPAT initiative are reduced inspections of partners’ consignments, the assignment of an Account Manager and expedited processing of partners’ shipments.³⁸⁵

TPAT). Validation Process Fact Sheet”, online US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctpat/> (date accessed: 14 May 2005).

³⁸² US Customs and Border Protection, “C-TPAT Validation Process Guideline” (23 January 2003), Validation Process Fact Sheet”, online: US Customs and Border Protection website < http://www.customs.gov/xp/cgov/import/commercial_enforcement/ctpat/> (date accessed: 14 May 2005).

³⁸³ *Ibid.*

³⁸⁴ *Ibid.*

³⁸⁵ Canada Border Services Agency, “Free and Secure Trade (FAST) - Frequently Asked Questions”, online: Canada Border Services Agency website < <http://www.cbsa-asfc.gc.ca/import/fast/faq-e.html#1a>> (date accessed: 1 July 2005).

2. Canada

In addition to the programs mentioned above which involve agreements between Canadian and United States Customs administrations, two other programs developed by Canada have an impact on air cargo security, namely the Advance Commercial Information (ACI) Initiative and Partners in Protection (PIP) Program.

2.1. Advance Commercial Information (ACI) Initiative

In 2004, the Canada Border Services Agency (CBSA), formerly Canada Customs and Revenue Agency, launched the Advanced Commercial Information (ACI) initiative, a program aimed at increasing the effectiveness of risk management processes by better identifying threats to public health, safety, and security prior to the arrival of shipments in Canada.³⁸⁶ In order to achieve these goals, the CBSA requires importers to electronically provide key data regarding their cargo before the goods arrive in Canada. This mandatory advance Electronic Data Interchange (EDI) cargo reporting is used to detect shipments of unknown or high risk, while allowing for legitimate low-risk shipments to be cleared more quickly.³⁸⁷

2.2. Partners in Protection (PIP) Program

Partners in Protection (PIP), a program similar to the C-TPAT program,³⁸⁸ aims at engaging the private industry in efforts to enhance border security, combat terrorism, increase awareness of customs compliance issues and help detect and prevent contraband smuggling.³⁸⁹ PIP is available to the entire trade community, including importers, carriers, brokers, warehouse operators and

³⁸⁶ The implementation of this Initiative for the air mode is scheduled to begin on 5 December 2005. Canada Border Services Agency, "Advance Commercial Information (ACI)", online: Canada Border Services Agency website < <http://www.cbsa-asfc.gc.ca/import/advance/menu-e.html> > (date accessed: 1 July 2005).

³⁸⁷ *Ibid.*

³⁸⁸ See *supra* Part II.C.1.1.4.

³⁸⁹ Canada Border Services Agency, "Partners in Protection", online: Canada Border Services Agency website < <http://www.cbsa-asfc.gc.ca/general/enforcement/partners/menu-e.html> > (date accessed: 16 May 2005).

trade associations. Private companies interested in becoming partners in protection must sign a partnership agreement (memorandum of understanding) with the Canada Border Services Agency (CBSA). This partnership is based on goodwill and all the information exchanged is treated as confidential. Once the MOU is signed, a CBSA representative meets with a representative of the partner organization to make arrangements to implement the program.³⁹⁰

The companies are requested to provide the CBSA with a self-assessment of their security systems. Such an assessment allows CBSA to identify potential weaknesses in the security system throughout the supply chain and help the partner organization address them. There is no set timeframe to address identified weakness and the CBSA works with the partners to address the deficiencies within a reasonable amount of time.³⁹¹ Also, there are no penalties associated with the Partners in Protection program. Among the benefits of such a partnership are a quicker movement of low-risk goods through customs, improved security levels, enhanced reputation of the company - partner, improved understanding of customs requirements and better communication between the employees of the company and the CBSA.³⁹² Organizations that join the PIP are eligible to participate in the Free and Secure Trade program (FAST).³⁹³

3. The United Kingdom

3.1. "Known Consignor" Customs-Business Partnership

On August 1, 2003, United Kingdom (UK) changed its air cargo security regime. Prior to this date, regulated (listed) air cargo agents were able to assist their customers' security arrangements and, if satisfied with specified standards, were entitled to validate the premises and confer upon their customers the status of "known consignor". Cargo from "known consignors" would then be considered as secure and allowed to be loaded on an aircraft without further

³⁹⁰ *Ibid.*

³⁹¹ *Ibid.*

³⁹² *Ibid.*

³⁹³ See *supra* Part II.B.3.

checks. The validated consignors would maintain their “known” status for 12 months, after which a re-assessment would be required.³⁹⁴

In August 2003, the UK Department of Transport decided to switch the responsibility for assessing consignors from regulated agents and airlines to independent validators appointed by the Department of Transport and selected on the basis of their cargo security experience.³⁹⁵ British traders involved in international air cargo transport may start the validation process by accessing online a list of appointed validators. The trader then contacts the validator of its choice to arrange a validation inspection. The validator advises the organization about what the inspection will involve and may offer, either free or for a fee, to carry out a pre-validation inspection.³⁹⁶

During the inspection, the validator evaluates the following: the physical security measures in place at the site, the staff recruitment and reference check procedures, staff security training procedures, whether any other organizations use the same site, access control to the site, the point at which the cargo becomes air cargo, the air cargo preparation procedures, air cargo packing procedures, storage of secure cargo, transport of secure cargo to security approved air cargo agent or airline.³⁹⁷ It should be mentioned that, among other requirements, all staff who have access to air cargo must have received basic security training. Also, their recruitment procedure must request of written references, which will normally be expected to go back five years.³⁹⁸

Where security measures in place at trader’s place of business are judged by the validator to be of a sufficiently high standard, a known consignor certificate (which provides confirmation to the security approved air cargo agent

³⁹⁴ UK Department of Transport, “Changes to the UK Air Cargo Security Regime”, UK Department of Transport website, online: < http://www.dft.gov.uk/stellent/groups/dft_transsec/documents/page/dft_transsec_023330.hcsp > (date accessed: 26 May 2005).

³⁹⁵ *Ibid.*

³⁹⁶ *Ibid.* One may note that each validation inspection costs £ 400 per site, plus the validator’s travel expenses, whether it leads to a successful validation or not.

³⁹⁷ *Ibid.*

³⁹⁸ *Ibid.*

or airline that all the security requirements have been met) and a unique reference number (URN) is awarded. The company's site details are entered on a website, so that regulated air cargo agents or airlines can verify the status.³⁹⁹

In case the validator finds the level of security unsatisfactory, it must give the company a report outlining where the business has failed to meet the security requirements. If the consignor decides that it will undertake a rectification action, a re-inspection is possible.⁴⁰⁰ An appeal of validator's decision is also available to traders in the case of an unsuccessful validation. Within 7 days of the inspection, the consignor must write a letter to the Department of Transport listing the grounds for the appeal and specifying the issues in dispute. The Department will investigate the matter and issue a final decision. If the appeal is dismissed the consignor remains unknown, unless it decides to re-apply for known status and is subsequently validated. If the appeal is accepted, the consignor will be added to the list of known consignors.⁴⁰¹

The major benefit of acquiring a "known consignor" status is that the cargo shipped by such traders will not be screened before being flown and the known cargos will not have to pay the security charges levied by a listed agent or airline (as will have to do an unknown consignor).⁴⁰²

The role of the Department of Transport is to oversee the validation system and to remove, if considered appropriate, a validator from the list. The Department may send its own validators to accompany a validator on a visit to a site or may carry out no-notice spot checks of known consignor sites.⁴⁰³

4. Sweden

4.1. StairSec Programme

In order to improve security in the global supply chain, the Swedish customs authorities have designed a global supply chain security system to be

³⁹⁹ *Ibid.*

⁴⁰⁰ *Ibid.*

⁴⁰¹ *Ibid.*

⁴⁰² *Ibid.*

⁴⁰³ *Ibid.*

integrated with the existing custom system based on a partnership between Customs and the business community, called the Stairway. The new accreditation process of the operators involved in the global supply chain, StairSec, is aimed at facilitating legitimate trade while allocating more efficiently resources to high risk areas.⁴⁰⁴

With the purpose of defining criteria for differentiating between high risk trade and low risk - or mainstream- flows, the Swedish authorities opted to allow compliant operators to receive a Customs-accreditation which in turn provides them with increased efficiency and facilitation in Customs-processes.⁴⁰⁵ The program is based on the basic philosophy of providing facilitation in exchange for compliance, and avoiding duplication of systems through full integration with existing programs for accreditation and facilitation of international trade processes.⁴⁰⁶

In terms of potential participants in the program, it should be noted that all global supply chain stakeholders (e.g., importers, exporters, forwarders, brokers, and terminals, such as airports and warehouses) are allowed to apply and obtain an accreditation for a secure supply chain. The accreditation process is conducted by the Swedish Customs with a view of establishing and maintaining a partnership between Customs and trade during and following the process of accreditation.⁴⁰⁷

The first stage in the process of authorizing a secure supply chain is the company analysis and defining its specific risk mapping. The main criteria of assessment are compliance by the company with existing national and international regulations and high quality of its Customs-business and electronic

⁴⁰⁴ The idea for this system was developed and designed in co-operation with trade organizations over a period of four year, from 1998 to 2002. Swedish Customs, "White Paper on Accreditation of Operators and the Supply Chain Security (StairSec)" (June 2003), Swedish Customs website, online < http://www.stairsec.se/docs/white_paper.pdf> (date accessed: 23 May 2005).

⁴⁰⁵ *Ibid.*

⁴⁰⁶ *Ibid.*

⁴⁰⁷ *Ibid.*

flows.⁴⁰⁸ If these security standards are met, the Customs and the company sign a memorandum of understanding (MoU) which is not legally binding; the obligations undertaken pursuant to it are to be fulfilled on a voluntary basis.⁴⁰⁹

The designers of the StairSec Programme made a point of the need to clearly define the benefits and costs of joining the partnership for both Customs and the business community. Among the benefits of the StairSec Programme is that the Customs will assist in providing optimal logistic solutions for the partner - companies through individually designed measures with integrated electronic solutions aimed at re-using commercial information to the greatest extent possible.⁴¹⁰

5. Australia

Australian Customs have developed two programs that have applicability in air cargo security field: Frontline and Accredited Client Programme.

5.1. Frontline

In 1991 Australia Customs Services established a cooperative program with industry groups involved in international trade and transport, called Frontline. The program draws on the expertise and knowledge of people in the industry to help prevent drug trafficking, wildlife and flora smuggling and illegal import or export of restricted items, such as weapons and chemicals.⁴¹¹

As part of the Program, Customs provide comprehensive training to Frontline partners with a focus on the indicators allowing the detection of illegal drugs and activities. Also, Frontline participants are acknowledged by Customs as partners in the fight against illegal activities, which leads to a good reputation for the company, ultimately benefiting participants, their business clients and the

⁴⁰⁸ *Ibid.*

⁴⁰⁹ *Ibid.*

⁴¹⁰ *Ibid.* It should be noted that the business-partners undertake to co-operate with Swedish customs in order to minimize the risks of criminality in the logistical flows.

⁴¹¹ Australian Customs Service, "Frontline: Help Customs Protect Australia's Borders", Australian Customs Service website, online: <<http://www.customs.gov.au/site.htm>> (date accessed: 24 May 2005).

community. In addition, the improved operational security of a Frontline partner helps Customs make clearance procedures more effective.⁴¹²

Frontline members sign a Memorandum of Understanding (MOU) with the Australian Customs to formalize this cooperation. The MOU represents a voluntary commitment to cooperation by both parties and thus it is not a legally binding or enforceable contract.⁴¹³ Under this partnership, the Australian Customs undertake to provide educational materials and guidance to appropriate company staff, encourage and work with the company to help it exercise effective control over its facilities, treat information submitted by business partners as confidential by both parties, and foster overall cooperative relationship.⁴¹⁴ On the other hand, the businesses partners in Frontline undertake, *inter alia*, to: (a) provide Customs with timely notification, where possible, of unusual or suspicious events, (b) take reasonable and legal precautions to check the background and integrity of potential new staff, (c) advise staff of the company's commitment to Frontline, and its expectation of similar commitment from staff, (d) cooperate, as far as possible, in giving comment and assistance to Customs officers, and (e) seek Customs involvement in advice, assistance and educational materials.⁴¹⁵

5.2. Accredited Client Programme

Another program initiated in Australia is the Accredited Client Programme, designed for low-risk importers and exporters with the aim of streamlining their reporting requirements.⁴¹⁶ In order to become an accredited client, traders need to assure Customs of their ongoing compliance with business and security rules and negotiate individually tailored commercial contracts

⁴¹² *Ibid.*

⁴¹³ *Ibid.*

⁴¹⁴ *Ibid.*

⁴¹⁵ *Ibid.*

⁴¹⁶ Australian Customs Service, "Accredited Client Program", Australian Customs Service website, online: <<http://www.customs.gov.au>> (date accessed: 26 May 2005).

between themselves and the CEO of Customs, the program being based on the philosophy that “one size doesn’t fit all”.

The Accredited Client Programme allows certain traders streamlined reporting options, increased cargo facilitation, an alternative cost recovery model for importers⁴¹⁷ and includes the benefit of a Customs client manager.⁴¹⁸ However, accredited clients will not be exempt from community protection activities conducted by Customs.⁴¹⁹

To join the Accredited Clients Program, importers and exporters need to demonstrate their ability to communicate electronically with Customs, a history of providing accurate and timely information and the ability to demonstrate they can continue to provide accurate and timely information, an Australian Business Number (ABN), their eligibility to defer goods and services tax (GST), and a record of compliance with permit issuing agencies (PIAs).⁴²⁰

The accreditation procedure involves the submission by the applicant importer or exporter of an audit report prepared by a qualified independent auditor chosen in accordance with the business rules.⁴²¹ The audit report must include details of responsibilities and duties of key personnel of the client and their service providers, an auditable record of imported and exported goods, evidence of a 12-month history of compliance, details of the system the client is using to identify the permit requirement of goods, and details of the system the client is using to identify and rectify errors when preparing information for Customs.⁴²² It is important to note that the partnership between traders and Customs under the Accredited Client Programme takes a legally binding form, as an Import or Export Information Contract between Customs and the

⁴¹⁷ Note that there is no cost recovery for exporters. *Ibid.*

⁴¹⁸ Such Client Manager provides assistance in client’s dealings with government in relation to their import or export processing. *Ibid.*

⁴¹⁹ *Ibid.*

⁴²⁰ *Ibid.*

⁴²¹ Note that there is no application fee, but there are some costs associated with obtaining an independent audit report.

⁴²² *Ibid.*

importer/exporter. The information required for the purposes of this contract needs to spell out any details of the relationship between the parties and their rights and responsibilities. Such information contract must include provisions relating to: the goods covered by the contract, available mechanisms for reporting and monitoring a person's compliance with agreed procedures and the business rules, and the powers of the Customs to terminate the contract if the person fails to comply with any of the procedures or business rules.⁴²³

Under the partnership contract, accredited clients need to comply with the Programme's business rules and contractual obligations, in particular, the obligation to provide Customs with accurate and timely information regarding duty payments and charges, maintain relationship with Customs Client Managers, and provide details of any changes to company personnel, procedures and systems.⁴²⁴

In exchange, the Customs Customs will allow Accredited Clients to enter goods for import/export in a two-step process. The initial step is a Request for Cargo Release (RCR) for imports and an Accredited Client Export Approval Number (ACEAN) for exports. The RCR and ACEAN must include only minimal information to identify the owner of the goods and the consignment. At the end of each month, the importer/exporter must provide all other statistical information in the form of a periodic declaration. Note that all RCRs, ACEANs, and periodic declarations must be communicated electronically.⁴²⁵

With the exception of normal community protection measures, Customs undertake to facilitate the import/export transactions of accredited clients. Similarly, recognizing the low-risk status of the accredited clients, Customs clear their goods with minimal intervention, without doing regular checks or validation of the clients' transactions.⁴²⁶

⁴²³ *Ibid.*

⁴²⁴ *Ibid.*

⁴²⁵ *Ibid.*

⁴²⁶ *Ibid.*

Another important aspect of the partnership is that the accredited clients must provide an annual declaration assuring Customs of their ongoing compliance with the business rules. The declaration should include assurance of ongoing compliance, changes to reporting methods and key personnel, and evidence of ongoing eligibility to defer payments.⁴²⁷

6. New Zealand

New Zealand Customs established two programs with applicability in air cargo security and facilitation, i.e., FrontLine Programme and Secure Exports Partnership (SEP).

6.1. FrontLine Programme

In 2001 New Zealand Customs Service began implementing the FrontLine program as a partnership between Customs administrations and industry with the aim to facilitate the movement of legitimate goods, promote community development through international trade, and detect prohibited goods and illegal activity.⁴²⁸

FrontLine is a co-operative program and does not impose any new legal obligations on partners. It is designed to facilitate better communication with the clients Customs do business with, promoting a better understanding of the problems and objectives common to industry and Customs. These relationships are formalized, where appropriate, with a Partnership Agreement which has a voluntary basis and does not trigger legally binding effects.⁴²⁹

Under the partnership agreement, Customs undertake to promote community development by providing information and support to new and developing businesses and breaking down barriers to trade by supplying accurate advice and improving communication. The FrontLine partner undertakes to co-operate with Customs to provide accurate trade information and to

⁴²⁷ *Ibid.*

⁴²⁸ New Zealand Customs Service, "FrontLine Programme", New Zealand Customs Service website, online: <<http://www.customs.govt.nz/commhome/frntline.htm>> (date accessed: 23 May 2005).

⁴²⁹ *Ibid.*

understand Customs role and requirements. The partner also undertake to help protect the community by using their own commercial expertise to help identify unusual or suspicious activities and taking precautions against becoming an unwitting tool in illegal activities by maintaining adequate security measures.⁴³⁰

6.2. Secure Exports Partnership (SEP)

On December 1, 2004, New Zealand and US Customs authorities began the implementation of a commonly agreed measures aimed at strengthening the supply chain security for shipments by air and sea between the US and New Zealand.⁴³¹ Pursuant to this security agreement, New Zealand Customs Service have developed and implemented, in consultation with business, a Supply Chain Security Strategy to provide enhanced security assurance over exports, imports and transshipped cargo. This strategy is based on four major pillars: accurate advance electronic reporting of information about consignments; intelligence-based risk assessment; examination of cargo identified as high risk to New Zealand or trading partners, using both non-invasive technology and physical inspection as required; and voluntary agreements between customs and trade to reduce risks.⁴³²

Pursuant to the objective of reducing risk through voluntary agreements with industry, the New Zealand Customs Service developed the Secure Export Partnership Scheme (SEP) as a voluntary agreement aimed at ensuring that goods exported under the scheme are packed securely and shipped in such condition that tampering with or smuggling contraband into the shipment is not possible.⁴³³

⁴³⁰ *Ibid.*

⁴³¹ New Zealand Customs Service, "Partnership for Trade Protection" (20 December 2004) online: New Zealand Customs Service website <<http://www.customs.govt.nz/about/News/zespri201204.htm>> (date accessed: 1 June 2005).

⁴³² New Zealand Customs Service, "US Arrangement Benefits NZ Exporters" (1 October 2004) online: New Zealand Customs Service website <<http://www.customs.govt.nz/about/News/usarrangement011004.htm>> (date accessed: 1 June 2005).

⁴³³ New Zealand Customs Service, "Secure Export Partnerships" (9 December 2004) online: New Zealand Customs Service website <<http://www.customs.govt.nz/about/News/partnership%20191203.asp>> (date accessed: 1 June 2005).

The businesses willing to participate in this scheme need to show that they have adequate measures in place to ensure the security of the supply chain. The consignment of goods from a secure export partner is sealed with a Customs-approved seal⁴³⁴ which signals that the shipment is under Customs control and can be considered secure by overseas customs administrations.⁴³⁵

7. General Comments on Current Regulatory Initiatives

To date, several regulatory initiatives to improve air cargo security have been undertaken at the international, regional, and national level. Some of these measures address expressly security and facilitation issues in air cargo transport, while others have a broader scope but contain provisions applicable to air cargo. At the international level, the security conventions and the more specific standards and recommended practices adopted by the ICAO, although useful in introducing several general principles, including the concept of “authorized importer”, appear to be insufficient in keeping pace with the current needs in international air cargo security and facilitation. The World Customs Organization’s initiatives, i.e., the Revised Kyoto Convention and the WCO Framework provide useful guidance in designing viable and efficient cargo security in all means of transportation, but lack specificity in regard to air cargo realities. In addition, the WCO Framework has limited enforcement power. At the regional level, the North American Partnership is only in an incipient stage and will need further development, while setting a useful example of multilateral approach to transportation security.

The European Union provides a more comprehensive and aggressive set of measures dealing with aviation security in general and air cargo in particular. Since these regulations are already in force, it will be interesting to see how the

⁴³⁴ Note that the Customs control over the sealed shipments is regulated by the Border Security Bill. *Ibid.*

⁴³⁵ New Zealand Customs Service, “US Arrangement Benefits NZ Exporters” (1 October 2004) online: New Zealand Customs Service website <[http:// www.customs.govt.nz/about/News/us_arrangement011004.htm](http://www.customs.govt.nz/about/News/us_arrangement011004.htm)> (date accessed: 1 June 2005).

Union will react to future proposals of international standards that might differ from the current European approach.

At the national level, some governments have taken steps to enhance aviation security through, *inter alia*, requirements for advance cargo information and providing for government-business partnerships in various forms. It is apparent that these initiatives are not pursued with equal determination by all States and have not follow sufficiently similar approaches allowing for an easy harmonization of air cargo in the near future. While certain initiatives, taken individually, may improve trade facilitation and security in a particular sector or region, the lack of international co-ordination could lead to duplications of these requirements which translate into increased burdens on international traders.⁴³⁶ For example, the government-business partnerships entail different approaches to risk assessment of traders and shipments, as reflected in the comparative table below, making the mutual recognition of status of authorized trader at the present time less likely. However, the review of various approaches provides useful ideas on how to achieve the trustworthiness of cargo flowing through air transportation mode and particularly how best to achieve it without unduly impeding commerce. The next section of the thesis addresses the need for an international approach and proposes several possible measures to ensure air cargo security and maintain facilitation.

⁴³⁶ European Chemical Industry Council [CEFIC], "CEFIC Discussion Paper on Trade Facilitation" (3 November 1998), online: CEFIC website <http://www.cefic.be/position/Tea/pp_tm037.htm> (date accessed: 15 July 2005) [hereinafter CEFIC Discussion Paper].

Comparison Table National Approaches to Customs-Business Partnerships								
	USA	Canada	UK	Sweden	Australia		New Zealand	
	C-TPAT	PIP	Air Cargo Security Regime	StairSec	Frontline	Accredited Client Programme	FrontLine Programme	Secure Exports Partnership (SEP)
Who May Participate	Businesses from the entire supply chain involved in international trade	The entire trade community, from importers, carriers, brokers, warehouse operators to associations	Operators involved in global supply chain	All global supply chain stakeholders (importers/exporters, brokers, forwarders and terminals)	Industry groups involved in international trade and transport	Low-risk importers and exporters	Industry involved in international trade	Industry shipping goods between New Zealand and US by air or sea
Partnership Format and basis	Voluntary basis	Memorandum of understanding Voluntary basis	Known Consignor Certificate and a unique reference number (URM)	Memorandum of Understanding (MoU) Voluntary Basis	Memorandum of Understanding Voluntary Basis	Legally binding contract	Partnership Agreement, voluntary basis, not legally binding	Voluntary agreement
Validating Authority	US Customs authorities	Canada Border Services Agency (CBSA)	Independent validators appointed by the Department of Transportation	Swedish customs authorities	Australia Customs Service	Australia Customs Service	New Zealand Customs Service	New Zealand Customs Service
Validating Procedure	Process conducted jointly by US Customs personnel and a representative of the industry participant Involves on-site review of the participant's supply chain security profile Each validation is customized for each participant involved	Once a MOU is signed a CBSA representative meets with a representative of the partner organization to make arrangements to implement the program. Companies must provide the CBSA with a self-assessment of their security systems.	First, the customs accesses online the validation site from where it chooses from a list of validators. The customer then contacts the validator to arrange a validation inspection. The validator advises the organization about what the inspection will involve. If the validator finds the security measures satisfactory, it awards the certificate of known consignor.	Accreditation is performed according to the principle of partnership between customs and trade. The process involves the following stages: company analysis, risk mapping, cost benefit, MoU enforcement and security.	No specific provisions	Importers and exporters must provide an audit report prepared by a qualified independent auditor.	No specific procedure	Review of business processes to ensure that adequate security measures are in place. The consignment of goods from a secure export partner is sealed with a customs-approved seal which signals that the shipment is to be considered secure by other customs authorities

	USA	Canada	UK	Sweden	Australia		New Zealand	
	C-TPAT	PIP	Air Cargo Security Regime	StairSec	Frontline	Accredited Client Programme	FrontLine Programme	Secure Exports Partnership (SEP)
Criteria for assessment	Focus on the participant's C-TPAT supply chain security profile: existence of procedures to protect against unmanifested material being introduced into the supply chain, physical security of all buildings is ensured, access control, employment screening and interviewing.	CBSA identifies potential weaknesses in the security system throughout the supply chain based on risk management principles	Physical security measures in place at the site, staff recruitment and reference check procedures, staff security training procedures, access control to the site, air cargo preparation procedures, air cargo packing procedures, storage of secure cargo, transport of secure cargo	Compliance with existing legislation and high-quality of its Customs-business and electronic flows	Commitment to help in the prevention of drug trafficking, wildlife and flora smuggling and of illegal import and export of restricted items such as weapons and chemicals.	A history of providing accurate and timely information, ability to demonstrate they can continue to provide accurate and timely information.	Adequate security measures in place and willingness to assist the customs in identifying illegal or suspicious activities	Adequate security measures to ensure a secure supply chain in place. Goods exported are packed securely, conveyed and then shipped in such conditions that tampering with or smuggling contraband into the shipment is impossible
Customs Obligations under the Partnership Program	To share with the participant "best practices" in securing international supply chain	CBSA must assist the partner in identifying the weaknesses in its security system and must help the organization address them within a reasonable time Must treat information confidential	Department of Transportation must oversee the validation process and reviews appeals against a validator's decision	Must provide simplified routines and intelligent system based control schemes allowing individually designed solutions.	Must provide comprehensive training to Frontline members in security matters and detection of illegal activities, and treat information provided by the partner as confidential	Must facilitate the client's import/export transactions, clear their goods with minimal intervention and provide a Client Manager to each client	Provide information and support to new and developing businesses and facilitate the movement of legitimate goods	To facilitate the cross-border movement of shipments from SEP and signal to other customs authorities that these goods are secure
Business Obligations under the Partnership Program	Businesses must implement a sound plan to enhance security procedures throughout their supply chain and must emit documents that are complete, legible, accurate and submitted in timely manner to Customs.	The Partner organization must address the weaknesses identified by the CBSA. There is no set timeframe for addressing these weaknesses. There are no penalties associated with the PIP system.	To contact a validator of its choice for a validation inspection and to co-operate with the validator during the inspection of its premises.	The partner must co-operate with Swedish customs to minimize the risks of criminality and security breaches in the logistical flows	Must provide customs with timely notification, where possible, of unusual or suspicious events, take reasonable and legal precautions to check the background and integrity of new staff	Must provide customs with accurate and timely information, provide accurate and timely duty payments and charges.	To Cooperate with Customs to provide accurate information and to understand Customs requirements and to use their own expertise to help identify unusual or suspicious activities.	To ensure compliance with secure supply chain measures

	USA	Canada	UK	Sweden	Australia		New Zealand	
	C-TPAT	PIP	Air Cargo Security Regime	StairSec	Frontline	Accredited Client Programme	FrontLine Programme	Secure Exports Partnership (SEP)
Reassessment	Possible	No specific provision	Department of Transportation may carry out no-notice spot checks of known consignor sites	No specific provision	No specific provision	Annual report submitted by the client	No specific provision	No specific provision
Benefits for the Business	Expedited customs procedures	Quicker movement of low-risk goods through customs, improved security levels, enhanced reputation of the company-partner, improved understanding of customs requirements and better communication between the employees of the company and the CBSA.	The cargo shipped by known consignors will not be screened before being flown and the known cargos will not have to pay the security charges levied by a listed agent or airline	Increased service and efficiency and facilitation in Customs-processes	More effective clearance procedures, an opportunity for businesses to review their security arrangements and minimize the chance of their business becoming a participant in illegal trade	Increased cargo facilitation and an alternative cost recovery model for importers.	Better understanding of Customs requirements and more efficient movement of goods.	Facilitated cross-border trade and improved business reputation

III. Towards an Internationally-Accepted Regulatory Approach in Air Cargo Security and Facilitation

A. Possible Rationale for an International Uniform Approach

Air cargo transportation has in most instances an international aspect and so do most of potential security threats against it, such as terrorist attacks or other type of crime targeting air cargo. Thus, it is only natural that a coordinated international approach should be adopted to effectively address emerging security threats to air cargo. The current patchwork of initiatives taken at the national and regional level is inadequate to properly address the transnational nature of security threats against air transport. In the absence of a uniform international approach, there it is the risk that different countries will adopt different standards and procedures, sometimes incompatible, at other times duplicating, which will increasingly burden traders involved in international commerce. Uniform standards regarding air cargo security and facilitation at a global level would promote certainty, uniformity and predictability,⁴³⁷ as well as help prevent unnecessary duplication of efforts and resources.⁴³⁸

A joint effort of national authorities would presumably improve the over-all risk management and incident response techniques by allowing for sharing of information, expertise and best practices in air cargo security. Also, as national authorities often must rely on security checks and procedures performed by other States on air cargo entering their countries, the existence of commonly agreed standards which are effectively and transparently applied would serve mutual security of air transport while lowering the costs for both government and businesses.⁴³⁹

A very important aspect that must be considered is that, in order to protect the entire transport chain, it is imperative to ensure that all parties involved in

⁴³⁷ WCO Framework, *supra* note 178 at 4.

⁴³⁸ Charles Piersall, "Taking Aboard All Players in Securing the Supply Chain" *ISO Focus* (January 2005) 10 at 10.

⁴³⁹ CEFIC Discussion Paper, *supra* note 436.

the supply chain operate to agreed standards since all stakeholders in the transport chain are interdependent. Otherwise, the traders that implement security measures and thus bear the associated costs will be at competitive disadvantage *vis á vis* other service providers that are not under an obligation to adopt such standards. To avoid such distortions of competition resulting from varying obligations and cost structures due to implementation of different security requirements, there is a need for an international approach to security that applies to all service providers, ideally across all modes of transport and along the entire supply chain.

Although the approaches for all modes of transport should be comparable, there may be different security response based on necessity, proportionality, the specificity of and exposure to risks characteristic of each transport operation, infrastructure or equipment. Such measures need to be built on best available practices, with the aim of ensuring compatibility and fairness between modes.⁴⁴⁰ A viable approach to cross-modal harmonization would be to develop a common core of measures applicable to all modes of transport and then complete it with mode-specific rules which address modal specificities. Ideally, a set of measures would be applicable to all modes of transport and countries (what is called “vertical and horizontal harmonization”) to prevent both security breaches and distortion of competition.⁴⁴¹

B. Proper Forum for Adopting International Standards

Some argue that the World Trade Organization (WTO) would be the most suitable international organization to ensure proper coordination of activities related to trade facilitation in general and implementation of any agreed set of standards.⁴⁴² The arguments in favor of the WTO are based mostly on its expertise in customs matters and the number of members (168 customs administrations as members, managing the transborder traffic of 99 per cent of

⁴⁴⁰ EC, Freight Transport Security Consultation Paper, *supra* note 26, Observations of CLECAT.

⁴⁴¹ *Ibid.*

⁴⁴² *Ibid.*

global trade), which would allow a uniform implementation of customs rules and procedures.⁴⁴³

Others argue that the ICAO would be the proper forum for adoption of such international standards given its role in identifying priorities and its expertise. In addition to developing mandatory standards and recommended practices for its Member States, the ICAO has the authority and the means to monitor implementation of these standards.

C. Potential Approaches to International Security and Facilitation Standards

Since inspecting 100 per cent of air cargo is currently impossible due to limited technology and infrastructure, “flow of commerce” and finite resources, many experts agree that the most practical approach would be based on a risk management technique which enables the authorities to identify high-security risk shipments on which to concentrate control. In this context, the objectives that would enhance air cargo security may be formulated as:

- (1) ensuring the trustworthiness of the cargo flowing through the system;
- (2) ensuring the trustworthiness of workers who operate and provide the vehicles and handle cargo;
- (3) ensuring the trustworthiness of the private companies that operate in the system, such as the carriers, shippers, agents, and brokers;
- (4) ensuring the security of the area around transportation facilities and vehicles in operation.⁴⁴⁴

Based on some of the best cargo security and facilitation practices adopted or proposed at the international, regional, or national level, reviewed in Part II of this thesis, one may identify several technological and procedural best practices to enhance air cargo security. These measures include technologies and operational practices. In order to determine the feasibility of such measures to become an international standard or best practice, each of the potential measures needs to be weighed against other factors such as the cost of its implementation

⁴⁴³ WCO Framework, *supra* note 178 at 3.

⁴⁴⁴ *Transportation Security: Issues for the 109th Congress Report*, *supra* note 50 at CRS-1.

and effect on the flow of cargo. A review of such measures and their potential benefits and drawback follows.

1. Technology-Based Measures to Improve Cargo Security

Government and industry reports have identified existing and emerging technologies which may be set as standards able to improve the efficiency of cargo inspections. One may divide the technological solutions into screening technologies, intrusion-detection technologies and hardened cargo containers.⁴⁴⁵

1.1. Screening Technologies

Screening technology aims at detecting explosives and weapons of mass destruction, including radiological, chemical, and biological agents. Such technology includes: x-ray, gama-ray, neutron beam technologies,⁴⁴⁶ radiation detection, decompression chambers,⁴⁴⁷ chemical trace detection systems.⁴⁴⁸ In addition, the use of canines offers significant benefits.⁴⁴⁹ The advantage of using such devices is that they can indicate the presence of threat objects without the need to open the packages and containers.

On the drawback side, some of these technologies tend to be expensive,⁴⁵⁰ too dependent on the performance of the human operator,⁴⁵¹ or require building modifications in order to accommodate the equipment.⁴⁵² Also, some of them require a long time to reveal results,⁴⁵³ or cannot identify specific threat.⁴⁵⁴

⁴⁴⁵ GAO Report, *supra* note 9 at 11-14.

⁴⁴⁶ This technology uses gamma rays to identify the chemical composition of items in containers by measuring their density. CRS Report, Air Cargo Security, *supra* note 32 at CRS-20.

⁴⁴⁷ This technology involves placing the suspicious items in a chamber that simulates the flight pressure conditions during takeoff, normal flight and landing. Applying these conditions to the items will cause explosives that are attached to barometric fuses to detonate. GAO Report, *supra* note 9 at 13.

⁴⁴⁸ Such systems are commonly referred to as explosives trace detection systems (ETD)—currently used to screen passenger baggage for explosive material. They use a variety of technical principles to analyze the chemical composition of sample residue wiped from suspect articles. CRS Report, Air Cargo Security, *supra* note 32 at CRS-21.

⁴⁴⁹ Canines are considered one of the most efficient ways to screen cargo. GAO Report, *supra* note 9 at 12.

⁴⁵⁰ The cost ranges from under \$50,000 per unit for trace/vapor detection and canine use to over \$10 million US\$ per unit for pulsed fast neutron analysis and certain x-ray. GAO Report, *supra* note 9 at 11.

⁴⁵¹ CRS Report, Air Cargo Security, *supra* note 32 at CRS-20.

⁴⁵² Such is the case with bulk EDS and pulsed fast neutron analysis equipment. GAO Report,

1.2. Intrusion-Detection Technologies

Intrusion-Detection technologies include devices that can be used to determine whether a package or container has been tampered with, by visual inspection (such as tamper-evident tape or seals)⁴⁵⁵ or by emitting an alarm or notifying a central control station (for example, electronic seals⁴⁵⁶). Such devices have the benefit of being a relatively inexpensive⁴⁵⁷ means to make tampering with cargo more difficult during transport by truck from the shipper to the airport and in cargo-handling facilities. The drawback is that all types of tape and seals are themselves vulnerable to tampering given the appropriate tools.⁴⁵⁸ In addition, experts point out that currently available electronic seals have a limited transmission range which could lead to difficulties in captioning the signal of tampering.⁴⁵⁹

1.3. Hardened Cargo Containers

Hardened cargo containers have the potential of controlling the damage caused by an in-flight explosion by confining it to their walls.⁴⁶⁰ Such containers are expensive⁴⁶¹ and they weigh more than standard containers,⁴⁶² the extra-weight adding to the aircraft's fuel costs. Also, their lifespan is shorter than that of a standard container.⁴⁶³

supra note 9 at 11.

⁴⁵³ For example, the pulsed fast neutron analysis can take more than an hour per object to screen. GAO Report *supra* note 9 at 11.

⁴⁵⁴ Such is the case with x-ray and gamma-ray technologies. Also, they cannot discriminate different materials in high density cargo. GAO Report, *supra* note 9 at 11.

⁴⁵⁵ CRS Report, Air Cargo Security, *supra* note 32 at CRS-18.

⁴⁵⁶ An electronic seal is a radio frequency device that transmits shipment information as it passes reader devices and transmits and alarm if a container has been compromised. GAO Report, *supra* note 9 at 10, fn. 4.

⁴⁵⁷ The cost ranges from under \$1 per unit for tamper-evident tape to \$2,500 per unit for electronic seals, but are reusable.

⁴⁵⁸ GAO Report, *supra* note 9 at 11.

⁴⁵⁹ CRS Report, Air Cargo Security, *supra* note 32 at CRS-18.

⁴⁶⁰ *Ibid.* at CRS-22.

⁴⁶¹ A hardened container costs around \$15,000, as compared to a standard container which costs about \$1,000. GAO Report, *supra* note 9 at 14.

⁴⁶² Hardened containers weigh approximately 150 pounds more than a standard container. GAO Report, *supra* note 9 at 14.

⁴⁶³ If the hardened container is scratched or bumped during shipping, its life span can be reduced to less than one year, compared to standard containers that usually last 8 years. GAO Report,

2. Operational Measures to Enhance Cargo Security

Such operational or procedural initiatives may include regulatory proposals to impose physical security of air cargo facilities and operations, provide for mandatory advance cargo information, and expand the use of “authorized economic operator” and “secure supply chain” programs.

2.1. Procedures to Ensure Physical Security of Air Cargo Facilities and Operations

The usually large size of air cargo facilities and relatively continuous high-volume cargo operations that are carried out in their perimeter, involving the presence of numerous individuals and vehicles creates tremendous challenges for ensuring their physical security. The idea is to provide a secure environment for all-cargo aircraft as well as take appropriate facility security measures.

Best practices identified in government and industry reports concentrate on three main aspects:

(a) *Periodic inspections and oversight of air cargo facilities:* Such inspections have the purpose to ensure compliance with applicable aviation security measures. The ability of national authorities to undertake regularly such inspections depends on the availability of human resources and funding.

(b) *Providing training for air cargo personnel* in security procedures and standards to ensure cargo integrity, protecting facilities, and reporting suspicious activities.⁴⁶⁴

(c) *Increasing Control over Access to Aircraft and Cargo Facilities:* Several national regulations require background checks for all workers with unescorted access to passenger aircraft and secured areas of airports.⁴⁶⁵ Note that security concerns were raised by the fact that such workers can bypass airport screening checkpoints; hence new initiatives call for physical screening of all workers with

supra note 9 at 14.

⁴⁶⁴ CRS Report, Air Cargo Security, *supra* note 32 at CRS-16.

⁴⁶⁵ See for example, the *Aviation and Transportation Security Act (ATSA)* P.L. 107-71.

access to aircraft or secured area.⁴⁶⁶ For example, in the United States, TSA proposes that airport operators and operators of all-cargo aircraft be required to make greater use of criminal history records checks, employ additional measures for identifying and screening people with access to the aircraft, randomly screen cargo for stowaways, secure unattended aircraft and the air operations.⁴⁶⁷ The use of identification card systems is recommended to verify individuals authorized to enter restricted areas of airports, which include cargo-handling facilities.⁴⁶⁸ Moreover, in the US several proposals recommend the use of biometric screening technologies, such as fingerprint, retinal scan, and facial pattern recognition, as a means to authenticate individuals, particularly airport personnel.⁴⁶⁹ Also, another US initiative regards the Transportation Worker Identification Credential (TWIC), a system-wide uniform credentialing system which, if necessary, could be used across transportation modes for personnel requiring unescorted physical access to secure areas of the transportation system.⁴⁷⁰ Another set of measures consists of placing federal air marshals and arming pilots on some flights, as well as providing hardened cockpit doors. Despite initial reticence towards allowing airline pilots to be armed, the US Congress passed legislation allowing pilots to serve as armed federal flight deck officers.⁴⁷¹

2.2. Advance Electronic Cargo Information Requirement

As electronic commerce is being increasingly used by industry and governments, it is only normal that facilitation and security air cargo measures should take full advantage of this paperless and almost instantaneous means of

⁴⁶⁶ S. Rept. 108-38, *supra* note 13.

⁴⁶⁷ TSA, Air Cargo Strategic Plan, *supra* note 3.

⁴⁶⁸ GAO Report, *supra* note 9 at 17.

⁴⁶⁹ For example, the *National Intelligence Reform Act of 2004* (P.L. 108-458) refers to the use of biometric or other technologies for airport access control systems.

⁴⁷⁰ Transportation Security Administration, Statement of Admiral James M. Loy Administrator, Transportation Security Administration on Transportation Security before the Committee on Transportation and Infrastructure Subcommittee on Aviation, United States House of Representatives (16 October 2003), online: Transportation Security Administration website <<http://www.tsa.gov/public/display?theme=47&content=0900051980063d1c>> [hereinafter TSA, Admiral Loy's Statement, 2003].

⁴⁷¹ *Homeland Security Act of 2002* (P.L. 107-296). Note that *Vision 100* (P.L. 108-176) expanded the program to include all-cargo pilots and other flight crew members such as flight engineers.

exchange of information. In fact, the concept of advanced electronic cargo information has become increasingly accepted and sometimes unavoidable standard as a commercial practice in virtually all air cargo operations.

The requirement for advance cargo information is justified due to its essential role in assisting risk analysis by allowing the use of such information to identify high-risk consignments as early as possible in the supply chain, at or before loading for export.⁴⁷² At the same time, it is expected that the resulting quicker process of customs clearance and release of the goods upon arrival will be of sufficient benefit to traders to outweigh any cost or inconvenience of providing information earlier than at present.⁴⁷³

In order to facilitate the information exchange, common measures should provide for the use of compatible communication systems based on harmonized and interoperable mechanisms.⁴⁷⁴ In addition, the type of data required should be harmonized in order to avoid forcing the traders to continually modify information for different markets.⁴⁷⁵ The required data should consist of readily available commercial information and should not overburden the traders, although due consideration should be given to security issues.⁴⁷⁶

Several initiatives to introduce standard data sets for use in the international trade of cargo, including air transport, are worth mentioning. For example, the International Air Transport Association (IATA) advocates developing categorized control data lists that would reflect the pared down information requirements of more advanced Customs administrations.⁴⁷⁷ The

⁴⁷² WCO Framework, *supra* note 178 at 9.

⁴⁷³ European Commission, Taxation and Customs Union, Pre Arrival/Pre Departure Declarations, online <http://europa.eu.int/comm/taxation_customs/customs/procedural_aspects/general/prearrival_predeparture/index_en.htm> (date accessed: 15 July 2005).

⁴⁷⁴ WCO Framework, *supra* note 178 at 9.

⁴⁷⁵ World Trade Organization, Council for Trade in Goods, Communication by the European Community, "Trade Facilitation: Assessment of the Scope for WTO Rules in the Field of Import, Export and Customs Procedures", G/C/W/122 (22 September 1998) [hereinafter WTO Trade Facilitation].

⁴⁷⁶ CEFIC Position Paper, *supra* note 436.

⁴⁷⁷ See International Air Transport Association website <<http://www.iata.org>> (date accessed: 15 July 2005).

World Customs Organization (WCO) is undertaking the standardization of data requirements by suggesting to Customs administrations sets of information to be demanded for border control purposes.⁴⁷⁸

Several proposals claim that an internationally recognized form with minimal data inputs, including only key elements, should be an adequate documentation requirement. It is recommended against the possibility of including different formats or special national data requirements, as is the case with the Single Administrative Document (SAD) used in the EU.⁴⁷⁹ Ideally, only one set of data should be required as import, export or transit documentation.⁴⁸⁰ Also ideally, the traders would submit the required information about inbound outbound and transit shipments once to a single designated authority (the “single window” concept). In other words, the exchange of information that may be required for reasons of security would be channeled through one single switchboard.⁴⁸¹ Such a scenario would require co-operative arrangements between Customs and other government agencies with competencies in the area of cargo security and facilitation. This type of arrangement should provide for an exchange of risk intelligence at both national and international levels in order to facilitate the seamless transfer of international trade data.⁴⁸²

It should also be mentioned in the context of standardized information, that the concept of UCR (Unique Consignment Reference) for uniquely identify cargo in transit has become a facilitation tool in its own right with potential benefits for air cargo security as well. If properly applied, the UCR permits the information from the goods declaration to be joined with that from the manifest

⁴⁷⁸ In 2002, the WCO Council approved a set of maximum 27 data items recommended to be required by national customs authorities, depending on each country’s security needs.

⁴⁷⁹ CEFIC Position Paper, *supra* note 436.

⁴⁸⁰ MERCOSUR and European Union, “Buenos Aires Statement on Business Facilitation” (Business Facilitation Conference, Buenos Aires, December 2001) at 3 [hereinafter MERCOSUR].

⁴⁸¹ EC, Freight Transport Security Consultation Paper, *supra* note 26.

⁴⁸² WCO Framework, *supra* note 178 at 23.

at the earliest stage in the customs process, thus contributing to streamlining the transit of goods.⁴⁸³

To summarize, the main benefit of advance cargo information is streamlining of customs processing and time savings for traders.⁴⁸⁴ In addition, significant security improvements are possible since this advanced information allows competent authorities to assess the risks and decide whether an inspection is warranted. This allows for a better allocation of resources and increased focus on more suspicious shipments.⁴⁸⁵

The cost for data entry will vary in different exporting countries.⁴⁸⁶ In addition, it is estimated that the measure will result in loss of cargo revenue in passenger-carrying operations, especially on short-haul flights. As discussed above, passenger aircraft must wait until it is certain that all of the passengers and their luggage have been placed on board and the fuel needs have been calculated. Moreover, passenger-carrying operations cannot hold a plane on ground after it is loaded given the carrier's primary goal of meeting the take-off schedule. Consequently, in order to be able to prepare accurate cargo information by "wheels up," as it is currently required in the US for short-haul flights and recommended by WCO as an international standard, the air carriers would have to limit the amount of cargo sent from the warehouse for a flight to the amount that the carrier felt could be safely loaded, assuming that all passengers arrive carrying their full complement of luggage. For many flights, this approach would probably reduce the amount of cargo carried and, therefore, reduce carrier's revenues.⁴⁸⁷

Another potentially adverse impact of such data requirements affects the express carrier and scheduled cargo operations on short-haul flights, where the

⁴⁸³ Charles Piersall, "Streamlining the Transit of Goods" *ISO Focus* (January 2005) 12.

⁴⁸⁴ Advance Electronic Filing Rule Regulatory Impact Analysis, *supra* note 11 at 55.

⁴⁸⁵ *Ibid.*

⁴⁸⁶ For example, the cost of data entry was estimated in the United States to be \$US 8.50 per house bill, based on the fee US Customs brokers charge truckers at the Canadian border. Advance Electronic Filing Rule Regulatory Impact Analysis, *supra* note 11 at 22.

⁴⁸⁷ *Ibid.* at 23.

information is suggested to be submitted at “wheels up.” The current practice for such carrier is to file cargo information data after departure to accommodate late-arriving cargo and the need to adjust loads for weight, balance, size and delivery demands. In order to be able to file the data at “wheels up”, such carriers will have to keep the aircraft on the ground longer than they currently do, resulting in delays and customer dissatisfaction due to changes in promised delivery time.⁴⁸⁸

The implementation of advance electronic cargo information and the related concepts of “single window” and UCR raises the question of whether such measures are within every country’s reach. Some States will require assistance and capacity building support to develop adequate communication technology infrastructure. Only a careful and thorough cost-benefit analysis and possibly a massive use of public aid may actually allow the wide implementation of this technique.

2.3. Government-Business Partnerships, the “Authorized Economic Operator” and “Secure Supply Chain” Concepts

The public-private partnership emerges as a new trend aiming at reducing the burden on authorities in charge of trade security, while providing benefits to compliant traders. The review of national practices shows the emergence of “known consignor or shipper” and “regulated agent” concepts and procedures, as means to ensure security throughout the transport chain and reduce costs and delays for regular shippers. The “known shipper” programs were created to establish procedures for differentiating between trusted shippers, known to an air carrier or freight forwarder through prior business dealings, and unknown shippers who have conducted limited or no prior business with an air carrier or a freight forwarder. Using this system, shipments from unknown sources can be selected for additional screening and inspections. Since accredited service providers present a lower risk they would benefit from less controls and resulting delays.

⁴⁸⁸ Advance Electronic Filing Rule Regulatory Impact Analysis, *supra* note 11 at 23.

Thus, the concepts of “known shippers” and “authorized (regulated) operators” reconcile facilitation and compliance with security measures, which leads to certain advantages for the traders in terms of expeditiousness of the secure chain.⁴⁸⁹ However, it all depends on how the qualifications and the obligations are actually defined and how the regime is applied in practice.

Reviewing the various partnerships between government and business as implemented by different countries, one may identify two main issues: first, the adequacy of procedures for auditing and monitoring “known shippers,” and second, the lack of a basis for mutual recognition of authorized status.

For example, critics of existing “known shipper programs” in the United States argue that currently there is very little investigation of authorized business to demonstrate that these companies are trustworthy and have adequate facilities to ensure the security of their shipment and of the supply chain.⁴⁹⁰ In addition, different criteria and procedures for certification, as currently implemented by various States, create uncertainty with regard to the extent to which such partnerships can be extended to include foreign participants in trade and transport operations.⁴⁹¹ For these reasons, there is a need for agreement between governments on the criteria of eligibility and the nature and extent of benefits to be granted to authorized traders.⁴⁹² It is recommended, *inter alia*, that States should formally agree on a set of the criteria by which international traders can obtain the status of secure partner, based on best practices and generally accepted security standards. Possible criteria include issues such as existence of comprehensive plans to assess threats and prevent unauthorized or high-risk goods entering the international supply chain, adequate physical security of buildings and premises, proper systems for ensuring the security of cargo and means of transport, personnel vetting, an adequate system for managing their

⁴⁸⁹ WTO Trade Facilitation, *supra* note 475.

⁴⁹⁰ Ken Leiser, “Gaps in Air Cargo Security May Offer Terrorism Openings” [21 June 2002] AEROTECH News and Review at B2.

⁴⁹¹ Raven, *supra* note 54.

⁴⁹² WTO Trade Facilitation, *supra* note 475 at 11.

commercial records and guarantees for adequate protection of information systems.⁴⁹³ Also, an internationally agreed “authorized economic operator” system should clearly provide the benefits to be granted to businesses that meet certain supply chain security standards and best practices so that the AEOs see a tangible return to their investments in compliant security systems and practices.⁴⁹⁴ Among such benefits of improved security levels could be reduced risk-targeting assessments and controls and expedited processing of their low-risk shipments by customs (e.g., through reduced examination rates), leading to improved export/import efficiency and savings in time and costs for the traders.⁴⁹⁵ In addition, the authorized traders will enhance the reputation of their company, increased business opportunities and better communication with the customs administrations as well as a better understanding of the customs requirements.⁴⁹⁶

It should be noted that proposals for establishing national industry-wide centralized database of authorized operators, such as in the United States, could be extremely useful in international trade as well and facilitate the process of mutual recognition of status.

A concept related to the “know shipper” is the “secure supply chain” which refers to a system that works as follows: the exporter of goods carries out the packing of cargo in a secure environment, then the goods are certified as secure and passed to the freight forwarder or airline by secure vehicle. Upon receipt by the forwarder or airline, the consignment together with the attached documentation are checked for evidence of tampering or other interference, then recorded as having been received securely and are stored in a secure area. In due course, the consignment is passed on to the next freight forwarder, consolidator, integrator or aircraft operator in a secure condition and certified as such. Thus, the cargo is properly protected from interference and properly accounted for at

⁴⁹³ WCO Framework, *supra* note 178 at 12, 23.

⁴⁹⁴ Raven, *supra* note 54.

⁴⁹⁵ WCO Framework, *supra* note 178 at 8.

⁴⁹⁶ *Ibid.* at 12.

every stage of its transportation. These procedures, if properly applied, would result in an effective form of risk management and would allow focusing of screening efforts on more suspicious consignments, such as one-time new business shipments and any consignment whose security integrity cannot be readily established.⁴⁹⁷

The underlying philosophy is that the supply chain is as secure as its weakest link.⁴⁹⁸ A desired degree of security in transport can be achieved only by targeting the entire supply chain. In order to establish a secure supply chain it is necessary that all participants in the transactions are approved by proper national authorities in compliance with specific standards regarding the secure handling of goods and commercial information.⁴⁹⁹ Shipments passing from their origin to destination entirely within such a supply chain would benefit from an integrated cross-border simplified procedure, with only minimal requirements for import or export information.⁵⁰⁰

When designing a “secure supply chain” program, several minimum security standards must be put in place such as: checking the access of service providers to land transport infrastructure, the use of units and vehicles that can be locked (using seals or locks), thus ensuring a secure way to move goods; basic security measures that can be made mandatory if a risk analysis warrants such measures for certain sectors, areas or activities, such as worker ID, background checks of potential employees, audit trails, physical security and safety awareness training, lighting, surveillance and access control.⁵⁰¹ Such security standards should be put in place for all parties involved in the process, i.e., air carriers, road transport operators, terminal operators, overnight parking places, railway and inland waterway undertakings, and freight forwarders.

⁴⁹⁷ Trelawny, *supra* note 43 at 23.

⁴⁹⁸ EC, Freight Transport Security Consultation Paper, *supra* note 26.

⁴⁹⁹ WCO Framework, *supra* note 178 at 23.

⁵⁰⁰ *Ibid.*

⁵⁰¹ EC, Freight Transport Security Consultation Paper, *supra* note 26.

While the benefits of implementing the concepts of “authorized trader” and the “secure supply chain” are obvious, the main obstacle to adopting them as international practice is the cost of ensuring security of all the facilities and transportation means involved in the supply chain. Another drawback is the possibility of “authorized” traders abusing the system. Therefore, it is recommended that random checks of cargo declared as secure are to be conducted in order to determine the accuracy of the information provided in the accompanying documentation.⁵⁰²

The possible approaches reviewed above and the potential benefits, costs and drawbacks associated with their implementation are provided in the table below. In general, for any of the listed approaches, there is a tradeoff between program costs and potential impacts on the air cargo industry on the one hand and the level of security that can be achieved by implementing the measure on the other hand. As it may be noticed, no one measure is perfect and applicable to all operating environments. It is very likely that a combination of approaches is needed in order to create a comprehensive and reliable air cargo security system. A comprehensive, “holistic” approach is most likely needed to maximize the benefits of different measures.

⁵⁰² Trelawny, *supra* note 43.

3. Comparative Table of Cost-Benefit Analysis of Possible Measures

Potential Measure	Description	Benefits/ Advantages	Costs and drawbacks
Screening technology	Technologies that are capable of detecting explosives and weapons of mass destruction	-ability to detect potential presence of threats without the need to open the packages or containers	-most of these technologies are costly; some require building modification in order to accommodate the equipment, some do not identify specific threat and some are slow in revealing results.
Intrusion-Detection technology	Devices that can be used to determine whether a package or a container has been tampered with.	- inexpensive means to make tampering with or stealing cargo more difficult and could deter terrorists from attempting to place explosives or contraband in air cargo	-cost between under \$1 for tamper evident tape and \$2,500 per unit for electronic seal -themselves are vulnerable to tampering
Hardened containers	-technology which hardens cargo containers to confine the damage caused by an explosion between their walls	-have the potential to protect aircraft from catastrophic structural damage caused by an in-flight explosion	- expensive (more than \$15,000 per unit) and are heavy which results in increased fuel consumption and thus costs
Enhancing physical security of air cargo facilities	-access control: screening all persons with access to air cargo facilities and aircraft	-potentially deters a variety of risks to cargo including cargo crime, hijacking and sabotage --ensure that employees with access to aircraft meet the same level of security as passengers and reduces the risks of weapons and explosives introduced by cargo workers	--may be difficult and costly to provide increased physical security --may not mitigate the possibility of other security risks such as placing explosives in pre-packaged cargo --relatively high cost since it may require additional screeners and screening stations at air cargo facilities
Advance Electronic Information		-security improvements by allowing authorities to decide whether a physical inspection of the shipment is warranted; this allows a better allocation of resources towards more suspicious shipments; -streamlining the customs processing of data resulting in time savings for traders	Some cost of data entry; loss of cargo revenue especially in short-haul flights, delays in express carriers and scheduled cargo operations; degradation of service.
"Known Shipper" and "Secure Supply Chain" Program	-partnership that establishes a link between compliance with security measures and facilitation by which compliant traders are rewarded with cheaper, simplified customs procedures	--provides customs flexibility to focus their resources on high risk targets --potential flaws in validation processes leading to selection of untrustworthy businesses	-relatively low cost, unless expensive security improvements at business facilities are needed -provides possibilities for authorized traders to abuse the system

4. Long Term Solution: A Comprehensive Risk-Management Approach

Long-term solutions to these problems would require a comprehensive security plan based on a risk-management approach where resources are being allocated as efficiently as possible in implementing measures to mitigate security risks. The essential condition of adopting an international approach is a determined multilateral effort to ensure cargo security through a framework that integrates and builds upon the best practices and standards identified by governments and international organizations. A security plan must manage various security risks in a cost effective manner and must adopt a multimodal vision that provides an efficient security framework that is risk-managed, adequately addresses vulnerabilities in the system, is fiscally responsible and does not unduly impede the flow of commerce.⁵⁰³

Suggested risk management includes:⁵⁰⁴

(a) an assessment of threats to air cargo security in a particular region, based on such factors as capabilities, intentions and past activities;⁵⁰⁵

(b) an assessment of vulnerabilities to those threats, which implies identifying particular weaknesses that may be exploited and proposing measures to address these vulnerabilities;⁵⁰⁶ and

(c) an assessment of relative importance of addressing the identified vulnerabilities, given their effect on public safety and the economy.⁵⁰⁷

⁵⁰³ TSA, Air Cargo Strategic Plan, *supra* note 3.

⁵⁰⁴ US General Accounting Office, Homeland Security: A Risk Management Approach Can Guide Preparedness Efforts, GAO-02-208T (Washington, DC: 31 October 2001).

⁵⁰⁵ It is suggested to use information-based targeting regime to identify high risk cargo and develop a risk score for that specific shipment. Transportation Security Administration, Statement of Admiral James M. Loy Administrator, Transportation Security Administration on Transportation Security before the Committee on Transportation and Infrastructure Subcommittee on Aviation, United States House of Representatives (16 October 2003), online: Transportation Security Administration website <<http://www.tsa.gov/public/display?theme=47&content=0900051980063d1c>> (date accessed: 1 August 2005).

⁵⁰⁶ For example, a vulnerability assessment will analyze the pathway through which cargo moves from the shipper to the airport and look at the storage facilities to identify the point at which a terrorist could place a bomb or other weapon in the shipment or aircraft. Such assessment should take into account the multimodal element of the air cargo system. GAO Report, *supra* note 9 at 19.

⁵⁰⁷ Such assessment would lead to a decision of which structures and processes are relatively more important to protect from security breaches. *Ibid.* at 19.

Such a process would allow the authorities to target their resources to the highest priorities, while reducing the need for targeting resources of lower priorities. At the same time, this approach should ensure that the international standards reflect current security needs and have the in-built flexibility to adapt to differing national requirements and needs.

5. Funding the Adoption of Air Cargo Security Standards

The implementation of air cargo security must be based on a partnership where each participant must bear its fair share of costs.⁵⁰⁸ Yet, the cost of implementing air cargo security measures can be quite onerous to both governments and the air cargo industry. One must also consider the indirect, long term costs of air cargo security on air cargo operations.⁵⁰⁹ However, the potential costs of a terrorist attack, both in terms of loss of life and property, could have a devastating economic and human impact that is impossible to predict and quantify.⁵¹⁰

To address concerns over funding security initiatives, some have suggested that a fee schedule be established to be charged to all shippers to cover costs associated with screening cargo, fee that would be similar to the security service fee imposed on airline passengers in the United States.⁵¹¹ Regardless of how such a fee is collected, i.e., either through fees assessed to air carriers or freight forwarders or through direct fees applied to each shipment, the cost will be borne by shippers and ultimately passed on to the users of their services.

For air cargo of relatively high value, it is likely that the cost of a security fee in relation to the value of the shipment will be low which would minimize the economic impact of such a fee. However, if fees applied to air cargo carried aboard passenger aircraft are set higher than fees for transporting the same cargo

⁵⁰⁸ Transportation Security Administration, Statement of Admiral James M. Loy, *supra* note 470.

⁵⁰⁹ CRS Report, Air Cargo Security, *supra* note 32 at CRS-26.

⁵¹⁰ *Ibid.*

⁵¹¹ *Ibid.*

on all-cargo aircraft, a significant decrease in passenger air carrier revenues from cargo would result.⁵¹²

Also, if such fees are imposed only in certain countries, there is a risk that increasing shipment costs would negatively affect the competitiveness of manufacturers and shippers using those air services.⁵¹³

6. Other Possible Implementation Challenges

The most challenging aspect of harmonizing international standards is to determine whether such international approaches are feasible in different country-settings. Lack of political will among governments to adopt comprehensive security measures or to place air cargo security sufficiently high on their domestic or international agenda will affect the process of adoption and implementation of adequate regulations.

In order to determine appropriate implementation mechanism, every country should designate the national authority(ies) in charge with air transport security. Such national authority would have then to conduct an inquiry to assess the security risks confronting aviation security in its region. In response to the weaknesses identified during the security review, a security action plan will have to be prepared (including an emergency response plan) to address the security risks based on existing international standards. In addition, it is recommended that an annual review of the security plan is conducted.

Uniform international standards require uniform standard of implementation.⁵¹⁴ In order to ensure a uniform implementation of measures, there is a need for mutual acceptance of data⁵¹⁵ and a mutual recognition of authorizations or validations. A common approach to implementation must

⁵¹² *Ibid.*

⁵¹³ *Ibid.*

⁵¹⁴ Charles Piersall, "Taking Aboard All Players in Securing the Supply Chain" *ISO Focus* (January 2005) 10 at 10.

⁵¹⁵ CEFIC Position Paper, *supra* note 436.

include uniform performance measures, harmonized security assessments and standards for evaluating employee integrity.⁵¹⁶

Adoption and implementation of such measures also raises the question of technical assistance and capacity building in the developing countries willing to modernize and secure their trade procedures.⁵¹⁷

Another potential problem in implementation is the lack of transparency concerning security procedures in various countries which can create unwarranted costs and delays. This aspect represents a major concern for international trade. A recommendation to create a single comprehensive database, accessible by Internet, assembling all relevant standards and practices in air cargo security and facilitation in each country seems sound.⁵¹⁸

Another element that could adversely impacts proper implementation is corruption and other integrity factors. This is a sensitive issue for which there are no easy, short-term solutions and the only possible solution is based on training and persuasion.⁵¹⁹

D. Concluding Remarks

The security of air cargo has become one of the major global security concerns given its recognized vulnerabilities which make air cargo possibly the easiest target for terrorists. In recent years, a variety of national, regional and international regulatory and policy initiatives have taken place in an attempt to counter the perceived risks and vulnerabilities in the aviation industry. Since it is agreed that screening of all cargo carried by air is not currently feasible due to limited technology and infrastructure, "flow of commerce" issues and finite resources, the most practical security approach would involve a risk management technique which enables the authorities to identify high-risk shipments on which to concentrate their control. Several technology and

⁵¹⁶ WCO Framework, *supra* note 178 at 11.

⁵¹⁷ CEFIC Position Paper, *supra* note 436.

⁵¹⁸ Such recommendation was made regarding customs procedures. See WTO Trade Facilitation, *supra* note 475 at 13.

⁵¹⁹ *Ibid.*

operational measures have been identified to better address the threats to air cargo security. Among the procedural initiatives are the requirement for advance cargo information, expanding the use of “authorized economic operator” and “secure supply chain” mechanisms.

It was the argument of this thesis that an internationally agreed approach is necessary in order to adequately respond to the international nature of air cargo security risks and to avoid a patchwork of national and regional initiatives that may impede the flow of international trade.⁵²⁰ A viable international initiative should be based on best security practices identified by governments and international organizations and should aim at defining basic standard requirements for air cargo security and facilitation with the broadest geographical scope.⁵²¹

Solutions should be developed with due consideration for their impact upon air transport and trade. Future security measures should be effective and affordable and should be tested by practical experience. Only such measures, coupled with a workable authorized economic operator and a secure supply chain mechanisms can provide reliable guarantees of effective security in the air cargo system.

Setting up and implementing such a risk-managed approach would require close cooperation by all governmental authorities involved in international transport and trade. The use of automated risk-assessment systems, including mutual recognition of authorized economic operators, high standards of official and commercial integrity at all stages and agreed international security standards for all air cargo operations and related satisfactory methods of certifying and monitoring performance are essential requirements of such approaches.⁵²²

Before incorporating an international security standard into national regulations, the first step should be to explain the benefits and the costs of such

⁵²⁰ MECOSUR, *supra* note 480 at 16.

⁵²¹ CEFIC Discussion Paper, *supra* note 436.

⁵²² Raven, *supra* note 54.

measures for the industry and the society as well as who should pay for the adoption of such measures.

Another major issue that must be taken into account is that, while designing a set of international security and facilitation air cargo standards may not take long, the major challenge will be to obtain international acceptance and implementation of these standards. The proper pace of implementation will ensure a better air cargo security. In the context of a perceived high risk industry in certain countries and regions, the danger is that the implementation of international standards at a pace that is too rapid may eventually defeat the purpose of these measures.

In some States, rapid implementation will prove impractical given their available resources or the existing commercial practices, possibly leading to frictions in the industry.⁵²³ If one expects to implement overnight changes which would normally take years to be properly implemented, a rushed implementation would most likely have the opposite results of the ones desired, leading to negative impacts on international trade facilitation.⁵²⁴

It seems that, the most viable approach would be a phased implementation of measures, taking into consideration various factors characterizing the security risks and the resources of a certain area.⁵²⁵ Clearly, a scenario in which all traders and carriers have high performance automated systems and integrated end-to-end management of the shipments would become reality in most countries only gradually over the years.

Contemporary realities suggest that the adoption and implementation of security measures described above will be attained at different speeds in different regions. Several factors will determine the pace and scope of progress in various countries, e.g. the efficiency and integrity with which regulatory provisions are interpreted and applied in a given country, the quality of that

⁵²³ *Ibid.*

⁵²⁴ *Ibid.*

⁵²⁵ *Ibid.*

country's infrastructure and resources, the political stability and the will necessary to implement international standards, the commitment to compliance by traders involved in international air transport of cargo and the quality of government-business partnerships with regard to trade facilitation.⁵²⁶

To summarize, although there is a clear and present need for a uniform approach to air cargo security and a global enforcement system, it will most likely take years to establish and properly implement adequate international standards and instal the required monitoring systems. Even then, without central management and integrity in implementation, all that will result is "a set of secure links without any reliable relationship within a truly effective chain."⁵²⁷

⁵²⁶ The International Air Cargo Association, "What Is International Trade Facilitation" (October 2003), online The International Air Cargo Association <<http://www.tiaca.org/articles/2004/03/19/AEA29406392E4F05AE5D5BD075F00B2.asp>> (date accessed: 15 Mat 2005).

⁵²⁷ Raven, *supra* note 54.

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