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Post 9/11 maritime security measures : global maritime security versus facilitation of global maritime trade

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POST 9/11 MARITIME SECURITY MEASURES:

Global Maritime Security versus the Facilitation of Global Maritime Trade

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DECLARATION

I certify that all material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The content of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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ABSTRACT

Title of Dissertation : Post 9/11 Maritime Security Measures: Global Maritime Security versus the Facilitation of Global Maritime Trade

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The infamy of the Sept. 11, 2001 terrorist attacks against the World Trade Centre and the Pentagon caused the US to re-evaluate its 'homeland' vulnerabilities against the threat of terrorism that intending to carry out mass casualty attacks. Ever since the dawn of the day, numerous initiatives have been implemented to maximise the security of the international maritime transport. The initiatives, in particular, highlighted the weaknesses in links among the modes of transport supply chain and the need to coordinate security related approach among those modes.

The possibility of massive terrorist attack that would be bigger than that of Sept. 11 had been envisaged on maritime related sectors. Though speculative in nature, hours of manpower, millions of dollars and uncountable effort had and have to be spent. Security agenda or '*the appearance of security*' has seemingly replaced the need to facilitate maritime efficiency.

Security measures and facilitation aspects of shipping are two concepts apparently opposing to each other and the relationship between these two dichotomies have been extensively discussed. However, stakeholders worldwide have generally agreed that a sound and practical balance between these two security and facilitation requirements is indispensable. Security instruments that led to the improvement in the security consciousness have been given considerable efficient effect on trade facilitation. There is no single 'silver bullet' to deal with the issue of maritime

security effectively and efficiently. This formidable task requires deep coordination and intense work of national agencies and international community to ensure that the required security on the supply chain to be achieved.

This concluding chapter provides the brief outlook of maritime security measures and holds the view that maritime security and trade efficiency are distinct yet interrelated. The dichotomies between these two opposing concepts need to be addressed on a priority basis. A set of suggestions for improving maritime security without affecting efficiency of maritime trade is also highlighted.

KEYWORDS: Maritime security, Facilitation, MTSA, C-TPAT, ISPS Code, SUA Convention.

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24-Hour Rule	24-Hour Advanced Manifest Rule
AIS	Automatic Identification System
ATS	Automatic Targeting System
CBP	Customs and Border Protection
CCC	Customs Convention on Containers
CCoC	Customs Co-operation Council
CSI	Container Security Initiative
C-TPAT	Customs Trade Partnership against Terrorism
DHS	Department of Homeland Security
DNL	Do Not Load
EDI	Electronic Data Interchange
EDIFACT	Electronic Data Interchange for Administration, Commerce and Transport
EDP	Electronic Data Processing
FAK	Freight of all Kinds
FAL Convention	Convention on Facilitation of International Maritime Traffic 1965
GATT	General Agreement of Tariff and Trade
Geneva Convention	Geneva Convention on the High Seas 1958
ICAO	International Civil Aviation Organization
ICE	Immigrations and Customs Enforcement
ICS	International Chamber of Shipping
ILO	International Labor Organization
IMCO	International Maritime Consultative Organization
IMO	International Maritime Consultative Organization
INS	Immigration and Naturalization Service
ISPS Code	International Ship and Port Facility Security Code
ISSC	International Ship Security Certificate
JI	Jemaah Islamiah
LNG	Liquefied Natural Gas
MTSA 2002	Maritime Transportation Security Act 2002
NII	Non-Intrusive Inspectional
NSEERS	National Security Entry-Exit Registration System
NTC	National Targeting Centre
OECD	Organization of Economic Cooperation and Development
PSI	Proliferation Security Initiative
R & D	Research and Development
SIRC	Seafarers International Research Centre
SOLAS 74	International Convention for the Safety of Life at Sea, 1974
STC	Said-to-Contain

SUA 1988	Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation 1988
SUA 2005	Protocol for the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation 2005
TEU	Twenty-foot Equivalent Unit
TQM	Total Quality Management
UNCLOS	United Nations Convention on the Law of the Sea 1982
UNCTAD	United Nations Conference on Trade and Development
UNSC	United Nations Security Council
WCO	World Customs Organization
USCG	United States Coast Guard
USD	United States Dollar
VLCC	Very Large Crude Carrier
WMD	Weapons of Mass Destruction

CHAPTER 1

INTRODUCTION

"We are all determined to fight terrorism and to do our utmost to banish it from the face of the earth, but the force we use to fight it should always be proportional and focused on the actual terrorists. We cannot and must not fight them by using their own method – by inflicting indiscriminate violence and terror on innocent civilians including children"

- Kofi Annan,
Secretary General of the UN

1.1 Maritime challenges after 9/11

On August 2, 1939, Albert Einstein wrote a letter to President Franklin Roosevelt. The aim of the letter, among others, was to inform the President on his speculation that "*a single bomb, carried by boat and exploded in port, might very well destroy the whole port together with some of the surrounding territory*"[1]. Sixty-seven years of age, Einstein's prophecy is now a security nightmare and most importantly, the infamous Sept. 11, 2001 terrorist attacks against the World Trade Centre and the Pentagon had caused the US to re-evaluate its 'homeland' vulnerabilities against the threat of terrorism that intends to carry out mass casualty attacks. The nature of the attacks and scale of destruction surpassed any terrorist attacks ever experienced by the international community in general and specifically in the US. The attacks have been a catalyst on the widespread international recognition by the global community

[1] Daly, J. C. K., "al-Qaeda and Maritime Terrorism (Part I)" – In *Terrorism Monitor*, vol. I, issue 4, October 24, 2003, Washington D.C.: Jamestown Foundation, p. 1.

that something has to be done to prevent transnational terrorists from infiltrating the legitimate global network of international transport in general.

Ever since the dawn of the day, apart from fighting the war in Afghanistan and tightening the security of the border and airline industry, the US has also implemented numerous other unilateral initiatives, such as the 24-Hour Rule and entering into various other bilateral agreements, for instance the CSI and C-TPAT to maximise the security of the sector it deemed highly at risk of the threat of terrorism; international maritime transport. The initiatives in particular highlighted the weaknesses in links among the modes of transport supply chain and the need to coordinate security related approach among those modes. These measures are designed and built on an existing security framework for other modes of transport, predominantly from the airline security framework, established over many years.

In addition, the US has also dragged the international maritime community most importantly the IMO to work together in its war against terror. Most important of those are the 2002 amendment to SOLAS 74 and the recently concluded amendment to SUA 1988. No objection given, the invocation of indispensable security interests in the implementation of measures and other regulations that may indirectly shape international transactions commercially in order to achieve a single national security overriding goal; reduction of the risks of terrorist attacks.

1.2 Vulnerabilities of maritime trade

International maritime services consist of three types of activities; international maritime transport (freight and passenger), maritime auxiliary service and port service. All these network of activities are vulnerable to the threat of terrorism. There are a number of reasons that these activities become so susceptible to the threat of terrorism. Firstly, due to its sheer volume of cargo, its overriding focusing on speed and efficiency, as well as its international nature where ships sail in a ‘largely lawless

frontier'[2]. All these factors being put together contributed greatly to the vulnerability of the maritime trade against the possibility of terrorist targeting the whole maritime transport system or using it to pursue their nefarious and wicked intentions. The vulnerabilities of maritime industries against numerous security risks is often characterised by a much dreaded consequences for example in terms of loss of lives, damage to physical property and installation, immense financial lost and huge liabilities.

1.3 Maritime security initiatives – a brief outlook

Intending to protect its homeland and interests against terrorism, the US has implemented series of unilateral anti-terrorist measures. Even though most of the initiatives are unilateral and "hastily introduced", it was with worldwide application. Being the largest trading nations with the share amounting almost 20 percent of the total world trade, such initiatives have had immense impact on every aspect of global maritime trade. Those measures were seen to be inhibiting the growth of international maritime trade where those measures have forced the maritime trade related industry to rethink and reappraise its practices and way of doing business.

The possibility of massive terrorist attack that would be bigger than those of Sept. 11 had been envisaged on maritime related sectors. Though speculative in nature, hours of manpower, millions of dollars and uncountable effort needed and had to be spent. As a result, industry while trying to refute the need for too much anti-terrorist measures, were unable to impose anything substantial towards the government which act under the notion of national security. In maritime security, security agenda, or '*the appearance of security*' has seemingly replaced the need to facilitate maritime efficiency.

[2] *Ibid* Daly, p. 3.

1.4 Costs of security to the maritime industry

For the shipping industry, the need to confront terrorism directly has brought with it the clear requirement for a careful analysis of security risk, almost regardless of the trading area of any particular vessel. North American waters where very real fears about the possibility of attacks on strategic targets such as oil, gas and passenger shipping, nuclear power station and the ports themselves has led to high level of alertness and the close control and scrutiny of shipping movements. The need for security inspections and monitoring have occasioned delays and increased costs. One major difficulty in building appropriate security regimes is engaging the active involvement of the developing world. Sidelining or employing the developing world in the quest of securing global maritime trade would both have its own repercussions. Marginally treating the developing world would cause their economies to lag behind thus creating new gaps for terrorists to inject the malicious idea.

1.5 The purpose of the dissertation

The purpose of this dissertation is to identify and examine major global and US maritime security initiatives introduced after the Sept 11 attack against the US. It will focus on the initiatives that have serious implications on the facilitation of international maritime trade. To do so, the topic would be incomplete unless the conventions related to facilitation of maritime trade are analysed. Further, this dissertation would try to identify the tensions and synergy between the need to facilitate trade and the need for security of shipping. Finally the dissertation will make proposals and recommendations in order to reach an acceptable level of uniformity, regarding the initiatives and to balance those security initiatives with trade facilitation.

CHAPTER 2

THE THREAT OF TERRORISM IN THE MARITIME TRADE : IS IT REAL?

"The events of 11 September 2001, and a plethora of other incidents all over the world since, have demonstrated the determination of terrorists, in addition to pursuing their political aims, to disrupt our society. One of the lessons that these events have brought home to us all is the vulnerability of transport networks and the potential they hold to be either the targets or the instruments of terror. The shipping industry is, unfortunately, no exception"

- Efthimios Mitropoulos,
Secretary General of the IMO

2.1 The vulnerability of the maritime supply chain

International maritime services consist of three types of activities; international maritime transport (freight and passenger), maritime auxiliary service and port service[3]. These three activities led to the necessity to draw out rules and regulations to govern them and eventually after the 9/11, the need to secure them became more and more imperative and has been embraced into the main agenda of the international maritime community. In order to deal with the diverse regulations regarding security in shipping, it is pertinent to focus on the very distinct yet undoubtedly related factors of the risks affecting the following elements:

[3] Fink C., Mattoo A. and Neagu I. C., "Trade in International Maritime Transport: How Much Does Policy Matter? – In *World Bank Economic Review*, vol. 16, no. 1, pp. 81 – 108. Available online at: <http://wber.oxfordjournals.org/cgi/reprint/16/1/81?maxtoshow=&HITS=10&hits=10&RESULTFOR

(a) Cargo,

(b) Vessels themselves, and

(c) People who work in shipping, including seafarers and companies associated with shipping.

Broadly, these risks can be defined as the maritime part on the entire network of the supply chain that involves flow of goods and services from the main sources to the final consumer. This maritime part of the supply chain comprises of shipping and ports activities. A supply chain is the linked set of resources and processes that begins with the sourcing of raw material and extends through the delivery of end items to the final customer. It is an effective combination and coordination of "various channel members" including vendors, manufacturing facilities, logistics providers, internal distribution centers, distributors, wholesalers and all other entities that lead up to final customer acceptance[4]. In other words, the supply chain activities transform raw materials and components to a finished product that is delivered to the end customers[5]. It is a network[6] or integration of transportation nodes that provide the physical operation to be carried out with simple streamlined documentation, efficient management with effective control towards fully meeting customer's needs[7].

Present information and technology boom have made the supply chain management to recognize neither national boundaries nor distances. Taking advantage of the efficiency and cost effectiveness of supply chain today, product manufacturers obtain cheaper and abundant raw materials from sources outside their national boundaries

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MAT=&fulltext=trade+in+international+maritime+service&searchid=1&FIRSTINDEX=0&volume=16&issue=1&resourcetype=HWCIT> (Accessed on 20 July 2006)

[4] Xu K., Dong Y., Evers P. T., "Towards Better Coordination of the Supply Chain" – In *Transportation Research*, Part E, vol. 31, no. 1, March 2001, pp 35-54. Elsevier Science Ltd. (2000).

[5] Chopra S., Meindl P., *Supply Chain Management: Strategy, Planning and Operation*, pp. 3-4. New Jersey: Prentice Hall (2001). See also <http://en.wikipedia.org/Wiki/Supply_chain> (Accessed on 30 June 2006)

[6] Christopher M., *Logistics and Supply Chain Management: Strategies for Reducing Cost and Improving Service*, 2nd ed., Edinburg: Pearson Education Ltd. (2004), p. 15.

[7] Banomyong R., "The Impact of Port and Trade Security Initiatives on Maritime Supply-Chain Management" – In *Maritime Policy and Management*, Vol. 32, No. 1, 3 – 13, January – March 2005, London 2005. p.3. Routledge Taylor and Francis Group.

and export their finished products to users in totally different countries. Almost all international trade in goods is transported by sea, and ocean shipping inevitably plays the central focal role in world trade and thus contributes to world economic growth. For this reason, it is not a mere exaggeration to say that almost all goods that we had used, are now using, or will be using, are at some time in their manufacturing or distribution pass through the maritime leg of the supply chain[8].

Briefly, a supply chain in the international trade started initially with the shipper or the source, usually a manufacturer. The originator or manufacturer is relying on a number of third party logistics providers to deliver its product to the final user/consumer[9]. It then either be transported to the port or consolidated with other cargos depending on the nature and volume of the manufacturer's cargo. This stage may see the involvement of a number of logistics players, including buying agents, freight forwarders, customs brokers, carriers and warehouse agents. At the port, the cargo after that is loaded onto the ship that will deliver it to the destination port. Thereafter, the cargo is passing through another set of third party logistics providers, before finally reaching the end user[10].

But in reality, the supply chains in international maritime trade in particular are far more complex and multifaceted. Cargo (physical) and information flow simultaneously and endlessly[11]. The so-called 'complex web of electronic data interchange' now progressively more and more dominates what were once done through paper documentation. Adding the headache to this intricacy is the reality that supply chains for various goods differ. A simple shipping container on a distinctive door-to-door journey will be handled at as many as twelve to fifteen different

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[8] *An Assessment of Maritime Technology and Trade* (Washington, D.C.: U.S. Congress, Office of Technology Assessment, October 1983), pg. 9 retrieved from: <http://www.wws.princeton.edu/ota/disk3/1983/8302/8302/PDF> (Accessed on 30 June 2006)

[9] Simchi-Levi D., Kaminsky P., Simchi-Levi E., *Managing the Supply Chain: the Definitive Guide for the Business Professional*, New York: McGraw-Hill Publishing (2004), p. 21.

[10] Shah S. B., *Securing Maritime Trade: Post 9/11 Maritime Security Initiatives and their Implication on Malaysia*, Kuala Lumpur: Maritime Institute of Malaysia, pg. 3, available online at <http://www.mima.gov.my/mima/htmls/papers/online.html> (Accessed on 30 January 2006).

physical locations which include, for example, warehouses and ports, use a range of transportation modes, engage about twenty-five different parties interface and produce some thirty to forty papers[12]. It is standard for cargo to pass through transshipment ports, where it will be unloaded and loaded on another ship. Therefore, a single cargo container may pass through more than two different ports and be carried by more than a vessel, in addition to the other hinterland locations and supplementary land transport modes, which can either, be trucks or trains[13].

Despite this intricate contact of people and documents, and the perpendicular volume of goods that flow through it, the global supply chain, benefiting from the revolution in information technology aided by advances in transportation and logistics, is highly efficient and undoubtedly inexpensive. Looking at the supply chain on this basis, the maritime support system, i.e. the ports and the ocean going ships, is the most alluring target in the whole global supply chain, because that is where it is most vulnerable and carries the most strategic significance. Prior to 9/11, with regard to the question of security, it was entirely paying attention at addressing the problem of cargo theft and protection of proprietary data from antagonism[14]. Protecting the supply chain from being targeted or abused by terrorists is traditionally not a main concern. It never took any precedence over traditional security concerns.

"*As worldwide commerce grows at an unprecedented rate, so do the risks posed by terrorism*"[15]. Terrorists seek out weaknesses and vulnerabilities that can be exploited; those targets with the combination of vulnerability to attack, psychological and political significance and which, if attacked, poses the least risk to the terrorists. The financial cost and economic disruption caused by an attack on the maritime leg of the

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[11] *Ibid* Banomyong, p. 4.
[12] The Economist, *When Trade and Security Clash*, April 6th, 2002, pp. 66-67.
[13] Van de Voort M. & Rahman A., "Securing Global Supply Chains" – In *Port Technology International*, 24th ed., winter 2004, London: Henley Media Group Ltd, p. 67.
[14] Spear A.F., "Defensive Logistic" – In Containerization International, Issue 13, Vol. 37, August 2004, p. 48. London: T & F Informa UK Ltd. (2004).
[15] Latham D. & Toddington M., "Who are the International Association of Airport & Seaport Police" – In *Port Technology International*, 30th ed., summer 2006, London: Henley Media Group, p. 169.

supply chain is another reason why terrorists may deem it an attractive target[16]. This is borne out by a study done by the Brookings Institution, an independent US-based public policy research institution. The study assessed the costs of an attack on the supply chain, in the form of weapons of mass destruction placed in shipping containers would be ten times higher than the costs of 9/11. The summary of the study is depicted in Table 1 below.

Table 1: Economic Disruption Resulting from Terrorism

Nature of attacks	Nature of economic disruption	Potential Costs (USD)
Weapons of mass destruction shipped via containers, mail	Extended shutdown in deliveries; physical destruction and lost production in contaminated area; massive loss of life; medical treatment for survivors	Up to $1 trillion
Efficient release of biological agent through much of a major urban area	Disruption to economic activity in affected area; threat to confidence and economic operations in other areas; massive loss of life; medical expenses	$750 billion
Widespread terror against key elements of public economy across nation (malls, restaurants, movie theaters, etc)	Significant and sustained decline in economy activity in public spaces; associated drop in consumer confidence	$250 billion
Large attacks that expose a finite and reparable vulnerability (like 9/11)	Substantial but temporary weakening of economy due to direct (loss of human life and physical capital) and indirect effects (decline in confidence and network failures)	$100 billion

[16] Flynn, S. E., "Beyond Border Control" – In Foreign Affairs, vol. 79, no. 6, November-December 2000, p. 62

Nature of attacks	Nature of economic disruption	Potential Costs (USD)
Cyber attack on computer systems regulating regional electric power; combined with physical attacks on transmission and distribution network	Regional electricity shortages that persists for a week; health risks from heat/cold; interruptions of production schedules; destruction of physical capital	$25 billion
Bombing or bomb scares	Effective shutting down of several major cities for a day	$10 billion

Source: Brookings Institution [17]

Another study in the form of port security war game was also conducted a year after the attack of 9/11. The study took place on 2-3 October 2002 and carried out by the US consulting firm, Booz Allen Hamilton. It aimed to show in detail the repercussion of similar attack of 9/11 against the supply chain. The study involved the active participation of 85 senior policymakers from the Department of Transportation, US Customs[18], USCG, Department of Defense, Transportation Security Administration, Office of Homeland Security, intelligence agencies, port authorities, and various other government entities with business participants, including CEOs and senior executive from transportation carriers, technology firms, industry associations, and supply chain representatives of automobile and food/beverage manufacturers and distributors with critical stakes in port security. The participants were made to respond to a mock crisis the way they would have to handle in real life should an attack comparable to 9/11 occurred. The scenario began with the accidental

[17] The attacks postulated in this table and even their relative rankings, are illustrative and speculative. In addition to other economic costs, the estimates above assume an economic value for human life in the range proposed in Richard Layard and Stephen Glaister, Cost-Benefit Analysis (Cambridge University Press, 1994). Further reading, see <http://www.brookings.edu/fp/projects/homeland/chapter1.pdf> (Accessed on 20 August 2006)

[18] On March 1, 2003, US Customs Service along with the Inspections Programme on the Immigration and Naturalization (INS) and the Border Patrol of the INS combined to form the Customs and Border

discovery of a radiological bomb in a container on a truck as it left the port of Los Angeles. It escalated with the detention of suspected terrorists at the port of Savannah. Over a simulated period of three weeks, another bomb was detected in Minneapolis, shipped through Halifax, Nova Scotia, and a third bomb exploded in Chicago. At the end of the war game, it was estimated that the financial losses resulting from the attacks came to about USD 58 billion[19].

Back in 2003, during the second anniversary of the devastating attack of the US, the TV network ABC aired a documentary on how 15lbs of depleted uranium shipped on Maersk vessel from Jakarta to the port of Los Angeles, and thereafter to New York without being detected. It has caused massive embarrassments because this is the second time where the tight American security system was breached[20]. The first time was involving the use of P&O Nedlloyd containership[21].

2.1.1 Cargo-related risks

After the World War II particularly, the world economy flourished. The booming of the world economy inevitably led to great development in the means of handling maritime cargo. Initially, maritime cargo was moved in individual packages, and then the system of containerization was introduced and eventually become one of the most modern and effective means to handle maritime cargo. Initially started in mid-1950 by Malcolm McLean, owner of a North Carolina trucking firm, containerization has gained its popularity as the most effective method so far of handling the maritime cargo[22]. The simplified containerization system allows goods to be moved by the

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Protection Agency (CBP). With the passage of the Homeland Security Act 2002, the CBP passed from the jurisdiction of the Treasury Department to the Department of Homeland Security.

[19] Details of the study can be viewed at the compilation by Mark Gerencser, Jim Weinberg, Don Vincent in their "*Port Security War Game: Implications for U.S. Supply Chain*", available online at <http://www.boozallen.com/media/file/128648.pdf> (Accessed on 24 March 2006)

[20] DHS officials and industry executives argued that they did not detect the depleted uranium – which is harmless and legal to import into the U.S. – exactly because it was not the enriched uranium they would have been looking for.

[21] McLaughlin J., "Highlighting the security dilemma" – In *BIMCO Review 2004*, p. 24.

[22] *World Port Development,* April 2006, Vol. 6 No. 4, England: MCI Media Ltd, 2006, pg. 3.

entire trailer and therefore much more effectively and safely. Consequently, port fees were reduced due to lesser times spent in port and eventually shorter turnaround time for ships. As of today, the vast majority, almost 90%, of world's non-bulk cargo is transported in container ships. Indeed containerization has revolutionized cargo shipment today. In 2005, it is reported that some 18 million total containers were in circulation in the world's ocean making over 200 million trips per year[23]. As of August 1, 2005, total contracts of new containership reached 1,110 vessels, producing an overall slot capacity of 4.28M TEU[24]. This shows to some degree that containerization will continue to gain popularity.

However, the efficiency and effectiveness of the containerization system with its staggering volume of container 'boxes' seemingly poses the massive challenges from a maritime security point of view. As mentioned earlier, the maritime trade supply chain involved approximately dozens of actors, piles of documents, use two or three different modes and be handled at almost fifteen different locations physically. Around 5.88 billion tons of goods were carried via the world's oceans in 2002, accounting for over 80% of world trade by volume[25]. Because of the sheer volume of cargo and the need for smooth flow of trade, the focus of the maritime transport system has always been on the speed and efficiency of cargo movement, foregoing to a certain degree other concerns, such as crew welfare and security matters.

Cargos generally fall into two categories, bulk cargos and container cargos. Bulk cargos can be further classified into two categories, tanker cargos and dry bulk. Containerized cargos – cargos carried in sealed metal containers – are perceived to carry the greatest terrorism-related risks. The total number of inspections on containers is very small; in the US for example, before 9/11, only 2% of all incoming

[23] Gerald Malia, *50 years of container shipping.* Presentation delivered at the Sheldon Kinney Memorial Lecture, World Maritime University, Malmö, Sweden, dated 31 May 2006.
[24] Roach J., "World Fleet Changes in July 2005" – In *Containerization International*, Issue 9, Vol. 38, September 2005, London: T & F Informa UK Ltd., 2005.
[25] OECD Report, Maritime Transport Committee, *Security in Maritime Transport: Risk Factors and Economic Impact*, July 2003, p. 6, available online at

containerized cargos were inspected. This is simply because of the massive number of containers passing through the supply chain. In 2004, for instance, it was estimated that 11 million shipping containers were in use and 1.94 billion tons of dry cargo were transported via container[26]. The need for smooth flow of such enormous amount of cargos left authorities no choice but to rely on the good faith of shippers and the accuracy of documentation. These factors render it especially vulnerable to being abused by terrorists.

Container cargos are usually susceptible as a terrorist target in such a way that it faces the risk of being stolen by terrorist to be used in their actions or sold to sponsor their activities. On the other hand, the far greater threat in relation to containers is the risk of them being abused to facilitate and aid terrorism acts. Terrorists can place a tiny nuclear bomb, for example, either in a container or in the cargo positioned inside a container. This "*Trojan Horse*[27]" scenario could be done rather easily, whether by the terrorists acting as genuine shippers or workers in the manufacturer's premise or consolidation centre, or by inserting it later at any of the legs of the supply chain. As soon as the container later reaches the preplanned strategic target, which may be a busy port or when the container is on a ship, the bomb inside the container would be detonated. And it would be far more catastrophic if this small nuclear bomb were detonated when it reaches or passes through a population centre. This might be happening because containers usually do not stop and lay up at the ports. The vast majority of containerized cargos move inland *via* a multi-modal network linking vessels, port terminals, trucks and trains, which pass through various cities and other strategic targets.

At the same juncture, terrorists to smuggle goods such as illegal weapons or to smuggle terrorists themselves could also manipulate containers. In October 2001,

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<http://www.oecd.org/dataoecd/19/61/18521672.pdf> (Accessed on 2 April 2006)

[26] UNCTAD, *Review of Maritime Transport 2005*, Geneva: UNCTAD, p.15.

[27] European Conference of Ministers of Transport (ECMT), *Container Transport Security across Modes*, Paris: OECD Publications Service, p.13.

this concern proved well founded. Port workers at Gioia Tauro in Italy found a suspected al-Qaeda operative in a shipping container destined for Canada on a ship from Port Said. The container in which the suspected terrorist was found was furnished with supplies for a long journey, a laptop computer and a toilet. The man also had two mobile phones, cameras and numerous fake documents including a certificate identifying him as an aircraft mechanic, airport maps and airport security passes for Canada, Thailand and Egypt[28].

Some commentators argue that bulk cargos carry greater risk compared to container cargos. Firstly, it is because they form the bulk of maritime trade. Bulk carriers formed 74.9% of the world fleet plying international trade. Nuclear or other explosive devices can easily be hidden undetected in the cargos, which face less scrutiny than containerized cargos. As a target, they are also more attractive. Oil tankers are a particularly preferred target, as their cargos could easily be sold. Ships carrying hazardous cargos can be hijacked and the cargos stolen[29].

2.1.2 Ship-related risks

Ocean going ships are the backbones of international maritime trade where there are more than 46,000 vessels servicing the international trade. Ocean-going ships will always remain attractive either as targets of terrorism malice or as instruments to facilitate acts of terrorism. There are numerous terrorist threats against the ship itself. Terrorists can detonate tampered cargos, placed earlier on the ship, or board the ship before blowing it up. Ships could be targeted to a direct attack, like what happened on October 6, 2002, when terrorists in a small fishing boat packed with explosives rammed and badly damaged the 300,000dwt French VLCC, *MV Limburg* as it slowed for pilotage service three miles off the Mina al-Dibbah of the coast of

[28] *Ibid* The Economist, p. 65.
[29] *Ibid* OECD, p. 10.

Yemen[30]. Although the attack did not cause massive human losses (only one person was killed) nor did it cripple the global maritime trade, it did achieve some notable successes, among others, it gained global notoriety, and received tremendous media and other coverage until today and secondly and most importantly, it hurt the domestic economy of Yemen, the country in which the attack took place. A month after the attack, insurance underwriters imposed a 300% increase in insurance premiums on all vessels coming into Yemeni ports[31]. This translated to an average cost of an additional USD 150,000 for each vessel entering Yemeni ports. These resulted in a decrease of 50% of port activities in Yemeni ports, losing the country approximately USD 3.8 million per month.

On the other matters, the ship might also create some degree of risks to being used to facilitate terrorism[32]. This at present receiving the furthermost consideration is the likelihood of ships being used as weapons to target strategic facilities. This prospect is given due consideration because the fear that the said to be terrorists would assimilate the attack of 9/11 where the airplanes were hijacked and used to hit strategic places; i.e. World Trade Center and Pentagon. This fear has been given coverage especially by the Singaporeans, who fear that a ship carrying WMD could enter Singapore ports and the weapons detonated. Terrorists do not necessarily have to source for the hard-to-obtain WMD to achieve their nefarious objectives. As simple as a vessel carrying large amount of ammonium nitrate, an agricultural fertilizer used throughout the world, could be hijacked and the cargo rigged to explode when the ship enters busy ports[33].

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[30] *The Sea, Issue 161, Jan-Feb 2003*, p. 8. Following the attack, a number of Gulf States tighten their security and institute new protective measures. Singapore's navy has also stepped up its policy of random escorts for 'high value merchant vessels' through the Singapore straits. These ships include liquefied gas carriers, crude tankers and cruise ships.

[31] The Joint War Committee (JWC) of Lloyd's Market Association concluded that the area was a terrorist target and declared the increase of war risk premium. For further reading, see Raymond C. Z., "The Threat of Maritime Terrorism in the Malacca Straits" – In *Terrorism Monitor*, Vol. IV, Issue 3, February 9, 2006, pg. 8.

[32] Murphy M., "Maritime terrorism: the threat in context" – In *Jane's Intelligence Review*, February 1, 2006, pg. 2.

[33] *Ibid* OECD, p. 10.

In late 2001, this sort of fear is not at all far-fetched when Singapore cracked down on the Jemaah Islamiyah (JI) network. It was ascertained that JI had made plans for suicide attacks on US warships visiting Singapore. It was also discovered that Singapore JI members had already taken steps to procure 17 tonnes of ammonium nitrate for the manufacture of truck bombs to attack US, Israeli and British interests in Singapore. The rail incident on 18 February 2004 in Khorasan, Iran, that involved explosion of ammonium nitrate showed how bad the damage can be. The blast was so powerful that Iranian seismologists recorded a quake of magnitude 3.6 on the Richter scale at the time of the explosion[34]. An explosion of a shipload of the same material, engineered to deliver the maximum damage in a location like the port of Singapore, would create devastation equal to that of 9/11.

The 9/11 attacks proved that the unimaginable can happen[35]. Terrorists may also hijack ships for other purposes, for example, to blow it up and sink it at chokepoints such as the Straits of Malacca thereby causing a maritime traffic jam and unprecedented environmental damage, or to steal cargos, especially dangerous and hard-to-obtain cargos. Some kinds of cargo carried by ocean going ships such as weapons and dangerous chemicals are at high risk of being hijacked. For example, it was reported that due to renewed concern about terrorist attacks, the Panama authorities had beefed up security to protect a British ship carrying radioactive cargo from Japan to France via Panama Canal[36].

[34] The accident that occurred in the village of Khayyam, Vishapur (Khorosan) Iran created a death toll of over 300 people and 460 others injured and four villages destroyed due to the blasts. Further reading: <http://en.wikipedia/Nishapur_train_disaster> (Accessed on 28 March 2006)
[35] Van der Jagt N., "European Shipping Council" – In *Containerization International*, June 2002, London: T & F Informa UK Ltd., 2002, pg. 37.
[36] Becker E., "Panama steps up security for ships with atomic wastes" – In *New York Times*, January 15, 2000.

Ships could also aid terrorist activities by deliberately or inadvertently transporting arms or even terrorist operatives[37]. This is a regular Palestinian practice in the Israel-Palestinian conflict, as shown by three interceptions by Israeli forces of three arms-carrying ships in the period beginning May 2001 to May 2003. Another important point to note is that terrorists need not even have to hijack commercial ships to carry out their activities. According to some Western intelligence agencies pointed out that Al-Qaeda is said to own a fleet of 15 commercial ships. These ships could then be used to carry out the activities outlined above[38]. This is made much simpler and easier by ship registration provisions in various ship registers, which allow beneficial owners to mask or hide their true identities[39]. An OECD study found that it is very easy, and comparatively cheap, to establish a complex web of corporate entities to provide very effective cover to the identities of beneficial owners who do not want to be known[40].

2.1.3 Port-related risks

> It is not my intent to instill fear or alarm in anyone today. But the sobering reality is, because we live in a country that prides itself on the openness of its democracy, we always at risk of a terrorist attack. Therefore, it is important that we address the issue of security and crime in seaports now[41].

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[37] Timlen T., "The Broadening Scope of Maritime Security" – In *BIMCO Review* 2005, Denmark: Book Production Consultant plc, p. 182.
[38] Abuza Z., "Terrorism in the Southeast Asia: Keeping al-Qaeda at Bay" – in *Terrorism Monitor*, vol. II, no. 9, 6 May 2004, p. 4. Available online at <http://www.jamestown.org/terrorism/news/article.php?articleid=236669> (Accessed on 17 August 2006)
[39] Herbert-Burns R., "Terrorism in the Early 21st Century Maritime Domain" – in *The Best of Times, the Worst of Times: Maritime Security in the Asia-Pacific*, Ho J. and Raymond C. Z., (eds), Singapore: World Scientific Printers, 2005, pp. 160-161.
[40] *Ibid* OECD, p. 4.
[41] Full text of Admiral Loy statement is available online at: <http://testimony.ost.dot.gov/test/pasttest/01test/Loy5.htm> (Accessed on 20 August 2006)

The statement above by Admiral James M. Loy, the former head of USCG on his statement on 24 July 2001 before the Committee on Commerce, Science and Transportation of the U.S. Senate indicated that there is security threats existed in ports. The statement made just a few months before the 9/11 attacks had raised some eyebrows even the 9/11 attacks did not specifically target any maritime interests[42].

Inevitably, ports are the centers of the global supply chain with almost 4,000 ports servicing the international trade. Ports play a pivotal role in facilitating global commerce[43]. UNCTAD estimated that container throughput in top 20 world's leading port that handle containers reached 166.62 TEUs[44] in 2004[45]. Of these cargos, most pass through the major ports. As ports become bigger and busier, they become more vulnerable. A large port normally employs thousands of employees, and receives hundreds of outside visitors both from land and sea. A large port also sees the entry and exit of hundreds of land vehicles and a large number of ships and other vessels daily. The 9/11 Commission in their report stated that, "*While commercial aviation remains a possible target, terrorists may turn their attention to other modes. Opportunities to do harm are as great, or greater, in maritime and surface transportation*"[46].

Tens or even hundreds of thousands tones of cargo, in various forms, pass through it daily. The US for example, its maritime system includes more than 300 ports with

[42] Kirchner A., "Maritime Security: Consequences for the Maritime Transport Industry" – In *Ocean Yearbook* 19, Chircop A. and McConnell M. L. (eds.), Chicago: University of Chicago Press, spring 2005, p. 299.
[43] Kumar S.N., *The U.S. Container Ports: Arguments for a Public Policy Debate,* U.S.A.: Maine Maritime Academy, pg. 2.
[44] Twenty-foot equivalent units (TEU) is a measure of containerised cargo capacity equal to one standard 20ft (length) x 8ft (width) x 8ft 6in (height) container. There are five standard lengths, 20ft, 40ft, 45ft, 48ft and 53ft.
[45] *Ibid* UNCTAD, pg. 73.
[46] *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States*, pg. 391, retrieved from the World Wide Web: <http://www.gpoaccess.gov/911/pdf> (Accessed on 25 March 2006)

more than 3700 terminals spreading along thousands of miles of coastline[47]. Unavoidably, it also normally houses key strategic facilities such as LNG depot or bunkers and warehouses storing hazardous cargo. The LNG for instance, is extremely important for the US where it fulfilled ten percent of US energy needs. With docking facilities costing more than USD1 billion, any terrorist attack would cripple the US economy in the extreme. As such, LNG imports bound for U.S. require USCG escort vessels while 200 nautical miles at sea[48]. Ports represent a bottleneck of each nation's lifeline[49]; as such it carries a high risk of becoming a target for terrorist, or of being used by terrorists as an entry or exit point for smuggling arms, weapons of mass destruction, terrorist operatives and other materials.

2.1.4 Workers/seafarers –related risks

Millions of workers are employed by businesses involved in the global maritime trade. A single port involved in international trade, for example, normally employs thousands of employees and receives a large number of incoming visitors every single day, any one of which may be a terrorist intent on causing harm. Of the many maritime workers, seafarers have received the most attention after 9/11. Seafarers were traditionally treated in a special way. Prior to 9/11, seafarers arriving on board a merchant ship can go ashore and mingle with the local population without much entry restriction. Visas and other form of immigration documents are not normally required. In 2005, the worldwide supply of seafarers was estimated at 466,000 officers and 721,000 ratings[50]. The Philippines supplies the most number of seafarers (230,000 in 2000), followed by Indonesia (83,500), China (82,000) and Turkey (62,500). Of these top four countries, the Philippines, Indonesia and Turkey have all

[47] For further information on the U.S. maritime system, see U.S. Department of Transport website at: <http://www.marad.dot.gov/> (Accessed on 14 April 2006)
[48] Daly, J. C. K., "al-Qaeda and Maritime Terrorism (Part II)" – In *Terrorism Monitor*, vol. I, issue 5, November 7, 2003, Washington D.C.: Jamestown Foundation, p.7.
[49] Ellen E. (ed.), *Ports at Risk.* London: International Maritime Bureau, 1993, pg. 4.

faced terrorist attacks post 9/11 and are known to have active Al-Qaeda affiliated cells. It is not far-fetched therefore to imagine that these terrorists may pose as seafarers, or convert genuine seafarers to their cause either to sabotage any part of the maritime trade or to use the maritime trade to facilitate their activities.

This threat is exacerbated by the problem of maritime certificate fraud. Demand for seafaring job exceeds supply and regulation of recruitment as well as lax manning practices have opened the floodgates for corruption and fraud. In a study carried out by the SIRC[51], it was found that in 10 out of 13 countries visited by the researchers, there was evidence of fraudulent practices in the certificates and the certification process reported in 2001[52]. This would mean that many seafarers currently working as crew on board ships obtained their certificates fraudulently. A few reasons were identified as to the motivation for seafarers to obtain fraudulent documents and one of them is for the pursuance of committing crimes, which involve maritime transport[53]. If they can obtain fraudulent certificate enabling them to become seafarers, what can stop terrorists, with far dangerous motives, from doing so themselves.

2.2 Terrorism-related risks along the supply chain

Having examined the threat of terrorism that is persistent in the global maritime supply chain, it is timely to scrutinize the two aspects of terrorism-related risks as to the major elements of the supply chain discussed in this section. The first is the risk of the elements becoming targets of terrorism. The second is the risk of the elements being abused to facilitate terrorism. In this regard the supply chain, which involve different actors from the manufacturers; i.e. source of goods to third party logistics or

[50] Institute for Employment Research, *BIMCO/ISF Manpower 2005 Update.* Coventry: Team Impression Ltd., 2005.
[51] The study was commissioned by the International Maritime Organization to identify the extent and nature of fraudulent practices associated with certificates of competence and endorsements.
[52] See the abridged report on "*A study on fraudulent practices associated with certificates of competency and endorsements*" by the Seafarers International Research Centre (SIRC).
[53] See SIRC Report, pg. 12.

the so-called agents. In this stage there are few terrorism related risks in the sense that the terrorists posing as manufacturers/workers can prepare lethal cargo/insert lethal material into cargo esp. containers to be activated later; or insert terrorism-related materials/personnel into cargo esp. containers to be smuggled into destination country and also the terrorists can steal cargos.

While on the way to the port of origin, the terrorists can threaten the supply chain in several different manners: for instance, as following:-

(a) Threats from sea including:-
    (i) Attack on port facilities/ships in port by small vessels
    (ii) Ships rammed into port facilities/other ships
(b) Threats from land including:-
    (i) Ships/cargo detonated to cause maximum damage to port
    (ii) Attack/sabotage by terrorists posing as workers/ship crew/contractors
(c) Terrorists
    (i) insert terrorism-related materials/personnel into regular cargo especially containers to be activated later/smuggled into destination country
    (ii) slips into ships at berth
    (iii) tamper with ships at berth
    (iv) steal hazardous cargo stored at port

In the same juncture, terrorism-related risks may also present on the ships or the ships itself is the risk in manners described as tampered cargo exploded aboard ship/explosive material installed earlier on ship exploded, attack from other vessels, terrorists hijack ships or terrorists posing as crew take over ship to destroy ship/steal cargo/using ship as weapon, ship knowingly/unknowingly transport terrorism-related materials, or in the worst case scenario, terrorists owned ship that carries out

legitimate business to finance terrorism or attacks other ships/port facilities etc. or used as weapon e.g. to ram another ships, sunk at choke points, as floating bomb.

When reaching the destination port, the risks would similarly or almost as catastrophic as what could occur in the port of origin stipulated earlier. After reaching the final point of destination in the supply chain, the risks of terrorism are still persistent in the sense that explosives placed earlier in cargo placed could be activated when it reaches its strategic target/population centre or, in the case where terrorists being transported together with the other cargo, terrorist operatives join the population and set their plans in motion[54].

[54] *Ibid* OECD, pp. 12-14. *Se*e also Shah, pp. 7-8.

CHAPTER 3

POST 9/11 MARITIME SECURITY INITIATIVES

"I never dreamed that the United States of America could be attacked. And in that we got attacked, I vowed then, like I'm vowing to you today, that I understand my most important priority. My most important job is to protect the security of the American people. The threat to the United States is forefront in my mind. I knew that at times people would say, you know, it may be an isolated incident; let's just don't worry about it. Well, for me it's not an isolated incident. ***I understand there is still an enemy which lurks out there***"

- George W. Bush,
President of the United States

3.1 Introduction

Having described in detail the nature of risks related to terrorism, it is pertinent to now direct our focus on the initiatives that have been introduced so far in order to manage such risks. Traditionally and known to almost everybody in the shipping industries, the risks related to terrorist attacks on shipping have always existed and will always exist vis-à-vis maritime trade. However, as there has never been any significant incident demanding greater attention on security issues, the international community has learnt to live with the risks and adopted a series of initiatives to minimise those risks. In so far as security is concerned, it has always focused on addressing traditional problems such as cargo theft, cargo fraud, piracy and armed

robbery and drug smuggling. Losses through theft of cargo alone, for instance, cost insurance companies billions of dollars annually[55].

The devastating 9/11 terrorist attacks against the US have completely altered this complacent mindset and the global community has attempted to seriously address terrorism-related risks. Since the day of the attack, the US has been adopting the "*two-pronged approach*" to garner international support in its war on terror. Firstly, the US worked closely with relevant international organizations such as the UN (specifically the UNSC) and the IMO in order to take action that requires member states to impose new measures to deal with the threat of terrorism[56]. Secondly, the US has been particularly active in coming up with initiatives to secure its maritime trade, especially in relation to goods entering the country, bilaterally or through the establishment of the "coalition of the willing"[57]. While some of the measures carry minimal impacts on the rest of the international community, quite a significant number do have considerable impacts on those involved in international maritime trade, both technically and financially as the US is the largest trading nation holding approximately 30% of world trade[58]. Although many countries and stakeholders in the industry were against a number of these measures, arguing that they were unilateral and hastily introduced, the significance of trade with major economies such as the US has forced every player in the global maritime trade into a delicate balancing act between the need for security and the smooth flow of international trade.

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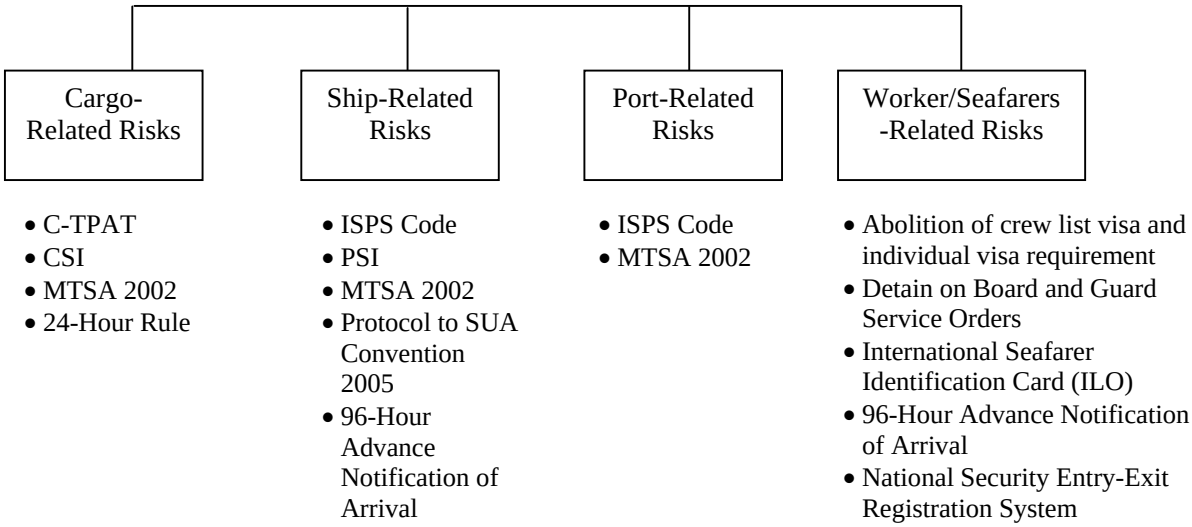
[55] Trelawny C., "Filling the Gaps" – In *Containerization International*, Issue 5 Vol. 39, May 2006, London: 2005.
[56] UN Security Council Resolution 1373 dated 28 September 2001. Available online at UN site at: <http://www.un.org/News/Press/docs/2001/sc7158.doc.htm> (Accessed on 24 April 2006)
[57] Beckman R., "Legal Implications of the Proliferation Security Initiative" – in *The Best of Times, the Worst of Times: Maritime Security in the Asia-Pacific*, Ho J. and Raymond C. Z., (eds), Singapore: World Scientific Printers, 2005, p. 215.
[58] Shapiro J., "International Cooperation on Homeland Security" – In *Protecting the Homeland 2006/2007*, Washington, D. C.: Brooking Institution, 2006, pp. 47-48.

At the same time, IMO and other international organizations such as the WCO[59] and the G8[60] too have been active and adopted new security standards *vis-à-vis* ships and ports that are involved in the international trade[61]. Due to resource limitation, this chapter of the paper will only look at the major security initiatives implemented in particular by the US and the IMO and discuss briefly some issues associated with these measures. It is worth noting that this chapter will be addressing the maritime security initiatives in the light of the risks enumerated earlier in Chapter 2.

A diagram as below can best depict major US and international maritime security initiatives post 9-11:

Diagram 1: Maritime Security Initiative Post 9/11



Source: Shah S. B.[62]

[59] Further reading on World Customs Organization, see: <http://www.wcoomd.org/ie/en/AboutUs/aboutus.html> (Accessed on 13 August 2006)
[60] Group of Eight (G8) consists of Canada, France, Germany, Italy, Japan, Russia, the UK and the US. Together, these countries represent about 65% of the world economy. Further reading: <http://www.g8.gov.uk/servlet/Front?pagename=OpenMarket/Xcelerate/ShowPage&c=Page&cid=1078995913300> (Accessed on 13 August 2006)
[61] Thorby C., "Staying Alert" – In *Containerization International*, November 2002, p. 86.

3.2 Maritime security initiatives before 9/11 – a brief outlook

Before looking in details on the various security measures being introduced after the 9/11 catastrophic attack against the US, it is of great importance that we focus our attention on what maritime security initiatives were essentially in place (and in force) prior to the attack.

There were, in fact, a series of attempts by the international community to address and improve the security related matters in international shipping. Those attempts range from different approaches taking into consideration the relevant security risks: i.e. ports, vessels, seafarers and cargo. Over the years, a series of regional and international instruments were adopted in international attempts to address the suppression and prevention the threats of security against shipping as a whole. The international community were still striving to find a balance to arrive at practical solutions so that the measures introduced would not hamper the flow of legitimate trade, which eventually would lead to slowing of international economic growth. Most of the instruments introduced were either trying to put the act to terrorism at sea[63] within the scope of piracy or focusing to deal with the problem on a case-by-case basis. These were principally inadequate in respect to combat terrorism[64]. It should also be noted that the two phenomena; piracy and maritime terrorism, are not interchangeable. Both in general notably have different motives where piracy is committed due to financial or private gains and terrorism (maritime or otherwise) was politically driven[65].

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[62] *Ibid* Shah, p. 15.
[63] Jesus J. L., "Protecting of Foreign Ships against Piracy and Terrorism at Sea: Legal Aspects" – In *the International Journal of Marine and Coastal Law*, vol. 18, no. 3, September 2003, p. 387.
[64] Pohlit C., *New Developments in Maritime Security and their Impact in International Shipping*, Research Dissertation of L.L.M in Shipping Law, pp. 9-10.
[65] Shie T. R., *Port in a Storm? The Nexus between Counterterrorism, Counterproliferation and Maritime Security in Southeast Asia*, Honolulu: Pacific Forum CSIS, 2004, p.14.

Among the very first attempt to address the prevention of maritime security related threats is the Geneva Convention[66] and UNCLOS[67]. In both Geneva Convention and UNCLOS, the notion of maritime terrorism as it is today cannot be fitted within the legal meaning of the violence at sea: i.e. what constitutes piracy covered in both conventions. The Geneva Convention, for instance, incorporated Articles 14 to 19 relating to piracy as it is "*hostes humani generis*" or "*jure gentium*" and "*punishable wherever encountered*"[68], whereas the UNCLOS reproduces the same regime in its Articles 100 to 107[69]. These two conventions establish four criteria for an act to be considered as piracy: i.e. a privately motivated ("*animo furandi*") illegal act of violence and not part of a struggle for political power[70], detention or depredation committed by the crew or passengers of a private ship or aircraft against another vessel, i.e. two ships requirements[71] on the high seas[72]. These four strict requirements had the effect that an offence occurring from within a vessel and an act that is politically motivated would be excluded from the conception of violence at sea as described in both conventions[73]. In order to address those lacunae, which compromised the safety and integrity of merchant shipping[74], the government of Egypt, Austria and Italy proposed the creation of a new convention. The convention

[66] Convention on the High Seas signed in Geneva in 29 April 1958.
[67] United Nations Convention on the Law of the Sea 1982 signed in Montego Bay, Jamaica on 10 December 1982.
[68] Dubner B. H., *The Law of International Sea Piracy: Developments in International Law*, The Hague: Martinius Nijhoff (1980), p. 3.
[69] Ibid Jesus, pp. 372-373.
[70] Rubin A. P., *The Law of Piracy*, 2nd ed., New York: Transnational Publishers, 1998, p. 91.
[71] Menefee S. M., "Foreign Naval Intervention in Cases of Piracy: Problems and Strategies" – In *International Journal of Marine and Coastal Law* Vol. 14, No. 3, August 99, Kluwer Law International, 1999, pp. 353-370.
[72] See Art. 101 of UNCLOS and Art. 15 of the 1958 Geneva Convention which stated "piracy consists of any of the following acts: (a) any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed: (i) on the high seas, against another aircraft, or against persons or property on board such ship and aircraft; (ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any state; (b) any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft; (c) any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b). Further reading; see Rubin, pp. 366-372.
[73] *Ibid* Jesus, pp. 378-381.
[74] Mensah T. A., "The Place of the ISPS Code in the Legal International Regime: for the Security of International Shipping" – In *WMU Journal of Maritime Affairs*, 2003, vol. 3, no. 1, Sweden: Wallin & Dalholm, p. 18-19.

was proposed in IMO, as maritime security is also an integral part of IMO responsibilities[75]. This convention was drafted in response to the hijacking of the cruise vessel *Achille Lauro*[76]. As a result, the SUA 1988[77] was adopted in 10 March 1988 in Rome[78]. The SUA 1988[79] seeks to improve the existing restricted rules with regards to piracy such as the "private ends" and "two ship requirements[80]".

The main purpose of SUA 1988 is to ensure that appropriate action is taken against persons committing unlawful acts against ships, which include the seizure of ships by force, acts of violence against persons on board ships, and placing the devices on board a ship which are likely to destroy and damage it[81]. Furthermore, Article 10 of the said Convention obliges Contracting Governments to either extradite or prosecute the alleged offenders. But the truth is not so, there are only a few provisions which speaks directly toward the prevention of illegal acts of crimes at sea. If we look at the Convention, we will find that the preamble of the Convention speaks directly on the prevention aspects. It states that IMO as the UN body would develop measures "*to*

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[75] International Maritime Organization: Enhancing Maritime Security, p. 2. See at <http://www.imo.org/Newsroom/mainframe.asp?topic_id=582> (Accessed on 5 January 2006)

[76] A group of Palestinians seized the *Achille Lauro*, an Italian registered cruise ship, in Egypt's territorial waters, and asked the release of the Palestinian prisoners from Israeli jails. The incident which happened on October 7, 1985 caused a series of diplomatic uproar when, in reaction to Israeli's refusal on the demand of the terrorists, they executed an elderly Jewish U.S. citizen. Egyptian government managed to negotiate the release of the other cruise ship hostages and took the terrorists in custody, but did not actually arrest them. Subsequently, the terrorists boarded an Egypt flight to Tunisia but the aircraft was not allowed to land at Tunisia and it was forced to land at a North Atlantic Treaty Organization (NATO) airfield in Italy where a standoff between the U.S. and Italian authorities over which government had jurisdiction had occurred. The Italian government subsequently denied the U.S. extradition request and tried the hijackers in Italy.

[77] The Convention was later being expanded by another Protocol of the Suppression of Unlawful Acts against the Safety of Fixed Platforms Located in the Continental Shelf (SUA Protocol).

[78] There was also another incident that did not fit in the meaning of piracy as defined by both Conventions. The seizure of Portuguese passenger ship *Santa Maria* by a Portuguese political figure, Dr. Enrique Galvão was also another prominent incident. Portugal appealed for foreign naval assistance, calling the politically motivated captor of the vessel as 'pirates'. That was uniformly denied by all states (one of them is the United States) that reacted that the act of Dr. Galvão to be treated under Portuguese municipal law.

[79] SUA Convention 1988 and SUA Protocol 1988 are two of the 12 Conventions and Protocols identified by the Counter Terrorism Committee of the UN established pursuant to Resolution 1373 of the Security Council of the UN. Further reading, see: <http://untreaty.un.org/English/Terrorism.asp> (Accessed on 21 April 2006)

[80] Churchill R. R. and Lowe A. V., *The Law of the Sea*, 3rd ed., Manchester: University Press, 1999, p. 210.

prevent unlawful acts which threaten the safety of ships" and it affirms "*the desirability of monitoring rules and standards relating to the prevention and control of unlawful acts against ships and persons on board ships, with the view of updating them as necessary*"[82]. Nonetheless, since the SUA Convention was created in 1988, IMO did not actually embark into any major actions to address ship security since IMO is more preoccupied with its traditional role of preventing marine pollution and safety at sea.

Articles 13 and 14 respectively establish a general duty for states to prevent the use of their national territories as bases for possible attacks and the requirements of state to share and exchange information on terrorist attacks as well as defining the information requirements. These pose several problems in matters of application where: -

(a) The flows of information were restricted among states that may exert jurisdiction in accordance to SUA 1988. This is a big impediment because shipping is an international activity where any criminal act against shipping would have implications to third states;

(b) The passing of information aforementioned must be based on the national law of the state that passes the information, thus adding further to the complications. Unless explicitly approved, most states criminalise the passing of information to foreign powers[83], creating further impediments;

(c) Consequently, the information passed would not be timely or, in some other worse scenario, not forthcoming at all; and

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[81] Article 3(1) of SUA Convention 1988.
[82] Preamble SUA Convention 1988.
[83] Some countries, for instance, Malaysia and United Kingdom have their own Official Secret Acts, which govern the passing of information, mainly on national security matters. In the United Kingdom for example, the members of security and intelligence services can only do by the crown servants and government contractors, or on special circumstances, the passing of intelligence information. Further reading, see <http://en.wikipedia.org/wiki/Official_Secret_Act> (Accessed on 15 May 2006)

(d) Also, the phrase "*the reason to believe that an offence set forth in Article 3 will be committed*"[84] creates further impediments where it is discretionary on the passing state to transmit information based on it "*reason to believe*".

Even so, like a number of other international conventions, it remains the commitment of the signatory states to enforce it and there are a significant numbers of states which ratified the convention without seriously accomplish anything to make it work. It was only after 9/11 that the international community led by the US had seriously embarked into discussion at both national and international basis on how best they can reduce the inadequacies in the international legal systems dealing with the terrorist threat against shipping.

Shipping and supply chain are becoming more and more complex as both involve a wide range of parties for instance port, coastal and flag states together with shippers, suppliers, manufacturers and the end customers. As mentioned before, shipping is an international business involving different physical locations in multiple states as well as different modes of transportations and a considerable number of actors. Thus, the need for international cooperation in order to deal with this new multifaceted security environment is high in IMO's agenda.

However, the attempt to develop a comprehensive system would somehow lead to diverse regional and international regulation. And normally, should that occur, a countless number of initiatives would be enacted with its own specific criteria and standards. Inevitably, it would create a situation where the cure for the disease is far more than the dose that is actually needed. It inadvertently creates a situation where it is difficult to establish a unified system. On that note, the most important new initiatives after 9/11 will be analysed as following taking into account various security related threat enumerated earlier in Chapter 2.

[84] Article 14 of SUA Convention 1988.

3.3 Maritime security initiatives

3.3.1 Initiatives addressing cargo related risks

To deal with the risks relating to cargo, especially cargo entering the country, the US has implemented three major initiatives: the C-TPAT, the CSI and the 24-hour Rule.

The C-TPAT is a voluntary[85] Government-business-co-operation where participating businesses sign an Agreement committing them to carry out a comprehensive self-assessment of supply chain security using the C-TPAT security guidelines. The former Commissioner of US CBP, Robert Bonner said:

> C-TPAT is a key component strategy – a strategy designed to increase security and at the same time facilitate legitimate trade by, among other things, using advance electronic information to screen all goods coming to the US; pushing our zone of security beyond our physical borders; deploying sophisticated inspection technology; and working in partnership with the trade to substantially increase supply chain security[86].

The C-TPAT is designed to strengthen the overall supply chain security in relation to imported goods[87]. C-TPAT provides verifiable evidence that every organization participating in this initiative and their suppliers watch every event in the supply chain. The program requires participants to assess their international supply chains, develop a security improvement plan if necessary, strengthen security practices,

[85] Kulisch E., "DNV Designs EU Strategy" – in *American Shipper*, Vol. 48, No. 1, January 2006, Florida: Jacksonville Publications, p. 27.
[86] Bonner R. C., "Next Steps in Securing the Supply Chain" – In *BIMCO Review 2004*, Denmark: Book Production Consultants plc, pp. 80-88.
[87] Webber J., "Lighting the Way" – In *Containerization International Regional Review: North America*, September 2005, pp. 13-14.

communicate policies and security requirements to their international supply chain partners, and monitor and improve security of their supply chain on an ongoing basis[88]. By this program, the US authority is putting the onus on US businesses to ensure that their overseas partners are genuine businesses with secure procedures and practices in place.

The next initiative, which was launched in January 2002, is the CSI. It is a "*multi-faceted approach that would affect the design of containers, the algorithms for identifying high risk boxes and the ability to screen containers at US ports and at important hubs in Europe and Asia*"[89]. It is consisted of four core elements, namely:

(a) Identifying 'potential risk for terrorism' containers by using automated targeting tools to identify such containers, based on advance information and strategic alliance;

(b) Pre-screening containers destined for US, generally at the port of origins/departure before loading them to be shipped to the US ports;

(c) Using advanced technology; include the large-scale X-ray and gamma ray machines and radiation detection devices, to undertake pre-screening of the said containers so that the process can be carried out rapidly without prejudicing the movement of trade in general; and

(d) Developing and using smart and secure containers for easy detection of the containers that have been tampered with during shipment by the CBP officers at the US port of arrival[90].

Looking at the above core premises, it can be summarized that the basic principle of the CSI is to screen cargo containers for security risk at ports of origin or transit

[88] Double Z., "Brothers in Arm" – In *Containerization International*, June 2005, p. 68.
[89] Stasinopoulos D., "Maritime Security: the Need for a Global Agreement" – In *Maritime Economics and Logistics*, 2003, 5, Palgrave Macmillan Ltd., pp. 311-320.
[90] Further reading, see <http://www.customs.gov/xp/cgov/border_security/international_activities/csi/csi_in_brief.xml> (Accessed on 7 May 2006)

rather than when they arrive at US ports[91]. CSI is done based on bilateral agreements and it is achieved by stationing US CBP and ICE officials at the port of origin with the agreement of the respective government to identify containers that may pose a security risk[92]. In order to be able to participate in CSI, the member state's customs administration and the seaport must meet the following three requirements:

(a) the customs administration must be able to inspect cargo originating, transiting, exiting, or being transshipped through a country;

(b) Containers that pose a potential terrorist threat are identified using the latest information and technology. NII equipment (including gamma or X-ray imaging capabilities) and radiation detection equipment such as those, which can screen up to 30 containers per hour must be available and utilized for conducting such inspections. This equipment is necessary in order to meet the objective of quickly screening containers without disrupting the flow of legitimate trade[93]; and

(c) The seaport must have regular, direct and substantial container traffic to ports in the US.

As part of agreeing to join the CSI, a Member State's Customs Administration and seaport must also:-

(a) Commit to establishing a risk management system to identify potentially high-risk containers, and automating that system. This system should include a mechanism for validating threat assessments and targeting decisions and identifying best practices;

(b) commit to sharing critical data, intelligence, and risk management information with the US CBP in order to do collaborative targeting, and developing an automated mechanism for these exchanges;

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[91] Roach A. J., "Container and Port Security: a Bilateral Perspective" – In *the International Journal of Marine and Coastal Law*, vol. 18, no. 3, September 2003, pp. 343.

[92] Barnes P., "Crisis Management Capabilities in Maritime Trading Systems", p. 3 – In *Proceedings the Australian-New Zealand International Business Conference: Dynamism and Challenges in Internationalization* (2004). Canberra, Australia.

(c) conduct a thorough port assessment to ascertain vulnerable links in a port's infrastructure and commit to resolving those vulnerabilities; and

(d) Commit to conduct integrity programs to prevent lapses in employee integrity and to identify and combat breaches in integrity.

The initial objective of the CSI is to engage the 20 major world ports that between them account for about 70 percent of the 5.7 million sea containers entering the US annually. Most of the ports (as per Appendix A) have either implemented the initiative or signed the agreement, together with a number of ports outside the top 20. As of November 2005, forty-one CSI port agreements were signed where the host countries allow the preloading inspections of suspected cargoes by the U.S. customs inspectors stationed in each of those countries[94]. As CSI is done on bilateral basis, it does offer some degree of reciprocity where the CSI partner countries can send its customs officials to the US ports to undertake the pre-screening of 'suspected' containers that will be exported to their respective countries from the US ports[95].

Albeit the efficient implementation of CSI, there is another important matter that needs to be solved i.e. to determine the level of risk of each container. This requires detailed and accurate information which most of the time is unavailable. This leads to the introduction of the third initiative called the 24-Hour Rule, which was later mandated by the Trade Act 2002. With effect from December 2, 2002, the CBP implements this rule and requires ocean carriers to submit cargo manifest earlier and in greater detail than before[96]. Under this new rule, the cargo manifests of U.S.-bound containers must be submitted twenty-four hours before it is loaded in a foreign port to allow CBP to analyze container content information. Ocean carriers must

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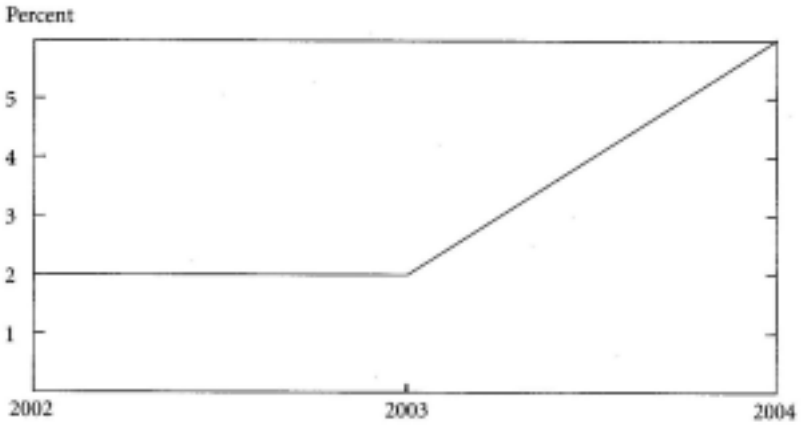
[93] Brown, D. R., "Combined Technology for Cargo Security" – In *Port Technology International*, 21st ed., spring 2004, London: Henley Publishing Ltd., p. 163.
[94] Flynn S. E., "Port Security is Still a House of Cards" – In *Far Eastern Economic Review*, January/ February 2006.
[95] *Ibid* Roach, p. 346.
[96] The type of information needed is a precise description of the cargo, quantity or number of packages, container number, and seal numbers (for all seals affixed to containers). The "Non-Vessel

submit cargo manifests to CBP twenty-four hours before US-bound containers are loaded in a foreign port.

Under the old rules, cargo manifests must be filed with Customs upon arrival in a US port, although, in practice, the vast majority of carriers file their cargo manifest electronically with Customs forty-eight hours before arrival[97]. The rule requires not only advanced submission, but also lists the specific informational elements that would need to be included in the submitted cargo manifest. Vague cargo terms such as "FAK", "general cargo" and "STC" are not acceptable[98]. Failure to comply with the rule will result in the cargo being considered as suspicious and a "DNL" message is issued while still in the foreign port[99]. If cargo were loaded without prior approval by CBP, the container would be denied permission to unload at all US ports. In addition, each violation would be liable to a fine. The diagram below depicted the inspections percentage of shipping containers that arrived in US ports in 2002-2004.

Table 2: Percentage of the Shipping Containers Inspected



Source: d'Arcy (et. al.)[100]

Operating Common Carrier (NVOCC)" must submit this information through the CBP Automated Manifest System (AMS) by the carrier or, if the NVOCC has been AMS certified.

[97] See <http://www.apl.com/security/html/cutoffs.html> (Accessed on 13 July 2006)

[98] See <http://www.cbp.gov/xp/CustomsToday/2004/March/Other/rules_cargosecurity.xml> (Accessed on 16 May 2006)

[99] *Ibid* Daly (II), p. 7.

[100] d'Arcy M. (et. al.), *Protecting the Homeland 2006/2007*, Washington, D.C.: The Brookings Institution, 2006, p. 196.

3.3.2 Initiatives addressing ship-related risks

(a) International Ship and Port Facility Security Code

The most important ships and ports security initiatives imposed after 9/11 was the ISPS Code introduced by the IMO. From 9 – 13 December 2002, the Diplomatic Conference on Maritime Security [101] convened at IMO and passed numerous resolution amending SOLAS 74 including adopting the ISPS Code[102]. Adopted in record time[103], the ISPS Code rested on the premise that "*it was better to detect and frustrate terrorists as far away as possible from the shores of America*" and to "*improve the security of foreign ports and ships, especially those ports which traded with the US and those ships that visited US ports*"[104]. The Code is part of SOLAS 74, thus made compliance is mandatory for all the 156 Contacting Governments[105] to SOLAS 74.

The ISPS Code applies to all passenger ships, cargo ships above 500 grt and mobile offshore drilling units involved in international trade[106] with effect from 1 July 2004[107]. Though there were some hopes that the deadline would be extended or the

[101] 108 Contracting Governments to the SOLAS 1974 attended the Diplomatic Conference, observers from two IMO member states and observers from the two IMO associated members. There were also observers from other United Nations specialised agencies, intergovernmental organizations and non-governmental organizations.
[102] The existing SOLAS 1974 Chapter XI (Special measures to enhance maritime safety) has been re-numbered as Chapter XI-1. And a new Chapter XI-2 (Special Measures to enhance maritime security) is added after the renumbered Chapter XI-1. Regulation XI-2/2 of the new chapter enshrines the ISPS Code.
[103] The ISPS Code came into picture 15 months and 2 days after the 9/11 incidence. There is another work done in a faster track; i.e. after *Estonia* ferry disaster – 14 months and a day. More information on IMO works after the ferry disaster, see: <http://www.imo.org/Home.asp?topic_id=821> (*Estonia* ferry disaster – Accessed on 20 August 2006)
[104] Parrit B., "Implement the ISPS Code by 1 July 2004? You must be joking!" – In *BIMCO Review 2004*, Denmark: Book Production Consultant plc, pp. 86-88.
[105] The total number of SOLAS 1974 Contracting Governments which represent 98.79% of world tonnage as of 31 May 2006. See <http://www.imo.org/home.asp> (Accessed on 3 February 2006)
[106] IMO, *International Ship and Port Facility Security Code and SOLAS 1974 Amendments 2002*, London: IMO, 2003, p. 8.
[107] Resolutions of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974, adopted in December 2002.

authorities in-charge of enforcing the Code turning the blind eye, there were only fall into the "*category of wishful thinking*"[108]. The implementation of this Code has neither extensions nor bypasses[109]. In essence, the Code takes the approach that ensuring the security of ship and port facilities is a ***risk management activity***[110], and that, to determine what security measures are appropriate, an assessment of the risk must be made in each particular case[111]. It starts by requiring ship owners to carry out security assessment including the risks, threats and existing security measures, the appointment and training of security officers, drawing up of ship security plan, and implementation of the plan[112]. Three security levels identified by the Code; i.e. Level 1, Level 2 and Level 3[113]. Level 1 connotes the normal operating level or the minimum appropriate security measures are required. Security Level 2 requires medium degree of security risk and the Security Level 3 is the highest level of concern where a security incident is probable or imminent[114].

The national authority will then assess ships that have carried out all the requirements or security organization appointed by the national authority, and if they were found to have satisfied the ISPS Code requirements, will be awarded the ISSC[115]. Starting July 1, 2004, ships involved in international trades that do not carry

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[108] Gibbons R., "Turning a Blind Eye?" – In *Containerization International*, May 2004, pp. 71-72.
[109] Charalambous N., "Issues Related to the Development and Implementation of the ISPS Code" – In *Contemporary Issues in Maritime Security*, Mejia Jr, M. Q. (ed.), Sweden: WMU Publication, 2005, p. 18.
[110] Hesse H. G., "Maritime Security in a Multilateral Context: IMO Activities to enhance Maritime Security" – In *The International Journal of Marine and Coastal Law*, vol. 18, no. 3, September 2003, pp. 330-331.
[111] Mitropoulos E., "Maritime Security and the IMO" – In *Contemporary Issues in Maritime Security*, Mejia Jr, M. Q. (ed.), Sweden: WMU Publication, 2005, p. 152.
[112] See <http://www.imo.org/Newsroom/mainframe.asp?topic_id=897> (Accessed on 30 January 2006)
[113] *Ibid* IMO, p. 8.
[114] *Ibid* Shie, p. 19.
[115] International Ship Security Certificate (ISSC), section 9.5.1 of the ISPS Code stipulated that "the nature of the changes of the Ship Security Plan or the security management that have been specially approved by the Administration, pursuant to section 9.5, shall be documented in a manner that clearly indicates such approval. This approval shall be available on board and shall be presented together with the International Ship Security Certificate (or the Interim International Ship Security Certificate). If these changes are temporary, once the original approved measures or equipment is reinstated, this documentation no longer needs to be retained by the ship.

the ISSC will be subjected to very strict port state control measures, including lengthy delay and even denial of entry. In addition to the adoption of the ISPS Code, the December 2002 Diplomatic Conference made other amendments to SOLAS 74 to address ship-related terrorism risks. Amongst these are that ships are required to permanently mark an IMO ship identification number on the stern or on either side of the hull[116] and to fit an AIS onboard ship[117].

The costs either to complying or non-complying to ISPS Code are likely to be substantial. Over 46,000 ships that are involved in international voyage and almost 4,000 ports serving international trade are required to comply with the ISPS Code[118]. "*Good security costs money*"[119]. Based on the report by the OECD, at least USD 1.3 billion and USD 730 million thereafter are needed by ship operators to comply with the Code[120]. Also worth mentioning that the estimated cost of bringing ports into compliance with ISPS requirements is hard due to the variation of needs and costs of meeting those needs for instance labor costs and materials is different from port to port[121]. One of the main weaknesses of the ISPS Code is that it only covers ships and port facilities; interface between the ships and the port; as such it does not cover the

[116] The existing SOLAS 74 Chapter XI (Special measures to enhance maritime safety) has been re-numbered as Chapter XI-1. Regulation XI-1/3 is modified to require ships' identification numbers to be permanently marked in a visible place either on the ship's hull or superstructure. Passenger ships should carry the marking on a horizontal surface visible from the air. Ships should also be marked with their ID number internally.
[117] A modification to SOLAS 1974 Chapter V (Safety of Navigation) contains a new timetable fort the fitting of Automatic Identification System (AIS). Ships, other that passenger ships and tankers, of 300 gross tonnage and upwards but less than 50,000 gross tonnage, will be required to fit AIS no later than the first safety equipment survey after 1 July 2004 or by 31 December 2004, whichever occur earlier. Ships fitted with AIS shall maintain AIS in operation at all times "except where international agreements, rules or standards provide for the protection of navigational information".
[118] United Nations Conference on Trade and Development, "Efficient Transport and Trade Facilitation to improve Participations by Developing Countries in International Trade", note by the UNCTAD Secretariat, TD/B/COM.3/60, October 3, 2003, p. 11, available online at <http://www.unctad.org/en/docs//c3d60_en.pdf > (Accessed on 2 April 2006)
[119] Carafano J. J., and Nguyen H., "Homeland Security and Emerging Economies" – In *Backgrounder*, no. 1795, September 14, 2004, Washington D.C.: The Heritage Foundation, p. 2.
[120] *Ibid* OECD, p. 39.
[121] *Ibid* OECD, pp. 40-45.

other facilities along the supply chain or the suppliers of goods[122]. Another major weaknesses identified in the ISPS Code is that there is nothing in the ISPS Code that will stop a ship with an ISSC or any ship to which the ISPS Code does not apply from transporting terrorism-related materials. To counter this threat, a few nations led by the US have implemented the Proliferation Security Initiative.

(b) Proliferation Security Initiative

While States have cooperated for many years to combat WMD proliferation and prevent specific shipments of WMD, their delivery systems, and related materials, these efforts have largely been ad-hoc. However, the increasingly sophisticated and aggressive measures taken by states and non-state actors to traffic in and obtain these items require like-minded nations to coordinate efforts to address this urgent challenge. Worldwide, almost twenty million packages of radioactive materials are transported annually [123]. The Proliferation Security Initiative (PSI) is an initiative led by the US, establishing a coalition of countries [124] that will impede and stop shipments of WMD, its delivery systems, and related materials flowing to and from states[125] and non-state actors of proliferation concern.

Launched by President Bush on May 31, 2003, in Krakow, Poland, PSI is an effort created in response to growing challenge posed by the proliferation of WMD. US involvement in the PSI stems from the US National Strategy to Combat Weapons of

[122] Raymond C. Z., "Maritime Terrorism – a Risk Assessment: the Australian Example" – In *the Best of Times, the Worst of Times: Maritime Security in the Asia-Pacific*, Ho J. and Raymond C. Z., (Eds), Singapore: World Scientific Printers, 2005, p. 200.
[123] Suarez A. S. V., "Post September 11 Security Challenges to the Legal Regime of the Maritime Carriage of Nuclear and Radioactive Materials" – In *The International Journal of Marine and Coastal Law*, vol. 18, no. 3, September 2003, p. 423.
[124] There are 16 participating countries that joined the bandwagon to PSI; Australia, Canada, Denmark, France, Germany, Italy, Japan, the Netherlands, Poland, Portugal, Singapore, Spain, United Kingdom, US and Turkey.
[125] North Korea, Iran, Syria, Cuba and Libya are, in particular, named as countries of '*proliferation concern*'.

Mass Destruction issued in December 2002[126]. That strategy recognizes the need for more robust tools to defeat the proliferation of WMD around the world, and specifically identifies interdiction.

PSI is not a formal treaty-based organization. It is considered as a set of activities based on participating countries' common commitment to the PSI Statement of Interdiction Principles, (as in Appendix B) which was agreed on 4 September 2003. The PSI Statement of Interdiction Principles establishes the basis for cooperation on specific activities, when the need arises. It does not create formal "obligations" for participating states, but does represent a political commitment to stop proliferation-related shipments whenever possible and to improve national capabilities and authorities to conduct interdictions[127]. The PSI Statement of Interdiction Principles identifies specific steps participants can take to effectively interdict WMD-related trafficking and prevent proliferation[128].

Participation in the PSI is voluntary as it is part of a cooperative international counter proliferation effort intended to apply intelligence, diplomatic, law enforcement, military, and other tools at the country's disposal to thwart transfers of WMD-related items to states and non-state actors of proliferation concern[129]. In fact, PSI is also received highest level recognition when in a speech in Madrid, UN Secretary General

[126] The proximate origins of the PSI are the subject of some debate where it is said that it stems out of the event occurred in December 2002 where the Americans were unable to seize 15 scud missiles with conventional warheads clandestinely en-route to Yemen on a North Korean freighter, the *So San*.
[127] Spring B., "Harnessing the Power of Nations for Arms Control: the Proliferation Security Initiative and Coalition of the Willing" – In *Backgrounder*, no. 1737, March 18, 2004, Washington, DC: the Heritage Foundation, pp. 2-3.
[128] Gahlaut S., "Political Implications of the Proliferation Security Initiative" – in *The Best of Times, the Worst of Times: Maritime Security in the Asia-Pacific*, Ho J. and Raymond C. Z., (Eds), Singapore: World Scientific Printers, 2005, pp. 229-230.
[129] The participant countries of PSI, as a basis for their positive cooperative action, cited the UN Security Council Resolution 1540, adopted unanimously by the Security Council, called on all states to take cooperative action to prevent trafficking in WMD.

Kofi Annan, encouraged all states to participate in PSI by applauding the efforts of the PSI to "*fill a gap in our defenses*"[130].

The international coalition is focused on pre-emptive interdiction, seeking to allow ships, aircraft, and vehicles suspected of carrying WMD-related materials to and from countries of "proliferation concern" to be detained and searched as soon as they enter member countries' territory, territorial waters, or airspace[131].It will also encourage member countries to deny overflight rights to suspicious aircraft or ground them when they stop to refuel. The PSI, however, would have problems of interdicting a ship suspected of carrying WMD on the high seas. It is because, "*a state cannot act against another state's vessels*[132]" and without any international convention or a UNSC Resolution[133], such interdiction would be a *prima facie* breach of international law[134]. It is clear in Article 92(2) of UNCLOS 1982 that "*Ships shall sail under the flag of* ***one State only*** *and, save in exceptional cases provided for in international treaties or in this Convention,* ***shall be subject to its exclusive jurisdiction on the high seas***."

In this respect, the US and like-minded countries are, through the IMO Legal Committee, proposed a new protocol to the Convention for the Suppression of Unlawful Acts against the Safety of Navigation, 1988.

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[130] Kofi Annan's keynote address to the closing plenary of the International Summit of Democracy, Terrorism and Security delivered on 10 March 2005 in Madrid, Spain. See <http://www.un.org/News/Press/docs/2005/sgsm9757.doc.htm> (Accessed on 23 July 2006)

[131] Eraydin H., *The Security of Maritime Traffic – Current Application of Maritime Law Enforcement against Terror at Sea and its implication on International Law* – In unpublished presentation during the Fifth Regional Sea power Symposium for the Mediterranean and the Black Sea Navies, Italy, 13-14 October 2004.

[132] Jacobsson M., "Terrorism at Sea" – In Mukherjee P. K. et. al., (eds.) *Maritime Violence and other Security Issues at Sea*, Malmo: WMU Publication, 2002, p. 160.

[133] On 28 April 2004, the UNSC unanimously adopted Resolution 1540 on preventing proliferation of WMD, as it constitutes the threat to international peace and security. The Resolution calls upon all States to take preventive actions to prevent illicit trafficking of WMD and its related materials, but the Resolution did not authorise the interdiction of vessels on the high seas.

[134] *Ibid* Beckman, p. 220.

(c) The new Protocol to the Convention for the Suppression of Unlawful Acts against the Safety of Navigation 1988 and its Protocol 1988[135]

As discussed before, the SUA 1988 created with aims to address lacunae that existing in the international system dealing with violence at sea. The new protocol to the SUA 1988, or what usually termed as the SUA 2005, adopted on 14 October 2005 contains several new provisions that seek to expand the scope of SUA 1988. The 84th Session of the Legal Committee of IMO saw the SUA Correspondence Group headed by the US proposed some new necessary amendments to SUA 1988 and its Protocol 19888[136]. The proposed new amendments for both instruments are to facilitate, strengthen, and expand international cooperation and coordination as a means of combating unlawful acts[137]. The most controversial provisions in the new SUA 2005 are:-

(i) the addition of Article 3 *bis* on the offences where a mere transport of prohibited weapons may become an offence under the Convention; and

(ii) Article 8 *bis* which allows for the boarding of ships flying the flag of a State Party beyond territorial seas by another State Party if such ships are reasonably suspected to be involved in offences under the Convention, provided that the State Party intending to board must first get the consent of the flag state. However, the new Protocol also proposes that if the flag state does not respond within four hours of the request, the requesting party may proceed "under tacit authorization clause" to board and search the ship[138].

Furthermore, the SUA 2005 makes it an offence if a person unlawfully carries out onboard a ship any of the acts listed in Article 3 thereof. It lists down scenarios in

[135] This is referring to the Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platform located in the Continental Shelf 1988.
[136] Legal Committee of IMO document: LEG 84/6/1 dated 22 March 2002.
[137] Mbiah K., "The Revision of the SUA Convention: an Update" – In *Contemporary Issues in Maritime Security*, Mejia Jr, M. Q. (ed.), Sweden: WMU Publication, 2005, p. 172.
[138] *Ibid* Beckman, p. 223-224.

which Contracting Governments will have jurisdiction, and obliges Contracting Governments either to prosecute or extradite the offender.

3.3.3 Initiatives addressing port-related risks

As stated above, the ISPS Code also aims to address risks relating to ports and port facilities. Contracting governments have the responsibility to identify what are port facilities that must comply with the Code. These port facilities then will appoint security officers, carry out security assessment, send their officers for securities training, draw out security plan, and implement the plan. The designated authority appointed by the contracting government will then carry out a security audit and ultimately, if all the ISPS Code requirements have been satisfied, issue a Statement of Compliance for the port facility. A port facility that does not possess a Statement of Compliance after July 1, 2004 will face numerous problems. Ships that visit such a port facility will be considered security risks at the ports they subsequently visit, and will probably be subjected to delaying port state control measures. Therefore, such a port facility will be avoided by ships and will subsequently suffer.

In addition to the ISPS Code, ports involved in maritime trade will be subjected to the USCG International Port Security Program. The Program, implemented pursuant to s70108 of the US Maritime Transportation Security Act of 2002, will see the USCG, starting May 2004, sending teams to countries around the world to evaluate their compliance with the ISPS Code and their port security plans. Vessels that make port calls at countries that are not participants could be delayed when attempting to enter a US port. It is far more complicated to estimate the cost of bringing ports into compliance to ISPS Code as the needs and cost varied from one port to another[139].

[139] *Ibid* OECD, p. 40-45.

3.3.4 Initiatives addressing seafarers related risks

In relation to risks posed by maritime workers in particular by ship crew, the international community, through the IMO, addressed the issue at the 1st Maritime Safety Committee International Working Group held in February 2002, where the ISPS Code was originally conceived. However, the matter was eventually forwarded to the ILO for consideration. Subsequently, in its 91st Annual Conference, the ILO adopted a new Convention on Seafarers' Identity Documents, replacing the ILO's Seafarers' Identity Documents Convention 1958 (No. 108) to establish a more rigorous identity regime for seafarers[140]. The new Convention provides for new seafarers' identity document for the world's 1.2million seafarers[141]. A major feature of the new ID is a biometrics template based on a fingerprint. It also makes provision for the facilitation of shore leave and transit and transfer of seafarers, including the exemption from holding a visa for seafarers taking shore leave. To avoid the risk of an ID being issued to the wrong person, ratifying member States also have to maintain proper databases available for international consultation by authorized officials and to have and observe adequate procedures for the issuance of IDs.

However, it is the US initiatives that have created the most significant impact on the industry. The US has implemented a range of initiatives designed to address risks coming from workers employed by its maritime transport industry and by seafarers employed onboard ships entering the US. Prior to 9/11, the USCG required ships coming to the US. to submit basic information regarding the ship twenty-four hours before arrival. After 9/11, the period was extended to 96 hours before arrival, and more detailed information is required. Concerning persons onboard the vessels, information required includes the individual's full name, date of birth, nationality, passport number, position or duties on ship, and the port or place where the individual embarked[142].

[140] See Mitropoulos, p. 154.
[141] *Ibid* d'Arcy, p. 139.
[142] *Ibid* Roach, p. 359.

This information will be subjected to check including by the intelligence community. Also before 9/11, crewmembers of foreign vessels calling at US ports did not have to undergo the normal procedure for the issuance of visas. The US immigration authorities issued a blanket visa to the crew of a ship prior to the ship's arrival, based on the official crew list provided by the owner. However the crew list visa is now abolished. Now, despite the agreement at ILO on biometric identity cards of seafarers, any foreign crewmember that wants to go for shore leave in the US will have to possess a valid personal passport and a valid US visa[143]. Douglas Stevenson of the New York based Center for Seafarers'' Rights condemned the US decision to deny shore leave due to security concern as shore leave is an "elemental necessity" for the seafarers who have been months on board[144]. Even with valid passports and visas, there is no guarantee that seafarers will be allowed to leave the ship. CBP officials will subject citizens of certain countries to additional security checks.

In addition, the discretion given to officers at US diplomatic posts overseas to grant so-called "personal appearance waivers" has been eliminated. This means that seafarers must appear personally at US consulates to apply for their visas. A ship with crewmembers not possessing a US visa is considered a security risk. The ship will also be considered a security risk if the USCG, the INS and other relevant agencies, after receiving the 96-hour arrival notice and carrying out further examination, deemed it to be such. In these cases, crewmembers will usually be subjected to a "detain on board" order. Even if a particular crewmember possesses a valid passport and visa, the "detain on board" status can still be conferred. When a "detain on board" order is made, the detained crewmember cannot leave the ship and the ship is required to hire a minimum of two private security guards for the duration

[143] *The Sea*, Issue 169, May/June 2004, p. 1.
[144] *The Sea*, Issue 161, Jan/Feb 2003, p. 3.

of the vessel's stay. This is to prevent the crewmember under the "detain on board" status from illegally leaving the ship[145].

Another initiative that addresses risk coming from seafarers on board ships entering the US is the NSEERS. It was implemented in all US ports of entry on 11 September 2002[146], exactly a year after the attack of 9/11. Temporary foreign visitors (non-immigrant aliens including ship crew) to the US to whom the NSEERS applies; i.e. arriving from certain countries[147], or who met a combination of intelligence-based criteria, and are identified as presenting an elevated national security concerns will have to undergo a national registration process that includes undergoing interview and being photographed and fingerprinted[148]. According to the DHS, the NSEERS [149] promotes several important national security objectives: among them are:-

(a) allow the US to run the fingerprints of aliens who may present elevated national security concerns against a database of wanted criminals and known terrorists;

(b) enables DHS to determine instantly when such an alien has overstayed his visa; which was the case with three of the 9/11 hijackers[150]; and

(c) enables DHS to verify that an alien in the US on the temporary visa is doing what he said he would be doing, living where he said he would be living[151].

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[145] It is reported in The Sea, Issue 161, Jan/Feb 2003 that in Louisiana port, one ship is placed under armed guard and when 3 of the crew stepped of the gangway to feel the dry land, they were fined USD3500 each.

[146] The Domestic Call-in Registration later followed NSEERS on 5 November 2002.

[147] The domestic registration program included citizens or nationals from Afghanistan, Algeria, Bahrain, Bangladesh, Egypt, Eritrea, Indonesia, Iran, Iraq, Jordan, Kuwait, Libya, Lebanon, Morocco, North Korea, Oman, Pakistan, Qatar, Somalia, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

[148] For further reading on NSEERS, refer to <http://www.dhs.gov/dhspublic/display?content=3020> (Accessed on 16 June 2006)

[149] NSEERS was the first step taken by the Department of Justice and then Department of Homeland Security in order to comply with the development of the U.S. Congress, which mandated an all-inclusive entry-exit program.

[150] See 9/11 Commission Report, pg. 273.

[151] The American Civil Liberties Union (ACLU) criticises this NSEERS, which is considered as controversial, and unfairly target immigrants for detention and deportation because of their religion, ethnicity and country of origin.

It is worthy to note that the list of countries are among them are Bangladesh and Indonesia. Thus, some shipping companies are denying jobs to Muslim seafarers because they are so-called, potential security risks. Any seafarers with the middle name "*bin*" is potential terrorist, even the word is actually hailed of Arabic origin, which essentially means '*son of*'[152]. On 2 December 2003, some controversial registration and tracking system; i.e. the 30/40-Day Follow-up and Annual Re-registration were suspended from the NSEERS, but other requirements continue to remain in effect[153].

3.4 Maritime Transportation Security Act 2002

One of the most important initiatives taken by the U.S. that has the significant impact in the world shipping is the MTSA 2002. Signed on November 25, 2002, MTSA 2002 is designed to protect the US waterways and ports from any aggressive act of terrorism. In other words, the Act is the US version of the ISPS Code[154]. Key features of MTSA 2002 are: -

(a) requirements for port, facility, and vessel vulnerability assessments;

(b) preparation by the Secretary of Transportation of a National Maritime Transportation Security Plan and Area Plans for each Coast Guard Captain of Port Zone;

(c) development of security plans for certain facilities and commercial vessels;

(d) the issuance and use of Transportation Security Cards for personnel whose responsibilities require them to access secure places aboard ships;

(e) establishment of a permanent programme of grants to facilitate the enhancement of maritime security;

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[152] Osler D., "Malaysian seafarers face 'employment prejudice'" – in *Lloyd's List*, 23 September 2005, p. 8.

[153] See <http://www.aclu.org/safefree/general/16965prs20031201.html> (Accessed on 25 June 2006)

[154] Kulisch E., "Tethering Cargo Security Standards" – In *American Shipper*, Vol. 48, No. 1, January 2006, Florida: Jacksonville Publications p. 32. See also <http://www.uscg.mil.hq/g-cp/comrel/factfile/Factcards/MTSA2002.htm> (Accessed on 5 June 2006)

(f) assessment by the Secretary of Transportation of the effectiveness of the antiterrorism measures at foreign ports;
(g) establishment of an enhanced system of foreign seafarer identification;
(h) creation of a Maritime Security Advisor Committee at national and area levels;
(i) installation and operation of AIS aboard certain commercial vessels;
(j) establishment of a program to better secure international intermodal transportation systems, to include cargo screening, tracking, physical security, compliance monitoring, and related issues;
(k) provision of civil penalties for violation of statutes and regulations;
(l) extension of seaward jurisdiction of the Espionage Act of 1917 to 12 nautical miles offshore of the territorial sea baseline;
(m) codification of the USCG Sea Marshall program and consideration of utilising merchant mariners and other personnel to assist the Coast Guard;
(n) requirements that shipment data be provided electronically to U.S. Customs prior to arrival or departure of cargo;
(o) reporting by the Secretary of Transportation to Congress on foreign/flag vessels calling to US ports; and
(p) developing of standards and curricula for maritime security professional training[155].

It is estimated by the US Coast Guard that the cost involving the compliance and implementation of MTSA 2002 and its related provisions to be approximately USD1.125billion initially and USD699million every year thereafter or USD5.45billion for the next 10 years[156].

[155] Kumar S. N., Vellenga D., "Port Security Costs in the U.S.: a Public Policy Dilemma" – In *International Maritime Economists Annual Conference 2004*, IAME Izmir 2004, Conference Proceedings (pp. 35-44), Izmir: Dokuz Eylul Publications.

3.5 Initiatives – a summing up

In summing up a workable policy environment post 9/11, it is proven that it is harder than said due to little information or data that would be an impetus to have practical policy decision. Attacks on World Trade Centre and the Pentagon were not remote attacks where organized terrorist groups with immense financial resources, intensive training and the most important commitment have carried out those attacks. Attacks against the maritime interests similar to 9/11 have been formulated on the "testable hypotheses" due to sheer volume and international nature of shipping industry itself as well as the possible consequences of such attacks[157].

[156] "New Port Security Regulations will require Billions in Investment" – In *Port Technology International*, 21st ed., spring 2004, London: Henley Publishing Ltd., p. 152.
[157] Kerr W. A., "Homeland Security and the Rules of International Trade" – In *the Estey Journal of International Law and Trade Policy*, vol. 5, no. 1 2004, pp. 1-4.

CHAPTER 4

FACILITATION OF INTERNATIONAL MARITIME TRAFFIC

"*Recognizing that the Convention on the Facilitation on Maritime Traffic, 1965, as amended, provides that foreign crew members shall be allowed ashore by the public authorities while the ship on which they arrive is in port, provided that the formalities on arrival of the ship have been fulfilled and the public authorities have no reason to refuse permission to come ashore for reasons of public health, public safety or public order, Contracting Governments, when approving ship and port facility security plans, shall pay due cognizance to the fact that ship's personnel live and work on the vessel and need shore leave and access to shore-based seafarer welfare facilities, including medical care.*"

- Preamble 11 of the ISPS Code

4.1 Introduction

A ships master once recounted his encounters with time-consuming bureaucratic procedures in the following words[158]:

Entering the port of XXX from an international voyage, the shipmaster heaves a sigh relief on having safely accomplished the voyage and philosophically awaits the arrival of the harbor authorities. However, besides the traditional glass of cheer normally provided, the port health, immigration and customs

officers, the harbor master, harbor police, terminal representative and clerk, duly board the ship and demand of our poor shipmaster no fewer than 109 pieces of paper, including nearly 50 separate documents, before they depart. Bills, lists manifests, summaries declarations and statements; and no passenger can disembark nor can a cargo be loaded or discharged until the correct forms have been produced to the right person. Up to 12 copies of a single document are demanded and it is no use for our shipmaster to inform the police that the immigration and customs officers have taken all his crew lists – they have to be given their own copies.

However, our shipmaster is an expert paper shuffler and all goes well at the port of 'XXX'. The ship clears following the production of even more paper and turns south for port 'YYY' where, he reflects with relief, a mere 100 pieces of paper with a trivial 33 documents will be required. Regrettably the authorities at port 'YYY' refuse to accept any of the forms prepared for port 'XXX' since their format differs and the form filling is required all over again.

All this is very humorous until the utter waste of labor is taken into account. 'XXX' and 'YYY' are merely given as examples, perhaps worse than most, but are indicative of the hundreds of man-hours wasted by increasingly expansive staff in satisfying the burgeoning appetite of bureaucrats throughout the world.

[158] This humorous classic account of a problem shown the dilemma is experienced by the seafarers in ports that fail to adhere to the facilitation procedures.

> Frequently through the unfamiliarity with the documentation demanded in foreign ports, expansive delays occur, tides are lost and stevedores stand idle awaiting the march of paper.[159]

Precedents, conventions and regulations essentially control most human activities, shipping included. These are of utmost importance in order to ensure the safe and secure environment for any of those activities to flourish – but there were cases where these regulations cause more unnecessary and significant burden on the activities that it supposed to control. Due to its global nature, international maritime transport also becomes the victim of the above problem. Various countries exclusively developed excessive control and 'inefficient' customs procedures practices as well as immigration and other standards totally independent of each other. Coupled with that, the prevalent monopoly of service providers in key entry points in importing countries adds to the complication of the matters[160]. This resulted in ships calling at different countries during the voyage expecting to be presented with a series of forms to fill in, which usually ask for almost the same information but to some extent in a different way[161]. For example, in Chittagong port, the second largest port of Bangladesh, shipmaster has to fill in 30 different forms compared with seven, say, in Malaysia[162].

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[159] Felding S. E., "Introduction of the Convention on Facilitation of International Maritime Transport, 1965, as amended" – In *Seminar on Facilitation of International Maritime Traffic*, London: IMO, 1989, pp. 3-4.

[160] Messerlin P. A. and Zarrouk J., "Trade Facilitation: Technical Regulations and Customs Procedures" – In *the World Economy*, vol. 23, issue 2, April 2002, pp. 578-580, available online at <http://www.blackwell-synergy.com/doi/pdf/10.1111/1467-9701-00291> (Accessed on 21 August 2006)

[161] UNCTAD, "*Compendium of Trade Facilitation Recommendations*", Geneva: United Nations Publication, 1994, p. 3.

[162] Transparency International, the Berlin-based watchdog group named this port as the most corrupt port in the world for the fifth year in a row. Apart from being corrupt and inefficient, it is also wrestled with red tape. Further reading; see *The Sea*, Issue 179, Jan/Feb 2006, p. 3.

The sheer number of documents further raised another concern, i.e. the format of each document[163]. From one port to another, the forms varied from one neighboring port to the other ports of calls. The varying degree of forms and procedures that needs to be adhered to add burden to shipmasters and crew. It should be further noted that paperwork and shipping documentation grew in tandem with shipping and trade development in the early part of the twentieth century. By 1950s, it was no longer a matter of inconvenience but has become a threat. The complication was further aggravated when the shipmasters had to deal with local language translation, consular visa requirements, authenticity of the information that the documents contain, etc. Finally, of course, these painstaking and time consumption procedures have led to delays or demurrage costs for ships[164].

The US Pacific Coast shipping industry in co-operation with the School of World Business, San Francisco State College, California produced a report entitled *Merchant Shipping on a Sea of Red Tape* on 1 April 1959. The report sought to compare the documentary requirements and procedures of the two most important transport modes; international shipping and international airline industry. It is found that international shipping is in dire need to be unchained of its "*self-inflicted bureaucracy*". Whilst aircraft was only required to have three or four documents to land in foreign countries, ships need no fewer than twenty-two, thirty-two or at the most, forty-six separate documents to be in ports. Thus, the report concluded that:-

(a) ships documentation need to be simplified urgently and the demands of individual Governments had to be put in clear perspective with the overall welfare of merchant shipping;

[163] Kouassivi A. M. F. (1997), *Facilitation of Maritime Transport Document Procedures: a Case Study of Benin* – Master of Science Dissertation, World Maritime University, Malmo, Sweden, p. 7.
[164] *Ibid* UNCTAD, pp. 4 – 5.

(b) the cost saving due to unification, simplification and standardization[165] to both industry and Governments were significant to motivate immediate actions;

(c) establishment of ICAO and its experience to regulate airlines business could provide a pattern for action; and

(d) to achieve successful outcome of documentation simplification, Governments have to co-operate among themselves[166].

A Workshop on Standardization of International Travel and Transport Documents held in Beijing in 1993 also found that the enormous amount of paperwork is needed to import or export consignments in ports in South Asia[167] as shown in the following Table 2.

Table 3: Number of paperwork to import and export consignment in South Asia

	India	Nepal	Pakistan
Types of documents	29	83	15
No. of copies	118	102	108
No. of signatures required	256	113	56
Manpower required	7	22	11
Estimate costs of procedures	10 percent of consignments value		

Source: UNESCAP report

[165] Unification – the process of combining several similar documents whenever possible; Simplification – the process of elimination (or at least modified) of superfluous data and unnecessary documents; and standardization – the development of definite size, format and language for documents designed for a specific purpose and use, and their general acceptance by and use throughout the industry.

[166] See Focus of IMO December 1996, "*Cutting Red Tape: IMO and the Facilitation of Maritime Travel and Transport*", available online at <http://www.imo.org/includes/blastDataonly.asp/data_id%3D7998/FALFocus1996.pdf> (Accessed on 30 July 2006)

[167] This is based on the report "Trade Facilitation and Electronic Commerce as Catalysts for Integration" done by United Nations Economic and Social Commission for Asia and the Pacific. Available online at <http://www.unescap.org/chap4_2054.pdf> (Accessed on 7 August 2006)

4.2 Facilitation and IMO

The need to facilitate maritime transportation has long been recognized since the inception of IMCO[168] back in 1959. Maritime nations, deciding that the issue of facilitation of international maritime transport could not be allowed to deteriorate further, had turned to IMCO for solution to this ever pressing matter[169]. Thus, an international conference on Facilitation of Maritime Travel and Transport was convened in 1965 at IMCO and attended by representatives of 68 countries, 38 of them being developing countries and 15 intergovernmental and non-governmental organizations. This conference concluded that "formalities, documentation, and procedures on arrival and departure of ships should be simplified and public authorities should only require ships calling at their ports to produce only eight listed documents in Standard 2.1".

The conference adopted the FAL Convention on 9 April 1965 and it entered into force almost two years after its inauguration, i.e. on 5 March 1967. To date, there are 107 Contracting Governments to the Convention representing 68.67% of world tonnage[170]. The list of Contracting Governments is as attached in Appendix C. The Convention has also endorsed the creation of the FAL Committee which since its initiation in 1973 met annually (with the exception of 2001), i.e. 33 times, the last being from 3-7 July 2006.

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[168] The name of the organization was changed to "International Maritime Organization" (IMO) by virtue of the amendments to the Organization's Convention, which entered into force on 22 May 1982.
[169] The real starting point of the idea of facilitation and solving the problem pertaining to voyage of ships, their arrival, stay and departure from ports was in the forum of the Organization of American States (OAS) which took place at the Inter-American ports and harbours conference held at San Jose, Costa Rica in 1956. The conference issued a declaration aimed at the simplification and standardization of port formalities and documentation requirements.
[170] As of 30 June 2006. Further information, <http://www.imo.org/includes/blastDataOnly.asp/data_id%3D14919/status.xls> (Accessed on 7 August 2006)

The Convention and its annexes trimmed down the numbers of documents required by the authorities at the port to eight[171]. IMO, in particular reference to the work of the FAL Committee, developed six A4 Standard Forms known as IMO Model Forms[172] (as in Appendix D). These forms set down, among others, formalities and practices, the status/purpose of a form, copies of each document to be presented by ship owners at the arrival and departure of a ship[173]. The forms are:-

(a) IMO general declaration – provides all important information about the ship;

(b) cargo declaration - information about the cargo on board;

(c) crew list declaration – information about the who's who in the crew member;

(d) passengers list declaration – information about the passengers (if any) on board;

(e) ships' stores declaration – information about the ship's stores; and

(f) crew's effects declaration – information on the personal effects of the crew[174].

The other two documents are those, which are required by the Universal Postal Convention and International Health Regulations. It should be further noted that the first four declaration enumerated above constitute the maximum information necessary and the other subsequent two incorporated the agreed essential minimum information requirements.

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[171] See FAL.2/Circ. 87 dated 17 December 2004 on the "*Revised List of Certificates and Documents required to be carried on board*". Available online at: <http://www.imo.org/includes/blastDataOnly.asp/data_id%3D11516/87.pdf> (Accessed on 9 August 2006)

[172] The forms are produced in Appendix 1 of the Convention.

[173] Alorsor G. E. (1996), *Simplification of Maritime Transport Procedures and Documentation: a Case Study for Ghana* – Master of Science Dissertation, World Maritime University, Malmo, Sweden, p. 18.

[174] Ibid Kouassivi, p. 8.

It should be noted that facilitation measures pertaining to shipping, in general, are applicable to all parts of the world and comprise of two main closely interrelated elements. They are:-

(a) Facilitation in shipping documentation – IMO[175]

(b) Facilitation in trade documentation – UNCTAD

4.3 Objectives and the development of the Convention

Overall, the objectives leading to the development of this so-called co-operative treaty are "to prevent unnecessary delays in maritime traffic, to aid cooperation between Governments, and to secure the highest practicable degree of uniformity in formalities and other procedures. In particular, the Convention reduces to just eight the number of declarations which can be required by public authorities"[176].

Briefly, those objectives can be achieved by undertaking the following:-

(a) Simplification – to adopt all appropriate measures to facilitate and expedite international maritime traffic and to prevent unnecessary delays to ships, and persons and property on board;

(b) Unification – to co-operate in the formulation and application of measures on the facilitation of arrival, stay and departure of ships combining similar documents;

(c) Standardization – to develop a general format in securing the highest practicable degree of uniformity in formalities, documentary requirements and procedures in all matters in which to facilitate and improve international maritime traffic and keep to a minimum any alterations in formalities, documentary requirements and procedures necessary to meet special requirements of a domestic nature: and

[175] The dissertation paper will only address this first element. In order to avoid duplication of work, IMO has agreed with UNCTAD to deal with works relating to shipping and trade documentation between IMO and UNCTAD respectively.

[176] See <http://www.imo.org/home.asp> (Accessed on 20 April 2006)

(d) Harmonization – to co-operate and assist each other through the IMO in matters relating to formalities, documentary requirements and procedures, as well as their application to international maritime traffic[177].

4.4 The FAL Convention revisited

The FAL Convention consists of[178]:-

(a) Articles i.e. the main body of the Convention itself;

There are 15 articles to the Convention, and the most important articles are as following:-

(i) Article I – In this article, the Contracting Governments give commitment to adopt all appropriate measures to "*facilitate and expedite international maritime traffic and to prevent unnecessary delays to ships and persons and property on board*";

(ii) Article II talks about the commitment of the Contracting Governments to "co-operate", "in the formulation and application of measures for the facilitation of the arrival, stay and departure of ships". And as many other IMO conventions, this Convention also do not apply to warships and pleasure yachts;

(iii) Article III entails that the Contracting Governments will "*co-operate in securing the highest degree of uniformity in formalities, documentary requirements and procedures in all matters*" in order to ensure the smooth flowing of international maritime traffic. Any alterations to such "*formalities, documentary requirements and procedures*" deem required to meet special domestic requirements are to be done at the minimum levels so that it would not hamper the smooth flow of maritime traffic;

[177] Vormawah B., "Introduction to Facilitation" – In *Proceedings of the Seminar on Ship/Port Interface and Trade Facilitation*, 27-31 October 2003, Suva, Fiji Islands. Fiji Islands: Quality Print Ltd., p.24.

(iv) Article IV allows the Contracting Governments to work among them on achieving the objectives of the Convention, i.e. ensure the smooth flowing of maritime trade, or to work with the IMO as an alternative;

(v) Article V, paragraph (2) states the provision that by being a State Party to this Convention does not mean that any Contracting Governments shall not apply any measures it deems necessary to "*preserve public morality, order and security or to prevent the introduction or spread of disease or pests affecting public health, animals and plants*";

(vi) Article VI defines what constitute "*Standards*" and "*Recommended Practices*". "*Standard are those measures the uniform application of which by Contracting Governments in accordance with the Convention is necessary and practicable in order to facilitate international maritime traffic*"; and "*Recommended Practices are those measures the application of which Contracting Governments is desirable in order to facilitate international maritime traffic*";

(vii) Article VII stipulates the methods of making amendments to the annex to the Convention;

(viii) Article VIII (1) of the FAL Convention provides that when the Contracting Government that "*find it impracticable to comply with any standard by bringing its own formalities, documentary requirements or procedures into full accord with it or which deems it necessary for special reasons to adopt formalities, documentary requirements or procedures differing from the Standard, shall inform the Secretary General and notify him of the differences between its own practice and such Standard*". The same procedure applies to new or amended Standards. The text of selected

[178] IMO, *Convention on Facilitation of International Maritime Traffic, 1965*, 7th ed., London: IMO Publication, 1998.

notifications received from Contracting Governments in compliance with this provision is as attached in Annexure; and

(ix) Article IX stipulates the method of making revisions and amendments to the Convention.

(b) Consolidated text of the annex to the Convention;

In almost all technical conventions, for example MARPOL 73/78 or SOLAS 74, the annexes constitute the 'meat' of those conventions[179] without which the conventions would not be comprehensive. In FAL Convention, the annexes were the place where the Standards and Recommended Practices on formalities, documentary requirements and procedures were thoroughly explained. The annexes have six sections as following: -

(i) Section 1 – Definitions and general provisions;
(ii) Section 2 – Arrival, Stay and Departure of the Ship;
(iii) Section 3 – Arrival and Departure of Persons;
(iv) Section 4 – Arrival, Stay and Departure of Cargo and other Articles;
(v) Section 5 – Public Health and Quarantine, Including Sanitary Measures for Animals and Plants; and
(vi) Miscellaneous Provisions.

(c) Six Resolutions adopted by the Conference;

(i) Resolution 1 – Encouragement of acceptances of and accession to the Convention
(ii) Resolution 2 – Acceptance of Standards
(iii) Resolution 3 – The creation of national and regional committees
(iv) Resolution 4 – Establishment of an ad hoc working group
(v) Resolution 5 – Future work on facilitation
(vi) Resolution 6 – Facilitation of international travel and tourism

[179] Mukherjee P.K, *Class Lecture of Implementation of Maritime Conventions* - delivered at the World Maritime University, Malmo, Sweden.

(d) Resolution A.628 (15) adopted by the Assembly on the "Application of automatic data processing (ADP) as provided for in the Convention on Facilitation of International Maritime Traffic, 1965, as amended"; and

(e) Appendices 1 – 6 provide additional information on facilitation requirements as following: -

(i) Appendix 1 – IMO FAL Forms

(ii) Appendix 2 – Simpler shipping marks

(iii) Appendix 3 – IMDG Code: Documentation of dangerous goods shipments

(iv) Appendix 4 – Format of the letter referred to in Standard 3.3.1

(v) Appendix 5 – Certificates and documents required to be carried on board ships

(vi) Appendix 6 – Supplement relating to the annex to the Convention: Differences between the national practices of Contracting Governments and the Standards and Recommended Practices contained in the annex as notified to IMO.

4.5 Amendments to FAL Convention

Starting 1973 and eventually since 1 January 1987, a series of amendments in addition to various Resolutions were adopted to bring the Convention up-to-date with the present international situation especially in relation to the introduction of information communication technology. This is the reason why most of the time; the Convention was referred to as the Convention on Facilitation International Maritime Traffic, 1965, as amended. Among the most important amendments[180] are: -

[180] See <http://www.imo.org/home.asp (Facilitation)> (Accessed on 28 July 2006)

4.5.1 The 1973 Amendments

Before this 1973 amendment was incorporated, any amendment to the Convention required two-thirds acceptance of the Contracting Governments to enter into force. The increasing number of Contracting Governments makes it difficult to achieve the required two-thirds acceptance. Thus, to solve the problem, the 'tacit acceptance' was introduced where any amendment to the FAL Convention 1965 will enter into force on a predetermined date as long as it is not explicitly rejected by certain number or percentage of the Contracting Governments[181]. However, this 1973 amendment, bound by the previous original amendment procedure took more than ten years i.e. on 2 June 1984 to enter into force. During this period of ten years, there was no other new proposal for amendments undertaken by the FAL Committee. Subsequently, as soon as this amendment entered into force, the FAL Committee then met to do all the other necessary and pending '*package of amendments*' to the Convention to 'reflect even current practice'.

4.5.2 The 1986 Amendments

The 1986 Amendments was aimed at permitting the use of automatic data processing (ADP) and other modern communications techniques. Entering into force on 1 October 1986, it allows the usage of EDI, which basically means '*computers talk to each other directly*'. The introduction of EDI increases business efficiency as well greater flexibility and faster access to information. Total number of staff required doing certain tasks, like keying-in data and the need for constantly making telephone calls, such as to track the whereabouts of cargo, were reduced. Despite its advantages, EDI is not as popular as it is forecasted to be. One of the apparent reasons is that lack of common language and standards, which are absolutely required to allow the

[181] This new amendment procedure is being incorporated into most of the IMO technical conventions for instance MARPOL 73/78. Further reading on 'tacit acceptance procedures' are available at <http://www.imo.org/Conventions/contents.asp?header=false&topic_id=148&doc_id=637#tacit> (Accessed on 25 July 2006)

computers to 'talk' directly[182]. But this setback was later being resolved by the introduction of EDIFACT[183], which universalized and standardized computer language in 1987[184]. Commencing then, shipping companies as well as others in the industry have properly accepted EDI, using EDIFACT and the European customs authorities agreed on the EDIFACT standard paperless trading.

4.5.3 The 1987 Amendments

Entered in force 1 January 1989, the Convention was amended to upgrade a number of recommended practices to standards. Standard 2.3.4 requires public authorities to accept a cargo manifest instead of the Cargo Declaration and standard 2.6.1 makes the contents of Crew List simpler where public authorities shall not call for more than the name and nationality of the ship, family name, given names, rank or rating, date and place of birth, nature and number of identity document, port and date of arrival, and arriving from. There are other amendments also which address the issue of facilitating the arrival and departure of ships engaged in disaster relief work, pollution combating operations and similar activities, which undoubtedly required speedy operations.

4.5.4 The May 1990 Amendments

These amendments entered into force on 1 September 1991, also under the ambit of tacit acceptance procedure. These amendments revised and added several

[182] Felding S. E., "The Use of Electronic Data Interchange for Clearance Purpose" – In *Seminar on Facilitation of International Maritime Traffic*, London: IMO, 1989, pp. 3-4.
[183] Electronic Data Interchange for Administration, Commerce and Transport agreed during a meeting organised by the United Nations. Further reading, see:
<http://www.unece.org/trade/untdid/sitemap.htm> (Accessed on 26 July 2006)
[184] Hayes T.P., "Customs and Trade Facilitation in an Electronic Age" – In *World Wide Shipping*, vol. 52, no. 4, (1989), pp. 15 – 18.

recommended practices including the issue of stowaways[185] and the traffic flow arrangements.

4.5.5 The 1992 Amendments

The 1992 amendments incorporated an addition of a new section dealing with EDP and EDI and other changes with regards to private gift packages and trade samples, consular formalities and fees, submission of pre-import information, clearance of specialized equipment and forged documents. Entered into force on 1 September 1993, the amendments also restructured the annex of the Convention to bring it in sequence with the subsequent provisions of the ICAO Convention.

4.5.6 The 1993 amendments

Several amendments were undertaken in 1993, which eventually entered into force on 1 June 1994. Noting the complication faced by the masters and owners in disembarking stowaways from ships, the Convention has been amended to handle the issue with regard to stowaways[186].

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[185] A stowaway is a person who is secreted on a ship, or in cargo which is subsequently loaded on the ship, without the consent of the shipowner or the master or any other responsible person and who is detected on board the ship after it has departed from a port, or in the cargo while unloading it in the port of arrival, and is reported as a stowaway by the master to the appropriate authorities. For instance, there were 545 reported cases of stowaway cases involving 2253 stowaways in 1999 (Average number per incident was four). Latest reports on stowaways' incidents to IMO can be found at the IMO website: <http://www.imo.org/includes/blastDataOnly.asp/data_id%3D14408/94.pdf > (Accessed on 7 August 2006)

[186] This amendment can be considered a landmark achievement of the FAL Convention, as the issue of stowaways has not been resolved internationally as there is no single international convention that is in force to deal with it. The 1957 International Convention Relating to Stowaways was adopted in Brussels during a conference but it has never secured adequate signatories to enable it to enter into force. Looking at the time frame of this almost 60 years Convention, it is very unlikely that it will ever enter into force.

4.5.7 The 2002 Amendments

This is one of the most pertinent amendments, which was adopted nearly five months, i.e. 10 January 2002 and entered into force on 1 May 2003, after the 9/11 attacks against the U.S. The amendments further add new standards and recommended practices for dealing with stowaways. Another amendment is also undertaken to FAL Form 7 – Dangerous Goods Manifest[187], where it is reflected as a basic document for public authorities to be informed on the dangerous goods on board when checking on those dangerous goods on board ships. This new FAL Form adds up the number of standard forms used by ships on arrival at ports to seven, i.e. FAL Form 1 – General Declaration, FAL Form 2 – Cargo Declaration, FAL Form 3 – Ship's Stores Declaration, FAL Form 4 – Crew's Effects Declaration, FAL Form 5 – Crew List, FAL Form 6 – Passenger List (if any) and FAL Form 7 – the new Dangerous Goods Manifest.

4.5.8 The 2005 Amendments

Intended to modernize the Convention, the 2005 amendments created on 7 July 2005 and will enter into force on 1 November 2006 include the following: -

(a) Recommended practices: -

(i) for public authorities to have necessary mechanism in place to ensure that information relayed prior to arrival and departure could be utilized towards facilitation and thus expediting the release and clearance of cargo and crew; and

(ii) An establishment of a focal point so that all required information could be directed to instead of sending to several points, which means duplication.

(b) information to be transmitted electronically for expedited communication and to save paper;

(c) security related measures were introduced, with special reference to ISPS Code and SOLAS Chapter XI-2, in the Standards and Recommended Practices; and

(d) IMO Standardized FAL Forms (1 to 7) to be amended.

4.6 Other international conventions on facilitation

UNCTAD together with other international organizations especially the WCO, have accepted a number of facilitation-oriented agreements and conventions, among them are:-

4.6.1 International Convention on the Simplification and Harmonization of Customs Procedures, 1973 (Kyoto Convention)

As said before, among the most important problem the shipping industry is facing are those related to customs procedures and documentations. It had been noted that the movements of goods had become expansive to both carriers and shippers because of excessive customs procedures and documentations, which were having some serious negative impacts on the smooth flowing of the international trade. Thus, in order to solve this problem, the CCoC[188] drafted and adopted the International Convention on the Simplification and Harmonization of Customs Procedures, which is also known as the Kyoto Convention. It came into force on September 1975 and number of contracting parties as of 1 August 2006 is 50 countries as Appendix F.[189]

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[187] The manifest includes references to the relevant provisions of SOLAS 1974 Chapter VII (Carriage of Dangerous Good) and the International Maritime Dangerous Goods (IMDG) Code, which require the completion of a Dangerous Goods List or Manifest.
[188] Customs Cooperation Council later changed its name to World Customs Organization.
[189] See <http://www.unece.org/trade/kyoto/ky-01-e0.htm> (Accessed on 30 July 2006)

This Convention was divided into two main parts; 19 Articles and sets of annexes. As most of other technical convention, the articles of this Convention only set out the scope, structure, and administrative matters. The most important is the annexes of the Convention, which detailed out separate customs procedures and gave guidance for simplifying and harmonizing national customs formalities[190]. They initially cover the following areas: - aimed at the "reduction of excessive customs procedures" by "simplifying and harmonizing" the local customs traditions; among others:-

(a) Customs formalities prior to the lodgment of goods declaration;

(b) Clearance of imported goods for home use;

(c) Origin of goods;

(d) Exportation;

(e) Procedures for suspension of payment of duty;

(f) Special customs procedures; and

(g) Customs external relations[191].

Being seen as one of the most useful customs procedures, the Kyoto Convention has been an instrument of modernization to the customs procedures worldwide. Series of amendments to the Convention have been undertaken to bring it up-to-date to the current situation. The new revised Kyoto Convention has entered into force on 3 February 2006 and it is widely regarded as a "blueprint for modern and efficient customs procedures in the 21st Century[192].

[190] *Ibid* Alorsor, pp. 49-51.
[191] *Ibid* Kouassivi, pp. 9-10.
[192] Based on the press release by WCO, Brussels, 3 August 2006. For more information, see WCO website: <http://www.wcoomd.org/ie/En/en.html> (Accessed on 7 August2006)

4.6.2 Customs Convention on Containers, 1972

Chapter 2 has enumerated in detail on the introduction of containerization, which has revolutionized the shipping industry. Though widely welcomed as one of the most efficient means of carrying general cargo, containerization was always the subject of a tug of war between both shipowners and customs authorities[193]. An extension to the world wide use of the first customs container drawn in 1956 by the members off Economic Community of Europe (ECE), the CCC 72 was also being placed under the administration of CCoC. Objectives of CCC 72 were to develop and facilitate international carriage of containers following the introduction of the containerization. As said earlier, it should be noted that containers have been causing a rift between customs whether to regard them as part of the cargo or separate unit. Different way of treating them lead to different kinds of implication; economically and legally. Thus the Convention sought to solve this kind of misinterpretation so that the world shipping is not being slowed down with this simple yet important matter.

4.6.3 International Convention on Multimodal Transport of Goods, 1982

The United Nations Convention on Multimodal Transport of Goods, 1982 was adopted on 24 May 1980[194]. Not yet entered into force and the writer doubts that it will eventually enter into force based on the fact that it has been adopted more than 26 years ago, the Convention did provide some basis on the facilitation of international maritime traffic, where it provides, among others, "*the need to stimulate the development of* ***smooth, economic and efficient*** *multimodal transport service adequate to the requirements of the trade concerned*" and "*the need to* ***facilitate***

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[193] See <http://www.unece.org/trans/conventn/ccc_1972e.pdf#search='customs%20convention%20on%20containers> (Accessed on 7 August 2006)

[194] The Convention was adopted following the United Nations Conference on the Convention on International Multimodal Transport, held in Geneva from 12 to 30 November 1979 and from 8 to 24 May 1980. For the complete text of the Convention, see <http://www.jus.uio.no/lm/un.multimodal.transport.1980/doc.html> (Accessed on 9 Aug 2006)

customs procedures *with the consideration to the problems of transit countries*"[195]. A major objective of the multimodal transport operations is to facilitate door-to-door transport of goods on a single transport document. It makes provisions for simpler customs procedures due to one single transport document. It is seen as "*manifestation of the international community's effort to make all countries enjoy the benefits of technological advances being made in transport and distribution"*[196].

[195] Selected preamble of the Convention on International Multimodal Transport, 1982.
[196] *Ibid* Alorsor, p. 54.

CHAPTER 5

THE TWIN GOALS: SECURITY AND FACILITATION

"Within a few days, as we saw the effect of Level One alert at our borders, I also realised that we needed to develop a strategy to secure the movement of trade to the U.S., but to do so without unduly impeding the flow of trade that is so important to our, and the world's, economy. That is to say, we needed a strategy to accomplish what I have referred to as our Twin Goals: Security AND Facilitation"

- Robert C. Bonner,
Former Commissioner, US Customs and Border Protection

5.1 Introduction

The writer has extensively discussed the risks of terrorist related activities that exist in, around and relating to the entire network of the supply chain in Chapter 2. As said before, the supply chain can be broadly defined as all the processes and procedures undertaken to ensure that goods (and services) reach its final destination; i.e. end users or consumers who would eventually end up paying for it. There are undoubtedly risks along these supply chains and the writer has also discussed in details in Chapter 3 on the worldwide measures undertaken by the IMO and the biggest trading nation; the US to mitigate such risks.

In this fifth chapter, the writer seeks to examine positive and negative relationships between those maritime security measures and the quest to facilitate the efficiency of international maritime trade; and then try to look for some acceptable balances of

both in order not to be prejudicial of one against the other. The importance of '*smooth movement of commodities from one port to the other has been the real basis for peaceful development of economies from ancient time till present day*' must never be disregard[197].

It should be noted, as said before, prior to Sept. 11, 2001, stakeholders when discussing about freight transportation security had primarily focused on means and mechanisms on how to control those freights of thefts and pilferage as well as to reduce the illegal introduction and entry of contraband items such as drugs, firearms, illegal immigrants, etc. into the country. Save for 9/11 catastrophe has altered the whole paradigm of this security outlook. Immediately after the attack, there were some 'acceptable and inevitable' disruptions of trade flow, yet additional friction trading cost due to tighter security measures seemingly affected trade worldwide[198].

One of them is freight security, which is now been viewed as to secure that freight from falling into the hands of terrorists either to use it as an arsenal of attacks or utilise it to finance their operations. Nevertheless, do the security concerns would be a trade-off to the flourishing international maritime trade that we are having now. There were also rising concerns over the financial costs versus the security benefits and its effect of trade efficiency[199]. The Booz Allen Hamilton security war game mentioned earlier in Chapter 2 clearly unfolded the challenges of striking an intricate balance between security and efficiency[200]. Accordingly, how best can we achieve the dual objectives of "global maritime security" and "global trade facilitation and efficiency".

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[197] Inoue S., "Port Security and Trade Facilitation" – In *Shipping Finance Annual* 2004/2005, Crisell M. (ed.), United Kingdom: Wyndeham Grange Ltd, p. 47.
[198] OECD, no. 35, June 2005, *The Impact of Sept. 11 on Trade*, available online at <http://www.oecdwash.org/NEWS/LOCAL/oecdwash-jun2002.pdf#search='the%20impact%20of%20the%20terrorist%20attacks%20of%2011%20september%202001%20on%20international%20trading%20and%20transport%20activities> (Accessed on 20 August 2006)
[199] *Ibid* Shie, p. 24.
[200] Starr R. & Bahr N., "Meeting the Growing Port Security Needs of a more Dangerous World" – In *Port Technology International*, 21st ed., spring 2004, London: Henley Publishing Ltd., p. 171.

Stakeholders be it public or private believe that with the right strategies and tactics, security related risks can and able to be reduced and simultaneously contributed greatly to the productivity and effectiveness of the whole network of supply chain. But what are then the right strategies and tactics? How to deal with all these security challenges effectively without jeopardizing the importance of allowing the free flow of the legitimate trade. In other simple words, how can we best stop illegitimate trade without causing any disruption (or at least inflicting minimal problem) to genuine trade? H. L. Lee and M. Wolfe in their article entitled "*Supply Chain without Tears*" speak in detail of the feasible means to address the issue of supply chain security while having in mind the need to facilitate the international maritime trade. Both Lee and Wolfe suggested the adoption of the "***1970's and 1980's Quality Revolution***", the "***Win-win Situation***" and the application of both concepts into the supply chain security to achieve the dual objectives of supply chain security and supply chain efficiency[201].

5.2 The 1970's and 1980's Quality Revolution

Back in 1970's and the 80's, the drive for quality started as the "*best way of ensuring customer loyalty, the best defence against foreign competition and the only way to secure continuous growth and profits in difficult market conditions*"[202]. This quality movement gave the notion that defects (not doing things right at the first place) can be very costly to a company[203]. Defective products (or unsatisfactory services) in the market can lead to yet another failures which usually termed as "external failure costs or non-conformance costs", i.e. unable to process customer's expectation, increased liability, products recall, repair, payment of damages, affecting negatively

[201] Lee H. L. and Wolfe M., "Supply Chain without Tears" – In *Supply Chain Management Review*, January/February 2003, pp 12-20. Available online at: <http://www.maritimesecurityexpo.com/whitepaperarticles/Security%20Without%20Tears%20SCM0333security.pdf> (Accessed on 14 August 2006).

[202] Munro-Faure L and Munro-Faure M., *Implementing Total Quality Management*, London: Pitman Publishing, 1992, p. 1.

on any future sales, and even in some instances, might cause catastrophic effects to the society. All these associated costs being put together would eventually end up being higher than the cost of the product itself[204]. Thus, the quest towards achieving higher improvement of quality becomes paramount[205]. Though requiring "*patience and continuous, steady effort*"[206], industries soon embrace into what is usually termed as TQM. It is a process of ensuring:

> The maximum effectiveness and efficiency of everything that is done within on organization. It provides market and sector leadership, by the establishment of processes and systems which promote excellence; prevent errors and waste without duplication, and ensures that every aspect of the organization is aligned to the needs of both the external and internal customer[207].

To achieve high quality standards, a total organizational focus must be adopted. Everybody in an organization must know the imperativeness of quality. It is the sole responsibility of the quality control department or quality supervisor. It should be regarded as the responsibility of all in the organization. The best way to ensure high quality in the first instance is to prevent defect from happening at the time the product (or service) being produced. It is more like a preventive strategy, which

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[203] *Ibid,* Munro-Faure L and Munro-Faure M, pp. 26-32.
[204] According to Munro-Faure L and Munro-Faure M, these associated costs of product/service failures can amount to 25 percent of actual turnover.
[205] Customers define quality. It is a key focal point of successful business nowadays. As a manufacturer (or service provider), you have to listen to customer's requirements and then produce it at minimal cost. This has been the driving force of the Japanese industry since the end of World War II and they have proven that they are as superior as their Western counterparts. Few books illustrated on the Japanese drive for quality contributed to their success, among others, Munro-Faure L and Munro-Faure M., *Implementing Total Quality Management*, Cohen S. and Brand R., *Total Quality Management in Government: a Practical Guide for the Real World,* Joyce M. E., *How to Lead your Business beyond TQM: Making World Class Performance a Reality*.
[206] Cohen S. and Brand R., *Total Quality Management in Government: a Practical Guide for the Real World,* San Francisco: Jossey-Bass Publishers, 1993, p. 8

emphasizes, *inter alia*, on education, design improvements and accountability of the total company. Moving from there, we can espouse the same principle in adapting supply chain security measures. Security should be imbedded into the total organization and ensure that it is the responsibility of everybody; top to bottom or vice versa along the supply chain. By so doing, security related breaches can be prevented and will eventually contribute to a more cost effective preventive, controlling and improvement aspects. This will eventually create more confidence to the supply chain security, which will contribute greatly to the free flow of maritime trade. Table 3 below illustrates in brief on key aspects of quality and how best can it be fitted into the supply chain security initiatives.

Table 4: Quality and Supply Chain Security

Quality and Supply Chain Security	
Quality	**Security Initiatives**
Defects are very costly	Security gaps create big risks
Total Quality Management	Involvement gaps of all stakeholders
Emphasis on prevention	C-TPAT, sealing and anti-tamper technologies
Source inspection	CSI and source inspection
Process control	Automated chain of custody
Identify, track, and improve quality	Container tracking and total visibility
Root cause analysis	Profiling system for shipments, shipper, carriers, trade routes
"Quality is free"	Higher productivity with supply chain security and confidence

Source: Lee and Wolfe

[207] Joyce M. E., *How to Lead your Business beyond TQM: Making World Class Performance a Reality*, London: Pitman Publishing, 1995, p. 4

5.3 The Win-win situation

Towards realising the "win-win situation" where security measures and trace facilitation could be achieved hand in hand, it is feasible to also look both in the light of maintaining quality. In security measures implementation and trade facilitation aspects, there are two main actors who play the most important roles. They are more often than not intersected with one another. "What do security officials actually require from supply chain managers and vice versa"? Ideally, having those responsible for facilitation of maritime trade thinking of security and those responsible for security thinking about facilitation would result an improved efforts directed at ensuring safe, orderly and efficient maritime transport. Those holding responsibilities of both security and facilitation such as immigration, customs authorities and the coast guards must be able to have a broad overview and must consistently aware of both aspects; security and facilitation in addition to their primary roles. This is where the most important perspectives come into pictures: security measures perspective and trade facilitation and efficiency perspective. The maritime security initiatives discussed in the previous chapter have given us idea on what the "security managers" actually required to do; i.e. protecting the ships and cargo being abused to facilitate the work of the terrorists. And in order to guarantee such elements not being abused to materialise the terrorists' ends, security managers need to ensure that these elements are protected by undertaking the following: -

(a) ensure the integrity of conveyance loading, documentation and sealing;
(b) reduce significantly the risk of tampering in transit which also ultimately means that the ships and crew on board need to be secured; and
(c) Timely information about shipment; especially in this era of e-business.

The writer has also discussed in the previous chapter the need to facilitate maritime trade. To be effective in doing so, the "supply chain managers" have to work together with the security managers by carrying out the following:-

(a) committed to processing and inspecting qualifying shipments in ways that permit highly reliable and predictable processing times for those companies that adhere to the best security practices and standards;

(b) protect all commercial information given to authorities; this includes protection from Freedom-of-Information and tort disclosure;

(c) harmonise and standardise security processes internationally and domestically; and

(d) Create security and anti-tampering practices that are by-products of excellent supply chain processes and activities.

This will ultimately lead to better visibility and control through all supply chain processes and activities. Security consciousness must be there at the beginning, during and after each measure.[208] These seven requirements would enable the supply chain managers and security managers to assess the effectiveness of any supply chain measures that being adopted in terms of effectiveness to deal with the issue of security of supply chain and facilitation of maritime trade.

5.4 The application of technology

In the age of technological advancement, it is highly feasible to balance the need of enhancing security and at the same times not choking the free flow of legitimate trade. By way of example, a particularly important trade facilitation measure is the 'Single Window' concept[209]. The usage of this single window concept can generate headway in the implementation of transport and trade facilitation initiatives while contributing greatly in a more secure maritime business environment.

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[208] Sheffi Y., "Supply Chain Management under the Threat of International Terrorism" – In *Supply Chain Management Review*, vol. 12, no. 2, 2001, available online at <http://esd.mit.edu/staging/HeadLine/Terrorism-%20Sheffi-IJLM.pdf#search='supply%20chain%20management%20under%20the%20threat%20of%20international%20terrorism'> (Accessed on 17 August 2006)

[209] Further information on a single window concept is available at the UN Economic Commission for Europe (UNECE), <http://www.unece.org/cefact/recommendations/rec33/rec33_trd352e.pdf> (Accessed on 20 August 2006)

Containers, which play the major part of the international maritime trade, have its key shortfalls. Former US CBP Commissioner Robert Bonner described containers in the following manner: "*They're as dumb as a fence post, so we just want to make them smarter*[210]". The technological boom has made possible for the development and the use of the smarter container or what usually referred to as "Smart Box". It is a smarter and more secure container that is, at a minimum, tamper-evident[211]. The integration of Smart Box into the supply chain security and logistic will facilitate trade in the sense that it will expedite cargo checking and clearance as it is allows immediate but secured access. The "green lane cargo" due to its expedited checking and clearance unquestionably will result in a significant financial and competitive edge for exporters. As it is more secured, the Smart Box also additionally reduces pilferage and provides more efficient and more predictable supply chain.

5.5 Learning from U.S. experience: prevention at the source

After 9/11, there are mass proliferation of supply chain security measures ranging from the protection of cargo, ports and seafarers from becoming the victims of the acts of terrorisms. Heightened security requirements have also led to some suggestions, among others, to increase the inspection rate to containers from the present 2 percent to 10 percent. It means that out of 15,000,000 containers worldwide, 1,500,000 would be subject to thorough check. In U.S. seaports alone, out of 9.5 million containers arrived (an average 26,000 a day), 950,000 or almost 2,600 a day would need to be scrutinised[212].

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[210] Further information, see: <http://www.cbp.gov/xp/CustomsToday/2005/nov_dec/technology.xml> (Accessed on 20 August 2006)

[211] Methods on how the concept of Smart Box are applied can be assessed at: <http://www.cbp.gov/xp/CustomsToday/2005/nov_dec/technology.xml> (Accessed on 20 August 2006)

[212] Excerpts from the CSI Fact Sheet by the U.S. CBP dated 29 March 2006, <http://www.cbp.gov/linkhandler/cgov/border_security/international_activities/csi/csi_fact_sheet.ctt/csi_fact_sheet.doc> (Accessed on 21 August 2006)

Looking at the first glance, this suggestion would be detrimental to trade facilitation in general. By putting aside the cost of purchasing a container scanner machine[213] and the rate of examining per container[214], the scrutinising of 1,500,000 containers would create several adverse implications or what usually expressed as the "domino effect"[215]; one piece falls after the other. First, there will be port and terminals congestion, which will eventually reduce the productivity of terminal operations and transportations expenses. Second, such inspections and congestion would slow the flow of cargo, extension of delivery times, and decreases the reliability of shipments. Thirdly, as awaiting inspections, there might be some cargo that has landed that may contain WMD. It will thus offset the value of security inspections[216].

In the previous discussion, the writer has highlighted the adoption of quality consciousness into security awareness in order to gain both security benefits and trade efficiency. As said before, if we necessitate to avoiding product flaw, we have to ensure the quality of the product at the time it was manufactured and the same principle applies to security of supply chain. Security measures are part of the preventive and controlling process. Thus, take the CSI and C-TPAT for example, both prevents and eliminates risks at its sources. We always hear a saying "prevention is better than cure" or "nip in the bud". This is what all security measures such s CSI and C-TPAT is all about. If we want to eliminate inspection that will have some serious adverse implications on the trade flow, we have to make sure

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[213] The USCG Port Security Assessment: Best Practices Bulletin, the initial cost of purchasing a container scanner varies depending on type, size and model. It is estimated that the cost per container would be at least USD2 million and the maintaining and training cost could also be considerable. Further information, see: <http://www.uscg.mil/hq/g-m/mp/pdf/Best%20Practice%20-%20Tunisia%20hundred%20percent%20x-ray%20screening.pdf#search='container%20screening%20cost'> (Accessed on 20 August 2006)

[214] According to a Pakistan newspaper report, the rate of scanning per container would cost exporters around USD5 for a 20feet container and USD10 for 40feet container. The report is available online at: <http://www.dawn.com/2004/05/24/nat13.htm> (Accessed on 20 August 2006)

[215] This theory was basically the U.S. foreign policy theory during the Cold War that if one land falls into the influence of Communism, the land or country within its vicinity would also follow in domino effect. The domino effect indicates that some change, small in itself, will cause a similar change nearby, which then will cause another similar change, and so on in linear sequence, by analogy to a falling row of dominoes standing on end.

[216] *Ibid* Lee and Wolfe, p.14.

that the risk is prevented or controlled where it starts. CSI, when first being introduced back in 2002, was not entirely welcomed by the countries because it is said to be not entirely voluntary where if a country wanted to export to the U.S., it must sign up. Yet, despite glaring economic problem and financial application, many countries have signed up for CSI.

It should be further noted that containerization is the primary system of the global trade where it has revolutionised the world's maritime trading system. The US CBP based on the statement of its former Commissioner Bonner, claimed that the strategies adopted to enhance security did not only securing the supply chain against the threat of terrorism but it also "actually facilitate the movement of trade". How the US experience in the enhancement of maritime security and at the same time making sure that maritime trade is further facilitated. On that note, the main four interrelated initiatives: the 24-Hour Rule, the NTC, the CSI and C-TPAT are investigated. Designed to meet the goals of enhancing security and facilitation of international maritime trade, these initiatives manipulated the usage of technology, advanced information, extended boarder concept and public-private partnership[217].

As discussed before, these maritime security initiatives such as the 24-Hour Rule allow the CBP to obtain advance electronic information on all cargo shipped to the US 24 hours before the cargo is loaded in foreign seaports. Then the ATS and the NTC allow the containers to be evaluated for terrorists risk before they are loaded or shipped to the US ports. The third initiatives i.e. the CSI, allow the CBP to identify through automated risk targeting, and inspect high-risk containers before they are loaded on board vessels heading to the US and finally C-TPAT which is usually termed as public-private partnership increased the supply chain security.

[217] Bonner R., "From Cold War to war on terror: Security and Facilitation of Global Trade in the Post-9/11 Era" – In *BIMCO Review* 2005, Denmark: Book Production Consultant plc, p. 174-175.

Just as the 24-Hour Rule become effective as it promotes timeliness and accuracy[218], the need to push even further the 24-Hour becomes paramount. To achieve better visibility along the supply chain, we can better improve the facilitation where Advance Trade Data Initiative would be applied to get additional information. Based on strategic alliance, the risk of terrorism would be better managed. These allow managing the risk of terrorist by zeroing in on any suspect shipments and performing all necessary security inspections at the earliest possible points in the supply chain. This do not hamper the free flow of the trade as it will only target the suspected shipment that may pose potential risk than having to check all the shipment which will eventually cause unnecessary delays. Undoubtedly, this means fewer inspections would be carried out and further facilitates international maritime trade.

5.6 Global maritime strategy and facilitation

Apart from that, the USCG working together with the IMO is bestowed to protect the security of commercial ocean-going vessels and seaports all around the world via the ISPS Code programme and these has also contributed greatly in securing maritime trade and trading system as well as playing a significant role in achieving the overall strategy of security and facilitation of the global trade[219]. It is without doubt almost a utopia to have a single global maritime strategy. But in order to deal with global maritime challenges, we need to go beyond our national strategy and quest to adopt a global maritime strategy[220]. First of all, we have to see what we have on the table and try to connect all these piecemeal. And only then would we be able to come out with something workable.

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[218] Garcia B. R. and Prince T., "Supply Chain Manifesto" – In *Containerization International (Regional Review)*, September 2005, p. 5, London: T & F Informa UK Ltd.
[219] Caplis J., "Global Maritime Security" – In *Journal of Safety and Security at Sea: the Coast Guard Proceedings of the Marine Safety and Security Council*, vol. 63, no. 1, Spring 2006, Arlington: USCG, 2006, p. 6.
[220] *Ibid* Inoue, p. 48.

As we look at the 24-Hour Rule, the CSI, C-TPAT or AIS, even these are US creation, it still have worldwide application because as said before the U.S. is the epicentre of world trade and those countries which wanted to trade with the U.S. have to comply with this rule, like it or not. The WCO also plays a leading and more active role in this effort by including the C-TPAT within its framework of standards to facilitate and secure trade. Being represented by almost worldwide customs administration of 169 countries which representing almost 99 percent of world trade, WCO is seen as the best solution towards facilitation of trade and security with the assistance of other agencies and stakeholders in supply chain. With that kind of cooperation, security concern could make customs procedures more efficient and effective, thus benefit trade facilitation as well[221]. Inherently, the launching of the WCO Framework of Standards to Secure and Facilitate Global Trade[222] in June 2005 should be viewed as WCO 21st Century capacity building initiative[223]. The Framework focuses on ensuring close customs-to-customs cooperation and establishing solid customs-to-business partnership relations. It concentrates on four main areas, specifically "the harmonization of advance electronic cargo information requirements for inbound, outbound and transit shipments; **the implementation of a consistent risk management approach to address security threats**; the definition of benefits to businesses that meet minimal supply chain security standards and best practice; and mandatory outbound inspection of high-risk containers upon reasonable request by the member receiving the cargo"[224].

5.7 Final remarks

Security measures and facilitation aspects of shipping are two concepts apparently opposing to each other and the relationship between these two dichotomies have

[221] UNCTAD, *Trade and Transport Facilitation: Building a Secure and Efficient Environment for Trade*, TD/L.387, 17 June 2004.
[222] Available online at: <http://www.wcoomd.org/ie/En/en.html> (Accessed on 21 August 2006)
[223] World Customs Organization – In *Port Technology International*, 30th ed., summer 2006, London: Henley Media House, p. 158.

been extensively discussed. However, stakeholders worldwide have generally agreed that a sound and practical balance between these two security and facilitation requirements is indispensable. Security instruments that led to the improvement in the security consciousness have been given considerable efficient effect on trade facilitation. The FAL Committee of IMO, for instance, has accordingly strengthened the convention relating to the facilitation of international maritime traffic by amending and including new standards and recommended practices to allow for tighter security regarding narcotics control, stowaways, illegal immigrants or undesirable persons, piracy, procedures in ports, fraud and other safety and emergency measures. Apart from the IMO, it is also worth mentioning that the shipping industry has taken these problems seriously and the response is seen to be encouraging (such as the ICS drug guide, piracy initiative and other measures)[225].

Further, the active involvement of WCO in this would be supplementary to facilitate the flow of global trade as there will be uniformity in the standards of security so that all nations would be able to work together under the same standards to ensure the core security standards without prejudicing the need to facilitate global trade. Maritime security initiatives are being developed to prevent and deter any exploitation of global terrorism. But no matter how good these measures are, it still need to have a back-up system or what usually called as contingency plan so that "Just-in-Case" the attack happened, the trade flow would not be a standstill for a long times, where trade can start business with minimal disruptions[226]. In implementing any security measures should be carried out efficiently to minimise interference with and delay to maritime transport was emphasized.

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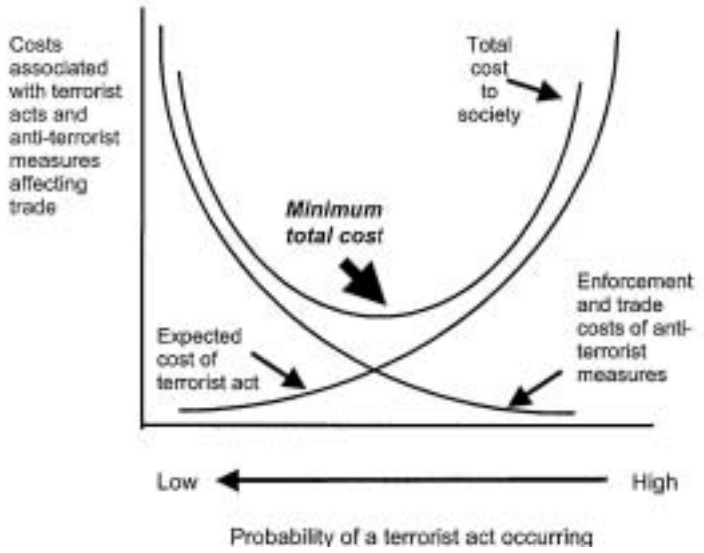
[224] UNCTAD Report, *Efficient Transport and Trade Facilitation to improve Participation by Developing Countries in International Trade*, TD/B/COM.3/72, 9 January 2006, p. 12.
[225] *Ibid* Felding, p. 2.
[226] Martha J. and Subbakrishna S., "Targeting a Just-in-Case Supply Chain for the Inevitable Next Disaster" – In *Supply Chain Management Review*, 1 September 2002, available online at: <http://www.manufacturing.net/scm/article/CA243747.html?text="targeting+a+just-in-case+supply+chain+for+the+inevitable+next+disaster"> (Accessed on 17 August 2006)

Diagram 2 below depicted that security measures been put in place to reduce the probability of the terrorist attacks. If no measures taken, the probability of attacks to occur would be higher and the expected cost to the society would also be high. But if the strong terrorist measures been put in place, the expected cost to the society would be lower. In order to decrease the possibility of terrorist attack, more resources need to be committed[227].

Diagram 2: The Cost of Terrorist Attack and anti-Terrorist Measures



Source: Kerr

"Free trade is the handmaiden to security"[228]. Such creation of level playing field in trade would enhance national economic and thus will contribute constructively towards strengthening global security regimes. The US National Security Strategy indicates:

> A strong world economy enhances our national security by advancing prosperity and freedom in the rest of the world. Economic growth

[227] *Ibid* Kerr, p. 5.

supported by free trade and free markets creates new jobs and higher incomes. It allows people to lift their lives out of property, spurs economic and legal reform, and the fight against corruption, and it reinforces the habit of liberty. We will promote economic growth and economic freedom beyond America's shores[229].

[228] *Ibid* Carafano and Nguyen, p. 4.
[229] The White House, National Security Strategy for the United States of America, September 2002, p. 17, available online at <http://www.whitehouse.gov/nsc/nss.pdf> (Accessed on 20 August 2006)

CHAPTER 6

CONCLUSION: FINAL REMARKS AND WHAT MORE CAN BE DONE

"For these reasons and many others, port security and the broader concept of maritime security cannot be reduced to a single threat vector, a single vulnerability, a specific location, or a single unifying legal theory. Maritime security impacts, and is impacted by, an interwoven system of national interests, legal frameworks, economic structures, intermodal transportation systems, and the environment. Because of that, the maritime security equation cannot be based upon a specific threat or vulnerability. It is more than container security, supply chain assurance, vessel borne improvised explosive devices, waterfront facilities, or vessels"

\- Admiral Thad W. Allen
Commandant of the US Coast guard

6.1 National security v. trade: a conclusion

Article XXI – Security Exceptions of the General Agreement of Tariff and Trade[230] clearly stipulated that: *"Nothing in this Agreement shall be construed… (b) to prevent any contracting party from taking any action which is necessary for the protection of its essential security interests…(iii) taken in time of war or other emergency in international relations;*[231]" Looking at this angle, striking a balance

[230] Typically abbreviated GATT was originally created by the Bretton Woods Conference as part of a larger plan for economic recovery after World War II. GATT included a reduction of tariffs and other international trade barriers and is generally considered the precursor of the World Trade Organization. Further information on GATT is available at <http://www.wto.org/> (Accessed on 20 August 2006)
[231] Full text of GATT 1947 (as amended through 1966) is available online at <http://pacific.commerce.ubc.ca/trade/GATT.html> (Accessed on 20 August 2006)

between maritime security and trade profitability seems to be one of the greatest challenges in the process of globalisation. The UN views international trade development not as an end in itself but rather as a vehicle through which economic development and poverty alleviation may be achieved[232]. However, trade itself can potentially pose threats to the good order of society and everything possible must be done to secure the economies against such threats.

There is no single 'silver bullet' to deal with the issue of maritime security effectively and efficiently. This formidable task requires deep coordination and intense work of national agencies and international community to ensure that the required security on the supply chain to be achieved. Those maritime security measures, be it MTSA 2002, C-TPAT, CSI, PSI, ISPS Code or the SUA 2005 are significant steps in the right direction to assist in reducing the vulnerability of maritime sectors from terrorist attacks. At this particular moment, the best approach that can be adopted is to manage those risks related to the maritime trade and to address the issues of particular concern, such as the dichotomy between maritime security measures and trade facilitation on a priority basis. The terrorist attacks on or suing the supply chain could occur everywhere, and a well-planned attack could result in significant loss of life. We must bear in mind that 'Security must be embedded into, not bolted upon'.

It is imperative to emphasise that the need to strengthen security within the worldwide maritime trading system presented a unique opportunity to enhance overall trade processes in such a way as to increase both security and trade facilitation. Supply chain efficiency and security are distinct but interconnected and any efforts to secure trade should try to minimise the potential negative side effects on the economy and should also ensure that no specific country or group is excluded.

[232] Terrorism is often seen as a direct result of poverty and ignorance. Some argue that it is the only effective means for those in want to express their needs and grievances. However, such arguments remain unsubstantiated and to some degree, simply false. In fact, a significant number of the terrorists

6.2 What more must and can be done

Finally, it is an inherent view that those in the ports, shipping and related industries, and even government officials, approach the security measures from a trade-facilitation point of view, rather than from a security point of view. What this means is that many carry out their part in complying with the security measures simply because of the need to ensure that they can carry on trading as usual, while at the same time believing that the risks of terrorism have been exaggerated. This intrinsic perception should be reversed in order to confront the issues of trade efficiency and security in a more all-inclusive manner. Joseph Nye has said, "*Security is like oxygen, you tend not to notice it until you begin to lose it, but once that occurs there is nothing else that you will think about*"[233]. Thus, what more can or suppose to be done by countries in finding the right balance between maritime security and the need to facilitate maritime trade. The following six recommendations should be considered.

6.2.1 Finding the right mix

Leaders must embrace security as a strategic and necessary concept for global trade and develop an end-to-end approach to building global trade resilience, business models must evolve to embed security within the economics of the industry and it is essential to establish public-private sector partnerships and interfaces that facilitate cooperation for these security efforts. Finding the right mix will require rethinking of business and operating models for all participants, both public and private. All organisations must work more closely together, to be clear on where real value could be added to the process, and also to be clear that the solutions developed were practical, stable and can be easily implemented by the business community. The main challenge was to facilitate the vast majority of international cargo movements

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involved in major attacks over the past several years have come from those relatively wealthy countries and upper-class families.

and passenger traffic as efficiently as possible while at the same time effectively dealing with the small percentage that may pose a threat to security.

6.2.2 Rebuilt trust

Security was not a new issue and industry had been defending cargo from criminal activities for many years. However, the threat as it is today, hailed from the trade itself. Much of the effort that has gone into trade facilitation over the past decades had been undone by the events of September 11th. There was now a need to rebuild trust in the trading system and this is the responsibility of all actors in the trade transaction chain. The need to look for equality in the approach to trade security across all modes of transport and the pragmatic and practical solutions that are appropriate to the threat should be emphasized.

6.2.3 Training

The world community should not respond to the political pressure to be seen to be doing something and that the measures must also meet the needs of industry. It was likely that security measures could cause trade distortions but that training of staff in developing countries could help offset this. WCO should play a more distinctive role in the security area, especially the refocusing on the need to collect export information. A pragmatic approach to trade facilitation and security are direly needed to avoid distortions and diversions. On that regard, WCO should devise a means to work together with the IMO to establish an international set of principles for trade facilitation and security.

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[233] Nye J., "The Case for Deep Engagement" – In *Foreign Affairs*, July-August 1995. Available online at: <http://www.foreignaffairs.org/19950701faessay5055/joseph-s-nye-jr/east-asian-security-the-case-for-deep-engagement.html> (Accessed on 20 August 2006)

6.2.4 Standards among international organizations

In the trade and security area, IMO, WCO and UNCTAD could work closely together in formulating a workable standard between these organizations. International trade and transport facilitation were considered within UNCTAD as tied to each other and that obstacles to transport would distort trade. Security had long been an issue for developing countries but had now reached the multilateral stage because it was now directly affecting developed economies. The key experience of UNCTAD was on trade facilitation implementation and not on security measures should be garnered further into the next level. The concept of developing a set of core UN principles to guide the development of trade facilitation and security initiatives for all organisations is also need to be ventured into.

6.2.5 Role of WTO

WTO should also play a more active role insofar as there were no WTO initiatives specifically addressing trade and security issues. The need to balance the facilitation of trade with the pursuit of legitimate control objectives is now persistent and urgent. Essentially, there is a need to combine the requirements and synergies of trade facilitation and security and advance information and risk management would be of primary importance in this regard. Any new approach to trade facilitation and security must cover other legitimate concerns, such as drugs enforcement, classical smuggling of all sorts, money laundering etc. There was a need to focus on capacity building and human resources development issues and finding synergies and avoiding duplication should always be prioritised. A concise review of all maritime security measures needs to be carried out to determine exactly who was doing what. Unnecessary costs should be avoided and the importance to realise that trade facilitation as an important element of economic development policy should also be emphasised.

6.2.6 R & D for new technologies

At present, countries have to invest millions of dollars in order to acquire sensor or scanning technologies for detecting weapons or illegal shipments. As highlighted before in chapter 5, the initial cost of acquiring a single scanning machine under CSI can easily cost around USD2million. Thus, it is imperative for governments to focus their target, apart from committing a considerable amount of fund to finance the implementation of security measures, on the development of new technologies for low cost yet efficient detection technologies for remote scanning of explosives and radiation. These would provide more coordinated and valuable capabilities for better securing of container security shipment in particular. This development of new technologies must also take into consideration of the market requirements of the developing countries.

6.3 Final remarks

Finally whatever the scheme that the US or the world community adopt, the aim should be to achieve maximum security with the minimum disruption to trade. In this ambiguous security environment, upgrading of security should be balanced as not to unduly burden the maritime transport industry as security barriers are capable of easily becoming trade barriers. As pointed out by the former Commandant of the USCG, Admiral James Loy[234]: "*To sustain prosperity, we open the gates. To ensure security, we close gates. We clearly need to get beyond the metaphor of an opened or closed gate*.[235]"

[234] Admiral James Milton Loy served as the Deputy Secretary of the US DHS from December 4, 2003 to March 2005. Before that he was the Head of the USCG beginning May 1998 to 2002. Admiral Thomas H. Collins then succeeded him.
[235] *Ibid* The Economist, p. 67.

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Appendix A

CSI Operational Ports – as on 29 March 2006

1. In the Americas:

- Montreal, Vancouver & Halifax, Canada
- Santos, Brazil
- Buenos Aires, Argentina
- Puerto Cortes, Honduras

2. In Europe:

- Rotterdam, The Netherlands
- Bremerhaven & Hamburg, Germany
- Antwerp and Zeebrugge, Belgium
- Le Havre and Marseille, France
- Gothenburg, Sweden
- La Spezia, Genoa, Naples, Gioia Tauro, and Livorno, Italy
- Felixstowe, Liverpool, Thamesport, Tilbury, and Southampton, United Kingdom (U.K.)
- Piraeus, Greece
- Algeciras, Spain
- Lisbon, Portugal

3. In Asia and the East:

- Singapore
- Yokohama, Tokyo, Nagoya and Kobe, Japan
- Hong Kong
- Pusan, South Korea
- Port Klang and Tanjung Pelepas, Malaysia

- Laem Chabang, Thailand
- Dubai, United Arab Emirates (UAE)
- Shenzhen and Shanghai
- Kaohsiung
- Colombo, Sri Lanka
- Port Salalah, Oman

4. In Africa:

- Durban, South Africa

Appendix B

Statement of Interdiction Principles

PSI participants are committed to the following interdiction principles to establish a more coordinated and effective basis through which to impede and stop shipments of WMD, delivery systems, and related materials flowing to and from states and non-state actors of proliferation concern, consistent with national legal authorities and relevant international law and frameworks, including the UN Security Council. They call on all states concerned with this threat to international peace and security to join in similarly committing to:

1. Undertake effective measures, either alone or in concert with other states, for interdicting the transfer or transport of WMD, their delivery systems, and related materials to and from states and non-state actors of proliferation concern. "States or non-state actors of proliferation concern" generally refers to those countries or entities that the PSI participants involved establish should be subject to interdiction activities because they are engaged in proliferation through: (1) efforts to develop or acquire chemical, biological, or nuclear weapons and associated delivery systems; or (2) transfers (either selling, receiving, or facilitating) of WMD, their delivery systems, or related materials.

2. Adopt streamlined procedures for rapid exchange of relevant information concerning suspected proliferation activity, protecting the confidential character of classified information provided by other states as part of this initiative, dedicate appropriate resources and efforts to interdiction operations and capabilities, and maximize coordination among participants in interdiction efforts.

3. Review and work to strengthen their relevant national legal authorities where necessary to accomplish these objectives, and work to strengthen when

necessary relevant international law and frameworks in appropriate ways to support these commitments.

4. Take specific actions in support of interdiction efforts regarding cargoes of WMD, their delivery systems, or related materials, to the extent their national legal authorities permit and consistent with their obligations under international law and frameworks, to include:

    a. Not to transport or assist in the transport of any such cargoes to or from states or non-state actors of proliferation concern, and not to allow any persons subject to their jurisdiction to do so.

    b. At their own initiative, or at the request and good cause shown by another state, to take action to board and search any vessel flying their flag in their internal waters or territorial seas, or areas beyond the territorial seas of any other state, that is reasonably suspected of transporting such cargoes to or from states or non-state actors of proliferation concern, and to seize such cargoes that are identified.

    c. To seriously consider providing consent under the appropriate circumstances to the boarding and searching of its own flag vessels by other states, and to the seizure of such WMD-related cargoes in such vessels that may be identified by such states.

    d. To take appropriate actions to (1) stop and/or search in their internal waters, territorial seas, or contiguous zones (when declared) vessels that are reasonably suspected of carrying such cargoes to or from states or non-state actors of proliferation concern and to seize such cargoes that are identified; and (2) to enforce conditions on vessels entering or leaving their ports, internal waters or territorial seas that are reasonably suspected of carrying such cargoes, such as requiring that such vessels be subject to boarding, search, and seizure of such cargoes prior to entry.

e. At their own initiative or upon the request and good cause shown by another state, to (a) require aircraft that are reasonably suspected of carrying such cargoes to or from states or non-state actors of proliferation concern and that are transiting their airspace to land for inspection and seize any such cargoes that are identified; and/or (b) deny aircraft reasonably suspected of carrying such cargoes transit rights through their airspace in advance of such flights.

f. If their ports, airfields, or other facilities are used as transshipment points for shipment of such cargoes to or from states or non-state actors of proliferation concern, to inspect vessels, aircraft, or other modes of transport reasonably suspected of carrying such cargoes, and to seize such cargoes that are identified.

Appendix C

FAL Convention Contracting Governments – as of 30 June 2006

Albania	Algeria	Argentina
Australia	Austria	Azerbaijan
Bahamas	Bangladesh	Barbados
Belgium	Benin	Brazil
Bulgaria	Burundi	Cameroon
Canada	Cape Verde	Chile
China	Colombia	Congo
Cote d'Ivoire	Croatia	Cuba
Cyprus	Czech Republic	Dem. People's Rep. Korea
Denmark	Dominica	Dominican Republic
Ecuador	Egypt	Estonia
Fiji	Finland	France
Gabon	Gambia	Georgia
Germany	Ghana	Greece
Guinea	Guyana	Honduras
Hungary	Iceland	India
Indonesia	Iran (Islamic Republic of)	Iraq
Ireland	Israel	Italy
Japan	Jordan	Latvia
Lebanon	Liberia	Libyan Arab Jamahiriya
Lithuania	Luxembourg	Madagascar
Mali	Malta	Marshall Islands
Mauritius	Mexico	Monaco

Netherlands	New Zealand	Nigeria
Norway	Peru	Poland
Portugal	Republic of Korea	Romania
Russian Federation	Saint Kitts and Nevis	Saint Lucia
Samoa	Senegal	Serbia & Montenegro
Seychelles	Singapore	Slovakia
Slovenia	Spain	Sri Lanka
Suriname	Sweden	Switzerland
Syrian Arab Republic	Thailand	Tonga
Trinidad & Tobago	Tunisia	Ukraine
United Kingdom	United States	Uruguay
Vanuatu	Venezuela	Viet Nam
	Zambia	Hong Kong, China
Yemen		(Associate Member)
Macau, China	Faroe Islands	

Appendix D

FAL Forms

IMO GENERAL DECLARATION

☐ Arrival ☐ Departure

1. Name and description of ship		2. Port of arrival/departure	3. Date – time of arrival/departure
4. Nationality of ship	5. Name of master	6. Port arrived from/Port of destination	
7. Certificate of registry (Port, date, number)		8. Name and address of ship's agent	
9. Gross tonnage	10. Net tonnage		
11. Position of the ship in the port (berth and station)			
12. Brief particulars of voyage (previous and subsequent ports of call, indicating where remaining cargo will be discharged)			
13. Brief description of the cargo			
14. Number of crew (incl. master)	15. Number of passengers	16. Remarks	
Attached documents (indicate number of copies)			
17. Cargo Declaration	18. Ship's Stores Declaration		
19. Crew List	20. Passenger List	21. Date and signature by master, authorized agent or officer	
22. Crew's Effects Declaration*	23. Maritime Declaration of Health*		

For official use

IMO Convention on Facilitation of International Maritime Traffic

IMO FAL
Form 1

Form 1 *(continued)*

This form is accepted in the following countries, either as an IMO form or as a national form based on the same layout (in some cases subject to minor modifications or conditions to be observed by the declarant).*

ARGENTINA	MEXICO
AUSTRALIA	NETHERLANDS
BELGIUM	NEW ZEALAND
BRAZIL	NORWAY
CANADA	PERU
CHILE	POLAND
CUBA	RUSSIAN FEDERATION
CYPRUS	SEYCHELLES
ECUADOR	SINGAPORE
FINLAND	SWEDEN
GERMANY	THAILAND
HUNGARY	UNITED KINGDOM
INDONESIA	UNITED STATES
IRELAND	YUGOSLAVIA
LIBERIA	

This form is also used in Hong Kong, China (Associate Member of IMO).

* See supplement relating to the Annex to the Convention on Facilitation of International Maritime Traffic, 1965, as amended, for further details (available from IMO, 4 Albert Embankment, London SE1 7SR, sales number IMO-350E).

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IMO CARGO DECLARATION

IMO Convention on Facilitation of International Maritime Traffic

		☐ Arrival ☐ Departure		Page No.
1. Name of ship		2. Port where report is made		
3. Nationality of ship	4. Name of master	5. Port of loading/Port of discharge		
A. No.* 6. Marks and Nos.	7. Number and kind of packages; description of goods		8. Gross weight	9. Measurement

10. Date and signature by master, authorized agent or officer

IMO FAL Form 2

* Transport document No.
Also state original ports of shipment in respect of goods shipped on multimodal transport document or through bills of lading

Form 2 *(continued)*

This form is accepted in the following countries, either as an IMO form or as a national form based on the same layout (in some cases subject to minor modifications or conditions to be observed by the declarant).*

ARGENTINA	HUNGARY
AUSTRALIA	IRELAND
BRAZIL	LIBERIA
CANADA	MEXICO
CHILE	NEW ZEALAND
CUBA	NORWAY
CYPRUS	RUSSIAN FEDERATION
ECUADOR	SPAIN
FINLAND	SWEDEN
FRANCE	UNITED KINGDOM
GERMANY	YUGOSLAVIA

This form is also used in Hong Kong, China (Associate Member of IMO).

* See supplement relating to the Annex to the Convention on Facilitation of International Maritime Traffic, 1965, as amended, for further details (available from IMO, 4 Albert Embankment, London SE1 7SR, sales number IMO-350E).

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IMO Convention on Facilitation of International Maritime Traffic

IMO SHIP'S STORES DECLARATION

Page No.

☐ Arrival ☐ Departure

1. Name of ship	2. Port of arrival/departure	3. Date of arrival/departure
4. Nationality of ship	5. Port of last call/Port of destination	
6. Number of persons on board	7. Period of stay	8. Place of stay

9. Name of article	10. Quantity	11. For official use

12. Date and signature by master, authorized agent or officer

IMO FAL Form 3

Form 3 *(continued)*

This form is accepted in the following countries, either as an IMO form or as a national form based on the same layout (in some cases subject to minor modifications or conditions to be observed by the declarant):*

ARGENTINA	IRELAND
AUSTRALIA	LIBERIA
BRAZIL	MEXICO
CANADA	NEW ZE ^ND
CHILE	NORW·
CUBA	PERU
CYPRUS	POLAND
ECUADOR	SINGAPORE
FINLAND	SWEDEN
FRANCE	UNITED KINGDOM
GREECE	UNITED STATES
HUNGARY	YUGOSLAVIA

* See supplement relating to the Annex to the Convention on Facilitation of International Maritime Traffic, 1965, as amended, for further details (available from IMO, 4 Albert Embankment, London SE1 7SR, sales number IMO-350E).

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IMO CREW'S EFFECTS DECLARATION

Page No.

1. Name of ship	2. Effects which are dutiable or subject to prohibitions or restrictions*	
3. Nationality of ship		

4. No.	5. Family name; given names	6. Rank or rating					7. Signature

8. Date and signature by master, authorized agent or officer

* e.g. wines, spirits, cigarettes, tobacco, etc.

IMO Convention on Facilitation of International Maritime Traffic

IMO FAL Form 4

Form 4 *(continued)*

This form is accepted in the following countries, either as an IMO form or as a national form based on the same layout (in some cases subject to minor modifications or conditions to be observed by the declarant).*

ARGENTINA	IRELAND
AUSTRALIA	LIBERIA
BRAZIL	MEXICO
CANADA	NORWAY
CHILE	PERU
CUBA	POLAND
ECUADOR	RUSSIAN FEDERATION
FINLAND	SEYCHELLES
FRANCE	SWEDEN
GREECE	UNITED STATES
HUNGARY	YUGOSLAVIA

* See supplement relating to the Annex to the Convention on Facilitation of International Maritime Traffic, 1965, as amended, for further details (available from IMO, 4 Albert Embankment, London SE1 7SR, sales number IMO-350E).

For official use

IMO Convention on Facilitation of International Maritime Traffic

IMO CREW LIST

Page No.

☐ Arrival ☐ Departure

1. Name of ship	2. Port of arrival/departure	3. Date of arrival/departure
4. Nationality of ship	5. Port arrived from	6. Nature and No. of identity document (seaman's passport)

7. No.	8. Family name, given names	9. Rank or rating	10. Nationality	11. Date and place of birth

12. Date and signature by master, authorized agent or officer

IMO FAL Form 5

Form 5 *(continued)*

This form is accepted in the following countries, either as an IMO form or as a national form based on the same layout (in some cases subject to minor modifications or conditions to be observed by the declarant).*

ARGENTINA	LIBERIA
AUSTRALIA	MEXICO
BELGIUM	NETHERLANDS
BRAZIL	NEW ZEALAND
CANADA	NORWAY
CHILE	PERU
CUBA	POLAND
ECUADOR	RUSSIAN FEDERATION
FRANCE	SEYCHELLES
GERMANY	SPAIN
GREECE	SWEDEN
HUNGARY	UNITED KINGDOM
IRELAND	UNITED STATES
ITALY	YUGOSLAVIA

* See supplement relating to the Annex to the Convention on Facilitation of International Maritime Traffic, 1965, as amended, for further details (available from IMO, 4 Albert Embankment, London SE1 7SR, sales number IMO-350E).

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IMO PASSENGER LIST

IMO Convention on Facilitation of International Maritime Traffic

☐ Arrival ☐ Departure

Page No.

1. Name of ship	2. Port of arrival/departure	3. Date of arrival/departure
4. Nationality of ship		

5. Family name, given names	6. Nationality	7. Date and place of birth	8. Port of embarkation	9. Port of disembarkation

10. Date and signature by master, authorized agent or officer

IMO FAL Form 6

Form 6 *(continued)*

This form is accepted in the following countries, either as an IMO form or as a national form based on the same layout (in some cases subject to minor modifications or conditions to be observed by the declarant).*

ARGENTINA	MEXICO
AUSTRALIA	NETHERLANDS
BELGIUM	NEW ZEALAND
BRAZIL	NORWAY
CHILE	PERU
CUBA	POLAND
ECUADOR	RUSSIAN FEDERATION
FRANCE	SEYCHELLES
GERMANY	SWEDEN
GREECE	UNITED KINGDOM
HUNGARY	UNITED STATES
IRELAND	YUGOSLAVIA
LIBERIA	

* See supplement relating to the Annex to the Convention on Facilitation of International Maritime Traffic, 1965, as amended, for further details (available from IMO, 4 Albert Embankment, London SE1 7SR, sales number IMO-350E).

For official use

Appendix E

Member states to World Customs Organization – as of 30 June 2006

- 169Members -

Afghanistan (Transitional Islamic State of)
Albania
Algeria
Andorra
Angola
Argentina
Armenia
Australia
Austria
Azerbaijan
Bahamas
Bahrain
Bangladesh
Barbados
Belarus
Belgium
Benin
Bermuda
Bhutan
Bolivia
Botswana
Brazil
Brunei Darussalam
Gambia
Georgia
Germany
Ghana
Greece
Guatemala
Guinea
Guyana
Haiti
Honduras (Republic of)
Hong Kong, China
Hungary
Iceland
India
Indonesia
Iran (Islamic Republic of)
Iraq
Ireland
Israel
Italy
Jamaica
Japan
Jordan
Kazakhstan
Nigeria
Norway
Oman
Pakistan
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Poland
Portugal
Qatar
Romania
Russian Federation
Rwanda
Saint Lucia
Samoa
Saudi Arabia
Senegal
Serbia and Montenegro
Seychelles
Sierra Leone
Singapore
Slovakia

Bulgaria
Burkina Faso
Burundi
Cambodia
Cameroon
Canada
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo (Republic of the)
Costa Rica
Côte d'Ivoire
Croatia
Cuba
Cyprus
Czech Republic
Democratic Republic of the Congo
Denmark
Dominican Republic
Ecuador
Egypt
Kenya
Korea (Republic of)
Kuwait
Kyrgyzstan
Latvia
Lebanon
Lesotho
Liberia
Libyan Arab Jamahiriya
Lithuania
Luxembourg
Macau, China
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Mauritania
Mauritius
Mexico
Moldova
Mongolia
Morocco
Mozambique
Slovenia
South Africa
Spain
Sri Lanka
Sudan
Swaziland
Sweden
Switzerland
Syrian Arab Republic
Tajikistan
Tanzania
Thailand
The Former Yugoslav Republic of Macedonia
Timor-Leste
Togo
Tonga
Trinidad and Tobago
Tunisia
Turkey
Turkmenistan
Uganda
Ukraine
United Arab Emirates
United Kingdom

El Salvador (Republic of)	Myanmar	United States
Eritrea	Namibia	Uruguay
Estonia	Nepal	Uzbekistan
Ethiopia	Netherlands	Venezuela
Fiji Islands	Netherlands Antilles	Vietnam
Finland	New Zealand	Yemen
France	Nicaragua	Zambia
Gabon	Niger	Zimbabwe

Appendix F

Member States of the Kyoto Convention - as of 1 August 2006

Algeria	Australia	Austria	Azerbaijan	Belgium
Botswana	Bulgaria	Canada	China	Congo (Dem. Rep. of the)
Croatia	Cyprus	Czech Republic	Denmark	Estonia
European Community	Finland	France	Germany	Greece
Hungary	India	Ireland	Italy	Japan
Korea	Latvia	Lesotho	Lithuania	Luxembourg
Mongolia	Morocco	Namibia	Netherlands	New Zealand
Pakistan	Poland	Portugal	Senegal	Slovakia
Slovenia	South Africa	Spain	Sri Lanka	Sweden
Switzerland	Turkey	Uganda	United Kingdom	United States
Zambia	Zimbabwe			

Number of Contracting Parties: 50