

Vessel security and Maritime insurance: Will Maritime insurance policies diminish when defensive measures are employed against piracy and terrorism?

By

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Abstract

Today, the international community fails to realize that sea piracy still has not been eliminated. Not only has piracy never been eradicated, but the number of pirate and terrorist attacks on ships has tripled in the past decade alone elevating piracy to its highest level in history. Contrary to the stereotype, intelligence has revealed that today's pirates are often trained fighters who frequently board speedboats equipped with satellite phones and global positioning systems. Many of these so called pirates have ties to regional terrorist organizations indigent to areas from which they operate.

The maritime insurance underwriters in London and the United States appear to continue as before and write policies without concern for rising piracy and terrorism on the high seas. Maritime insurance underwriters are only concerned with the quality of the vessel, type of cargo and area of operation. The policy will be written, and extra riders placed on the policy if the vessel ventures into high risk areas. The insurance community surprisingly does not inquire into the defensive tactics of the ship and crew.

It is the conclusion of this thesis, maritime insurance policies will continue to be written on whatever cargo is available and the addition of defense measures of the shipping community will not help diminish the premiums the maritime insurance industry expects.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION.....	10
II. HISTORY OF PIRATES AND TERRORIST.....	12
Regions of Interest.....	17
Methods of Attack.....	19
III. CHALLENGES POISED BY TERRORIST ANDPIRATES.....	20
Area of Operations.....	20
International Maritime Treaties.....	21
INTERPOL.....	24
Maritime Legal Cases.....	26
Military Interventions.....	27
IV. ACTORS AND CRIMINAL CONSPIRACIES.....	28
Actors.....	28
Somalia Warlords.....	29
Nigerian Pirates.....	30
Indonesia.....	31
Others.....	31
V. MARITIME INSURANCE.....	34
Underwriters.....	34
Policy Coverage.....	35
Marine Insurers.....	36
Piracy Endorsements.....	37
VI. METHODOLOGIES OF PIRATE ATTACKS.....	41
Types of Pirates.....	41
Types of Attack.....	42
Hit and Run Robbery.....	43
Cargo Heist and Hostage Attacks.....	44
Phantom Ships.....	44
Stowaways.....	44
VII. CHALLENGES AND SOLUTIONS FOR VESSELS.....	45
Piracy Prevention Today.....	45
Ship Loc.....	46
Secure Ship.....	46
Long Range Acoustic Device.....	47
Diplomacy.....	47
Privateers.....	48
Raiders.....	48

Stringent Security Runs.....	49
Tracking Beacons on Goods.....	50
VIII. CONCLUSION.....	51

I. Introduction

In the first years of the nineteenth century, Mediterranean pirates, with the support of the Barbary States of Northern Africa, would capture merchant ships, terrorize their crews, and hold the ship for ransom. In response, the United States launched the Barbary Wars, the first successful effort by the young republic to protect its citizens from a ruthless, unconventional enemy by fighting a protracted struggle overseas. Today, the international community fails to realize that sea piracy still has not been eliminated. Not only has piracy never been eradicated, but the number of pirate attacks on ships off the coasts of Somalia, Nigeria, and the Malaccan straits has tripled in the past decade elevating piracy to its highest level in history. Contrary to the stereotype, intelligence has revealed that today's pirates are often trained fighters aboard speedboats equipped with satellite phones and global positioning systems and armed with automatic weapons, antitank missiles, and grenades. Many of these so called pirates have ties to their regional terrorist organizations (O'Rourke, 2005).

Most disturbingly, the scourges of piracy and terrorism are increasingly intertwined: piracy on the high seas is becoming a key tactic of terrorist groups. Unlike the pirates of old, whose sole objective was quick commercial gain, many of today's pirates are maritime terrorists with an ideological bent and a broad political agenda. The nexus of piracy and terrorism is especially dangerous for energy markets: most of the world's oil and gas is shipped through the world's most piracy-infested waters (Ibid, 9). As the world's need for oil, natural gas, and goods swell in today's economy, the need for

intelligence concerning the pirates and their home base of operations becomes ever inerrably important. Terrorist incidents have an adverse impact on Maritime shipping throughout the world. Terrorism on the other hand is relatively easy and simple to define. In the context terrorism can be defined as:

[the] unlawful use or threatened use of force or violence against people or property to coerce or intimidate governments or societies, often to achieve political, religious, or ideological objectives.

Many Western intelligence agencies have reported that certain Islamic terrorist groups have declared that they are intent on bringing down the economies of the West in order to further their own religious aims. These statements infer that these terrorist groups will utilize piracy as an instrument to damage the World economy. The *raison d'être* for these attacks are to inflict economic damage. The result is that it is easy to detect the indirect benefit piracy can have to terrorist groups. Valuable shipping lanes such as the Suez, Strait of Hormuz, or the Malacca Strait, could be targeted by Terrorist groups by sinking a vessel in a maritime chokepoint. Although terrorist groups would undoubtedly claim responsibility, their method of attack would probably be similar to that of a pirate attack. Western intelligence services still do not have any evidence to suggest that terrorists are actively pursuing piracy as a deliberate method of conflict. There is no evidence that the attack on the USS Cole and MV Limburg was an act of piracy but rather the results of the following investigation indicated that it was a terrorist attack. These were specific terrorist attacks aimed at specific targets, both military and economic (Homeland Security, 2005).

II. History of Pirates and Terrorist

In 1985, the Palestine Liberation Front's (PLF) seized the passenger ship Achille Lauro, and held 331 crew and (120 of 754) passengers, as hostages. The initial aim of the hijacking was to seize the vessel and use it to conduct a terrorist attack on an Israeli oil terminal in the port of Ashdod. When that attack was thwarted, however, the hijackers, pirates, or terrorists (using whichever terminology you wish) opted to demand the release of Palestinian prisoners (Gottschalk & Flanagan, 2000). The aftermath of the Achille Lauro incident saw a significant downturn in the cruiseliner industry, with a resulting economic effect on the countries frequented by cruise ships. That the incident has not been repeated owes much to luck rather than increased security measures such as the utilization of the Long-Range Acoustic Device (LRAD) defensive weapons. The PLF did not intend for any economic downturn to occur, but as previously said, certain terrorist groups could actively seek to put pressure on some fragile Western economies. An attack now, some twenty years after this event, would not only have an adverse effect on the cruise industry, but could also contribute to any downturn in the global economy (Ibid, 60). It could be argued that the attack on the Achille Lauro was not an act of piracy, but was purely an act of terrorism, one in which the perpetrators had a political motive, rather than a private agenda (Johnson, 2005).

Terrorist groups could see their aims furthered by pirate activity. Some indeed have used techniques similar to those that have been used by pirates during attacks. However, the previously mentioned terrorist attacks have been quite specific in their targets, whereas pirate attacks appear to be random and uncoordinated (Stuart, 2002). It is extremely doubtful that terrorist groups would form an alliance with any external groups including one with pirates. Terrorist groups are very closely knit, suspicious of outsiders

or those who are unknown to them, especially if they do not share the same ideology. It is probable that terrorists would conduct their own piracy campaign rather than using any criminal group. The Abu Sayyaf Group (ASG), which is based in the Southern Philippines, has been linked to hijacking and kidnapping for ransom, including raids from the sea on holiday resorts (Ibid, 140). International reporting has indicated that the line between piracy and terrorism is narrow and that the group is believed to have moved from being an Islamic separatist group to a criminal enterprise. If that is the case, then the group is moving from political ends to private ends in its criminal enterprises. This does not suggest that the ASG has moved away from terrorism. ASG claimed responsibility for the attack on the Superferry 14 in early 2004. This suggests that the group will continue to engage in acts of terrorism, while engaging in piracy to raise funds to continue to conduct a campaign of terror (Hussain, 2008).

Another Southeast Asian group that has been linked to piracy is the Free Aceh Movement (Gerakan Aceh Merdeka; GAM). GAM seeks the removal of Indonesian government structures and forces from the Aceh region of Sumatra. The Indonesian and Malaysian authorities have linked this group to acts of piracy in order to raise funds (Banlaoi, 2005). The main maritime operating area for this group is within the confines of the Malacca Straits, and it is probable that they are involved in a vast number of the incidents that are reported in the region (Figure 1). It has not been possible to assess the full extent of this activity, as GAM has denied some of the attacks attributed to it. It has been reported that pirate groups in the region have copied GAM's uniforms and tactics, leading to an inflated number of attacks being attributed to GAM. This is supported by reports that GAM funding has mainly come from other sources (International, 2006).



(Figure 1) IMB 2008 Indonesian Pirate Attacks

In another piracy hotspot, the Horn of Africa, the indigenous terrorist organization Al Ittihad Al Islamiya (AIAI) may be involved in piracy. AIAI is a very loose arrangement of individuals, whose tribal loyalties, and shifting external alliances, produce a wide spectrum of terrorist and criminal acts, from banditry to piracy and sea-jacking. AIAI seeks to establish an Islamic nation in the Horn of Africa (HOA). There have been reports that suggest that they have engaged in acts of piracy in order to raise funds. The majority of reported incidents in the HOA, however, have been conducted by armed gangs, whose loyalty is clan based rather than linked specifically to AIAI. These gangs

are heavily armed and, in the true sense of the word, pirates, not terrorists. In recent months, piracy in the HOA has escalated: ships attempting to bring food aid into the region have been taken, along with their crews, and have been held hostage by armed militia — sometimes for several weeks, even months. In order to reduce the likelihood of an attack, and under the instructions from the IMO, ships not bound for HOA destinations have been navigating further and further from the coast. Though this may prevent attacks in coastal waters, it may subsequently drive the pirates farther out to sea as well (Luft & Korin, 2004).

In West Africa the Ijaw militias are conducting a civil war and are also involved in intertribal conflicts in the Niger Delta region of Nigeria. Over the last two years, there have been increasing reports of piracy in the region, including attacks against oil-support vessels and off shore installations (Abati, 2004).



(Figure 2) Google map showing the location of a Pirates Cove and IMB photograph of the village

This has helped turning the region into one of the most reported in terms of piracy, second only to the Malacca Straits. The attacks have been accompanied by theft and

kidnapping for ransom, and those involved have become more violent in their methods. Because of the level of corruption in the region, the amount of money that the oil industry is making has enabled criminal gangs to move into what was hitherto thought to be a political conflict against the government (Ibid, 3). Those attacks attributable to the Ijaw militia are possibly being committed in order to raise funds in order to support their continued attacks on the Nigerian government and the country's oil industry. However, it is likely that many of the attacks reported are criminal, and motivated much by political corruption. The remainders of the incidents are acts of petty theft and have little to do with piracy in its general description (Ibid, 4).

There has been much speculation about the role that Al Qaeda have had in the incidents of piracy and terrorism. In the immediate post-9/11 analysis of the maritime domain, government agencies reporting, coupled with a plethora of press reports, identified Al Qaeda (AQ) as having a fleet of ships that were ready to attack ships and ports throughout the world. The organization undoubtedly has links to the maritime industry, but that is through ship owners and operators who are sympathetic to Islamic rather than terrorist aims (Simpson, 2008). There is little evidence to suggest that a fleet of hundreds of vessels and phantom ships is anything more than speculative. Evidence in the trial of Wadi Al Hage, who was convicted of involvement in the embassy bombings in East Africa, identified that a vessel had been used for logistics purposes, MV Sky 1 (Banlaoi, 2005). Intelligence agencies targeted the holding companies and vessels linked to them, which provided a framework of suspect vessels considered to be linked to terrorism. In the years that followed, none of these suspect vessels have been linked to terrorist acts, and just a few have been linked to illicit activity such as human trafficking

and contraband smuggling. Al Qaeda operators have obviously been linked to the bombings of the USS Cole and MV Limburg, but to date, have never been linked to any act of piracy (Johnston, 2005).

There are two terrorist organizations that have known maritime links the Liberation Tigers of Tamil Elam (LTTE) and the Lebanese group Hezbollah. LTTE has an established maritime arm, the “Sea Tigers,” which has been linked to acts of piracy against foreign-owned commercial vessels. It has recently been reported that LTTE no longer requires funding from illegal activities such as piracy, but there remains a determination to conduct maritime terrorist acts (Davies, 2001). Hezbollah are known to operate in the Eastern Mediterranean, but they are not linked to piracy and they have not been involved in any terrorist attacks on Western shipping interests in the region. There is no doubt that they have the capacity and the expertise to conduct such terrorist attacks and may well be predisposed to do so.

Attacks in South East Asia are almost always attributed to terrorism, rather than piracy. In March 2003, the M/V Dewi Madrim, a chemical tanker was boarded by pirates while underway, and it has been speculated by many that these pirates were in fact terrorists. Reports were circulated that suggested that they had not been after “booty,” but had boarded the vessel to gain experience in ship handling, prior to conducting an attack using a similar vessel against U.S. naval vessels in port (Banlaoi, 2005). There were also reports that suggested that certain members of the crew were taken as hostages in order to teach the terrorists ship-handling techniques. In the aftermath there has been much speculation by alleged maritime-security experts that this was a terrorist attack, but there is little evidence to support this view. It was probable that the pirates had sufficient

skill to steer the ship anyway. The pirates reduced speed to a minimum in order to maintain steerage way, and to enable the pirates' own vessel to stay alongside. The pirates had left the vessel after approximately one hour taking cash, personal property, and ship's equipment with them, when they absconded (Luft & Korin, 2004).

Regions of Interest

In Southeast Asia and the Indian Sub-Continent, forty-seven incidents were report in 2007. The areas of interest for pirates are still the Malacca Straits, Bangladesh and areas within Indonesian waters (International, 2006). Much of the problem of "piracy" in Indonesian waters point to a spate of attacks on small tankers by heavily armed pirates using fast craft as well as fishing vessels; and suggests that separatist rebels from the Free Aceh Movement (GAM) were often behind attacks in the Malacca Strait (Banlaoi, 2005). In another particularly serious incident, pirates claiming membership of GAM attacked a fully-laden oil tanker some ten miles from Port Klang in Malaysia. GAM pirates forced the vessel into Indonesian waters and took its captain and other crew members as hostages. There are over 50,000 attacks on ships in the Malacca Strait annually. Attacks in the Malacca Strait and Indonesian waters together accounted for roughly one-third of the worldwide total (Basilio, 2007).

The authorities in Singapore, a country highly dependent on trade, have emphasized not only the growing seriousness of maritime crime but also its potential links with terrorism. In October, the city-state's Defence Minister, Rear-Admiral (Res.) Teo Chee Mean, pointed at the potential threat from sea-borne terrorism. He focused on the serious economic and strategic repercussions "for the whole world" that disruption of maritime commerce in the region could cause. In November, he warned more specifically that

terrorists might turn "supertankers, LPG [liquid petroleum gas], LNG [liquefied natural gas] or chemical carriers into floating bombs" (Asian and Asia's, 2008).

Organized criminal syndicates, possibly with international links, appeared to be behind some of the increasingly competent attacks. These attacks featured well-trained personnel using fast boats, modern weapons, and sophisticated communications. The perpetrators were able to take advantage of weak law enforcement on the Indonesian side of the Straits, which effectively provided pirates and sea-robbers with sanctuary (Land, 2008).

The waters off of Africa are the second-worst in the world in terms of the number of recorded confrontational maritime incidents-- or pirate attacks. Between May and November 2005, the International Maritime Bureau noted nearly 50 attacks off of the two most dangerous coastlines on the continent: 17 attacks were recorded in Nigeria's waters, while 29 were reported off the coast of Somalia (Figure 3).



(Figure 3) IMB locations of Pirate attacks in the Gulf of Aden on Google maps

These totals are higher than anywhere else in the world except Indonesia. The problem area stretches from Somalia and the busy Gulf of Aden and its narrow gateway to the Red Sea and Suez Canal, right along Southern Yemen as far as Oman. Any vessel running from the Mediterranean down to the Seychelles or up into the Persian Gulf must risk the gauntlet through this "Pirate Alley (Ibid, 3)."

Private yachts sailing in company are not immune. In March 2005, two American sailing yachts, Mahdi and Gandalf, were attacked while underway in the Gulf of Aden 30 miles off the coast of Yemen. Two 30-foot blue outboard boats, each carrying four pirates, opened fire on the yachts' cockpits. One crewman, a former U.S. Marine aboard Gandalf, returned fire before ramming one of the pirate boats and almost sinking it (Ibid, 4).

Somalia has no navigable inland waterways, which means that most of Somalia's attacks have taken place far out at sea. As a result, the U.S. and other governments, as well as many international maritime organizations, have warned seagoing vessels to steer far clear of the Somali shoreline-- the latest Maritime Administration warning suggests 200 nautical miles distance (Figure 4).



(Figure 4) Google Map of Somalia Inland Waterways

Most Somali attacks appear random and are based on whether or not pirates can get close enough to the vessel to launch an attack. However, more sophisticated, premeditated attacks are possible. Ships passing by Somalia often have come through the Suez Canal, with no other possibility for routing except making a u-turn. Cruise ships in this area have their itineraries posted online months ahead of time-- anyone with internet access can go to a travel website and research when the next American cruise ship will pass by (Abati, 2004).

Methods of attack

During February and March 2003, marauders armed with assault rifles attacked three chemical tankers in the Strait. In one case, they disabled the ship's radio, took the helm, and apparently experimented with steering the vessel at various speeds. Many of the phantom ships that set off to sea with a cargo and then disappear are sailed by crewmen with false passports and competency certificates. They usually escape detection by the

port authorities. In a recent case of a vessel located and seized in South-East Asia further to IMB investigations, it has emerged that all the senior officers had false passports. The ship's registry documents were also false (Eklof, 2006)."

As documents go electronic and integrated in proprietary or common cargo tracking systems, such forgery will wane. Bolero - an international digital bill of lading ledger - is backed by the European Union, banks, shipping and insurance companies. The IMO is a proponent of a technology characterized by the application of encrypted "digital signatures" to electronic bills of lading. Still, the industry is highly fragmented and many ships and ports don't even possess rudimentary information technology. The protection afforded by the likes of Bolero is at least five years away (Ibid, 35).

Pirates sometimes work hand in hand with conspiring crew members (or, less often, stowaways). In many countries - in East Asia, Latin America, and Africa - Coast Guard operatives, corrupt drug agents, and other law enforcement officials, moonlight as pirates. Renegade members of British trained Indonesian anti-piracy squads are still roaming the Malacca Straits (Ibid, 110).

III. Challenges poised by Terrorist and Pirates

Area of Operations

The South China Sea is a semi-enclosed part of the Pacific Ocean extending from Singapore and the Strait of Malacca in the south, to the Strait of Taiwan in the north. So, it's not surprising that six countries bordering this sea - the Philippines, Brunei, Vietnam, Malaysia, China, and Taiwan - are disputing the valuable economic rights that draw from controlling this stretch of sea. It's critically important due to the fact that over 50% of the world's current supertanker traffic passes through its corridors. Considering the heavy

congestion of vessels in the area, the temptation to attack and seize vessels has proven quite irresistible and, in most cases, rewarding for maritime pirates that hail mostly from one of the six border states (Jayakumar, 2005).

Crude oil or chemical tankers taken over by these seagoing brigands are paid for handsomely by the owners of the vessels who have little choice except to pay the monetary demands (usually) of the pirates. What is needed today is to impel these syndicated or freelance pirates that crime does not pay and that prosecution and punishment inescapably await them. Since time immemorial, piracy has been the type of crime that any country could try even if the reprobates did not commit the offense within its territory (Staff, 2005).

This became a universally recognized exception to the territoriality doctrine in criminal law - that a state can only prosecute felons in the territory where the crime was committed. This reasoning will be expanded upon in the United Nations Maritime Treaties. In keeping with maritime tradition, Piracy was usually punished with quick death. It still appears to be prudent to stay with this well-established practice observed through the ages.

International Maritime Treaties

In 1958, the international community adopted the Geneva Convention of the High Seas that set forth a definition of Piracy in a major international instrument. UNCLOS, which was signed and entered into force in 1994, restates the definition established in the Convention on the High Seas. According to the definition found in the Convention on the High Seas and UNCLOS, "piracy" consists of (1) illegal acts committed on the high seas (2) for private ends (3) by the crew or passengers of one ship against the crew,

passengers, or property onboard another ship. Some believe that the requirement that the acts be motivated for private ends restricts this definition to attacks committed with the intent to rob, and also limits the ability of states to claim universal jurisdiction over politically motivated attacks. On the contrary, “for private ends” can be utilized to assist nation states to prosecute terrorist organization because terrorist organizations exploit organized Crime Syndicate methods to obtain monetary funds to purchase weapons and equipment (Basilio, 2007).

This requirement reflects the states’ primary underlying concern about interference with commercial shipping and transportation, and underscores the states’ general unwillingness to assert jurisdiction over politically motivated acts that do not have a commercial aspect. To date, Indonesia, Malaysia, and the Philippines, the states most heavily impacted by piracy, are parties to UNCLOS and as such are bound by the rights and obligations of the UNCLOS definition of piracy (Richardson, 2004). It has been clear that UNCLOS does not cover many of the violent crimes committed on the seas.

On October 7, 1985, four armed stowaways onboard the Italian cruise liner *Achille Lauro*, hijacked the ship and killed one handicapped American passenger. This attack was apparently political motivated and is believed to have originated from the target ship. This terrorist incident placed the attack outside the UNCLOS definition of piracy and, presumably, beyond the purview of universal jurisdiction. The United States, and other states that may have had an interest in prosecuting the attackers, were apparently left without the authority under international Piracy law to do so. In particular, UNCLOS requires that a crime occur on the high seas in order to be punishable as piracy (Staff, 2004). However, the majority of maritime attacks in Southeast Asia occur within a

state's territorial waters. Under UNCLOS, only the states in whose territorial waters the attacks occurred would be permitted to prosecute the offenders. Nations states that are plagued with Piracy and terrorism must be willing to act. One of the shortcomings of the UNCLOS is the rules regarding "hot pursuit". UNCLOS provides that a state may commence pursuit of an offending ship within its territorial waters, and continue into international waters so long as the pursuit is uninterrupted. The right of hot pursuit ends, however, as soon as the fleeing ship enters its own or a third state's territorial waters. These limitations on the states' ability to pursue offenders are especially problematic in insular Southeast Asia and Africa (Stiles, 2007).

The attack of the *Achille Lauro* demonstrated to the international community that there is a serious gap in the UNCLOS. The requirement states that if perpetrators stage an attack from one vessel against the crew or passengers of another vessel in order for the attack to qualify as piracy. Thus, an attack on a ship committed by its crew, its passengers, or stowaways likely would be excluded even though the social and economic harm would be identical to an attack that satisfied all of the UNCLOS elements (Ibid, 9).

The Rome Convention was meant to fill these gaps left by the UNCLOS definition of piracy. In particular, the Rome Convention covers acts occurring in territorial waters and acts motivated for political ends, as well as eliminating the two-vessel requirement. While the Rome Convention would empower Southeast Asian states to act more decisively in responding to maritime attacks, none of the states in Southeast Asia that are especially hard-hit by these attacks, namely the Philippines, Malaysia, and Indonesia, have signed it (Barrios, 2005).

The unwillingness of the region's large insular states to join the Rome Convention can be explained in large part by the characteristic jealousy with which Southeast Asian states guard their political and territorial sovereignty. States in this region view the Rome Convention's obligations concerning the extradition or prosecution of maritime criminals as an affront to their sovereignty because these provisions prescribe how states should deal with matters concerning their own territorial waters. The unwillingness to participate in the Rome Convention deprives the states in Southeast Asia of an important legal framework for dealing with the acts of maritime violence that do not fall within the UNCLOS definition of piracy (Ibid, 160).

Even if the major insular states in Southeast Asia were to join to the Rome Convention, the Convention has shortcomings that prevent it from completely covering all the acts excluded by UNCLOS. Although the Rome Convention's definition of piracy covers attacks that do not fall within the UNCLOS definition, the Rome Convention's provisions are only applicable within the jurisdictions of states party to it. Arguably, the scope of criminal attacks embraced by the Rome Convention's definition of piracy includes acts that are not considered *ergo omnes*, and therefore do not provide for universal jurisdiction. The acts within the Rome Convention's definition of piracy are only punishable by the states that are party to the treaty, only if the perpetrators or victims are nationals of a party state, and only if the offending acts take place in a party state's territorial waters or the offending vessel was scheduled to navigate through such waters. Furthermore, the decision by the parties to enforce the Rome Convention is ultimately discretionary. Even though a party may be obligated by the terms of the Rome Convention to act in response to an offense, the Convention does not provide for any

sanctions against parties who fail to fulfill their treaty obligations. Thus, if a party authorized or obligated by the Rome Convention to act declines to do so, the purported attack may go unpunished and the other party states may have no recourse against that non-conforming state (Ibid, 162).

Thus, even if all relevant Southeast Asian states were to become party to the Rome Convention, the limitations of the Rome Convention and UNCLOS leave a regulatory gap through which certain acts of maritime violence could slip by unpunished. Terrorist acts occurring on the high seas, for instance, would fall outside of both the UNCLOS and Rome Convention frameworks. It is now up to the 184 nation states to require an enforcement body to enforce the laws and prosecute pirates and terrorist where ever they are found (Ibid 163).

INTERPOL

The International Criminal Police Organization (INTERPOL) view the proliferation of acts of piracy and maritime violence as a very serious escalation of international crime. In 2006, Interpol began to collect information on maritime piracy and armed robberies against ships in Southeast Asia and in Africa, which it shared with NCBs and the international maritime community. Interpol also looked at other organized crime activities related to maritime routes, such as illegal immigration and trafficking in humans, drugs and arms (Interpol, 2008). Project Bada helped to identify members of gangs, existing hierarchies, areas of operation, modus operandi and links to other criminal activities inco-operation with other international organizations, such as the International Maritime Organization, International Maritime Bureau.

Each of 178 countries has an Interpol National Bureau (NCB). NCBs are multi-agency law enforcement agencies with the police element being closely linked to national or federal bodies. The fact that they are multi agency means they are an excellent point in each country through which to liaise with other agencies, particularly the maritime ones. That the police element is closely linked with national or federal authorities also gives the ability to task the appropriate body to investigate crimes, amass evidence, arrest offenders, seize property and advise with prosecution and/or extradition. Interpol are also able to assist to combat offences by providing a swift and secure communications network between its 178 National Bureaus. In practical terms, this means that reports of incidents received by any National Bureau can be disseminated to any selected neighboring Bureaus (or world-wide) instantly and securely (Ibid).

Interpol is therefore positioned as the logical agency to deal with offences of piracy and maritime violence, as information can be instantly transmitted to the relevant body or bodies with powers to investigate, arrest, and arrange judicial action. In addition, Interpol Headquarters in Lyon, France, continually collates information from each NCB, and disseminates the resulting data through the Interpol Network. When crime patterns from different countries are identified, Interpol can then advise on global supportive measures (Ibid). However, Interpol can only provide this assistance if it receives detailed reports of incidents. Interpol's chief problem is delay in being notified of incidents and/or insufficient provision of details to enable effective action to be initiated.

In addition to the practical difficulties, a diversity of laws between countries – or a complete lack of them – hampers effective investigation. For this reason, universal adoption of the Model National Law will be a major step forward, and is therefore

strongly urged by Interpol. As with all law enforcement, prevention is the prime concern. Interpol hopes to continue to work with all relevant national authorities and international organizations to adopt effective measures to combat this growing threat. To this end, an INTERPOL Working Party on the subject of Piracy and Maritime Violence is now due (Ibid).

Maritime Legal Cases

Hong Kong is planning to introduce legal changes that would allow maritime piracy and robbery suspects to be extradited to or from other Asian countries. Under article 12 of the agreement, one signatory can make an extradition request to another if suspected pirates or armed robbers are present in the territory. This Maritime pact was signed between China and 15 other Asian countries including Japan, Singapore, the Philippines, Myanmar and South Korea and came into force in November 2006. These include the arrest of pirates or armed robbers, the seizure of ships or aircraft used for committing piracy or armed robbery, the seizure of vessels taken or under the control of pirates and to rescue ships and the victims of piracy or armed robbery. Even though some nations are still attempting to organize their fight against Piracy, one nation in Africa is attempting to utilize the UNCLOS treaty to their favor (Wallis, 2008). Ten suspected Somali pirates have sought acquittal, saying Kenyan courts cannot try them. United States Marines arrested them off the Somali coast after they attacked, detained, and put 16 crew members aboard MV Safina in fear while demanding 3.5m shillings as ransom. Kenya's constitution requires that the UN Maritime Convention be legislated to allow the application of international law on foreigners facing piracy charges. In this case, the suspects are foreigners, the ship is foreign-owned, and the arrests were made by US

Marines. But Assistant Deputy Public Prosecutor Margaret Mwangi said the Penal Code gave a magistrate's court the powers to try foreign piracy suspects and Kenya had ratified the UN convention in 1989, which gives local courts the powers to try piracy suspects (Jayakumar, 2005). Furthermore, Mwangi said since the accused were suspected to have committed an international crime there was nothing wrong with trying them in the country. "If somebody has committed an international crime, they can be charged in any country because of universal jurisdiction as per the UN convention," Mwangi said. She noted that since the accused were arrested in the high seas there was no country, which could claim sovereignty over the case as such waters were open to all states.

Military intervention

Although many of the world's Navies are on patrol around the world to intervene in their nation's military problems, they are not specifically tasked with Pirate patrol. In a turn of events, Chief of Naval Operations (CNO) Adm. Gary Roughead announced the reestablishment of U.S. 4th Fleet. The U.S. 4th Fleet will be responsible for U.S. Navy ships, aircraft, and submarines operating in the U.S. Southern Command (SOUTHCOM) area of focus, which encompasses the Caribbean, and Central and South America and the surrounding waters. U.S. 4th Fleet was original established in 1943 as one of the original numbered fleets, and was given a specific mission. During World War II, the U.S. needed a command in charge of protecting against raiders, blockade runners and enemy submarines in the South Atlantic (Gragg, 2008). The thrust of this decision is to give the US Navy a far broader role than it currently plays in Latin America. While Washington can point to no imminent military threat in the region, the reactivation of the Fourth Fleet has a powerful symbolic significance, indicating a return to gunboat diplomacy. The US

4th fleet will direct U.S. naval forces operating in the Caribbean, Central and South American regions and interact with partner nation navies within the maritime environment. Various operations include counter-illicit trafficking, Theater Security Cooperation, military-to-military interaction, and bilateral and multinational training. Even though the 4th fleet directed its might against raiders during WWII, it is unlikely the fleet will take on any anti-piracy roles. We can now change our direction, and look toward a new and possible avenue to combat piracy and terrorist throughout the world (Ibid). A new concept which utilizes a 1,000 ship navy, an idea for developing a global maritime partnership, that is self-regulating and without treaties is catching on with international navies, according to the Navy's top service official. Chief of Naval Operations (CNO) Adm. Mike Mullen has been touting the idea of a 1,000 ship navy as a way for countries to provide aid to each other in times of natural disaster, such as the Indonesian Tsunami in 2004, or to help with security issues such as piracy, weapons of mass destruction (WMD), drug smuggling or human trafficking (Fein, 2006).

IV. Actors involved in the criminal conspiracies

Actors

The actors in piracy throughout the world are two-fold. The first actor is the general criminal elements that have plagued mankind for centuries. Only these criminals have taken a step forward and begin to utilize modern devices such as the satellite telephone, computers, and mother ships. An example of this type of organization can be found in the Al-Shabaab terror group and the Somalia street gangs. Readers may question the difference in criminal pirate gangs and terrorist organization, but they are relatively

similar. Both groups must support their organization in whatever means necessary and attacking defenseless ships near their coast is one means (Langewiesche, 2004).

Somalia Warlords

Somalia is not only one of the most dangerous countries in the world due to its long running civil war spanning decades, but its waters remains the second highest area for piracy. For example, the waters off the coast of Somalia have become the most perfidious in the world, swarming with well armed pirates searching for prey to hold to ransom. The street gangs mainly have their main bases in the northeastern regions of Somalia, known as Puntland. In fact, Somali pirates are not a monolithic group, and their relationships to Somalia's complex field of aspiring rulers — the Baidoa-based transitional government, Ethiopia and the Al Shabaab Islamic group — are problematical. Indeed, some of the Somali Marines that France arrested are related by blood to Somali president Yusuf (Land, 2008).

The pirates have vowed to resist any move by any Security Council member to invade Somalia, saying such a move would be tantamount to breaching the sovereignty of the conflict-ridden nation. It is nevertheless interesting that piracy along the Somali coast acts as a source of economic preservation furnishing for a large population of people mainly the jobless populace. The militias who are a result of lawlessness and unemployment have organized their power to hijack ships and vessels in the Indian Ocean waters for huge ransoms. As many as three pirate gangs have been operating off the coast, and have attacked ships as far as 300 kilometers out to sea. So far this year, over 30 ships have been attacked. Unlike pirates in other parts of the world, who just rob the crew and escape with whatever they can carry, the Somali pirates capture ships and

hold them for ransom to support terrorism (Gottschalk & Flanagan, 2000). The U.S., Germany, and France already have warships north of Somalia, guarding the Djibouti coast and the Gulf of Aden. Subsequently, no nation has offered to go after the Somali pirates. Meanwhile, merchant shipping has been warned to stay at least 200 kilometers from the Somali coast (Simpson, 2008).

Intelligence has concluded the pirates are organized according to tribal and clan backgrounds and are led by war lords, corrupt business men, and even local authorities. Pirate groups are well organized and led from headquarters ashore. In the need to operate far out at sea they increasingly employ mother ships from which they launch small interceptor craft to attack merchant or fishing vessels (Abati, 2004).

Nigerian Pirates

Nigeria is one of the oil rich countries in Africa which hosts many mega-oil companies such as Exxon-Mobil, Shell, and others. The oil rich area of the Niger Delta region has seen a massive rise in pirate attacks (Figure 5.)



(Figure 5) 2008 Nigerian Prate attacks as reported by IMB on Goggle maps.

Nigerian government officials are associating the upsurge to a general decline in security throughout the country's oil-rich regions. Trawler fishermen in the area suffered more than 100 pirate attacks in 2007 and a spike of 50 attacks in the first month of 2008 that culminated in five crew deaths in one day. Nigeria's oil-rich Niger Delta is awash with guns. There, militant groups kidnap foreign workers for ransom, blow up pipelines, and invade offshore oilrigs. Their activities helped push oil prices to record highs of more than \$130 a barrel. Around the world, piracy is a longstanding problem (Figure 6).



(Figure 6) Nigerian Pirates as reported by IMB.

After years of decline, 2007 saw a 10 percent increase in piracy incidents, according to latest figures from the International Maritime Bureau (IMB), a nonprofit organization set up to tackle all types of maritime crime and malpractice (International, 2006). Nigeria holds second spot with 18 reported incidents received. Twelve of the attacks have occurred in a concentrated area aimed at vessels at anchorage at the port of Lagos. The number of reported attacks in Lagos has seen an increase from eight in the first six months of 2007 to 12 for the corresponding period in 2008 (Ibid).

Indonesia

In 2008, Indonesia ranked as the third highest ranking country with 13 reported incidents. Two incidents have been reported for the Malacca Straits, the same number as for the corresponding period in 2007. The littoral states should also be complimented for the continued and enhanced co-operation that has been in existence since 2004 which is directly attributable to keeping down the overall number of incidents in this important strategic chokepoint (International, 2006).

Recent Indonesian and Western intelligence believes that the majority of the pirate attacks are organized criminals and members of the Free Aceh Movement. Piracy occurring in the Straits of Malacca is mainly orchestrated by entrepreneur pirates seizing a chance to make a quick profit. Organized gangs belonging to a crime syndicate and “political” pirate associated with a terrorist or secessionist group play the roles in this area. They operate in small groups with fast boats looking for the slow moving ships that appear easy to loot and without any visible security. The members of Free Aceh Movement, an Indonesian separatist group, have been hijacking vessels and taking hostages in exchange for ransom to procure arms or for the captured rebels detained by the government. They organize ambushes and utilize sophisticated arms and equipment to facilitate stealing the cargo, kidnap the crew for ransom, or hijacking the ship (Johnson, 2005).

Other Actors

One of the most notorious terrorist organizations in the Asian community is the Liberation Tigers of Tamil Eelam (LTTE). This terrorist organization is widespread in Sri Lanka and has been fighting an open war with their government since 1983. One of the best trained and equipped naval terrorist force is the LTTE’s Sea Tigers (Johnson &

Valencia, 2005). The Sea Tiger's utilize a number of small, but very effective suicide-bomber vessels against the Sri Lanka Navy and others. The Sea Tigers are led by Col. Soosai, with their main base at Mullaititu, on the north-eastern coast of Sri Lanka. It was reported recently Soosai was critically wounded when a suicide boat exploded near his command boat during a training exercise. Over the years the Sea Tigers have sunk 29 Sri Lankan naval gunboats, and 1 civilian freighter (Davis, 2008).



(Figure 7) LTTE attack

In the first years its primary task was smuggling personnel and equipment between the LTTE's bases in Tamil Nadu and Sri Lanka, in particular Jaffna. As the Sea Tiger cadres gained experience it took on offensive operations against the Sri Lankan Navy. Light fiberglass boats are used for suicide-bomber offensives. These boats can be up to 15 meters, usually equipped with four 250 Hp outboard engines and a mixture of weaponry; light and heavy machine guns, and grenade launchers. The Sea Tiger attack vessels are only at sea during operations and training; when idle they are loaded on large trailers and hidden in the dense jungle southwest of Mullaitivu or even transported to the west coast if needed (Ibid, 112).



(Figure 8) LTTE boat trailer

The Sea Tigers utilize various styles of boats to attack the Sri Lanka navy or other commercial vessels. The Sea tigers have incorporated vessels from large patrol crafts to small fast attack vessels and incorporate armament range from Rocket Propelled grenades to heavy machine guns. When the Sea Tigers are in the attack mode, they utilize the World War II German style “Wolf Pack” and surround their prey and strike simultaneously from many angles. It only takes a few minutes for a coup de grâce to be complete (Ibid, 113).

Equally important is the Sea Tigers known aggression toward commercial vessels. The Sea Tigers are known to hijack ships and boats of all sizes, and it is common practice for them to kidnap and kill the crew members on board the hijacked vessels. The Sea Tigers have been accused of hijacking several vessels in waters outside Sri Lanka including the *Irish Mona* (in August 1995), *Princess Wave* (in August 1996), *Athena* (in May 1997), *Misen* (in July 1997), *Morong Bong* (in July 1997) among others. The Sea Tigers are known to be violent toward the crew. When the LTTE captured the *MV Cordiality* near the port of Trincomalee, they killed all 45 Chinese crew members on board. The fate of the ship's crew of 63 is unknown. It is suspected that the vessel was hijacked by the LTTE, the crew thrown overboard, and is now been used as a phantom vessel. Jane's International Defense Review, in a report on Sri Lanka, published a few

years ago, pointed out that the Sea Tigers "have taken on the Sri Lankan navy with unprecedented success. "The fact that the Sea Tigers do not rely on communications with their command on shore during ongoing operations is one factor in their success. The Sri Lankan Navy on the other hand is required to act in accordance with commanders onshore. The basis of Sea Tiger offensive operations can be described as "hit and run"; avoiding any attempt of sea control, but keeping the SLN on their toes with their extensive sea denial tactics in the northern waters of Sri Lanka (Ibid, 114). Some analysts say the Sea Tigers have adopted the military theory of 'Versatile Maritime Force'. Sea Tiger operations could also be seen as a clear example of asymmetric warfare. Asymmetric warfare originally referred to war between two or more actors, or groups of actors. Sun Tzu explained it in these terms:

“If he (the enemy) is superior in strength, evade him. If his forces are united, separate them. Attack him where he is unprepared; appear where you are not expected”.

Notwithstanding the presence in Indonesia of at least several hundred members of Jemaah Islamiah (the pan-regional Southeast Asian affiliate of al-Qaeda, responsible for the Bali bombings in October 2002) and a spate of incidents in the Malacca and Singapore Straits during 2003, there was no firm evidence of links between maritime criminals and terrorists in the region. But even without the undertone of potential terrorism, security in the Straits appeared to be deteriorating and there were good reasons for heightened concern (Richardson, 2004).

V. Maritime Insurance

Underwriters

The marine insurance market is as fierce as it's ever been. Insurers' losses are risk managers' gains. The American Institute of Marine Underwriters (AIMU) has written over \$100 million in ocean marine insurance in the United States to date. Overall, the marine insurance market--which includes cargo, blue water hull, brown water hull, marine liabilities, energy, yacht, and reinsurance, is working hard to provide the necessary insurance for the types of vessels sailing (Sieb, 2005). The Fireman's Fund a national leader in the marine cargo business combined gross premiums for the two companies, including all oceans and inland marine writings, combined would be \$322 million, representing one of the largest books of business in the U.S. marine insurance sector. Other companies are using mergers and acquisitions to expand their business. Merkel Corp., a Glen Allen, Va.-based insurer, agreed to acquire Terra Nova Holdings Ltd. Merkel's acquisition is expected to expand its property and casualty business internationally and widen its product lineup. Terra Nova is a Bermuda-based property/casualty, marine, aviation, and auto underwriter (Stipe, 1999). Other leading providers of ocean marine insurance include: American International Group; Chubb; CNA; Navigators Group Inc.; NY Marine & General Group; Reliance; St. Paul Cos.; Travelers; and Zurich. Additionally, U.S. domiciled companies increasingly do business abroad, more agents and brokers are discovering a need to expand their customary product offering beyond property and liability insurance to the oldest line of all: marine insurance. In particular, for clients who ship a significant volume of commodities or finished products abroad, producers may need to develop more than a passing acquaintance with ocean cargo insurance (Wolfe, 2006).

Policy Coverage

Open cargo policies are the main products used to insure shippers' goods. They cover all shipments made during the year, up to a certain limit per shipment; in general, policies range from \$1 million to \$5 million but sometimes are significantly higher. The policies generally provide "warehouse to warehouse" coverage, protecting the goods in all aspects of transportation, such as ships, trains, and trucks as they travel from shipper to consignee. As the goods make travel along the transportation corridor, coverage extends to temporary warehousing for approximately four weeks (Ambruster, 2006). Coverage can be arranged for longer storage periods, subject to an additional insurance premium. The basic AIMU open cargo policy is "all risk," with exclusions covering such perils to include inadequate packaging, leakage and general thefts. The shipper may also decide to purchase exclusions such as barring coverage for loss of market (i.e., lost business) arising from delay in the transit of goods; war risks; strikes, civil commotion and vandalism; and radioactive contamination.

Ocean cargo insurers will assess the commodities, type of vessel, and its destination before they are willing to insure. Such commodities as metals, crude oil and soft coal are among the more difficult to cover because of high jacking the cargo and selling on the black-market. When evaluating submissions, underwriters will attempt to reinsure returning clients or if the client is new ask many pertinent questions such as: Who are these people, how long have they been in business, and what is their experience? The second most important factor is the loss experience over the past five years. The lack of a track record makes it extremely difficult to arrange coverage for someone new in the business (Hyland, 2002). The countries in which shippers and consignees are located also are of interest to underwriters. So is the manner of conveyance. If goods are shipped on a

vessel (as opposed to aircraft), underwriters want to know its age and performance history.

Marine Insurers

For ocean cargo coverage, some domestic markets are Chubb, CNA, Great American, ACE, AIMA, AXA, Navigators and Mutual Marine Office. The overseas market is strongly influenced by the London market to include Lloyds of London. In regard to protection and indemnity insurance, 95% of ocean-going vessels are insured by the International Group of P&I Clubs, a worldwide organization whose members are essentially mutual insurance companies. The American Club, which was founded in 1917 and is located in New York, is the only member in the Western hemisphere. They can access these clubs, much as we would any insurer, to obtain coverage for clients (Eisenhart, 2002).

The marine insurance industry is mostly unregulated but is governed by industry standards and now some governmental regulations. Marine policies are reworked to minimize exposure to acts of terrorism. The insurance industry, for one, was impacted enormously by the terrorist attack of 9/11, and the effects trickled down to the businesses it served. Greg Kritz, regional vice president of Roanoke Trade Services stated:

"The way it's affecting ocean insurance is the anticipation of what is to happen next. "It's been reported that one way for terrorists to attack this country is via ocean vessels and containers."

Rates have gone up because insurers are dealing with an uncertainty. Maritime insurance companies are covering an unknown, and are charged with evaluating and underwriting those risks. However, the most recent modification in the marine insurance

marketplace is the Strikes, Riots & Civil Commotion (S.R.&C.C.) endorsement which explains how terrorism is being addressed in cargo policies. It stipulates that cargo is covered from peril while it is in due course of transit and for 60 days after it is unloaded from the vessel or until it reaches its final destination, whichever comes first. This endorsement covers the cargo against terrorism from beginning to end (Hyland, 2002).

Piracy Endorsements

Lloyd's classified piracy attacks in danger areas as a war risk, rather than a marine risk. New requirements handed down from the underwriters require ship owners to notify their insurer every time they enter dangerous waters, such as those off Indonesia, Borneo, Somalia, and Nigeria. This change came in 2005 as machinegun-toting pirates blew a hole in the side of a Bahamas-registered cruise ship 100 miles off the coast of Somalia. The *Seabourn Spirit*, carrying 302 passengers, repelled its attackers with a sonic blast (Sieb, 2005).

Neil Smith, manager of marine, aviation and transport at the Lloyd's Market Association (LMA), explained the change: "the removal of piracy from marine insurance policies — where it has traditionally been covered as a risk to the ship's hull — would help underwriters to price the piracy risk more accurately and to reduce the risk of legal wrangles. By covering piracy in war insurance policies, the attacks will be treated like those by terrorists". The LMA is responsible for issuing standard policy wordings to the Lloyd's market. Underwriters will allow ships to move freely around the world, while war insurance covers most parts of the world (Ibid, 1).

Dominic Armstrong, managing director of research and intelligence at Aegis, the risk management consultancy, believes after the tsunami in Indonesia many family style piracy operations ceased to exist in its place came the organized piracy gangs.

"Only sophisticated operators can handle the banking that's required for a multi-million dollar ransom. If you live in a hut, keeping a ship's crew hostage would get tedious within a couple of days," he said. "It's no longer a couple of guys with machetes. We're talking about rocket-propelled grenades" (Ibid, 2).

Marine buyers are benefiting from abundant capacity that is spurring insurers to make hefty rate reductions, particularly on cargo and certain hull risks (Tuckey, 2006). Double-digit premium rate decreases are common in most segments of the market, although cargo business is particularly competitive with brokers reporting reductions of up to 60% as new insurers enter the market. Under the war risk policy, marine underwriters have the ability to separately rate piracy risks and do so based on a predetermined list of high-risk sea areas published by the Joint War Committee of the Lloyd's Market Association (Wallis, 2008). Ship owners must notify their underwriters every time they are traveling through a high-risk area and the underwriters will charge an additional premium for each trip, which can be considerable. The hull war risk policy provides primary coverage for injury or death to crewmembers as a result of a pirate attack, and ship owners will purchase excess coverage from protection and indemnity clubs. Lloyd's Market Association intelligence research concerning today's more sophisticated pirate attack attacks on the high seas has their analysis attempting to decide whether an attack by pirates for personal gain, which would be covered under a hull policy, or by terrorists for a religious or political cause, which would be covered by a war risk policy (Sieb, 2005).

In addition to hull policies, piracy also is covered differently under marine cargo policies. Depending on the market and form, piracy risks will either be covered as a peril

under the general cargo policy or it will be included in a war risk extension to the policy. Ship owners also are implementing various risk management techniques to mitigate their exposures. In addition to security patrols and keeping watch over the waters at all times, some ship owners have used sonic weapons electric fences and water cannons to keep pirates from boarding a ship (Roberts, 2007).

Accordingly, Piracy is a risk for all types of vessels who transverse the vast seas of the world. Pirates are after everything from cargo to ransom money or even the ships themselves. Pirates attempt to locate and board ships with easy cargo to remove and sell (McKenzie, 2006). With the booming Chinese economy, pirates are supplying the large demand for vessels that a market for second-hand ships has developed. Many risk experts say that the lines between piracy and terrorism are blurring. Ships plying risky waters are charged higher insurance premiums, which are ultimately passed on to businesses and consumers. One of the biggest marine-insurance pay-outs in recent years was the loss on the MV *Limberg* a French tanker, off Yemen in 2002. Marine underwriters paid approximately 70 million. Even so, piracy business is a small fraction of the more than \$16 billion in marine premiums written annually. The attacks show no signs of abating (The Economist, 2006).

After the attack on September 11, 2001 in New York City, the United States Government enacted the Terrorism Risk Insurance Act (TRIA). TRIA is a federal program that backstops the insurance industry due to the absence of private market innovations and solutions, sustaining a viable private market for terrorism insurance. TRIA is a United States federal law signed into law by President George W. Bush on November 26, 2002 (Chalk & Hoffaman, 2005). The Act is intended as a temporary

measure to allow time for the insurance industry to develop their own solutions and products to insure against acts of terrorism. The Act was extended for another two years in legislation in December 2005, making the new expiry date December 31, 2007. On Dec. 26, 2007, the Act was again extended under the Terrorism Risk Insurance Program Reauthorization Act, which extends the Terrorism Risk Insurance Act through Dec. 31, 2014. TRIA created a U.S. government reinsurance facility to provide reinsurance coverage to insurance companies following a declared terrorism event. TRIA is a short-term measure designed to help the insurance market recover from 9/11 and develop solutions to insuring terrorism (Ferrazzano, 2004).

VI. Methodologies of Pirate Attacks

Types of Pirates

When people talk about the pirates today, they consider them as the legends from the dark past. Today, Pirates can be seen very often in the South and Southeast Asia, the South America, Africa, and south of Red Sea. They are still masked, dressed different than the usual people and often very aggressive. There are three types of modern pirates' existence: small-time pirates and organizations of pirates. Small pirates are mostly interested in loot and the safe of the ship they attack. They are similar to the old pirates from the past. Their goals are not high and they work only for themselves. An example of these types of pirates was seen off of the coast of Bantam, Indonesia before the tsunami (Eklof, 2006). These pirates were opportunist and usually part of the same family or friends. They organized as a family style business to subsidize their meager existence. The second type, are groups connected to an organized crime syndicate and

have an upper echelon to keep happy and well supplied. Their goals aren't just looting of the small ships. They attack for fulfilling their part of the business. However, they are usually only one link in a criminal chain. The third type is the "Semi-Official Military Pirate," examples of which have been seen in China, Indonesia & Somalia and elsewhere. An example of their tactics occurred a couple of years ago when the Panamanian flagged freighter M/V Hye Mieko was fired upon and stopped in international waters before reaching its Cambodian destination by what appeared to be a Chinese Customs Cutter. The merchant vessel was in honest commerce and well documented as was its cargo, bound for an ordinary delivery at Cambodia's Kas Kong port (Johnstone, 2005). The owner, William Tay later spotted his 1,606 ton ship from a small plane as the vessel and its US\$2 million cargo of cigarettes was forced to sail more than 993 miles through international waters to Shanwei in South China. The Chinese authorities denied any knowledge of the customs cutter and so it was assumed to have been manned by pirates (Johnson & Valencia, 2005).

Types of Attacks

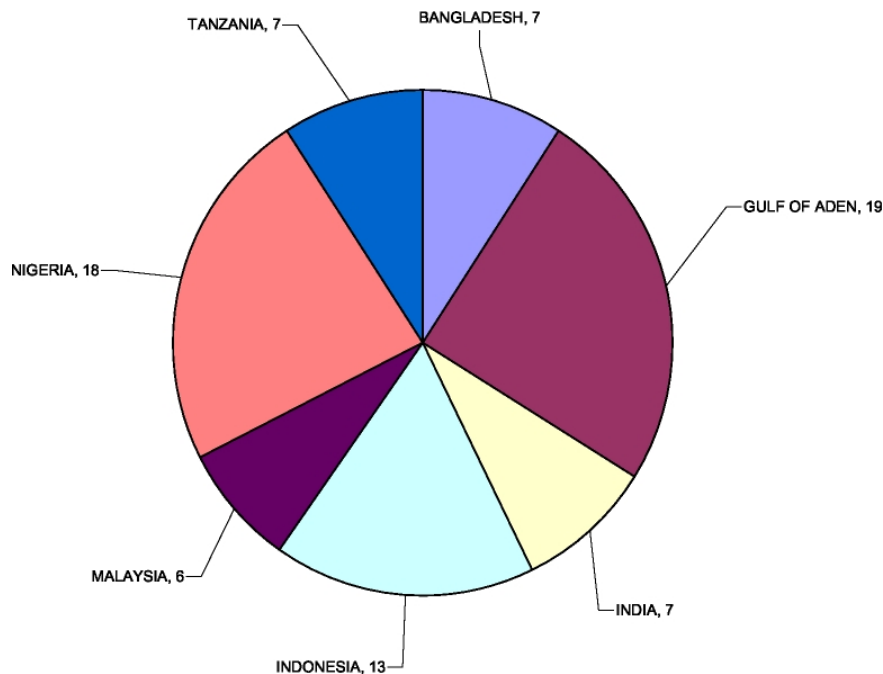
In the early years of the 21st century, piracy began to diminish throughout the world. This was mainly to the vast number of modern Navies patrolling immense miles of sea. Despite these impediments, piracy is still a problem today and IMB statistics reported attacks have steadily decreased in the last couple of years, piracy still poses a problem. Pirates are able to purchase readily available technologies which are utilized to ensure a successful attack; piracy will continue to be a threat unless stricter measures are taken (Cottrill, 1997).

Pirates today are armed with GPS trackers, high-speed boats, grenade launcher,

computers, Swiss Bank Accounts, and machine guns. As the world made its turn into the nineteenth and twentieth centuries, the same factors that began to hinder piracy also began to encourage it over time (Ibid, 2).

Technology has allowed the maritime industries to build larger and faster merchant vessels which can function with fewer crew members. The increased size of naval forces patrolling harbors has created more safety when ships are docked, but have left many ships vulnerable while in open waters (McDaniel, 2007). Increased costs to maintain security vessels have financially burdened many countries to the point where some governments inability to afford effective Naval assets are factors which have simply encouraged pirate attacks (McDaniel). Finally, international recognition of piracy has lessened in countries that do not have the political will to smash it, yet those same countries are the primary locations for the world's commercial fleets (McDaniel).

Pirates today can be primarily found in Southeast Asia, Africa, and the Indian Sub Continent with 19 actual or attempted attacks in the first quarter 2008. Similarly in the first quarter 2008, 18 attacks also occurred in Nigeria, while South East Asia experienced 13 attacks (IMB).



Subsequently, today, there are many different types of pirate attacks. Most of the attacks prey on the crew and ships safes for their on hand cash. The remaining pirates steal cargo and taking hostages, commandeering the whole ship, or attempt to plant a “stowaway” on the ship before it sails.

Hit and run robbery

The hit and run robberies usually occur early in the morning when the majority of the crew is asleep, and the crew standing watch are dosing at their stations. The pirates will stealthily pull along side of the ship and some utilize poles to scale the sides of the vessel. Once on board, the pirates can easily command the vessel at will. Many of these attacks end with the crew and ship stores bare (Majtenvi, 2005).

Cargo heist and hostage attacks

A second type of pirate attack is called a cargo heist and hostage attack and involves a larger band of pirates. This involves the pirates robbing the crew and making off with the cargo, sometimes taking crew members as hostages. Many of these attacks are

organized after the pirates research the manifest of the target vessel through internet services. Once the ship is targeted, the pirates usually attack the vessel with two or more small, fast crafts. This will help to confuse the helmsman and assist the pirates when boarding (McDaniel, 2007).

Phantom ship

The act of utilizing a Phantom ship begins with the theft of the vessel. The crew is disposed of by sudden death or being set afloat in the open sea. The ship is then transported to a safe haven and repainted, renamed and given a fresh set of forged documents. These types of pirates tend to be the most sophisticated and well organized. Organized crime syndicates and government officials are the likely culprits in this type of attacks (McDaniel, 2007).

Stowaways

A less sophisticated way for pirates to attack a vessel is from within. This type of piracy either plants a false crewmember on board or a hidden stowaway who waits until the time is right and radios the ships location and route to the attackers (McDaniel). The pre-planned stowaway trick was used by the motor tanker M/T Palau Mas which acted as a phantom ship to rob at least 21 other vessels in Indonesian Seas. Pirates had planted a phone crew aboard the M/T Palau Mas who then telephoned the ships route and position allowing the vessel to be taken (McDaniel 2007).

The number of attacks has dropped by from 445 incidents since 2003 to 263 incidents in 2007(IMB, 2008). Although piratical acts of aggression have largely declined, the problem still exists. Knives have been the weapon of choice for pirates with between 143 knives utilized in 2003 and 67 knife attacks in 2007, followed closely by attacks with guns ranging between 100 in 2003 and 72 in 2007 (IMB, 2007). The

decline in attacks overall is evidence that nations are increasing in their knowledge of the problem of piracy today and taking measures to thwart it.

VII. Challenges and Solutions for Maritime Vessels

Piracy Prevention Today

The Ship Security Alert System (SSAS) instituted a regulation for all passenger ships, mobile offshore drilling units, and cargo ships of 500 tons or more to be equipped with an alarm system to ensure security. Any ships thereafter built must comply with the regulation. This regulation went into affect on July 1, 2004 (Urquhart, 2006).

In accordance with the Global Maritime Distress and Safety System distress procedures, the alert system must obtain power from the ships primary power source as well as another appropriate source. The activation points of the alert device must be accessible from the bridge of the ship and the distress codes should be directed to shore and identify the ships location and identity through a unique code generated (Ibid, 2).

Ship Security Alert Systems have shown to be a great asset to the shipping industry. A Turkish bulk carrier was saved from a pirate attack in January 2006 by an SSAS alert when five pirates armed with machine guns and rocket launchers attacked the Turkish carrier. After activating the SSAS alert, a coalition warship was notified and responded to the alert within thirty minutes along with a helicopter which caused the pirates to stop firing, saving the carrier (Ong, 2004).

Ship Loc

The ShipLoc system provides ship owners with long range tracking of their ships. It has the capability to provide the owners with exact locations and routes of travel. The system reports between 6 and 24 times a day and immediate alerts

if triggered. Once installed on the vessel, ShipLoc transmits via satellite to the fleet operator information such as speed, heading, location, as well as meteorological information that could cause issues with the vessel. This device is in compliance with SSAS regulations; ShipLoc alerts are silent and provide information to shore installations only. ShipLoc has been approved by the International Maritime Bureau as the only SSAS system which is 100% reliable by using a second location system independent of GPS, to verify the GPS fixes. ShipLoc is also equipped with a silent alarm that can be triggered from any location on the ship (Franklin, 2007).

Secure Ship

Secure Ship electrifies a ship's hull using a 9,000 volt electrified fence that is erected around the ship. Secure Ship is a non-lethal system to prevent the boarding of a ship and allows the sailors on board the ship to work and can be activated at any time. Secure Ship utilizes the same technology that has been used at military installations; Secure Ship protects the crew and guests from unwanted intruders and robberies while still allowing the ship to conduct normal business. The device is armed with a siren that is activated when the electric fence is touched. Secure ship is marketed to commercial vessels as well as private mega yachts as a means of protection from the threat of a piratical attack (Kahn, 2003).

The way that the Secure Ship is designed, the electrified fence is erected around the perimeter of the boat extending outwards to prevent someone from boarding the ship. In the event of an emergency and there is a need for the crew to abandon ship, Secure ship has many points on the ship to turn off the device.

Long Range Acoustic Device

The Long Range Acoustic Device (LRAD) is a breakthrough long-range hailing and warning device designed to communicate with authority, affect behavior, and help determine intent. Developed by American Technology Corporation, the LRAD focuses sound waves at a particular target without interference from ambient noise. To note the deterrent effect of the LRAD, the noise level that is the normal threshold of pain for a normal person is 130 dB, and because the LRAD works at a low level of 145 dB then it is easy to see how it could be a deterrent for an attacking boat. An example of its use was seen in November 2005 when the luxury cruise ship Seabourn Spirit used the LRAD to repel pirates attempting to attack the vessel with rocket propelled grenades off the coast of Somalia (Norris, 2007).

Diplomacy

There are many theories for improving piracy prevention including uniform jurisdiction, convoys, privatization of anti-piracy efforts, and allowing crew members to defend themselves among others. Some experts in the maritime industry believe universal jurisdiction allows for the exercise of jurisdiction over certain actors or activities wherever they occur without regard to nationality or territoriality. In the past, Universal jurisdiction has been traditionally applied to piracy where any state has the right to seize a pirate ship and try those on board under that states laws. An example of this is the *United States vs. Furlong* case where the United States Supreme Court found that the U.S. courts retain jurisdiction over a piratical murder committed on the high seas against a U.S. vessel by a foreigner upon a foreign vessel (Furlong vs. US).

Many pirates who roam the seas are connected with land based criminal organizations that would give them a nation to be tried under. A good example is the recent attack of a

French vessel by Somalia pirates in June 2008. If seized in another jurisdiction, their home nation would require extradition to be tried in a court likely run by the criminal organization the pirate is connected (Goodman, 1999).

Privateers

In many cases, the waterways that are the most prone to piracy do not have adequate naval forces to properly patrol those waters, thus leaving pirates to plunder at will. A solution to this problem is the privatization of anti-piracy efforts. If nations cannot patrol their own waters, then privately owned, armed ships should be allowed to patrol the waters.

With more stringent restrictions on private efforts to battle piracy, security companies could bid for areas of the seas that are prone to pirate and terrorist attacks. Privateering could be a solid prevention method for piracy (Eklöf, 2006).

These contracts would be taken from the members of the nation state involved in this enterprise, from individuals willing to pay for the private protection, commercial vessels requesting an escort, as well as any payment through prizes collected from seizure of a pirate ship, be it a finders fee for its return or the ship itself (Ibid, 9).

Raiders

Another solution is the use of the lesser reported events of World War II. During World War II, Germany had immense success utilizing the "Surface Raiders" or Armed Merchant Ships. During the 1930's and 1940's the world's oceans became home for the "Marauders of the Sea." These vessels carried a slew of names such as *Atlantis*, *Orion*, *Widder*, *Thor*, *Pinguin*, *Komet*, *Michel*, *Stier*, and *Togo*, and, the best known, *Kormoran*,

who was involved with the disappearance and death of the famous Australian Cruiser "*Sydney* (Molyneux, 2003)."

By arming the crew members and the vessel it would offset the advantage that the pirates have by using smaller and faster boats. By arming sailors it allows them to defend their livelihood as well as their lives. Arguably crew members should be as equally armed as the pirates they risk encountering (Ong, 2004).

One of the huddles the ship encounters is the laws of the state in which are flagged. Although, countries have no laws over the high seas, each ship and crew need only adhere to the laws of the home state. If states refuse to change their laws regarding arming sailors on their ships then it is arguable that pirates will learn of this and begin to target those nations ships, knowing that they will be easier targets because they are not armed (Ibid).

Stringent Security Runs

As in the days of the North Atlantic in World War II, the merchant marine vessel had to defend itself from German U-boats by the use of convoys. Safety in numbers is a key aspect of anti-piracy practice. Vessels traveling in a convoy present as a much harder target for pirate vessels. One problem with this solution is that convoying is costly to smaller in the terms of burning extra fuel to maintain uniform speed (Turbiville, 2005).

As with the avoidance of crime, it is important to vary routines as much as possible to avoid piracy. Unfortunately, many vessels are unable to vary their schedule due to strict deadlines or lack of feasible alternative routes. However, even the appearance of variance may be beneficial should your vessel be the target of a planned attack. One

example would be the removal of exact time and date information from online cruise line itineraries, easily accessible by all Internet users (Ibid).

Some companies have kept routes but have either cut down on the number of runs or have changed the cargo aboard their vessels to items less attractive to pirates. In Nigeria, one bank with branches on islands only accessible by boat had experienced a rash of cash-in-transit robberies on the waterways between their main location and their branches. Bank management decided to maintain only electronic transactions at their branches, allowing them to stay in business; electronic transactions meant no cash was necessary, and all cash-in-transit deliveries were rendered obsolete (Ibid).

The Inventus UAV (unmanned aerial vehicle) is a state-of-the-art reconnaissance system packaged in a highly efficient, highly stable flying wing form. Outfitted with cameras, the Inventus flies and covers a large ocean area and relays a real-time data link back to the ground station. This link provides real-time aerial surveillance and early warning of suspect or unauthorized craft movements to the coastal or law enforcement authority. Inventus is fully autonomous and can be launched and recovered even from a seagoing or patrol vessel. There are gas and electric formats and both fly in all weather conditions (Luft & Korin, 2004).

Three countries, Malaysia, Indonesia, and Singapore have increased efforts to prevent piracy in the Malacca Strait .238 Since the three states have begun their anti-piracy efforts, piracy attacks in the Malacca Strait have declined from 38 in 2004 to 11 in 2006.

Tracking Beacons on Goods

Although there are tons upon tons of cargo being carried by vessels traversing the high seas everyday, there is very little chance of ever getting back that cargo after a successful

pirate raid. One way to prevent piracy from flourishing is to plant tracking beacons into cargo containers and other items that are primarily taken by pirates.

Once the pirates have stolen the cargo, they have unwittingly caused their own downfall because the naval forces or private pirate hunting forces will be able to track the cargo to wherever it is being held. Beacons could become a prime way of targeting pirates, getting back stolen cargo, or at least apprehending the pirate. With technology available today, tracking beacons could be placed on any size cargo, from commercial to personal effects and made of any type of material from wood to metal (Stuart, 2002).

Although there are tracking programs in use such as ShipLoc, those systems are not adequate when cargo has left the vessel. With tracking beacons though, many ships and their cargo could be spared by pirates for fear that the naval forces could be knocking on their doors at any minute no matter where the pirate may choose to hide his loot (Gottschalk & Flanagan, 2000).

VII. Conclusion

Over the years piracy has evolved from being a profession of praise to being condemned as an act of mere thievery. With prevention of pirate attacks motivating the shipping industry, many companies have introduced innovative ideas such as ShipLoc, Secure Ship, the long range acoustic device, and many security alert systems to aid in the deterrence of attacks. Although all of these products aid in the deterrence of pirate attacks, without the nations of the world coming together to battle piracy uniformly, piracy will continue to flourish as ways around methods of deterrence are found.

If piracy is to be fought effectively, the pirates must be put on the defensive. Employing

private entities to act as privateers would be highly effective as long as proper motivation is given. Privateering was a successful deterrent before to aid in the fight against piracy and it can be so again. Privateering can only aid other vessels if those crew members stay informed of the piracy statistics and readily report conflicts with pirates to the International Maritime Bureau and the Piracy Reporting center.

In the end, any method of piracy prevention is useless unless nations prepare for incidents by instituting safety measures for their waterways, and sailors take measures into their own hands by regularly reporting incidents of piracy and staying informed of current news. It is apparent in the maritime insurance industry the main goal is the bottom line. The industry must make a profit to survive and keep it's investors in the black. The maritime insurance underwriters are only concerned with one thing: No loss of any kind, on a voyage to any where in the world. The insurance industry does not care if a ship and crew is armed with the latest technology or defensive weapons to defend it self in hostile waters. The end result is if a ship arms it self and nothing happens, then no harm done. But, if there is loss to a ship with or without defensive measures taken, the premiums will increase.

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