INTRODUCTION

The September 11 attacks in the US underscored the devastating effects of terrorism to the world. The attacks on USS Cole in 2000, MV Limburg in 2002, SuperFerry 14 in 2004 and the M Star in 2010 are classified as acts of ‘Maritime Terrorism’, a stark reminder that the world’s waterways continue to be vulnerable. The maritime environment has some attributes that, on a basic level, could very well be conducive for terrorist activities to occur (e.g., the legal immunity in relation to activities on high seas, poor or conflicting efforts by numerous countries in trying to establish a safe operating environment in coastal regions and port facilities). Furthermore, maritime terrorist attacks have the potential to cause mass casualties, interruption to global trade as well as extreme damage to property.

This essay seeks to ascertain a common definition of ‘Maritime Terrorism’ and followed on to affirm that the terrorism threat in Southeast Asia is real through the use of the Opportunity, Capability and Intent (OCI) threat assessment framework. Next, the essay will discuss eight probable scenarios of a maritime terrorist attack in Southeast Asia and attempt to examine the credibility of each scenario. Finally, the essay will assess the adequacy of the region’s counter-terrorism efforts, highlighting the need to take a regional approach to combat extremist ideology.

HOW REAL IS THE THREAT OF MARITIME TERRORISM IN SOUTHEAST ASIA?

DEFINITION OF ‘MARITIME TERRORISM’

So what exactly is the definition of ‘Maritime Terrorism’? Unfortunately, the 1982 United Nations Convention on the Law of the Sea Treaty (UNCLOS)
was not particularly clear about what constitutes ‘Maritime Terrorism’, the closest being the definition of Piracy under Article 101. As such, the definition advocated by the Council for Security Cooperation in the Asia Pacific (CSCAP) was adopted in this paper. CSCAP states that ‘Maritime Terrorism’ is defined as:

‘…the undertaking of terrorist acts and activities (1) within the maritime environment, (2) using or against vessels or fixed platforms at sea or in port, or against any one of their passengers or personnel, (3) against coastal facilities or settlements, including tourist resorts, port areas and port towns or cities.’

OPPORTUNITY, CAPABILITY, INTENT

The terrorism threat in Southeast Asia is real and I will use the OCI threat assessment framework to elaborate further. ‘Opportunity’ refers to how easy it is for terrorists to conduct their activities. ‘Capability’ addresses the know-how and ability of terrorist organisations to carry out their actions and ‘Intent’ refers to their resolve to follow through those actions.

OPPORTUNITY

Southeast Asia is one of the world’s busiest and strategic chokepoints, accounting for approximately 40% of the total global maritime trade. With numerous ships passing by each day, the opportunity to hijack a ship to use as a weapon or carry out attacks (e.g., planting a bomb) on-board ships remains high.

The situation is further exacerbated by the fact that commercial shipping is a complex multinational network. A ship could be flagged in one country but owned by a company based in another country. Its crew can consist of a mix of nationals and its cargo can be consigned by numerous companies from all over the world transiting through the territorial waters of a third country heading towards a port of a fourth country. Given such complexity and ease of access to move people and goods in the maritime domain, the opportunities for terrorists to conduct their activities continues to exist.

CAPABILITY

In terms of hardware, terrorists continue to employ low-cost explosive devices against their targets. Notwithstanding, the ease of access to these raw materials as well as dual-use technologies such as satellite communication systems, Global Positioning System, recreational maritime vehicles (e.g., yacht, fast boats and jet skis) increases the available inventory that maritime terrorists can exploit to advance their cause.

Terrorists have also been known to align themselves to criminal organisations in order to gain access to the required expertise and resources, both in terms of manpower as well as financial support through activities such as smuggling and money laundering. Terrorist organisations have also exploited the use of social media and internet forums to recruit manpower, spread their ideology and teach the techniques, tactics and procedures (TTP) in carrying out terrorist acts. Given that some countries continue to be plagued by endemic income inequality and corruption, these factors have fuelled the growth of extremists within the region and spurned more radicalised individuals to join these terrorist organisations.
**INTENT**

Terrorism works at the mental and psychological levels by imparting and spreading trepidation in their casualties. The mere threat of an attack is sufficient to trigger governments into a host of arrangements to deter and disrupt terrorism. In the information operations realm, the successful assaults completed by Al Qaeda since 2000 had encouraged their members, regional terrorist organisations (e.g., the Kumpulan Militan Malaysia (KMM), Jemaah Islamiyah (JI), Abu Sayyaf Group, Moro Islamic Liberation Front, Laskar Jihad, Gerakan Aceh Merdeka, more recently, Jamaah Ansharusy Syariah) and ‘Lone Wolves’ to carry out high pay-off returns in the maritime domain. For example, the attack by Abu Sayyaf Group in 2004 on the SuperFerry 14 in the Philippines saw 116 passengers killed.

No doubt, these terrorist organisations continue to publicise their intent, rallying supporters to join their cause and encouraging them to carry out attacks. For example, in 2002, Singapore managed to uncover reconnaissance information gathered by JI on US naval facilities and ships based in Singapore. In May 2015, ISIS renewed calls to attack Singapore, Philippines and the US, following the disruption of a terrorist cell in Malaysia in April 2015 which had intentions of carrying out bomb attacks in Putrajaya. In May 2015, Singapore’s Ministry of Home Affairs detained a 19 year old student who had intentions to join ISIS in Syria and failing which, may have attempted to carry out ‘Lone Wolf’ attacks. Such evidence continues to demonstrate that the threats to our maritime security are real, present and clear.

**POSSIBLE SCENARIOS OF A MARITIME TERRORIST ATTACK IN SOUTHEAST ASIA**

To understand the dangers of maritime terrorism, there is a need to examine the list of vulnerabilities and potential outcomes that can be connected to potential attacks. This analysis must be grounded on authentic information and insights to the capabilities as well as goals of terrorist organisations. The Rand Corporation, in its study ‘Maritime Terrorism - Risk and Liability’ recognised seven conceivable scenarios where maritime terrorism might happen. Trend Micro completed a risk assessment study in December 2014 and highlighted eight potential scenarios that may be exploited by terrorists. The eight scenarios are as follows:

**Scenario 1**

Smuggle Chemical, Biological, and Radiological, Explosive (CBRE) materials ashore via cargo containers to carry out attacks at significant commercial ports such as Hong Kong or Singapore or key targets on land.

With more than 100 million cargo containers being moved through the world’s ports each year, it is possible that terrorists may choose to smuggle their CBRE materials in one of these containers. The sheer volume alone means that it is not feasible to carry out a 100% check on all the cargo containers.

Notwithstanding, another area of concern is the robustness of supply chains. The multifaceted and complex nature of freight shipment in ports represents another weak link to the security issue. Cargo is loaded at one area and transported by truck or rail to a port and thereafter, loaded onto a ship where it gets transferred to another ship at a transhipment port before reaching its destination. To ensure that the supply chain network is not compromised and all phases of the supply chain are screened, a significant amount of investment from the logistics as well as transport industry is required. However, all these measures drive up overheads and
time needed to move goods. Thus, it is unlikely that the developing countries in Southeast Asia will be willing to incur these costs unless it is a universal requirement by all ports to comply.

Scenario 2

Use of ‘Trojan Horse’ tactics, concealing weapons or other explosive devices, in seemingly harmless looking vessels as such fishing trawlers, tugs or re-supply ships.

Not only does the International Ship and Port Facility Security (ISPS) Code exclude vessels less than 500 tons, it also provides exclusion for all fishing vessels regardless of their size. Notwithstanding, a number of international standards that are applicable to merchant vessels are not applicable to the fishing vessels found in Southeast Asia, in part due to their haphazard operations schedule as well as the limited number of qualified seafarers on-board. Likewise, there have been numerous cases in which the vessel’s crew records were conflicting or erroneous. What this means is that these vessels continue to be the preferred choice for the conduct of illicit activities such as smuggling of weapons in hidden compartments under a boat load of fish. As these vessels are not Safety of Life at Sea (SOLAS)-compliant, security initiatives such as those implemented by Singapore (i.e., Harbour Craft Transponder System, Harbour Craft Security Code, and Ship Self Security Assessment Checklist) can be implemented by regional Port State Controls to deter maritime terrorism. The Mumbai attack is an example where terrorists exploited a seemingly harmless fishing vessel to bypass security agencies.

Scenario 3

Hijacking a vessel as a means to raise funds or to support their crusade of political viciousness coordinated toward ethnic, ideological, religious, or separatist outlines.

In 1985, the *MS Achille Lauro* was hijacked by four members of the Palestine Liberation Front (PLF). The hijackers demanded the release of 50 Palestinians locked up in Israeli jails. The incident saw one Jewish American passenger being killed in response to negotiation breakdown. In 2001, *MT Tri Samudra*, a chemical tanker, carrying a full cargo of inflammable petrochemical products, was hijacked by 35 gunmen, likely from the Free Aceh Movement, in Malacca Straits. The ship and crew were released, supposedly upon payment of the ransom. While these hijacks involved the smaller vessels, such as product tankers, tugs and fishing trawlers, they are largely carried out by criminal organisations that have the means to off load the valuable cargo on-board.

Scenario 4

Scuttling a ship at a chokepoint or narrow Sea Lines of Communication (SLOC) (e.g., Malacca Straits) to disrupt commercial trade and shipping movement.

Looking at the context of Southeast Asia, in particular the Malacca Straits, it is highly unlikely that such an attack will achieve its intended
outcome. This is because at One Fathom Bank, or the narrowest point in Malacca Straits, it is approximately 0.6 nautical miles wide and ships can circumvent round the sunken ship and continue on their passage. However, the threat from mines or floating Improvised Explosive Devices (IEDs) is far greater and will achieve the intended outcome of disrupting shipping movement in a SLOC.

Scenario 5

Hijacking a Liquefied Natural Gas (LNG) carrier and then exploding it as a floating bomb or utilising it as an impact weapon against port facilities.

Large vessels have long stopping distances and if used as an impact weapon against a port facility, can cause significant destruction. When these vessels are carrying high-risk or inflammable goods such as LNG, terrorists could hijack these ships and use them as floating bombs to target port facilities.

Natural Gas is not explosive in its liquid state. That is why refrigerated tankers are used to store huge amounts of LNG for transportation. However, once it is exposed to the ambient environment, LNG rapidly evaporates and forms an ignitable cloud. When this cloud is ignited, the heat generated is capable of melting steel at a separation distance of

![Layout of a typical LNG Carrier.](image-url)
about 1,200 feet away. A fire of such magnitude will be difficult to put out and can only be extinguished when all its fuel has been spent. For a port like Singapore, the effect of such an incident will be decimating. Death toll and serious infrastructure damage is expected to be high at the impact point as well as in the vicinity. This would also imply that the port would need to work at a decreased limit, resulting in delays and a loss of business. That said, the complexities in carrying out such an attack would render the threat from an LNG carrier to be low. It is easier to exploit more combustible platforms such as chemical tankers or Liquefied Petroleum Gas carriers to achieve the intended effect.

The disruption of oil trade as a result of a terrorist attack will have significant implications to the emerging economies of Southeast Asia.

Scenario 6

Use of small powerboats to assault an oil tanker or oil terminal to influence global petroleum costs or create significant contamination in the coastal areas.

The attack on M/V Limburg and M Star demonstrated the vulnerability of large ocean-going vessels in out-maneuvering small powerboats. It also showed the difficulty in causing critical damage to these huge vessels if the impact is not correlated with the vessel’s structural weak points. Notwithstanding, terrorists have continued to use small powerboats to assault oil terminals in an attempt to destabilise a country. For instance, the attacks on the Al Basrah and Khor Al Amaya oil terminal in Iraq back in 2004 caused both terminals to be shut down for two days, resulting in lost revenues of approximately US$40 million.

The disruption of oil trade as a result of a terrorist attack will have significant implications to the emerging economies of Southeast Asia. In addition, the potential for the contamination of coastal areas in Southeast Asia increases in tandem with the number of ships transporting oil through the region.

Scenario 7

Create mass casualty situation on-board a cruise ship or passenger ferry by detonating a bomb on-board or using a small but fast boat laden with explosives to ram the ship.

Terrorists can disguised themselves as tourists to gain access to cruise ships and plant explosives in order to trigger a mass casualty situation. For example, the Abu Sayyaf group’s attack on the SuperFerry 14 in 2004 was carried out by detonating 20 sticks of explosives that were stored inside an emptied out TV set. As a result, a fire broke out and 116 passengers were killed. In 2005, Lu'ai Sakra, an al Qaeda–linked organisation utilised a small boat laden with high explosives and smashed it into an Israeli cruise ship carrying travellers destined for Turkey.

Scenario 8

Using cyber attacks to hijack or spoof Automatic Identification System (AIS) transponder codes.

Trend Micro evaluated the AIS installed on-board ships and concluded that the system is susceptible to hijacking, disruption as well as spoofing. For instance, Closest Point of Approach (CPA)-spoofing can fake a possible collision scenario and cause the targeted ship to veer off-course and run aground. AIS-Search and Rescue transponder (SART) spoofing could potentially lure Search and Rescue (SAR)
vessels into a trap laid by terrorists. AIS hijacking could potentially trigger conflicts between nations by ‘moving’ military ships into another nation’s territorial waters.

**ARE THE REGIONAL COUNTER-TERRORISM ARRANGEMENTS SUFFICIENT?**

ASEAN members have, since 9/11, adopted a comprehensive approach to improve the regional security through continued informal interactions and focusing on economic development. In order to deter, detect and disrupt terrorism, a combination of security, economic and ideological measures are required at the national level. In addition, ASEAN members have collaborated with one another in the fight against terrorism by improving the geopolitical climate between countries through confidence building measures, shared intelligence, capacity building and enhancing interoperability. This section will elaborate on the regional arrangements established in combating terrorism and propose that greater collaboration between regional countries is required to combat terrorism at its source, by defeating its ideology.

**In order to deter, detect and disrupt terrorism, a combination of security, economic and ideological measures are required at the national level.**

**Confidence Building Measures**

At the geopolitical level, there is great value in enhancing co-operation between states, building trust and strengthening relationships. Such acts will result in the building up of ‘maritime capital’, allowing states to utilise this resource in times of crisis. To achieve this, ASEAN members have put in place numerous platforms and initiatives to enhance maritime security. For example, forums such as the ASEAN Regional Forum, ASEAN Defence Ministers’ Meeting (ADMM) and the ADMM-Plus Maritime Security Working Group continue to provide opportunities for collaboration towards peace and security in Southeast Asia.

**Shared Intelligence**

In addition, co-operation between Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) Information Sharing Centre, Information Fusion Centre (IFC), regional intelligence agencies, navies, coast guards and more importantly, the inclusion of the shipping community themselves, have been effective in combating maritime terrorism. Given the finite resources available to the navies and enforcement agencies, the Head of UK Maritime Trade Operations (UK MTO) office in Dubai suggested at the Regional Maritime Security Practitioner Course (RMPC) 2015 that greater co-operation and leadership be displayed by the militaries in tapping the thousands of sensors (i.e., commercial ships) that transit through the region for ground intelligence on potential threats to maritime security. For instance, the perpetrators responsible for the hijack of oil tanker V.L.14 off the South China Sea on 28th August, 2014 were successfully interdicted within 16 hours through the collaboration between regional agencies. That said, collective sense making continues to be relevant to overcome the limitation of finite resources that each country has. With the use of advanced data analytics tools, trend lines can be ascertained and priority of interception can be tagged to ships traversing from high risk states or those with links to terrorist organisations. Such pre-emptive measures serve to deter, detect disrupt terrorist acts even they arrive at their destination.
Details of the MH370 Search and Locate operation being shared among various International Liaison Officers at the Information Fusion Centre.

Capacity Building and Enhancing Interoperability

Concerted capacity building activities continued to be conducted by IFC. They include the annual Regional Maritime Security Practitioner Course (RMPC) and the international maritime information-sharing workshops/exercises. Notwithstanding, the conduct of multilateral maritime exercises at sea and ashore continues to strengthen information exchanges and interoperability between navies and maritime agencies, enabling them to respond decisively when called upon.34 Such exercises include the Maritime Information Sharing Exercise (MARISX), Western Pacific Naval Symposium (WPNS) Multilateral Sea Exercise (WMSX), Exercise Bersama Shield and Exercise Bersama Lima under the Five Power Defence Arrangement as well as the biennial Rim of Pacific Exercise (RIMPAC). Last but not the least, security arrangements like the Malacca Strait Patrols and the adoption of the Code for Unplanned Encounters at Sea (CUES) continue to foster co-operation between navies in tackling threats to regional maritime security.35

CHALLENGES TO REGIONAL COUNTER-TERRORISM EFFORTS

While the region’s efforts have been effective in deterring, detecting and disrupting maritime terrorism, there exist challenges to the conduct of good order at sea and terrorists are likely to exploit these gaps. As argued by Sam Bateman, these challenges can be summarised into five main points: (1) presence of sovereignty and/or boundary disputes; (2) lack of clearly defined and mutually agreed maritime boundaries between coastal states; (3) lack of capacity and coordination within the national
maritime administrators; (4) lack of support for key maritime treaties (e.g., International Convention on Maritime Search and Rescue (SAR) and Suppression of Unlawful Acts (SUA) and (5) regional differences in interpreting the law of the sea with regards to territorial rights, duties and exclusive economic zones.36

Many legal challenges will continue to arise in the fight against maritime terrorism. As such, it is important for regional states to refrain from eroding or damaging the incumbent Law of the Sea by adopting unilateral practices and claiming it to be ‘international customary law’ to advance their own interests.37 The lack of a common definition of ‘Maritime Terrorism’ will also continue to undermine the region’s efforts in achieving effective governance and co-operation in the maritime domain.

**ADDRESSING THE ROOT CAUSE OF TERRORISM**

In order to defeat terrorism, there is a need to address the fundamental social and political issues as well as to remove the financing support that allows terrorists to procure weapons and other related materials. While peace and security amongst regional states in Southeast Asia has propelled the region to economic success over the past decade, it is equally important not to be too focused on the ‘hard’ approaches to defeat terrorism. ‘Hard’ approaches such as safeguarding targets, capturing terrorists and sharing knowledge will not be adequate to defeat terrorism. There is a need for regional countries to collaborate with one another and adopt ‘soft’ approaches that target the ideology of radical Islamists and win the hearts and minds of progressive Islamists in Southeast Asia.38

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**CONCLUSION**

ASEAN’s political endeavours and co-operation over the past decade have eliminated crevices in the law that provided safe haven for terrorists to operate. Regional efforts as well as whole-of-government approach to combat terrorism have achieved the effects of deterring, detecting and disrupting terrorism. But the work is not done.

This essay has established that the maritime terrorism threat in Southeast Asia is real and the terrorist organisations have the opportunity, capability and intent to carry out the attacks. The eight possible scenarios were explained in the context of Southeast Asia with the latest addition of cyber attacks on the AIS following the study done by Trend Micro. Finally, the essay analysed ASEAN’s efforts in fighting terrorism and acknowledged that confidence building measures, shared intelligence, capacity building and enhancing interoperability have been effective in deterring, detecting and disrupting maritime terrorism. The essay also highlighted five main challenges that may undermine these efforts and propose greater regional collaboration in combating radical Islamist ideology.
BIBLIOGRAPHY


Gaouette, Mark. Cruising for trouble: Cruise ships as soft targets for pirates, terrorists, and common criminals. ABC-CLIO, 2010


ENDNOTES


11. Ibid.

12. Ibid.


19. If for some reasons, the terrorists is able to scuttle multiple ships and effectively blocked the Malacca Straits, what this means is that vessels will be forced to bypass Malacca Straits and use either Lombok or Sunda Straits to reach their destinations, potentially incurring additional shipping costs and delays but not resulting in a standstill of maritime trade in the region.


22. It is not easy to create a cloud of fire on an LNG carrier. First, LNG carriers are designed with numerous safety provisions such as compartmentalizing the tanks to prevent contact with one another. In addition, the power needed to break the structure of the tank would more likely than not, cause fire at the tank area and light up the gas as it escapes into the surrounding, restricting the potential damage fairly to the LNG carrier. As such, it is unlikely that a cloud of fire can be created during such an attack.


24. Ibid.


26. In 1997, Singapore experienced the worst oil spill in its history when the oil tanker Evoikos collided with the Very Large Crude Carrier (VLCC) Orapin Global in the Singapore Straits. As a result of the collision, 25,000 tonnes of oil were spilled into the sea, generating enormous damage to the maritime environment


28. Gaouette, Mark. Cruising for trouble: Cruise ships as soft targets for pirates, terrorists, and common criminals. ABC-CLIO, 2010

29. AIS provides real-time tracking and monitoring information to enhance the safety of ships at sea. Since 2002, it has been installed onboard over 300,000 vessels. The AIS system has been used during search-and-rescue (SAR) operations as well as accident investigations.


32. Sharing by Head IFC during RMPC 2015


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