

## Maritime Security

Dr. Manoj Kumar

Assistant Professor, Department of Defence Studies, Hindu College, Moradabad, Uttar Pradesh, India

### ABSTRACT

The maritime industry is one of the largest on the planet, and ensuring operations at sea continue safely takes determined effort. The implementation of maritime security takes both knowledge and vigilance, and is essential to enhance security enforcement without slowing down the timely flow of international commerce. Maritime security is a specialized field in the marine sector, and safety officers must employ best practices to defend their vessel against both internal and external threats. These threats come in various forms, and each requires a different strategy for a proper defense. Security risks are not always malicious, but maintaining vessel safety is a constant priority. Maritime security is a general term for the protection of vessels both internally and externally. The areas from which ships and maritime operations need protecting include terrorism, piracy, robbery, illegal trafficking of goods and people, illegal fishing and pollution.

Through supervision, inspection and proactive procedures, the marine industry does its best to minimize threats to maritime security, both malicious and accidental. And as the industry evolves and the marine sector grows, vigilance, enforcement and training will have to keep up with technology and increased opportunity for threats.

Since 9/11, there's been an increased focus on protecting the marine sector from terrorism and other similar attacks, both in port and at sea. Several state and international organizations have formed to help set standards for bettering maritime security. Since the marine sector is so vast and the massive amount of goods entering the country is difficult to screen, every precaution possible to minimizing malicious exploitation is critical.

Security is not only the job of vessel safety officers, but the job of the crew as a whole, which is why it's so crucial for companies to educate and train their employees so their vessels have a better chance of stopping security threats.

**KEYWORD:** *maritime, security, trafficking, illegal, threats, exploitation, pollution, fishing, commerce*

### INTRODUCTION

In today's marine industry, ensuring security compliance is a complex task, as there is much to look over and many ways a security breach can happen.

Security officers not only need to be vigilant to prevent attempts to undermine the nation's laws and security, but they also need to know how to be vigilant against local and internal threats. Small-scale attacks can still be harmful to a marine company and

can result in the loss of lives, severe environmental damage or harm to company property.[1]

### Here are a few of these types of risks:- Thievery

When transporting valuable goods and resources, there are sometimes attempts at the local level to steal these goods from vessels. Security officers need to be vigilant for this reason both in port and at sea, to make sure valuable and sensitive cargo is secure.

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## **Trespassing**

Security officers must make sure that when their vessel is in port, no unauthorized personnel come aboard and tamper with sensitive equipment. Even if the documented crew members carry out vessel operations correctly, a trespasser can tamper with cargo rigging and other sensitive gear, which can lead to severe consequences at sea.

Large-scale security measures concern things that can happen on an international scale, usually as the result of more malicious operations than individual crimes, like terrorism, environmental crimes, smuggling and trafficking.

## **Terrorist Threats**

Modern advances in telecommunications and international commercial logistics have increased the range and avenues open to terrorists. Criminals sometimes attempt to use marine shipping channels to transport dangerous weapons and materials.

Terrorists use transportation avenues because they can move goods and even people to advance their cause, and the marine shipping industry is a prime target. They use shipping industries in attempts to damage global, political and economic security, as well as the safety of citizens. Security officers must be vigilant and knowledgeable about the pathways terrorists can use to attack.

Since the maritime shipping sector is by nature an international business, marine professionals must do everything they can to protect their vessel and country from these kinds of threats.

A side effect of increasing maritime trade and economic globalization is that it will facilitate the expansion of transnational crime. Trafficking in drugs, arms and people is already big business, and maritime shipping is a crucial method of transport.[2,3]

International crimes will not disappear anytime soon, and maritime security must help minimize their spread. The more illegal cargo the shipping industry can stop at the source, the less damage the shipment will do once it reaches its destination — by keeping the unlawful products and weapons out of the hands of criminals.

With every shipping vessel carrying hundreds of large containers, it's difficult for security to check each one thoroughly. Criminals know this, and use it to their advantage. Smuggling networks will attempt to get around security measures and the shipping industry because its vastness and scale make it an easy target.

Smuggling is not exclusive to the shipping industry, as criminals will sometimes attempt to use other types

of vessels to get their contraband past international borders.

Just as the oceans are the highways by which we transport a large number of our goods, they're also the highways for the import and export of illegal items. Organized and international crime organizations use the shipping industry to transport large masses of their product, as we can see when we look at the many large-scale drug busts throughout the years. Not only do they smuggle drugs, but they may also smuggle firearms and other illegal technology that fetches a high price on the black market.[4,5]

## **Piracy**

Piracy may seem like an idea from the past, but large ships carrying millions of dollars worth of cargo still tempt criminals to attack ships. Today's pirates and criminals are usually well-organized and equipped with advanced communication and equipment.

Ample training and experience in maritime security can help crew members prepare for and deal with a piracy attack safely.

## **Human Trafficking**

Human trafficking is another one of the main issues that face international marine security. Illegal migration has been present in the maritime sector for a long time — whether it's people escaping political unrest or unwilling people being trafficked. It's difficult for the marine industry to catch all the illegal immigration, but proper marine security techniques help minimize the problem.

## **Environmental Damage**

Because large-scale commercial operations take place in the ocean ecosystem, there will inevitably be incidents that harm the environment. It's the job of marine security officers to help ensure that their vessel's operations harm the environment as little as possible. Proper safety and security protocols are the best strategies to avoid disasters, especially in the petroleum industry.

## **Discussion**

Some of the best practices a vessel security officer, or VSO, carries out.

- Regularly inspect the vessel: To monitor and ensure security measures, every security officer needs to be vigilant on their vessel and always be looking for anything out of the ordinary.
- Oversee maintenance to improve security: If there's anything aboard the ship that doesn't comply with best security measures, it's the job of officers to take care of it the right way.

- Manage the coordination and handling of cargo: When loading and unloading cargo, a security officer needs to make sure to do everything according to protocol and ensure proper checks take place, as well as inspection of vessel stores and bunkers.
- Proposing modifications: If there are any modifications to the security plan for the vessel, it's the job of the VSO to suggest these to the company security officer, so they can make a company-wide change to improve security.
- Report problems: If a vessel audit discovers anything wrong, it's the security officer's job to report it to the company safety officer so they can promptly implement corrective actions.
- Assuring security awareness and vigilance: It's not only the job of the VSO to monitor and be vigilant about anything out of the ordinary, but the role of other crew members as well. The safety officer should inspire the crew to be on alert and report potential threats.
- Implement security training: It's the job of safety officers to train their crew members about how to behave during normal operations and emergency operations of security.
- Report and record security incidents: Anytime there's something out of the ordinary, it's the security officer's job to note and report their findings to the senior security officer and the company security officer.
- Ensure screening programs: The VSO needs to run screening programs like transportation worker identification credential checks that clear crew members to work around the vessel by passing background tests.
- Monitor security equipment: A security officer must ensure security equipment is properly operated, tested, calibrated and maintained.[6,7]
- Supervise and support crew members: A vessel's security officer needs to make sure the crew members are acting according to the security plan and regulations for their ship.

The maritime industry is undeniably evolving. And with more and more operations being automated and technology improving, security will inevitably change too.

A lot of these improvements and advances are addressing the problem of visibility in the supply chain. Now, there are many points in the shipping process where criminals have the opportunity to infiltrate and exploit. But as technology and screening

processes advance, security officers will only be able to identify these weak spots better and ensure security for their vessels.

With these changes and updates to the maritime industry, security officers will have to adapt as well — especially in the field of cybersecurity.

Cybersecurity at sea means protecting the valuable data a company holds that criminals can exploit — including cargo information and employee details. Cybercriminals can also hack the electronic systems that control vessels, which can result in severe and costly ramifications.

As technology evolves, maritime security and protocols will need to change too, along with the development of the requisite legal framework to support new shipping methods.

One example of technological evolution within the maritime industry is the push toward completely automated shipping vessels. A vessel without crew members, if perfected, would be much more cost-efficient for shipping companies, and potentially more resistant to security threats — if a ship didn't need crew members to operate it, limiting access to the vessel could reduce the chance of piracy significantly.

Two Norwegian companies have been working on fully automatic ships, and expect to begin their remote operation in 2020. These ships could interpret real-time data based on information from other vessels, ports, weather conditions and more to operate at peak efficiency. However, these ships are still in the testing phases, and companies will likely be slow to adopt the fully automated ships because of concerns about liability, cybersecurity and safety.[8,9]

## Results

Historically, the sea has been subject to different concepts of law and power. The term *mare nostrum* (our sea in Latin) was coined by the Romans in 30 BC to 117 AD as a term to describe its control of the Mediterranean Sea. From this concept of the sealing of a sea, the legal concept of *mare clausum* (closed sea in legal Latin) was developed during the age of discovery between the 15th and 17th century. The sea became a restricted space, organised between Portugal and Spain. Maritime activity was exclusively reserved for the enhancement of national security through naval military.[7] In 1609, Hugo Grotius, a Dutch philosopher and jurist, published the book *mare liberum* where he introduced the concept of the free sea (*mare liberum* is translated to free sea in legal Latin). In his book, Grotius laid out the foundation of the freedom of navigation at sea. The sea was seen as



international territory, where every nation was free to conduct trade.[8]

Grotius' concept of the free sea was superseded by the United Nations Convention on the Law of the Sea (UNCLOS). This international agreement first came into effect in 1958 as the Convention on the High Seas (UNCLOS I). The most recent agreement is UNCLOS III, which is active since 1994. It now includes various zones and jurisdictions, including internal, territorial, and archipelagic waters. It further defines the exclusive sovereign waters of a state called contiguous zone, and the exclusive economic zones (EEZs) in which a state has the sole exploitation rights of resources like oil and fish. The latter can be extended by the continental shelf, a natural prolongation of the territory of the respective state.[9] Maritime security has until then been mostly concerned with interstate naval conflicts and piracy at sea. The warship USS Cole after an attack in October 2000 while she was being refueled in Aden harbour, Yemen

As a concept and agenda maritime security has evolved since the late 1990s and early 2000s. In particular concerns over terrorist attacks on port facilities sparked new security interests in the maritime domain. Notable events influencing the maritime security paradigm are the USS Cole bombing[10] in 2000 and the September 11 attacks in 2001.[7] Several states and international organisations have since outlined maritime security strategies. Many best practices and standards regarding physical maritime security like the ISPS Code from 2002 as a consequence of the attacks have been published by regulating authorities or the maritime industry.[11] In the light of the perceived terrorist threat, the scope of the maritime security concept began to broaden from the narrow focus on interstate military confrontation to include other issues.[12]

It is in particular the surge of piracy during the early 2000s in Southeast Asia, off the coast of Somalia and in West Africa which has triggered recognition for the detrimental effects of maritime insecurities.[13] As a result of the economic costs for world trade and the physical threats to seafarers, maritime security gained a significant increase of attention by the shipping industry, insurers and policy makers around the world.[4] Piracy was also the starting point of many international relations scholars for approaching maritime security as a concept.[7][13][14] In the wake of the Mumbai Terrorist attack in November 2008, an Indian scholar even lamented the serious lack of maritime vision in his government's policies to preserve India's expanding interests, thereby coining the catch-phrase "sea-blindness".[15]

One effect of piracy has been the development of regional cooperation initiatives. In Southeast Asia for example, the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCaap) has been initiated in 2004 and includes now an Information Sharing Centre (ISC). Besides maritime domain awareness (MDA) more topics began to become subject of these cooperation initiatives. The International Maritime Organization Djibouti Code of Conduct (DCoC), adopted in 2009, was originally an agreement on cooperation between East African and Southwest Asian states to counter piracy.[16] Since its revision and the complementary Jeddah Amendment to the DCoC of 2017, it now also includes other illicit maritime activities than piracy like human trafficking or illegal, unreported and unregulated fishing (IUU).[17]

Maritime security is facilitated at sea and in ports by several international regulations and codes from the International Maritime Organization.[18] The primary Code is the International Ship and Port Facility Security Code which entered into force in 2004.[19] The United Nations Convention on the Laws of the Sea (UNCLOS) which took place in 1984 gives a framework to piracy prohibition.[20] Since 2008, the United Nations Security Council edited some Resolutions concerning the specific Somali case like for example the 1846th in 2008 and the 1918th in 2010.[21] in order to make member countries put piracy as a penal crime in their domestic legislation. Those resolutions were ratified, but despite ratification, few countries have applied that resolution in their domestic law. In 2011, NATO put the maritime security issue in its Alliance Maritime Strategy objectives.[22] Despite the few countries who applied UN resolutions focused on Somalia piracy in their national legislation, many have created national agencies or bureaus specialized in maritime Security,[23] like the Maritime Security Agency[24] in Pakistan. The first country to put the problem on their agenda were the United States in 2004 with the Maritime Security Policy. It marked the beginning of United States' Maritime Security Operations, some maritime military actions other than wars, charged to detect and prevent illicit operations.[10]

## Conclusions

The maritime security matrix looks at the semantic relations between maritime security and other maritime concepts (see also semiotics) using four dimensions to relate and situate maritime security topics in and to the general concept of 'maritime security':

- Marine environment (e.g. connected to marine safety)

- Economic development (e.g. connected to blue economy)
- National security (e.g. connected to seapower)
- Human security (e.g. connected to human trafficking)[11]

A matrix may have each concept in a corner of a square, maritime security being situated in the centre. Depending on what is being analysed, concepts like human trafficking can then be situated e.g. between 'maritime security', 'human security', and 'economic development'. Securitization is a framework of international relations originally developed by Ole Waever and Barry Buzan. Sometimes called the Copenhagen School, securitization looks at who is making claims (using some form of language) in the name of security to carry out measures that would otherwise not easily be justified and accepted. The framework of practice theory enables to analyse what kind of activities are actually conducted in the name of security. Practice in this theory is seen as patterns of doing and saying things that lead to the implementation of maritime security measures. According to Bueger five practices fit within the conventional spectrum of maritime security:

- Maritime domain awareness (MDA, see also Information Sharing Centre (ISC))
- Activities at sea (e.g. patrols, inspections, exercises)
- Law enforcement activities (e.g. arrests, trials and prosecutions)
- Coordination activities (e.g. forums, conferences, harmonizing legal frameworks)
- Naval diplomacy (e.g. capacity building, warfare) This type of activity might not be associated with maritime security, but rather with war or other related concepts.[12,13]

These activities can be seen through two different perspective. The focus can either be laid on what activities belong to the everyday routine of maritime security actors or on the measures that are done in exceptional circumstances. [25]

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