# India's Maritime Trade: Safety & Security

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## Abstract

India has been a maritime nation since time immemorial with maritime trade being mentioned in the Vedic texts and ship repair and building facilities being discovered at Indus Valley sites that dot the Indian sub-continent.

As India grows as an economic power and takes its place at the forefront of trading nations a growing concern has been its ability to protect its trade routes, coastline and maritime assets. Piracy directed against Indian shipping and acts of piracy in Indian ports has been an issue over the last few years.

The risk of piracy has also caused foreign flag ships to have armed marines on board causing on occasion high levels of risk to innocent fishermen around the Indian coast, thus hampering India's fishing activity and affecting the livelihood of millions of fishermen.

Maritime security is a broad and sometimes nebulous area of strategic thought, and has relevance to everything from physical safety and security measures to port security, terrorism and more. A nation's lifeline is its maritime security and this cannot be compromised.

The paper primarily looks at pirate attacks in and around the India as well as in the immediate vicinity and possible measures to mitigate these threats. An unsafe maritime environment will necessarily thwart the nation's economic ambitions and its ability to grow in the years to come.

Key Words: Maritime Security, Economic Growth, Trade, Piracy, India

## Introduction

Economic growth is a sum function of the trade that an entity indulges in. In simple terms a country grows wealthier when its exports are greater than its imports and it is able to contain its fiscal spending within stated limits. India as a country needs to lift vast numbers of people out of poverty and this is possible when there is a thriving economy which is getting bigger and stronger.

Trade needs transport and when physical goods are transported, more often than not, the most economical transport mechanism is over the waterways. Trade cannot be supported unless a strong platform for transport is created and goods are ferried easily from one location to another. While inland trade through rivers and canals is always a viable option, ocean transport is imperative for foreign trade.

Indian trade is adversely affected by piracy in myriad ways. Indian imports and exports incur additional costs from increased risk insurance and longer transit times often called for to avoid pirate hotspots. Potentially, the long-term impact on India could also involve changes in trading partners – where our ships may not want to ply certain waters. Any disruption in maritime activity due to security concerns could affect India's economic growth.

Approximately, ninety per cent to ninety five percent of the country's trade by volume (70 per cent in terms of value) is moved by sea. India has the largest merchant shipping fleet among the developing countries and ranks highly among commercial navies of the world.

It's an enduring question as to why India slid from being an economic power in the sixteenth century to a nation that had to beg for food in the nineteenth century (The American food aid largess in the 1940's). Much has been written about India's fabled fabulous wealth and prosperity. Many nations of the world received Indian goods and the Indian sub-continent garnered about a third of the world GDP. I'm sure society was not egalitarian and India would

have had its share of poor and destitute, if not on the scale that existed at independence on cessation of the British Raj.

It is true that following the battles of Plassey and Buxar, the East India Company (An MNC that ruled a continent), followed by Britian ruthlessly exploited India and the country was nothing but a captive colony. A source of cheap raw material for British Industry, it was a huge market for British goods and fuelled the Industrial Revolution in England, making a once modest economy extremely rich, while destroying the Indian economy. As the British economic graph rose, India's declined.

Indian maritime trade had flourished since Harappan times (3000 BCE) with the Indus Valley civilization actively trading with Sumeria and Egypt. A superbly preserved ship repair and building dock at Lothal, Gujarat stands testimony. While England sourced Indian ships for their quality, they shackled maritime enterprise to allow their ships to rule the seas. India did not have control of their own seas for the next two hundred years.

Adam Smith considered to be the father of economics, might provide an answer to the decline of the Indian economy in his work *"An Inquiry Into the Nature and Causes of the Wealth of Nations,"* He states that nations get rich when free trade is allowed; there is a mutual benefit when people trade and the accumulation of wealth is encouraged. Treating India as a colony, the British destroyed internal trade, while monopolizing external trade, making India progressively poorer while enriching England. Adam Smith also conclusively argues that the people in a nation are richer in a growing economy, than a rich stagnant economy. He points to the fact that people in the colonies of North America were more affluent than the average denizen in rich England in the eighteenth century. The Indian economy was derailed for about two hundred years, making people progressively poorer, as accumulation of wealth declined and goods became costlier. The middle class would have slid into poverty and the poor into destitution, allowing concentration of the remaining wealth in the hands of a few.

Much of the world is excited on India, simply because the as economy grows, Indians get progressively richer and provide a huge market for free trade. It's like a juggernaut on the move after a couple of centuries of being lost in the wilderness. There is a large class that is rich enough to buy and this segment is getting bigger.

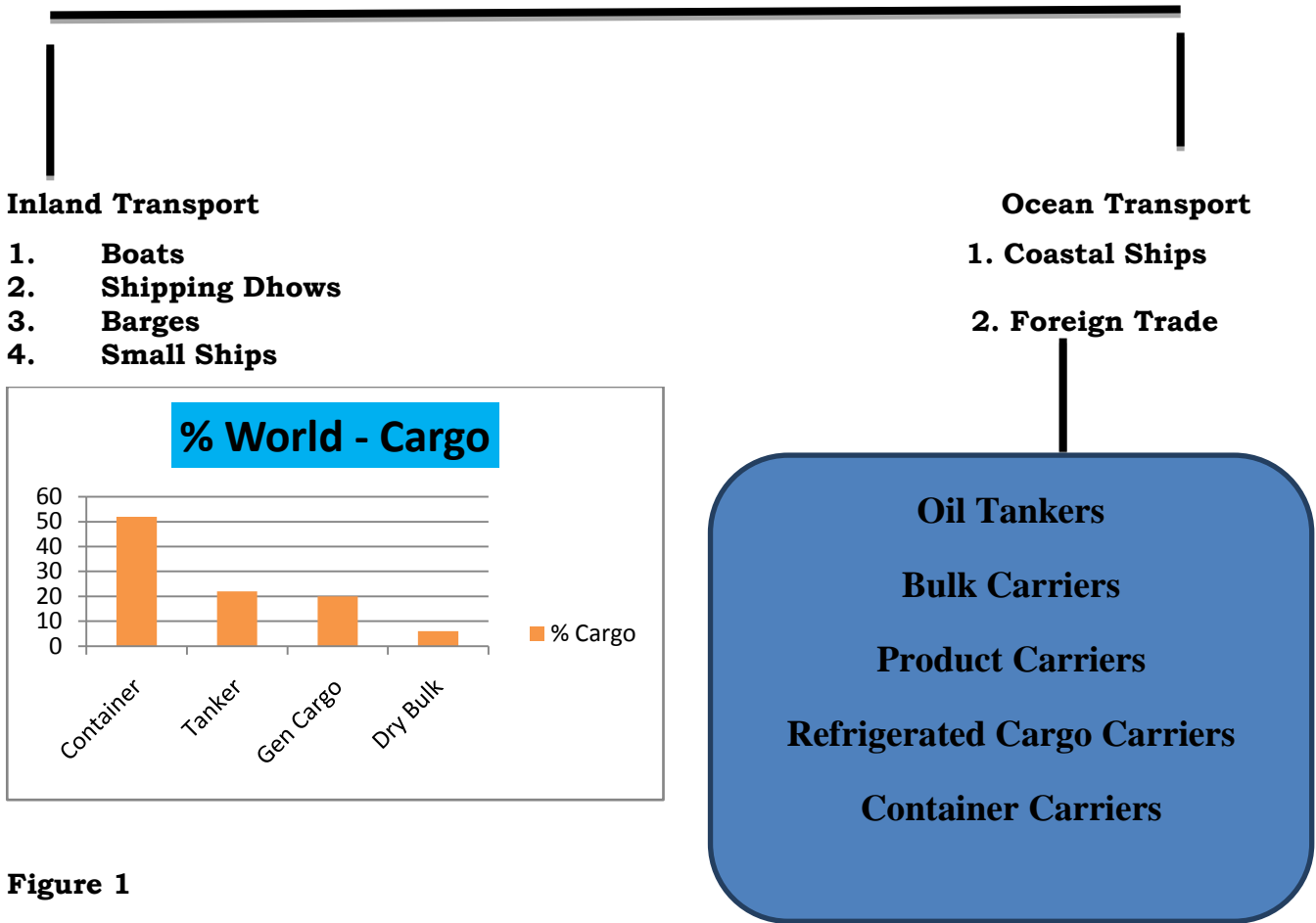**Maritime transport:**

**Types of Water Transport**

**Inland Transport**

1. **Boats**
2. **Shipping Dhows**
3. **Barges**
4. **Small Ships**

**Ocean Transport**

1. Coastal Ships

2. Foreign Trade

**% World - Cargo**

**Oil Tankers**

**Bulk Carriers**

**Product Carriers**

**Refrigerated Cargo Carriers**

**Container Carriers**

**Figure 1**

For foreign trade to flourish, the maritime infrastructure in terms of carriers and port infrastructure needs to be particularly strong. Infrastructural needs also include the safety and security of ships, without which, it is impossible for trade to flourish in a context of fear and insecurity.

**Maritime Trade in India**

The Indus River was a source of maritime trade by 3000 BCE. Mesopotamian inscriptions indicate that Indian traders from the Indus valley—carrying copper, hardwoods, ivory, pearls, carnelian, and gold—were trading in Mesopotamia. Gosch& Stearns write on the Indus Valley's maritime trade and talk about the Harrappans were bulk-shipping timber and special woods to Sumeria and luxury items such as lapis lazuli by ship.

The world's first ship building dock at Lothal (2400 BCE) was located away from the main current to avoid deposition of silt. Modern oceanographers have observed that the denizens of the Indus Valley must have possessed great knowledge relating to tides in order to build such a dock on the ever-shifting course of the Sabarmati, as well as a deep understanding of hydrological forces and marine technology. This was the earliest known dock found in the world, having the capability to repair and build ships. It is speculated that Lothal engineers studied tidal movements, and their effects on brick-built structures, since the walls are of kiln-burnt bricks. This knowledge also enabled them to select Lothal's location in the first place, as the Gulf of Khambhat has the highest tidal amplitude, between high and low waters, and ships can be navigated through high tides in the river estuary. Through the middle ages

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Indian maritime trade was robust and Indian kingdoms traded with other Asian countries as well as North Africa, particularly Egypt. The fifteenth century saw the blocking of overland routes to India from Europe, by powerful Ottoman Turks causing Europeans to launch sea expeditions to India. The Portuguese were the first Europeans to reach India by sea followed by other European powers notably the Dutch, French and English.

In many ways the advent of Europeans to India stifled Indian maritime trade, even as India was progressively colonized and the British East India Company took control of the seas. Indian ship builders known for their skill and quality of construction were in demand well into British times and were encouraged to contribute to the British navy.

**The Modern Age**

According to the Ministry of Shipping, around 95 per cent of India's trading by volume and 70 per cent by value is done through maritime transport.

Cargo traffic, which recorded 1,052 million metric tonnes (MMT) in 2015, is expected to reach 1,758 MMT by 2017. The Indian ports and shipping industry plays a vital role in sustaining growth in the country's trade and commerce. The Indian Government plays an important role in supporting the ports sector. It has allowed Foreign Direct Investment (FDI) of up to 100 per cent under the automatic route for port and harbour construction and maintenance projects. It has also facilitated a 10-year tax holiday to enterprises that develop, maintain and operate ports, inland waterways and inland ports. This is a welcome move as infrastructure development in the part development and maintenance area is a highly capital intensive venture.

The environment in which India has to consider it's maritime security includes the high seas in the northern Indian Ocean and the maritime zones which include ports and territorial waters. The territorial waters are the areas were India possesses complete and overarching rights and extends right up to the limits of the Exclusive Economic Zone (EEZ) and Continental Shelf both on the east and west coasts. This is further complicated by the international rights of freedom of navigation and innocent passage for all ships and craft even in territorial waters. It is indeed a highly appreciated fact that seas around the country contain neutral shipping, shipping of countries inimical to India's national security interests, warships of all denominations, research ships, sailing ships, fishing trawlers of various sizes and even pleasure craft.

The main users of the seas in the Indian maritime zones are:

1. Indian and international shipping
2. Major and minor ports
3. Oil installations and exploration vessels.
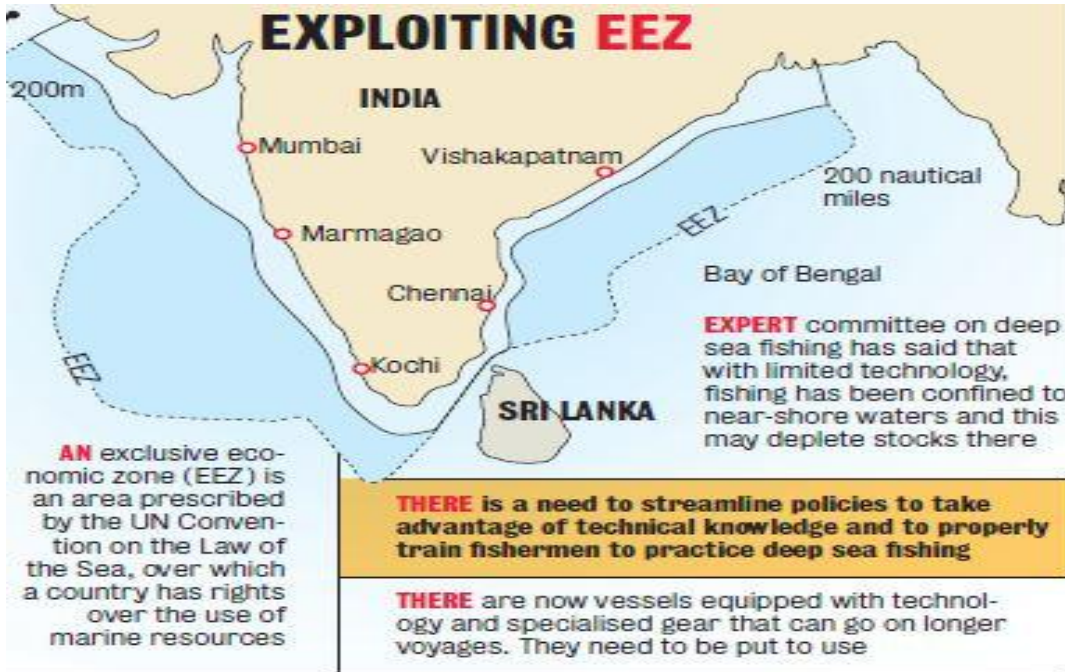4. Fishing Industry
5. Mining Industry

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Figure 1 India's Maritime Zone - EEZ

With a coastline of over 7,500 kilometres and an Exclusive Economic Zone (EEZ) of 2.3 million square kilometres, India occupies an important position in the Indian Ocean and plays a pivotal role in the strategic maritime interests of many nations. Ninety seven per cent of India's trade is moved by sea. The 12 major and 187 minor ports that dot the Indian peninsula, which is a major landmass that is washed by three major seas – The Indian Ocean, The Arabian Sea and the Bay of Bengal. The Indian Ocean is vast. Its western border is continental Africa to a longitude of 20° E, where it stretches south from Cape Agulhas; its northern border is continental Asia from Suez to the Malay Peninsula; in the east it incorporates Singapore, the Indonesian archipelago, Australia to longitude 147° E and Tasmania; while in the south it stretches to latitude 60° and is probably the most important ocean for international trade. The Indian Ocean region is seeing increasing interest. The reasons for this include security concerns about instability that characterises and destabilises the region, the region's vital role in oil production and its importance for energy shipments, the wealth of resources and raw materials in the region, involvement of extra-regional powers in a number of conflicts, and the rise of new regional powers and their ability to project their power particularly China and India.

Indian waters harbour important sea lanes that serve as the life line of the economies of several countries in the Asia Pacific, North and South America. They carry critical energy resources like crude oil from the Persian Gulf as also provide an economical maritime trade route. The Malacca Strait that allows maritime traffic to navigate past Singapore, Malaysia and the Indonesian archipelago is witness to heavy maritime traffic and on an average 200 ships pass through this strategic choke point. The entry for the mercantile traffic, navigating the strait, lies off the Andaman Islands in the Andaman Sea. India lies astride this critical sea lane and is therefore strategically located to monitor the entire maritime activity in the area. Any event or contingency in the area or among its maritime littorals, having maritime connotations has direct implications for its security.

The Indian Ocean serves to carry one half of world's container shipments, one-third of the bulk cargo traffic and two-thirds of the oil shipments, though three-fourths of this traffic goes to other regions of the world. Ninety percent of India's trade by volume and Ninety percent of oil imports take place through sea.

While the Indian coastline is not as well developed as other developing countries due to the high cost of capital a fair amount of cargo flows into these ports. It is interesting to note that Kandla Port, in Gujarat handles the largest amount of cargo in comparison to other major ports in India.(Table 1)

The Government of India and the Ministry of Shipping are cognizant of the need to improve India's maritime infrastructure and are taking proactive steps in this direction.
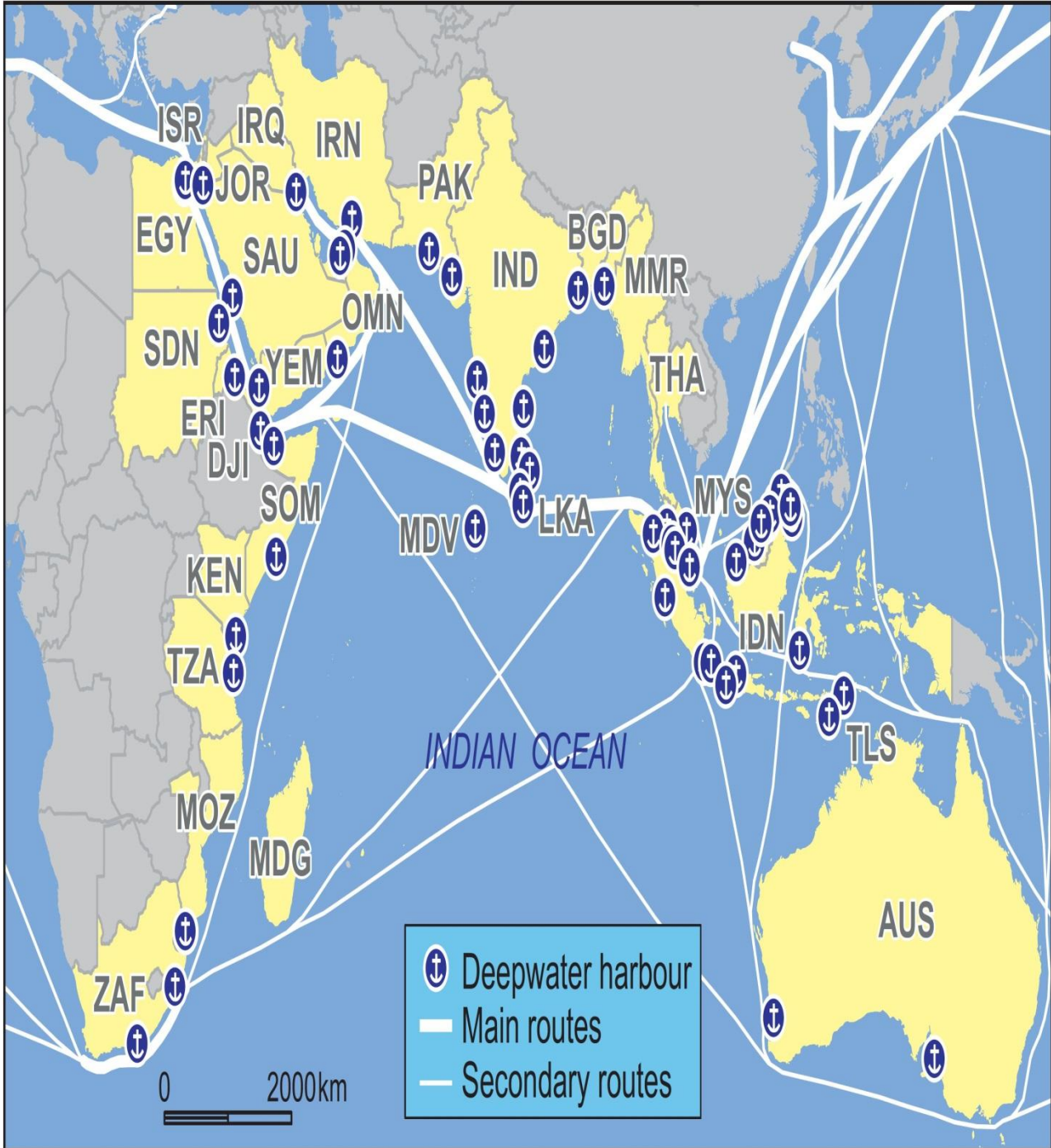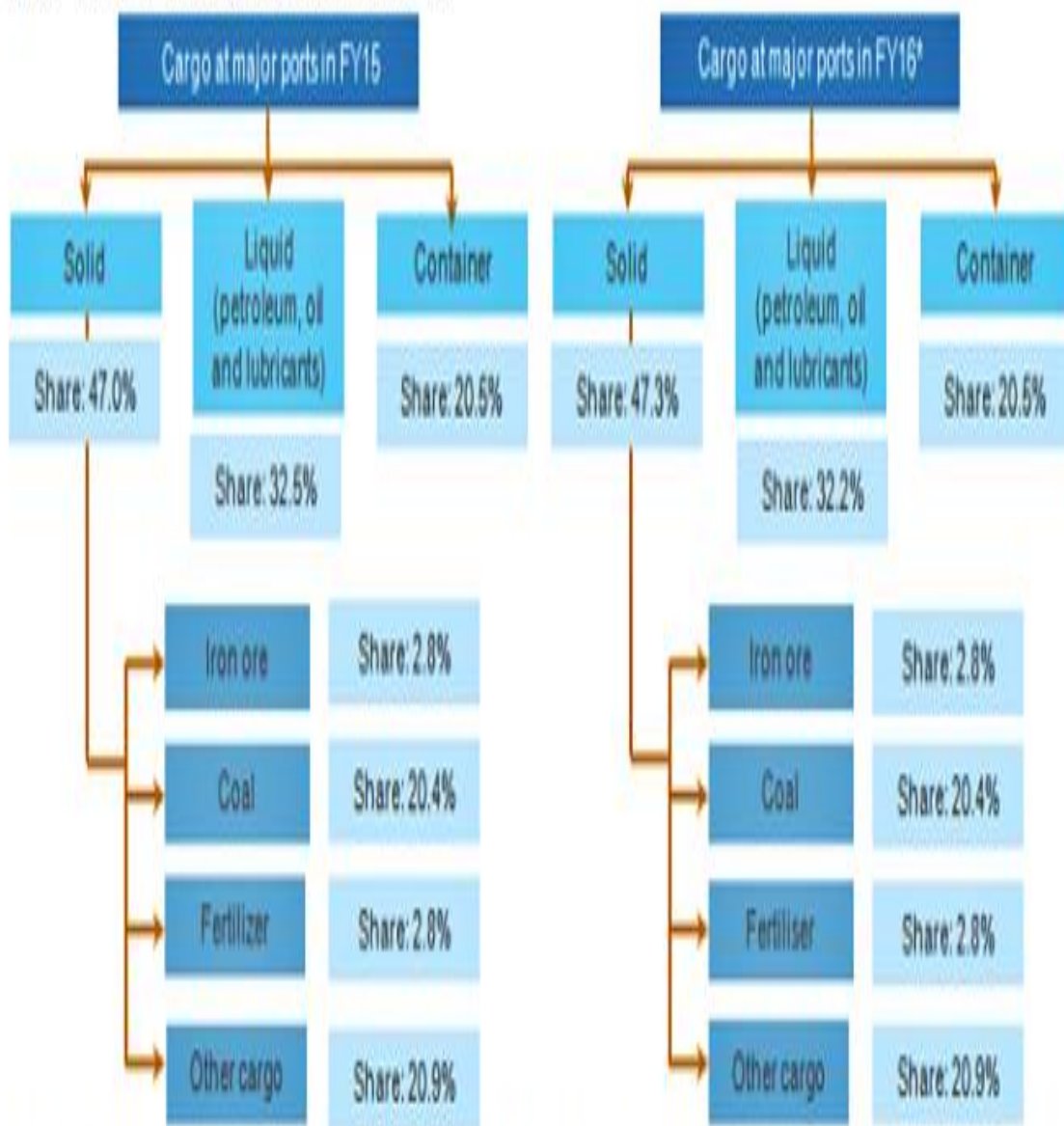


**Figure 2 Sea Routes in the Indian Ocean Region**

## Cargo Profile at major ports in India



| Cargo at major ports in FY15 | | |
| --- | --- | --- |
| Solid Share: 47.0% | Liquid (petroleum, oil and lubricants) Share: 32.5% | Container Share: 20.5% |

| | |
| --- | --- |
| Iron ore | Share: 2.8% |
| Coal | Share: 20.4% |
| Fertilizer | Share: 2.8% |
| Other cargo | Share: 20.9% |

| Cargo at major ports in FY16* | | |
| --- | --- | --- |
| Solid Share: 47.3% | Liquid (petroleum, oil and lubricants) Share: 32.2% | Container Share: 20.5% |

| | |
| --- | --- |
| Iron ore | Share: 2.8% |
| Coal | Share: 20.4% |
| Fertiliser | Share: 2.8% |
| Other cargo | Share: 20.9% |

Source: Ministry of Shipping; TechSci Research; Note: Other cargo includes Fertiliser Raw Material (dry) and food-grains; FY16* : April-October 2015
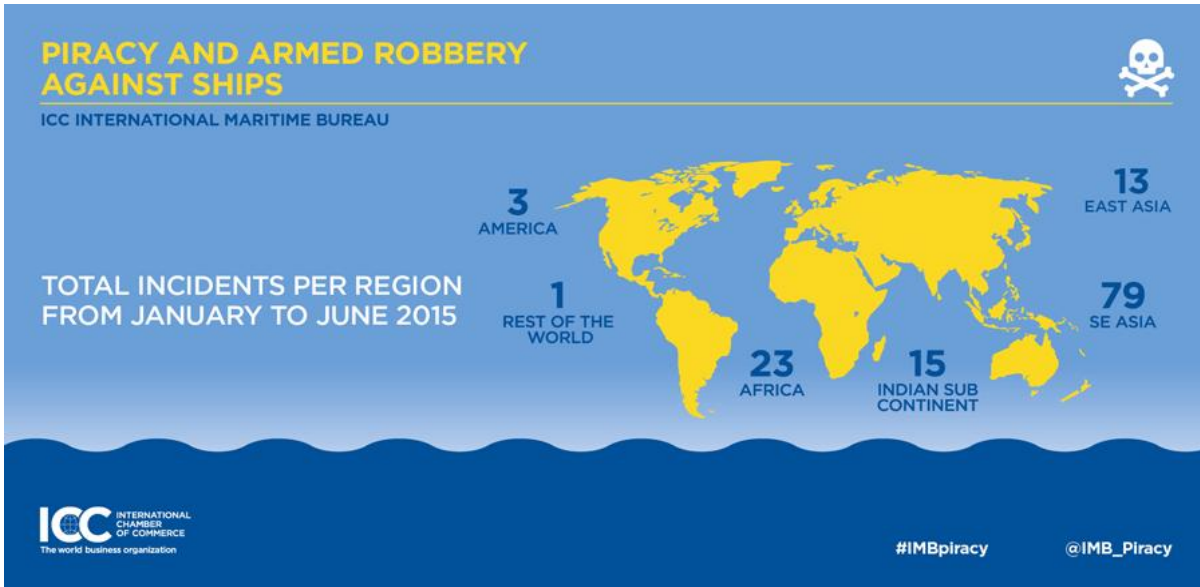
**Figure 3 Indian Cargo - A perspective**
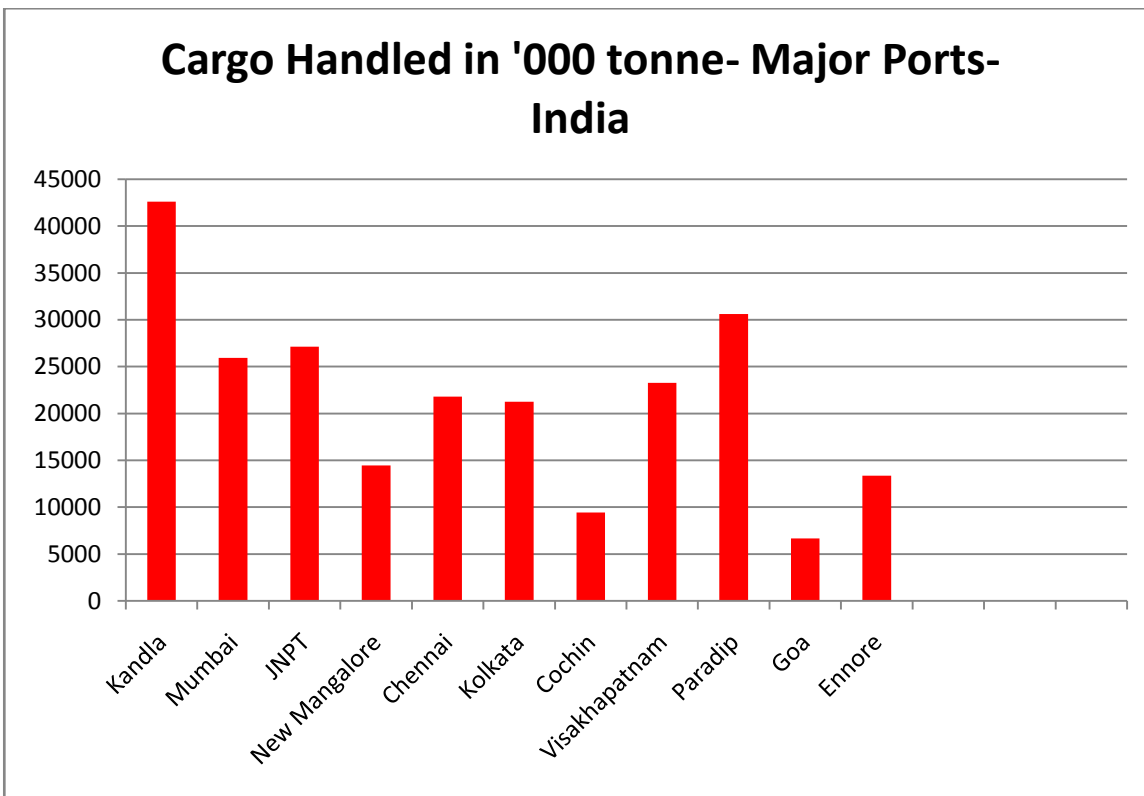
**Figure 4 Piracy Report 2015**



Table 1: Cargo Handled at Major Indian Ports – April 2013 to March 2014

**Piracy – A security hazard**

Article 101 of the 1982 United Nations Convention on the Law of the Sea (1982 UNCLOS) has defined the growing threat of piracy as follows. This narrow definition restricts it to unlawful acts committed by a private ship against another ship for private ends. However, a broader view delineates that acts committed for other than private ends can also constitute piracy.

Maritime piracy, which includes hijacking for ransom, robbery and criminal violence, is very prevalent in the Indian Ocean. Commencing in the early 1990s, attacks on ships using

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shipping lanes around South-East Asia (Indonesia, Malaysia, Thailand and the Philippines) and Africa began to increase and were not random events that could be ignored. Somalia became the hotbed of pirate activity ships traversing the Horn of Africa were susceptible to armed violence. Statistics of the International Maritime Bureau (IMB) indicate that of the 406 reported pirate attacks around the world in 2009, 297 occurred in the Indian Ocean region. In 2010, piracy attacks in the same area increased to 311. The large number of pirate attacks and hijackings off the Horn of Africa, specifically around Somalia and in the Gulf of Aden, is of great public concern and has resulted in considerable international action and response including world navies patrolling the area giving rise to the possibility of naval conflict. In the EMEA region and the Indian subcontinent, India and Nigeria are among the five countries in whose waters the lion's share of crimes at sea were reported in 2015, according to the latest International Maritime Bureau's (IMB) piracy report.  Last year, 71% of a total 246 reported attacks worldwide occurred in waters around Indonesia (108), Vietnam (27), Nigeria (14), Malaysia (13), and India (13). Weapons used during attacks on ships across all regions were typically knives, while firearms were widely in play in Africa.

Many private security companies are involved in fighting piracy. They lend their expertise and support to the shipping industry in myriad ways includes a variety of techniques and services, ranging from the training of navigating officers to designing anti-piracy drills manoeuvres and providing real time physical security on board ships. A number of nonlethal antipiracy measures are available to deter pirates, such as the use of high-tech sonic cannons, electrified handrails, placing extra crew on watch, drenching approaching boats with foam sprayers or high-pressure fire hoses, spraying decks with a slippery substance, etc. Most shipping companies do not arm their ships with lethal weapons and as many experts, insurers, the IMB and the International Maritime Organisation (IMO) do not endorse arming merchant vessels for the reason that it could increase levels of violence. Ship crews too are more often than not trained in handling weapons and are wary of doing so as it is an added responsibility. The killing of Indian fishermen in the Arabian Sea is a case in point where good intent may have gone awry. An Indian fishing boat was fired upon by armed marines from an Italian ship, killing two of them almost immediately. This incident sparked off a diplomatic row between Italy and India and refuses to go away. Fishermen often aggressively approach large ships when they feel that their nets are in danger. This may be seen as a threat by panic stricken ship's crew who would resort to action deemed to be in self-defence causing loss of life.

Another dimension is the striking of economic targets at sea. The Iran-Iraq War from 1980 to 1988 is mostly remembered for its severity and cost in human and economic terms. However, the war is also very important for two strategically initiated ways of naval conflict:

1. The attempts by Iraq to weaken Iran by destroying its ability to use tankers for exporting oil, which escalated into the so-called 'Tanker War', thus causing huge damage to Iran's economy and its ability to continue the war.
2. The US-led Western naval presence in the Persian Gulf to ensure the freedom of passage for tankers to Kuwait and the security of shipping to and from neutral Gulf countries.

The Tanker War started commenced in 1984 with Iraqi attacks on Iranian oil tankers and the oil terminal at Kharg Island. Roughly 546 commercial vessels were damaged during the Tanker War and around 430 civilian sailors were killed in what transformed the way in which countries viewed sea trade and an ability to project their presence at sea in terms of naval power. India's move in establishing a fully operational naval base at Karwar, on India's western sea-board is a step in the right direction in this regard.
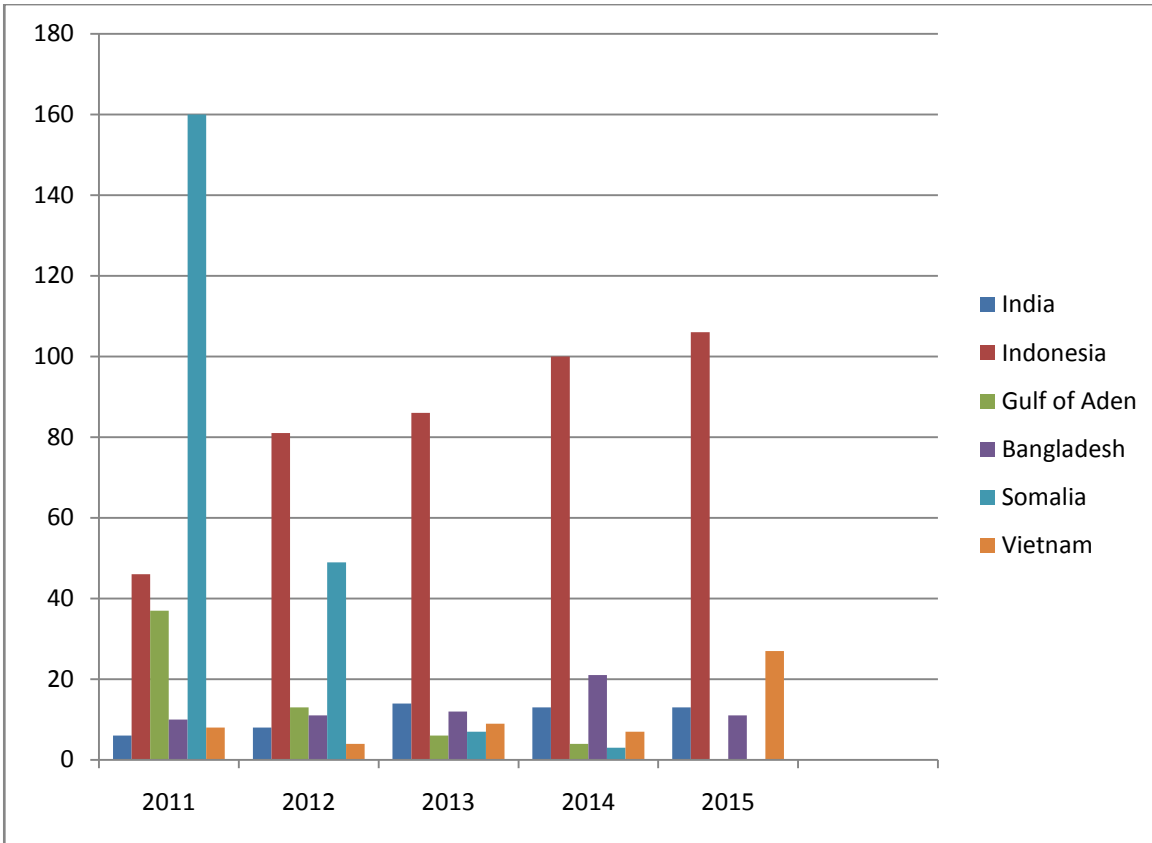
Table 2: Pirate Attacks – Jan – Dec: 2011 to 2015

The Indian Navy and the Indian Coast Guard are responsible for maintaining maritime order in the Indian waters. They are well equipped in terms of surface ships and maritime aircraft to undertake patrolling and surveillance of the sea areas. The naval forces also include maritime helicopters for deployment of quick reaction forces, hover craft that can be used both on land and water, marine commandos, diving teams and damage control units.

The Indian Coast Guard has grown over the years and plays a dominant role in patrolling Indian waters with patrol vessels, interceptor boats and aircraft. In addition marine customs and police forces play an important role in handling criminal acts in and off Indian ports.

Ships too play an important role in thwarting marine piracy by having frequent drills and keeping the crew alert to situations that may call for immediate action.

Some preventive measures that ships use are:

1. High Pressure water cannon
2. Electrified guard rails
3. Secure locations on board that pirates cannot reach
4. High speed sea maneuverers that can throw pirate skiffs off balance
5. Anti-piracy drills
6. Continuous radar watch and patrolling of decks in danger zones
7. Well lighted decks
8. Barbed Wire

The leading maritime shipping associations and the International Transport Workers' Federation (ITF) have initiated the "**Save Our Seafarers**" campaign, in which governments are asked to take the following steps to eradicate piracy at sea and ashore:

• Reduce the effectiveness of the easily identifiable pirate mother ships.

• Authorize naval forces to detain pirates and deliver them for prosecution and punishment.

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- Fully criminalize all acts of piracy and the intent to commit piracy under national laws in accordance with their mandatory duty to cooperate to suppress piracy under international conventions.

- Increase naval assets available in the area.

- Provide greater protection and support for seafarers.

- Trace and criminalize the organizers and financiers behind the criminal networks.



Figure 5 – Anti – Piracy Curtain

## Command and Control

The maritime forces are based at various naval and coast guard stations and ports along the east and the west coast of India. Naval bases based in the Andaman and Nicobar Islands and the Lakshadweep group of islands in the Arabian Sea allow the Indian Navy a footprint in the Indian Ocean, the Arabian Sea and the Bay of Bengal. Naval forces are commanded by the Naval Headquarters through the Flag Officers Commanding-in-Chief based at Mumbai, Kochi and Vishakhapatnam.

The Coast Guard Headquarters at New Delhi exercises control over coast guard forces through Commander, Coast Guard Region based at Mumbai, Chennai, and Port Blair.

Thereis Maritime Operation Canter (MOC) and Maritime Regional Coordination Centres (MRCC) located at Mumbai, Kochi, Vishakhapatnam and Port Blair which service commercial shipping in India's zone. These agencies maintain a constant communication network with maritime forces as also maritime canters located in neighbouring countries including the Piracy Reporting Center at Kuala Lumpur. India is also the coordinator of NAVAREA VIII for broadcasting weather reports, safety messages and other information relating to safety of mariners at sea.

The Indian Ocean Naval Symposium (IONS) is a consultative and cooperative effort to find commonality regarding the rising threat in India's maritime zone. The Indian Navy acted as facilitator and invited naval chiefs or the heads of maritime agencies from Indian Ocean Region countries. Twenty-seven naval chiefs or their representatives attended the event in February 2008 and the majority endorsed the charter in principle. The objectives of the IONS are to expand it to the next level of cooperation, create allied maritime agencies, establish a high degree of interoperability, share information to overcome common trans-national maritime threats and natural disasters, and maintain peace in the oceans.

According to the Director General of shipping, the Government has taken following steps to avert incidents of piracy of ships/vessels:

1. Advisories by the Directorate General of Shipping to ships/vessels transiting through Gulf of Aden on patrol convoy timing followed by the Indian Naval patrol;
2. Forwarding to the Indian shipping fraternity the information obtained from the international forces regularly in the area.
3. Deployment of an Indian Navy warship in the area to escort Indian and other ships seeking assistance.
4. Taken a position that the death and injury compensation for seafarers is the responsibility of ship owners who obtain insurance through Protection and Indemnity Club

**Conclusion**

This paper focussed on India's and the Indian Ocean's strategic value, maritime security and threats, possible solutions, and international and regional cooperation. It is critical for India a major player in the region to facilitate vibrant maritime commerce and economic activities at sea since these underpin economic security. It is also very important to protect their maritime domains against ocean-related threats such as piracy, criminal activities and terrorism. Cooperation on maritime security is essential, since virtually all nations benefit from maritime activity. Countries that need to co-operate to the greatest extent in keeping the Indian Ocean safe for maritime trade are India and China. As India's maritime stakes in the Indian Ocean and South-East Asia is greater than that of China's, it should take the lead in establishing an environment that is conducive to working with China in this regard despite their geo-political ambitions and strategic interests.

It is also pertinent for India, as a growing economy to have a large maritime footprint in the region and project naval power so that our economic interests like oil drilling facilities, fishing rights; mineral reclamation rights are protected as a matter of course. It is also important for India to protect her own shipping and those shipping traversing Indian ports from piracy and terrorism.

It is evident that any disruption in maritime trade can have catastrophic results for our burgeoning economy. While India has made some progress in thwarting pirate attacks, a lot more needs to be done in this area if the seas around us are going to be safe.

Much can be gained from a cooperative sub- regional and regional approach between states that promotes consultation not confrontation, collaboration not conflict, transparency not secrecy and interdependence not selfish strategic interests. In such circumstances navies can contribute much towards enhancing maritime security, managing disasters, providing humanitarian assistance and limiting environmental security challenges. The recent case of the Indian Navy evacuating refugees from Yemen is a case in point. Operation Raahat was an outstanding success for the Indian Navy and a feather in its cap.

The Indian Ocean region is noted for its complex sub-regional geopolitical and geostrategic associations, each with its own strategic interests that are driven by historical compulsions. It is imperative the countries in the region share information and resources to thwart security threats if their economies are to flourish.

**The Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP)** is the first regional government-to-government agreement to promote and enhance cooperation against piracy and armed robbery in Asia. It was finalised on 11 November 2004 and entered into force on 4 September 2006. To date, 20 States have become Contracting Parties to ReCAAP. It is heartening to see this happen in the vicinity of India.