



Navigating the Waters: Maritime Security Challenges and Countermeasures in the Indian Ocean Region

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Abstract:

Maritime security in the Indian Ocean region is a complex and multifaceted issue that poses significant challenges to global trade, economic stability, and regional stability. This research provides an overview of the key maritime security challenges in the Indian Ocean region, including piracy, armed robbery, illegal fishing, maritime terrorism, and other challenges. It highlights the implications of maritime security threats for regional and international security, as well as for the sustainable development of coastal states in the Indian Ocean region. Furthermore, it discusses the various responses and initiatives undertaken by regional states, international organizations, and naval task forces to address these challenges. Finally, the abstract recommends some ideas to enhance maritime security cooperation, strengthen governance mechanisms, and promote sustainable maritime development in the Indian Ocean region.

Keywords: Maritime security, Indian Ocean, piracy, Armed Robbery, Illegal Fishing, Territorial Disputes, Environmental Degradation.

I. Introduction:

The Indian Ocean Region (IOR) is a huge sea locale extending from the coast of East Africa to the coast of Southeast Asia, which incorporates critical ocean paths, vital areas, and copious marine assets. The Indian Ocean Region (IOR) is significant for several reasons. To begin with, it serves as the global hotspot for naval trade and for maintaining sea-based lines of communications. It houses chokepoints like the Bab-El Mandeb, Strait of Hormuz, Suez Canal, and the Malacca and Sunda Straits, accounting for over 40% of the global oil and gas trade. On the other hand, it is home to many High-Risk Areas (HRAs) for piracy, making the regional security situation dynamic and prone to attacks from pirates. From robbery to natural corruption, territorial debate and indeed

non-traditional security dangers, the Indian Sea faces complex challenges that require participation. This exposition analyses different sea security issues in the Indian Sea locale, counting robbery, Illegal, Unreported, and Unlawful (IUU) angling, sea fear mongering and strife, sway claims, trafficking and people-trafficking, the natural corruption and wrongdoing. -Conventional dangers to security.

II. Maritime Security Challenges:

1. Piracy and Armed Robbery:

One of the most tireless oceanic security issues in the Indian Ocean Region is robbery, especially off the coast of Somalia in the Horn of Africa. Somali privateers have long desolated these waters, captured dealer ships, and held their groups for deliver and disturbing oceanic exchange. Despite worldwide sea watches and expanded security measures, robbery remains a risk, although episodes have diminished in later a long time. The root causes of robbery in the locale, counting destitution, frailty, and powerless administration, proceed to fuel these wrongdoings, and endeavours are still underway to address them. The number of IORA part states is lower than the Sea Security List normal. In any case, it is critical to note that this IORA normal is skewed by the scores of a few part states in Southeast Asia, counting Indonesia, Malaysia, and Singapore, where robbery and outfitted burglars in the Straits of Malacca and Sulu. Oceans.

As per the report published by Information Fusion Centre, Indian Ocean Region (IFC – IOR), it was recorded that 194 incidents of piracy and armed robbery, a notable increase of 20% compared to 161 in 2022. These incidents are categorised into sub types such as hijack, kidnap, illegal boarding, attack, sea robbery, sea theft, attempted incidents, and suspicious approach. The monthly average incidents rose from 13 in 2022 to about 16 in 2023. Despite the surge in incidents, a



positive trend emerged as 78% of reported incidents involved no violence. However, isolated instances of violence resulted in severe injuries and one fatality.

At the beginning of the year, by 27th January, three armed pirates hijacked a fishing vessel underway. A Seychelles Coast Guard vessel was dispatched to locate the fishing vessel. On 29 January 2024, after a brief exchange of fire with the pirates the Seychelles Coast Guard boarded the fishing vessel and rescued the crew. The three pirates were detained. The fishing vessel was escorted to a safe port. All crew safe.

Following that, on 12th March 2024, A bulk carrier underway was attacked and hijacked by armed pirates in small boats. The ship's SSAS was activated, and all 23 crew members were taken hostage by the pirates, who had full control of the ship. The pirates then sailed the ship and anchored it at the Somali coast.

2. Illegal, Unreported, and Unregulated Fishing:

The Indian Ocean is home to rich marine biodiversity. IUU fishing postures a major challenge to the supportability of marine environments and the employments of coastal communities in the Indian Sea. Unlawful fishing activities, such as overfishing, the utilize of risky angling strategies and angling in exclusive economic zones (EEZs), undermine marine biodiversity and weaken endeavours to secure the fishing activities. IUU is frequently supported by destitute requirement of fishing laws, frail observing capacity and need of participation between coastal states. Tending to IUU fishing requires expanded oceanic reconnaissance, more grounded angling laws and territorial participation to combat national dangers.

In 2023, Information Fusion Centre, Indian Ocean Region monitored and reported 800 IUU fishing incidents, witnessing a significant 33% surge from 03 incidents in 2022. The reported incidents have categorized as 'local IUU' and 'Poaching'. Local IUU and poaching accounted for 60% and 40% of reported IUU incidents respectively. Both categories witnessed a notable increase compared to 2022, with local IUU fishing registered 24% rise and poaching incidents increased by 48%. Southeast Asian region has badly affected due to IUU fishing consists of 65% of all recorded IUU incidents. South Asia followed with 21% of reported incidents. West Asia saw a decrease in overall IUU fishing incidents compared to previous year.

3. Maritime Terrorism:

Maritime terrorism is a genuine risk to the worldwide oceanic environment. Maritime terrorism has been committed in the past, causing misfortune of life and pulverization of foundation. The threat of maritime terrorism looms large in the Indian Ocean region, with the potential for attacks on ships, ports, and offshore installations. The terrorist organizations that arrange these assaults are a particular and special non-state performing artist, but where do these groups' capabilities and interface come from? With the developing danger of Islamic State in the Middle East and North Africa, will the following major assault in the West take put at ocean?

The dangers the world faces nowadays are exceptionally distinctive from what they have been utilized to for centuries. Fear monger bunches such as Al Qaeda and its partners have postured a risk to sea exchange and security by assaulting oceanic framework, shipping, and coastal regions. Terrorist organizations exploit porous maritime borders and weak regulatory frameworks to smuggle weapons, drugs, and illicit goods, posing a grave security risk to coastal states and international shipping lanes.

Following the outbreak of the Israel-Palestine conflict triggered by the Hamas attack on Israel on 7 October 2023, the Houthi rebels initiated a series of assaults on merchant ships in the southern Red Sea region. Since these incidents, a considerable portion of cargo ships engaged in international trade and commerce, transiting through the Suez Canal and the Bab-El-Mandeb strait – a critical chokepoint measuring 29 kilometres at its narrowest point – have been affected by missile strikes and long-range drone attacks.

4. Territorial Disputes:

The Indian Ocean is home to many maritime territorial disputes between littoral states, particularly in the South China Sea and the Arabian Sea. These disputes often involve conflicting territorial claims over islands, reefs, and maritime territories, leading to maritime conflicts and disputes. Territorial disputes and sovereignty claims are worsened by competition for maritime resources, strategic interests, and historical grievances, complicating efforts to resolve these disputes diplomatically. Territorial disputes over islands, maritime boundaries, and exclusive economic zones (EEZs) have led to heightened tensions among littoral states in the Indian Ocean region. These disputes not only jeopardize stability



but also hinder cooperation on maritime security initiatives.

There are many territorial disputes in the Indian Ocean Region. One such major incident is Katchatheevu issue between India and its neighbouring nation Sri Lanka. India and Sri Lanka have long had a dispute over maritime boundaries and sovereignty over the island of Katchatheevu. The island is important for fishing and has an area of 285 hectares. In 1974, Indira Gandhi and Srimavo Bandaranaike settled the maritime boundary dispute and handed over the island to Sri Lanka. In 1991, the Tamil Nadu Congress passed a resolution to reclaim the island. China has been expanding its presence in the Indian Ocean region, raising India's concerns.

5. Smuggling and Trafficking:

The Indian Ocean is a route for many criminal activities, including drug smuggling, human trafficking, arms trafficking and smuggling. Transnational criminal networks pose a threat to regional security and stability by using maritime routes and weak law enforcement mechanisms to transport illicit goods and conduct criminal activities. Trade and commerce undermine maritime governance, promote corruption, and create social instability in coastal communities. Maritime and anti-trafficking law enforcement, intelligence sharing and cooperation between maritime security agencies to disrupt criminal links and strengthen maritime security in the Indian Ocean Region (IOR).

The Information Fusion Centre recorded an 18% upswing in incidents, totaling 958 seizures. Narcotics accounted for 31% of incidents, while domestic products and fuel smuggling each represented 17% of recorded instances. Major Drug Seizures in the IOR include large shipments of Amphetamine type simulants (ATS) such as Methamphetamine, Cannabinoids, and Opioids such as heroin.

Despite a nominal decrease in recorded Irregular Human Migration incidents from 300 in 2022 to 243 in 2023, the scale and impact remain significant. Irregular Human Migration incidents in the Indian Ocean Region accounted for 66 migrant fatalities and 114 individuals reported missing in 2023. Migrants undertake substantial risk transits on overcrowded and often unseaworthy small boats, 14183 migrants were rescued, and 55 smugglers/traffickers were apprehended during 2023.

6. Environmental degradation:

The Indian Ocean faces environmental problems such as pollution, habitat loss, reef erosion and climate change. Oil spills, plastic pollution and freshwater discharges from coastal cities cause marine pollution, threatening marine biodiversity and ecosystem health. Environmental degradation not only poses a threat to human health and well-being, but also undermines the resilience of coastal communities and increases their vulnerability to natural disasters. Plastic pollution continues to threaten the Indian Ocean.

Plastic waste can also enter the ocean directly from marine sources such as fishing, commercial and recreational vessels, and offshore platforms. The International Convention for the Prevention of Pollution from Ships of 1988 prohibited the discharge of waste from ships. However, accidental loss and illegal disposal still contribute to plastic waste. Of the approximately 11 million tons of plastic thrown into the ocean each year, a generous part ends up in the Indian Ocean, which is the second most polluted ocean in the world after the North Pacific.

The Indian Ocean is experiencing unprecedented and accelerated warming, which may continue throughout the century unless greenhouse gases (GHGs) are reduced immediately. A new study published in journal *Science Direct* has predicted that between 2020 and 2100, the Indian Ocean could warm at a rate of 1.7-3.8 degrees Celsius per century. This could lead to widespread socio-economic impacts, along with significant effects on biodiversity, especially on coral reefs.

“The future increase in heat content is equivalent to adding the energy of one Hiroshima atomic bomb detonation every second, all day, every day, for a decade,” said Roxy Mathew Koll, a climate scientist at Indian Institute of Tropical Meteorology and lead author of the study, in an interview with *Down To Earth*.

The study also discovered that the seasonal cycle of surface temperatures has shifted and might shift further due to warming. Between 1980 and 2020, the maximum sea surface temperatures (SST) across the Indian Ocean generally stayed below 28°C (ranging from 26-28°C). If GHGs are emitted at current levels, the minimum SSTs in the Indian Ocean could exceed 28°C (28.5-30.7°C) all year round by the end of the 21st century, according to the study. Generally, SSTs above 28°C are conducive to the formation of tropical cyclones and extremely heavy rainfall.



III. Countermeasures:

1. United States of America: The United States has been at the forefront of counter-piracy efforts in the Indian Ocean, deploying naval assets and participating in multinational task forces such as Combined Task Force 151. Through patrols, surveillance, and interdictions, the US Navy has played a crucial role in deterring pirate attacks and ensuring the safety of maritime traffic.

In 2018, the United States reorganized its largest combatant command, PACOM, into INDOPACOM, reflecting a transition in U.S. strategy that recognized the significance of the Indian Ocean to national and international security. Days after the Indian Navy and Indian Air Force carried out a daring 40-hour long operation in the Arabian Sea, capturing 35 Somali pirates and freeing 17 crew members of a commercial ship, the USA thanked India for the continued anti-piracy operations in one of the world's busiest sea trade corridors. Since December, there has been an increase in the piracy attempts in the Arabian Sea after a gap of almost 7-8 years. This has happened because of the Red Sea crisis, forcing most of the naval vessels deployed in the area to turn their attention to trouble torn areas.

2. United Kingdom: The United Kingdom contributes to anti-piracy missions in the Indian Ocean through its participation in Combined Task Force 151 and bilateral agreements with regional states. The Royal Navy conducts patrols, provides escort services to merchant vessels, and collaborates with international partners to combat piracy and armed robbery.

The UK also maintains sovereignty over the British Indian Ocean Territory (Diego Garcia) in the Chagos archipelago, with its joint US/UK facility supporting regional operations, including the prevention of human trafficking and countering narcotics and terrorism. While this is a controversial political issue in India, its strategic dimensions for India, including the provision of UK membership of the Indian Ocean Naval Symposium (IONS) (alongside the UK's dialogue partnership of the Indian Ocean Rim Association (IORA)), cannot be ignored.

3. France: France maintains a significant naval presence in the Indian Ocean region, conducting patrols and surveillance missions to safeguard maritime security. The French Navy collaborates with regional partners and participates in multinational initiatives such as Operation Atalanta to counter piracy and maritime threats. India and

France are increasing their collaboration in the Indian Ocean aimed at increasing maritime safety in the region. The two countries recently conducted their latest joint surveillance and mapping of the South-West Indian Ocean.

The first bilateral naval exercise between the two countries was held in 1983, and it was named 'Varuna' in 2001. The 17th edition of India-France Bilateral Exercise 'Varuna' was held in May 2019, in Goa. It was the largest ever exercise undertaken between the two navies, with eleven of India and France's most modern units, including two aircrafts and two submarines. In addition, ships from both navies make regular port calls at each other's ports.

The latest mission was focusing on the waters of the Mozambique Channel, as well as in the areas around Mauritius and Reunion. The Indian Navy's Boeing P-8I arrived in Reunion, a French Overseas territory in the Indian Ocean. It teamed up with the French Navy Falcon 50 maritime aircraft for the surveillance. This year has seen an increase in joint exercises between the French and Indian navies, with the first mission happening in March 2022. Another joint surveillance exercise followed in May 2022, involving an Indian P-8I aircraft along with the French frigates *Floreal* and *Nivose*.

According to the Indian Navy, the joint surveillance exercises go beyond ocean bed mapping, with the strategic allies committed to combat piracy, drug trafficking, arms smuggling, and the presence of extraneous powers on the eastern seaboard of Africa as part of maritime security cooperation. "This deployment will further enhance maritime domain awareness, security, and safety in the Southern Indian Ocean Region (IOR)," stated the Indian Navy.

4. China: China has actively participated in anti-piracy efforts in the Indian Ocean, deploying naval assets to escort Chinese-flagged vessels and aid other ships in distress. The Chinese People's Liberation Army Navy (PLAN) contributes to multinational task forces and engages in cooperative initiatives to enhance maritime security cooperation in the region. It had first entered in force in 2008 under the pretext of anti – piracy patrol. Later, it deployed a nuclear submarine for the same purpose.

In 2012, it had started deploying its intelligence collection ships to collect signals, electronic intelligence and map the ocean floor. It has been deploying conventional and nuclear submarines in the region since 2013. China has been hugely



investing in major maritime and non – maritime projects, especially in countries such as Sri Lanka, and Pakistan, to build its strategic bases in the Indian Ocean Region.

5. India: As a major regional maritime power, India has launched several initiatives to address piracy and maritime security threats in the Indian Ocean. The Indian Navy conducts patrols, surveillance, and escort missions to safeguard maritime interests and protect shipping lanes. India also cooperates with other countries through joint naval exercises and information-sharing mechanisms.

Firstly, India is making efforts to develop its maritime assets. The naval defence budget continues to increase each year—the proportion of the navy's budget for buying new platforms and equipment went up by 45 percent in 2022 alone, and the largest proportion of increase in the defence budget this year went to the navy. The bulk of this budget is directed towards capabilities creation rather than salaries.

After nearly two days, two Indian Navy warships on Saturday were finally able to force 35 Somali pirates to surrender while rescuing the crew members of a commercial vessel that had been taken over by the pirates. "INS Kolkata, in the last 40 hours, through concerted actions successfully cornered and coerced all 35 Pirates to surrender and ensured safe evacuation of 17 crew members in the evening of March 16 from the pirate vessel without any injury," a navy spokesperson said. A second naval warship, aircraft, and marine commandos were also part of the operation.

IV. Conclusion:

Maritime security challenges in the Indian Ocean region pose significant threats to global trade, economic stability, and regional security. Addressing these challenges requires concerted efforts from both regional stakeholders and international actors. By implementing comprehensive strategies, enhancing cooperation, and strengthening governance mechanisms, the countries of the Indian Ocean region can effectively mitigate maritime security threats and promote sustainable maritime development.

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