

Current Development

Recent Attacks on Maritime Security in the Red Sea - An Indian Perspective

1. Introduction

The Red Sea, steeped in history and culture, is a crucial maritime artery linking the Indian Ocean with the Mediterranean Sea, facilitating a significant portion of global trade. Approximately 12% of the world's commercial traffic goes through it, making it one of the busiest cargo and oil transit routes in the world, particularly for countries like India that rely heavily on its uninterrupted functioning for energy and commodity imports.

However, escalating security concerns in the area in recent years have put ships, crews, and international trade at risk. A noticeable uptick in piracy, armed robberies, and other types of maritime attacks has led to considerable disturbances and financial losses.

Since mid-October 2023, Ansar Allah, a Yemeni militia organization often referred to as the Houthis, has intensified their assaults on commercial voyagers in the southern Red Sea region. In retaliation to Israel's airstrikes on Gaza, the Iranian-backed militia has targeted ships allegedly en route to Israeli ports launching drones and missiles launched from Yemen, in a move that is sabotaging global trade. These series of assaults on major container vessels have led to the United States and Britain launching retaliatory airstrikes on targets in Yemen.²

The ramifications of these attacks extend far beyond the region's coastline, given how much of a lifeline the Red Sea is to international trade. The recent rise in attacks reopens old wounds relating to the area's vulnerability to assaults from piracy attacks, explosives, and attacks on the lucrative oil and gas supply chain. Safeguarding this maritime corridor is not merely a regional necessity but an international imperative.

This short focus critically analyses India's role in response to the attacks on the Red Sea. It aims to identify the basic causes of these attacks and suggest how India can enhance the security of the sea in the region.

2. Identifying the causes of maritime attacks

2.1 Why the Red Sea?

The ongoing crisis in the Red Sea is not a 1-time affair; over the preceding years, the Red Sea has been a witness to several marine security incidents. First, commercial vessels and fishing boats in the area have been the targets of such crimes over the years, and more so recently.

¹ NEXT IAS, 'Red Sea Crisis: Importance of IMEC' (26 February 2024) <www.nextias.com/ca/editorial-analysis/26-02-2024/red-sea-crisis-importance-of-imec> accessed 12 March 2024.

² Ingrid Fuary-Wagner, Jenny Wiggins, and Les Hewitt, 'Five maps that show why the Red Sea is so important' (31 Jan, 2024) www.afr.com/world/middle-east/five-maps-that-show-why-the-red-sea-is-so-important-20240115-p5ex9j accessed 12 March 2024.



Secondly, the presence of carefully planted mines and improvised explosive devices (IEDs) has made certain places along the Red Sea maritime channels far riskier for commercial shipping and trade. The Bab-el-Mandeb Strait is an important chokepoint at the southern end of the Red Sea; in December 2020, an explosion there wrecked a container ship. The incident, which the Houthi rebels claimed as their own, prompted worries about the protection of maritime routes and the possibility of additional interruptions to multinational trade.³ The Houthis maintain control over the areas surrounding Bab-el-Mandeb Strait in the continuing civil war in Yemen and it has been the site of massive attacks even in the current attacks on ships in 2023 and 2024.⁴

Finally, the Red Sea has been a conduit for several illicit operations, including the smuggling of various kinds, which has exacerbated the security situation in the area. Between 2015 and 2024, more than twelve shipments of weaponry, purportedly bound for Yemen (likely for Houthis) from Iran, were intercepted by the US and its allies.⁵

2.2 Houthi attacks in the Red Sea

On January 1, 2023, the shipping industry revoked the designation of the Indian Ocean High-Risk Area (HRA).⁶ This decision marked a significant milestone, as it came after five years of no reported pirate attacks in Somalia's coastal waters, signalling the end of a long-standing maritime threat in the region.⁷ But the Houthis in Yemen quickly overturned the decision, nonetheless, with their relentless attacks since November 2023. Between November of last year and March of this year, there were over ninety maritime incidents. These include 57 drone or missile attacks or sightings, as well as 39 incidents involving piracy, hijacking, or suspicious approaches as of March 31, 2024.⁸

The Houthis started attacking Red Sea-faring vessels on November 19, 2023, in retaliation to action

³ Alexander Lott, 'Iran-Israel 'Shadow War' in Waters around the Arabian Peninsula and Incidents near the Bab el-Mandeb,' in Alexander Lott (eds), *Hybrid Threats and the Law of the Sea* (2024) 117–141.

⁴ Laurence Butt, 'Strait to the point: Houthi rebels control international shipping' (*Cedars*, 15 February 2024) https://cedars.cedarville.edu/2024/02/strait-to-the-point-houthi-rebels-control-international-shipping/ accessed 12 April 2024.

 $^{5 \} Andrew \ Hanna, `Timeline: U.S. \ Seizures \ of Iranian \ Weapons \ at Sea' (\it{The Iran Primer}, 15 \ February \ 2024) < https://iranprimer.usip.org/blog/2021/may/12/seizures-iranian-weapons> accessed \ 12 \ April \ 2024.$

⁶ International Chamber of Shipping. 'Shipping Industry to Remove the Indian Ocean High-Risk Area' (*ICS Press Release*, 22 August 2022) https://www.ics-shipping.org/press-release/shipping-industry-to-remove-the-indian-ocean-high-risk-area/ accessed 29 January 2025; Raul (Pete) Pedrozo, 'Protecting the Free Flow of Commerce from Houthi Attacks off the Arabian Peninsula' (2024) 103 International Law Studies 49 https://digital-commons.usnwc.edu/ils/vol103/iss1/2/ accessed 10 July 2024; Hanna Duggal and Mohammed Haddad, 'Mapping Red Sea Shipping Attacks' (2022) Al Jazeera https://interactive.aljazeera.com/aje/2024/mapping-red-sea-shipping-attacks/ accessed 10 July 2024.

^{7 &#}x27;Maintaining maritime security in the Western Indian Ocean' (*International Maritime Organization (IMO)*, 3 February 2023) <www.imo.org/en/MediaCentre/Pages/WhatsNew-1821.aspx#:~:text=Since%201%20January%202023%2C%20the,piracy%20situation%20in%20the%20region> accessed 12 April 2024.

⁸ Sumana Nandy, 'Navy vs Pirates of the Arabian: Inside Indian Navy's Daring Red Sea Missions,' (*NDTV*, 31 March, 2024) <www. ndtv.com/india-news/navy-vs-pirates-of-the-arabian-inside-indian-navy-daring-red-sea-missions-5343645> accessed 12 April 2024; Elijah Joyce History, 'Timeline of the Red Sea Crisis: October-December 2023' (*Medium*, 22 February 2024) https://medium.com/@elijahjoyceweather21/timeline-of-the-red-sea-crisis-october-december-2023-2bc840ded659> accessed 12 April 2024.



taken by Israel in Gaza. These assaults have interrupted the world's shortest shipping connection between Europe and Asia significantly.

The United States and the United Kingdom have retaliated with targeted airstrikes under Operation Prosperity Guardian, focusing on the Houthi missile launching apparatus. The European Union also started its naval operation on February 19, with French, German, Italian and Belgian contingents as part of it. 10

To this date, Houthi attacks continue to pose a severe threat to maritime trade and regional security. Drones and missile attacks have become a routine blizzard, impacting international shipping with impacts on the vessels belonging to Israel, the US, and the UK, among other nations. The actions have been described by human rights organisations as potential war crimes, something that has amplified global worries. This situation continues to highlight the need for prolonged international cooperation, enhanced maritime policies and solutions for the stability of one of the world's most vital trade arteries.

3. Why India Matters?

The Red Sea route is a vital conduit for India's trade with European, North African, and North American nations.¹² As per CRISIL Ratings,¹³ for the fiscal year ending in March 2023, the Red Sea contributed to approximately 30% of India's imports of 17 trillion rupees (\$205bn) and 50% of its exports of 18 trillion rupees (\$217bn).¹⁴

India, the largest exporter of basmati rice in the world, annually exports approximately 35 per cent of the country's production, or 7.5 million tonnes, via the Red Sea to Europe, North America, North Africa, and the Middle East. ¹⁵ The Red Sea also serves as the primary route for Russian oil shipments to India and with 1.7 million barrels per day, Russian deliveries constituted more than 35% of India's

⁹ Dan Sabbagh and Julian Borger, 'US and UK Air Strikes Target Houthi Rebels Amid Red Sea Crisis' (12 January 2024) The Guardian <www.theguardian.com/world/2024/jan/12/us-uk-air-strikes-yemen-houthi-rebels-red-sea-crisis> accessed 12 November 2024.

¹⁰ ibid

¹¹ United Nation, 'Houthis Undermining Regional, International Peace Efforts in Yemen, Says Delegate, Calling on Security Council to Pave Way towards Political Solution' (9835th Meeting (AM), 15 January 2025) https://press.un.org/en/2025/sc15964.doc.htm accessed 16 January 2025.

¹² Afaq Hussain and Akhtar Malik, 'Can the IMEC address the Red Sea crisis: Explained' (26 February, 2024) The Hindu https://www.thehindu.com/news/international/can-the-imec-address-the-red-sea-crisis-explained/article67885961.ece accessed 18 April 2024.

^{13 &#}x27;Red Sea Crisis to Have Differential Impact Across Sectors' (CRISIL Ratings, 25 January 2024) < www.crisilratings.com/en/home/newsroom/press-releases/2024/01/red-sea-crisis-to-have-differential-impact-across-sectors.html> accessed 18 April 2024.

¹⁴ Bibhudatta Pradhan, 'How escalating Red Sea crisis poses billions of dollars of risk for India' (31 January, 2024) Al Jazeera < www. aljazeera.com/economy/2024/1/31/how-escalating-red-sea-crisis-poses-billions-of-dollars-of-risk-for-india> accessed 18 April 2024. 15 ibid 16.



overall crude imports in 2023.16

Exporters are incurring losses due to the disruption of cargoes of produce from India, including grapes, buffalo meats, tea, and spices, similar to the situation for Basmati. Similarly, the postponement of imports of machinery components, electronic products, fertilizers, sunflower oil, and machinery is exposing consumers to increased expenses. The disturbance may result in disruptions to supply chains and trade, impeding the progress of food inflation reductions.¹⁷

3.1 India's maritime laws

India is a signatory to several international maritime conventions that form the backbone of its maritime safety practices, including the United Nations Convention on the Law of the Sea (UNCLOS)¹⁸ and Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA Convention).¹⁹ India's domestic maritime affairs are governed by laws²⁰ including the Merchant Shipping Act, 1958,²¹ Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981,²² Coastal Security Scheme,²³ and Indian Coast Guard Act, 1978.²⁴

Until recently, Indian domestic law lacked a clear definition of piracy, leading to delays in trials and, in some cases, the failure to successfully prosecute apprehended pirates. However, with the addition of the Maritime Anti-Piracy Act, enacted in 2022 to give effect to the UNCLOS, this problem has been sorted.²⁵ With the Act, piracy has been defined under Section 2(h) as (i)any illegal act of violence or detention or any act of depredation committed for private ends by any person or by the crew or any passenger of a private ship and directed on the high seas against another ship or any person or property on board such ship; (ii) any act of voluntary participation in the operation of a ship with knowledge of facts, making it a pirate ship; (iii) any act of inciting or of intentionally facilitating an act described in sub-clause (i) or sub-clause (ii); or (iv) any act which is deemed piratical under the international law

¹⁶ Krishn Kaushik, 'India Deploys Unprecedented Naval Might Near Red Sea to Rein in Piracy' (*Reuters*, 31 January, 20) <www.reuters.com/world/india-deploys-unprecedented-naval-might-near-red-sea-rein-piracy-2024-01-31/> accessed 19 April 2024.

¹⁸ United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 396 (UNCLOS).

¹⁹ IMO Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (adopted 10 March 1988, entry into force 1 March 1992) 1678 UNTS 221.

²⁰ Mazyar Ahmad, 'Maritime piracy operations: Some legal issues' (2020) Journal of International Maritime Safety, Environmental Affairs, and Shipping, 4(3), 62-69.

²¹ The Merchant Shipping Act (1958) Act 44 of 1958.

²² The Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act (1981) Act 42 of 1981.

 $^{23\} Ministry\ of\ Home\ Affairs,\ `Coastal\ Security\ Measures'\ (Government\ of\ India,\ 18\ June\ 2019)\ < www.mha.gov.in/sites/default/files/2022-08/BM_II_CostalSecurity_18062019\%5B1\%5D.pdf>\ accessed\ 19\ April\ 2024.$

²⁴ The Coast Guard Act, 1978, Act No. 30 of 1978.

²⁵ Dinakar Peri, 'Anti-Piracy Act has been a great enabler: Navy Chief' (New Delhi, 24 March 2024) The Hindu <www.the-hindu.com/news/national/anti-piracy-act-has-been-a-great-enabler-navy-chief/article67987273.ece> accessed 10 July 2024.



including customary international law.26

India is engaging its regional and international counterparts through initiatives like Security and Growth for All in the Region (SAGAR),²⁷ which promotes maritime safety, environmental conservation, and regional security, alongside active bilateral and multilateral partnerships with countries like Indonesia, Sri Lanka, and the Maldives to enhance maritime domain awareness and address illegal activities at sea.

3.2 India in the Red Sea Attacks

These global efforts of India have been truly reflected in the response it has taken against the Houthi attacks on shipments through the Red Sea, a majority of which has India as its destination, or source. India has applied the right to self-defence as outlined in Article 51 of the UN Charter, and its obligations as a flag state under the Safety of Life at Sea ("SOLAS") Convention and the International Ship and Port Facility Security ("ISPS") Code, which require nations to ensure the safety of vessels flying their flag. This invocation of self-defence is justified by the imminent threat posed by non-state actors, as emphasized in India's position at the Arria Formula meeting on 24 February 2021,²⁸ where it argued that pre-emptive strikes are permissible when faced with imminent armed attacks.²⁹ The repeated assaults from Houthi militants combined with local authorities' failure to eliminate the threat has prompted India to protect its commercial and strategic interests in accordance with its stated position on self-defence. But India has not just limited its effort to protecting ships to and from India or flying the Indian flag.

By gradually building up its navy in the Arabian Sea and the Red Sea area, India has intensified its presence in these waters, in front of the escalating piracy threats and safety. According to Indian authorities, a number of no less than ten warships of the navy were sent to guard ships against the danger of piracy specifically the threat of Houthis in Yemen.³⁰ Although India has not joined the U.S.-led forces to patrol the Red Sea, it has deployed two of its advanced warships to the Gulf of Aden and more than 10 warships to the northern and western areas of the Arabian Sea along with the surveillance aircraft. This mission is the biggest so far in the history of the Indian military campaign in the Indo-Pacific region.³¹

The Indian Navy has been involved in extensive patrols and surveillance actions such as boarding

²⁶ The Maritime Anti-Piracy Act (2022) Act 3 of 2023.

^{27 &#}x27;India believes in 'Security and Growth for all in the Region' to focus on cooperative measures for sustainable use of oceans: President Kovind' (*Press Information Bureau*, 21 Febrary, 2021) https://pib.gov.in/PressReleasePage.aspx?PRID=1800028 accessed 16 January 2025.

²⁸ K. Nagaraj Naidu, 'Statement by Ambassador K. Nagaraj Naidu, Deputy Permanent Representative at Arria Formula Meeting Organized by Mexico' (Permanent Mission of India to the United Nations, 24 February 2021).

²⁹ Burra Srinivas, 'India's Decisive Turn on the Right of Self-Defence' (22 March 2021) Opinio Juris https://opiniojuris.org/2021/03/22/indias-decisive-turn-on-the-right-of-self-defence/ accessed 29 January 2025.

³⁰ Rajat Pandit, 'Over 10 warships sent to deter pirates of the Arabian Sea' (9 January 2024) The Times of India https://timesofindia.indiatimes.com/india/over-10-warships-sent-to-deter-pirates-of-the-arabian-sea/articleshow/106646794.cms accessed 15 January 2024.

³¹ Kaushik (n 19).



and investigating vessels, with such operations aimed at the prevention of the occurrence of piracy cases. Since December, there have been at least 17 recorded incidents of hijacking, attempted hijacking, and suspicious approaches in this region.³² Indian naval personnel, including special commando units, have boarded and carried out more than 250 inspections involving almost 40 ships.³³

A highly important Indian naval operation took place on January 26, 2024, during the Red Sea crisis, when the oil tanker *Marlin Luanda* was hit by a Houthi missile approximately 110 kilometres southeast of Aden. The missile attack resulted in a conflagration within one of the cargo tanks of the tanker. Contrary to the first rumours of the crew deserting the ship, they chose to stay on board and combat the fire using firefighting equipment. In light of the attacks, *USS Carney* neared the *Marlin Luanda* but was subjected to another Houthi missile, which was successfully intercepted.³⁴ The crew remained unscathed, and with aid from Indian, American, and French warships, the fire was successfully put out, enabling the tanker to proceed towards a secure harbour. The *USS Carney*, French frigate *Alsace*, and the Indian destroyer *INS Visakhapatnam* were instrumental in the firefighting operations. Additionally, ten Indian Navy soldiers collaborated with the crew of the Marlin Luanda for six hours to extinguish the fire.

The Indian Navy's strong actions demonstrate its dedication to upholding peace at sea, safeguarding important trade routes, and acting as a security provider in the area amidst changing threats in the maritime sphere.

4. Strengthening India's Role in Maritime Security

Khaled Khiari, Assistant Secretary-General for the Middle East, Asia and the Pacific in the Departments of Political and Peacebuilding Affairs and Peace Operations, condemning retaliation by Western nations said "We are witnessing a cycle of violence that risks grave political, security, economic and humanitarian repercussions in Yemen and the region".³⁵

This stand aligns with India's evolving maritime doctrine, encapsulated in the Indian Navy's policy document 'Ensuring Secure Seas: The Indian Maritime Security Strategy' of 2015³⁶ which replaced

³² Mohamed Olad Hassan, 'Indian Navy Frees Cargo Ship from Somali Pirates After Shootout' (16 March 2024) *Voice of America* <www.voanews.com/a/indian-navy-frees-cargo-ship-from-somali-pirates-after-shootout/7530557.html> accessed 15 January 2025.

³³ Reuters, 'India Deploys Unprecedented Naval Might Near Red Sea' (1 February, 2024) *Voice of America VOA* <www.voanews.com/a/india-deploys-unprecedented-naval-might-near-red-sea/7466220.html> accessed 19 April 2024.

³⁴ Sayantani Biswas, 'Red Sea: Houthi attack UK oil tanker MV Merlin Luanda catches fire with 22 Indians onboard, Indian Navy responds,' (*Livemint*, 27 January 2024) <www.livemint.com/news/world/red-sea-houthi-attack-uk-oil-tanker-mv-merlin-luanda-catches-fire-with-22-indians-onboard-indian-navy-responds-11706354811855.html> accessed 19 April 2024.

³⁵ United Nations, 'Pointing to "Cycle of Violence", Senior UN Official Urges Restraint Following Air Strikes in Yemen' (9532nd Meeting (PM) SC/15565, 12 January 2024) https://press.un.org/en/2024/sc15565.doc.htm accessed 20 April 2024.

³⁶ Darshana M. Baruah, 'India's Evolving Maritime Strategy' (3 December 2015) The Diplomat https://thediplomat.com/2015/12/indias-evolving-maritime-strategy/ accessed 20 April 2024.



a reactive approach to the strategic projection of India's maritime power. Leveraging these opportunities in consonance with the strategies under the 'Act East' policy³⁷ and the India Middle East Europe Economic Corridor (IMEC) enunciates India's capabilities to protect the regional and global maritime domain.³⁸

As a leading contributor to United Nations peacekeeping missions, with over 2,53,000 personnel deployed in 49 missions since 1948 and 6700 troops currently active,³⁹ India has demonstrated its commitment to international peace. Building on this, India could be the driving force behind a UN-backed maritime peacekeeping endeavour to solve the problems of regional immediacy and foster longer-term stability.⁴⁰ The idea of a UN-backed maritime peacekeeping endeavour aligns with India's consistent advocacy at the UN Security Council, as seen in its 2021 statement highlighting the threats to commercial shipping in the Red Sea and Gulf of Aden.⁴¹ India has also actively contributed to the Yemen peace process,⁴² and broader UN initiatives on stability and security.⁴³ Additionally, India has expressed deep concern over the misuse of Hudaydah's Red Sea ports for staging maritime attacks and has called for greater monitoring and security measures to ensure safe navigation and humanitarian access.⁴⁴

Maritime security is highly interlinked with economic stability. India can extend developmental aid to troubled nations like Yemen and Somalia to help them resolve structural problems of instability by addressing systemic inequities to reduce conflict. This is structured on structural-functionalism, whereby conflicts can be resolved by trying to alter structural imbalances. Such initiatives would build up the soft power of India and strengthen its perception as a responsible global actor.⁴⁵

India's diplomatic efforts must further evolve to engage Red Sea littoral states and other stakeholders.

³⁷ Amb (Retd) Anil Wadhwa, 'India's Act East Policy,' (Ministry of External Affairs (MEA) of India, 9 August, 2019) <www.mea.gov.in/distinguished-lectures-detail.htm?840> accessed 20 April 2024.

³⁸ Navdeep Suri et al, *India-Middle East-Europe Economic Corridor: Towards a New Discourse in Global Connectivity* (Observer Research Foundation (ORF), Special Reports, 9 April, 2024).

³⁹ Permanent Mission of India to the United Nations, *India and United Nations: Peacekeeping and Peacebuilding* https://pminewyork.gov.in/pdf/menu/submenu_1260383365.pdf> accessed 16 January 2025.

⁴⁰ Mandar Apte, 'Leveraging India's Wisdom for Transforming UN Peacekeeping' (Observer Research Foundation, 29 May 2024) <www.orfonline.org/expert-speak/leveraging-india-s-wisdom-for-transforming-un-peacekeeping> accessed 15 July 2024.

⁴¹ Statement by Ambassador T.S. Tirumurti, Permanent Representative, Security Council Meeting on Yemen (Briefing / Consultations) (Permanent Mission of India to the United Nations, 14 January 2021).

⁴² Nagaraj Naidu (n 31).

⁴³ Mandar Apte (n 44).

⁴⁴ Statement by Mr. A. Amarnath, Counsellor, UNSC Open Meeting on Yemen (Permanent Mission of India to the United Nations, 15 March 2022).

⁴⁵ Denis Venter, 'India and Africa: Maritime Security and India's Strategic Interests in the Western Indian Ocean' in Iain Walker, Manuel João Ramos and Preben Kaarsholm (eds), Fluid Networks and Hegemonic Powers in the Western Indian Ocean (Centro de Estudos Internacionais 2017).



Strengthened ties through the Gulf Cooperation Council (GCC),⁴⁶ African Union (AU), and as an observer since 2020⁴⁷ in Djibouti Code of Conduct⁴⁸ would enhance mutual trust and foster regional security initiatives.

Through its evolution in maritime policies, strong armed forces, and commitment to global peace-keeping, India has turned into a maritime power which protects not only its interests but also contributes to global stability. If India can incorporate the realist model, structural-functionalist model, and liberal institutionalist model into its strategy, it can further reinforce its role as a key player in addressing the Red Sea crisis and safeguarding international trade. This comprehensive approach underlines the ability of India to become a leader in achieving peace, security and prosperity in one of the world's strategic maritime zones.

5. Conclusion

The maritime security obstacles in the Red Sea need to be dealt with through a multi-layered strategy addressing both legal frameworks and regional collaboration activities. The international community and regional stakeholders, including India, need to work together to strengthen the existing legal instruments, enhance regional collaborations and information security means and properly address the political, social and economic factors that account for the unstableness in the region, as a means of safeguarding the safety and tranquillity of as the important Red Sea passage. This approach is not only of importance to the regional powers but also to the economy of the world as a whole and a large part of the international community that relies on the uninterrupted flow of maritime trade through this strategic waterway. The stakes are high, and the need for action is urgent. Such a scenario is only possible through a cooperative effort, led by a better framework of laws and improvement of regional coordination, aimed to adequately deal with the security challenges of the Red Sea Region, which remains a major maritime trade gateway.

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⁴⁶ Viraj Solanki, 'The Gulf Region's Growing Importance for India' (International Institute for Strategic Studies, 21 February 2024) <www.iiss.org/online-analysis/online-analysis/2024/02/the-gulf-regions-growing-importance-for-india/> accessed 20 November 2024.

^{47 &#}x27;India Joins the Djibouti Code of Conduct as Observer' (*Ministry of External Affairs, Government of India*, 16 September 2020) <www.mea.gov.in/press-releases.htm?dtl/32977/India_joins_the_Djibouti_Code_of_Conduct_as_Observer> accessed 15 January 2025.

⁴⁸ Code of Conduct concerning the Repression of Piracy and Armed Robbery against Ships in the Western Indian Ocean and the Gulf of Aden (adopted on 29 January 2009).

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Aspects Related to the Presence of Asbestos in Ships

Through consultation the AMINAVI¹ database, created by the Institute of Marine Engineering of the CNR, the main stages of legislation related to the presence of asbestos in ships have been identified and reviewed.

The use of asbestos² on board ships arises from the need to adapt to the provisions of the International Convention for the Safety of Human Life at Sea (SOLAS, (Safety Of Life At Sea, 1914). This was the first version of a fundamental International Treaty for the Safety of Merchant Ships. This Convention was adopted in response to the Titanic disaster in 1912. Among the main provisions of the 1914 Convention were 'Minimum Standards', for the design and construction of ships to ensure better safety. In particular, rules about the characteristics of insulation, incombustibility, resistance to fire and heat of all the structures of a ship to prevent the spread of fires between the various parts of the hulls (fireproof bulkheads, decks, etc.). Asbestos was by far the most effective and versatile material available on the market at the time, thanks to its numerous properties: fire resistance, chemical and physical stability, excellent electrical, thermal and acoustic insulation, and low density — a key advantage in naval design, where minimising weight is crucial. Additionally, its low cost made it particularly attractive for such applications.

Due to its exceptional characteristics, the shipbuilding industry was one of the largest users of asbestos in the construction of cargo, passenger and military ships.

By the late 1980s, following decades of evidence about the long-term health effects of asbestos — particularly its carcinogenic nature — the use of this mineral, including in shipbuilding, was progressively phased out. In particular: Italy, Legge 257 (1992); Germany, Gefahrstoffverordnung (GefStoffV) (1993); France, Décret n° 96-1133 (1996); Spain, Real Decreto 396/2006; United Kingdom, Control of Asbestos Regulations (2012).

Worldwide, asbestos is regulated in only 67 countries (34%), out of 195. Some of the main users include: Russia, the largest producer and exporter of asbestos, particularly Chrysotile; China, the second-largest producer and user of asbestos; India, although mining is banned, asbestos is still widely used; Brazil, despite a partial ban, some production continues; and Indonesia, and Kazakhstan,

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¹ The AMINAVI database was created as a web application, which can always be updated and interrogated. It consists of a list, starting from 1900 of Italian naval vessels and their related information in case of presence of asbestos. The collection and cataloguing of the cognitive information of each naval unit (Launching, Radiation, Reclamation Activity Reports, etc.), makes it possible to trace the mapping actions of each unit and the subsequent reclamation activities.

AMINAVI, 'Database of the National Research Council' <www.cnr.it/it/banche-dati-istituti/banca-dati/1069/aminavi> accessed 10 April 2025.

² The name "amianti or asbestos" refers to six specific natural minerals, belonging to the mineralogic-compositional class of silicates (Tremolite, Actinolite, Amosite, Antofillite, Crocidolite, Crysotile). The morphological and dimensional characteristics make these particular mineral fibres capable of reaching the deep respiratory tract and can cause degenerative diseases (asbestosis, mesothelioma, lung cancer, etc.). Ann G. Wylie, 'Mineralogical Characteristics and Risk Assessment of Elongate Mineral Particles (EMPs)' in Andrey Korchevskiy, James Rasmuson, Eric Rasmuson (eds), *Health Risk Assessment for Asbestos and Other Fibrous Minerals* (2024).



among the top 'consumers of asbestos'3.

However, in countries where the cessation of asbestos (extraction, production, marketing, consumption), has been decreed, but indirect use has not been prohibited, such as, for example, the presence of asbestos in ships built before the regulation entered into force. Therefore, asbestos may still be present today in older vessels if they have not been completely decontaminated. Or in the case of component replacement interventions in countries where asbestos is not yet prohibited (for example, in Russia or China). Marine Traffic data (2023), indicate that the average age of ships in circulation in the world is 22.2 years. Over half of them are over 15 years old⁴. In Italy, 40.6% are over 30 years old; these are very old vessels such as fishing boats or passenger and Ro-Pax (hybrid ships designed to carry both vehicles and passengers), which operate on local routes and between islands. In this regard, from the consultation of the AMINAVI database, there are currently 119 units of the Navy, and 110 units of the Merchant Navy built before Law 257/92 in circulation (which could have asbestos components).

The ship environment has always been a particularly complex and risky work environment, being a single work and living environment for seafarers. During navigation, the vibrations of the ship and the erosion of the saltiness may make maintenance interventions necessary, carried out by the same maritime personnel present on the ship. Such interventions, if carried out without adequate safety measures, can lead to environmental contamination throughout the ship when asbestos is present — sometimes unknowingly — as forced ventilation systems recirculate air between different compartments, spreading hazardous fibres beyond the immediate work area.

The International Maritime Organisation (IMO) plays a key role in regulating maritime safety globally, indirectly influencing the handling of asbestos on ships⁵. While the IMO does not specifically address asbestos, its conventions, such as the SOLAS (Safety Of Life At Sea), promote safer practices and materials on vessels. The SOLAS Convention, established by the IMO, addresses maritime safety and includes provisions related to asbestos.

Here are some key points from the updated guidelines:

'since 1 July 2002, the installation of materials containing asbestos has been prohibited under SOLAS regulation II-1/3-5, with some exceptions for specific components; from 1 January 2011, the installation of Asbestos Containing Materials (ACMs) has been completely prohibited for all ships without exception.'

The updated guidance emphasises the responsibilities of shipyards, maritime equipment suppliers, and shipowners to ensure that no ACMs are used. It also highlights the importance of proper training for surveyors and inspectors to detect asbestos on board.

These updates aim to enhance awareness and ensure stricter compliance with the prohibition of as-

³ USGS, 'Asbestos Statistics and Information' (*National Minerals Information Center*) https://www.usgs.gov/centers/national-minerals-information-center/asbestos-statistics-and-information accessed 09 April 2025.

⁴ UNCTAD, 'Review of Maritime Transport 2023' <unctad.org/publication/review-maritime-transport-2023> accessed 08 April 2025.

⁵ See generally IMO, 'About IMO' <www.imo.org/en/About/Pages/Default.aspx> accessed 10 April 2025.



bestos on ships⁶. Despite the prohibition, asbestos is still found on various ships, often in places like fire blankets, joints, insulation materials, and brake friction materials. This can occur due to repairs at shipyards or the purchase of spare parts in countries where it is not regulated, such as Russia or China.

The overall vision obtained from the consultation of AMINAVI also allows us to understand aspects related to radiation and dismantling, which can represent an environmental and worker health risk. Among the documents that can also be consulted in AMINAVI relating to the Aliseo Frigate are the sales contracts. It was sold in 2021 to Turkish demolition specialists for € 550,550.00, with the obligation for the buyer to carry out demolition and safe, environmentally sound recycling in accordance with Regulation (EU) No 1257/2013⁷. In 2024, again in Türkiye, two former submarines 'Da Vinci' and 'Marconi', and the frigates 'Scirocco' and 'Maestrale', were dismantled.

This regulation was introduced to ensure that ships are recycled in a safe and environmentally sound manner, minimising risks to human health and the environment. In addition to protecting workers from exposure to hazardous substances such as asbestos, mercury, lead, polychlorinated biphenyls, and residual fuels, the regulation also aims to prevent damage to the fragile ecosystems of coastal areas affected by these materials. The regulation arose from the need to address a health and environmental issue linked to globalisation: the scrapping of old ships. This refers to the practice of demolishing ships on the beaches of Asia — particularly in India, Bangladesh, and nearby Turkey — where their parts or constituent materials are extracted and sold, often using low-cost, unskilled labour and with inadequate safety measures for both workers and the environment. This Regulation is bearing fruit. Recently, several shipyards in the world have been authorised by Europe for the demolition and recycling of ships, including those in Aliaga in Türkiye, among the largest in the world.

India has the world's largest ship recycling operation – the Alang-Sosiya ship recycling yards, situated on the west coast of the State of Gujarat. These yards are responsible for 47% of all the ships recycled in the world and employ nearly 60,000 people.

While regulations have improved, significant gaps remain. Ship owners can bypass recycling obligations by registering their vessels under non-EU flags before dismantling. In 2022, one in seven ships worldwide flew an EU flag, but this figure dropped by 50% for end-of-life ships.

These statistics highlight the urgent need to enhance regulations and oversight to ensure safe and environmentally friendly ship dismantling.

Another major gap hampering the Ship Recycling Regulation (SRR) is the frequent absence or poor quality of inventories of hazardous materials during the operational life of a ship, according to the EU Commission assessment.

These inventories, which are crucial to ensuring safe dismantling, are often unreliable at the time of recycling. Indeed, the Belgian Shipbreaking Platform (2024) found that 45% of EU-inspected ships failed to comply with SRR inventory requirements, with many not having an inventory of hazard-

⁶ IMO, 'Asbestos' <www.imo.org/en/OurWork/Safety/Pages/Asbestos.aspx> accessed 10 April 2025.

⁷ Regulation (EU) No 1257/2013 of the European Parliament and of the Council on ship recycling includes specific provisions for managing hazardous materials, including asbestos. Key elements include the Inventory of Hazardous Materials, Certification, and Removal and Disposal requirements.



ous materials during operation.

To address the issue of "lag hopping" and, by extension, other prevalent SRR concerns, the European Commission has shared that it is exploring various mechanisms of action, such as the creation of a ship recycling licence. Hopefully, this will bridge the price gap between EU-listed yards and cheaper, less regulated facilities⁸.

Furthermore, another step forward could be the transfer of compliance responsibility from the registered owner to the actual owner, making it more difficult for companies to circumvent EU regulations by reflagging a vessel before demolition.

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⁸ European Commission, 'A Strategy for Better Ship Dismantling Practices' https://eur-lex.europa.eu/EN/legal-content/summary/a-strategy-for-better-ship-dismantling-practices.html#:~:text=The%20Commission%20has%20adopted%20a%20Community%20strategy%20aimed,ships%20safer%20for%20workers%20and%20for%20the%20environment accessed 23 April 2025.

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