

# **“Effect of the Red Sea Crisis on Global Supply Chains”**

Project report submitted to the School of Maritime Management, Indian Maritime University in partial fulfilment for the requirements for the award of degree of

**MASTER OF BUSINESS ADMINISTRATION**

**In**

**International Transportation and Logistics Management**

*Submitted by*

**Laxmi Narayan Ambuj**

**(Reg. No. 2303305025)**



*Under the guidance of,*

**Dr. Lekha Ravi**

**Assistant Professor**

**INDIAN MARITIME UNIVERSITY**

(A Central University, Government of India)

**SCHOOL OF MARITIME MANAGEMENT**

**CHENNAI CAMPUS**

**MAY 2025**

## DECLARATION

I, **Laxmi Narayan Ambuj**, Reg. No.2303305025 student of **School of Maritime Management, Indian Maritime University**, pursuing MBA in **International Transportation and Logistics Management** hereby declare that this submission of this project report titled "**Effect of the Red Sea Crisis on Global Supply Chains**" - has been prepared by me towards the partial fulfilment of the Master of Business Administration in **International Transportation and Logistics Management** under the supervision of **Dr .Lekha Ravi** Assistant Professor SMM, Indian Maritime University, Chennai Campus. I also declare that this project report is my original work and has not been copied from any other report previously submitted for the award of any degree, fellowship or other in the similar title.

**Place: Chennai**

**Date: 27-05-2025**

*Narayanji*  
**Laxmi Narayan Ambuj**

**Reg.No: 2303305025**

## CERTIFICATE

This is to certify that this project report entitled "**Effect of the Red Sea Crisis on Global Supply Chains**" submitted to the School of Maritime Management, Indian Maritime University, Chennai Campus in partial fulfilment of the requirement for awarding the degree, MBA in International Transportation and Logistics Management (ITLM) is a genuine work of **LAXMI NARAYAN AMBUJ** (Reg No. 2303305025).

  
Project Guide

**Dr. Lekha Ravi**

Assistant professor



**Dr. B Swaminathan**

Associate Professor & Head, SMM



  
External Examiner

Place: Chennai

Date: 27.05.2025

## ACKNOWLEDGMENTS

First and foremost, I would like to thank God the Almighty who has granted countless blessings, knowledge and opportunity to complete this project to its fullest.

I would like to thank my parents for the moral support and cooperation throughout the programme. My heartfelt and sincere thanks to, **Dr. B Swaminathan**, Associate professor Head SMM, Indian Maritime University, Chennai Campus who gave me the golden opportunity to do this wonderful project on the topic “**Effects of the Red Sea Crisis on Global Supply Chains**”. I pay him my deep sense of gratitude for guiding me.

I would like to express my deep sense of gratitude of **Dr. Lekha Ravi** Assistant Professor SMM, Indian Maritime University, Chennai Campus. For his esteemed guidance and expert suggestions in each step of the project, alleviating inspiration, encouraging and kind supervision in the completion of my project.

I am also thankful to faculty members, library staffs, my friends and my well-wishers who were very cooperative during my project in providing appropriate guidance and support without whom this project would not have been completed successfully.

**Laxmi Narayan Ambuj**

## **ABSTRACT**

The Red Sea crisis, characterized by escalating geopolitical tensions and maritime disruptions—particularly the Houthi attacks—has significantly impacted global supply chains. This study investigates the strategic importance of the Red Sea, assesses the consequences of the ongoing conflict on international trade routes, and evaluates the economic, logistical, and environmental repercussions for global and Indian commerce. Employing a mixed-methods approach, the research combines qualitative insights from literature and industry analysis with quantitative data on freight rates, transit times, and rerouting impacts. Key findings reveal increased shipping costs, extended voyage durations, heightened insurance premiums, and a rise in carbon emissions due to rerouting. Additionally, the study explores the viability of alternative trade corridors such as the Eastern Maritime Corridor, IMEC, and the Arctic routes. The research underscores the urgency for resilient maritime strategies and enhanced international cooperation to mitigate the effects of geopolitical disruptions on global logistics.

## TABLE OF CONTENT

<b>ABSTRACT</b>	v
<b>CHAPTER 1: INTRODUCTION</b>	1
<b>1.1 About Maritime transport sector</b>	2
<b>1.2 Statement of the Problem</b>	2
<b>1.3 Objectives</b>	2
<b>1.4 Research Methodology</b>	3
<b>1.5 Scope</b>	3
<b>1.6 Limitations</b>	4
<b>CHAPTER 2: LITERATURE REVIEW</b>	5
<b>CHAPTER 3: THE RED SEA AND ITS STRATEGIC IMPORTANCE</b>	15
<b>3.1 Trade</b>	16
<b>3.2 Military Presence along the littoral area</b>	17
<b>3.3 Economic Resources</b>	18
<b>3.4 Geo-political tensions</b>	19
<b>3.5 Competition of Iran with Other Military Presence</b>	20
<b>3.6 Syrian Civil War</b>	20
<b>3.7 Israel-Palestine Conflict</b>	22
<b>3.8 Upcoming projects &amp; Developments</b>	23
<b>CHAPTER 4 - THE IMPACT OF RED SEA CRISIS ON WORLD TRADE</b>	28
<b>4.1. The Global Economy and Trade</b>	29
<b>4.2 Impact on shipping transport cost</b>	32
<b>4.3 Impact on Indian economy and trade</b>	35
<b>4.4 Responses by Country Heads, Military bases, and other International Organisations</b>	38
<b>4.5 Emerging new trade routes in relation with Red Sea and Suez Canal</b>	39
<b>CHAPTER 5-FINDINGS AND CONCLUSION</b>	47
<b>5.1 Findings</b>	48
<b>5.2 Conclusion</b>	49
<b>LIST OF REFERENCES</b>	51

## TABLE OF FIGURES

Figure 1. Bab-al-Mandeb Strait	14
Figure 2. The active ports in the Red Sea before the crisis (red dots) and Military bases (Black dots)	16
Figure 3. Damage on the US-owned ship Genco Picardy that came under attack from a bomb-carrying drone launched by Houthis in the Gulf of Aden, on Jan. 18 2024	18
Figure 4. Map showing areas controlled by warring factions in Syria	19
Figure 5. Aerial view of a project under the development of Red Sea Global in Saudi Arabia	22
Figure 6. City of Jeddah, Saudi Arabia	24
Figure 7. Map showing the Historic port and the proposed new port of Suakin	25
Figure 8. The Nile River Basin and Surrounding Countries	26
Figure 9. Frequency of Maritime disruption occurred on the Red Sea (2023-2024)	28
Figure 10. Chart showing 3 kinds of War Scenario	29
Figure 11. Global GDP according to 3 Kinds of War Scenario	30
Figure 12. Inflation caused because of Israel-Hamas Conflict	31
Figure 13. Alternative shipping route avoiding Red sea	33
Figure 14. Increase in the shipping costs by route	34
Figure 15. Drewry World Container Index (as of 29 February 2024)	34
Figure 16. Major commodities with export growth/Decline in Dec 2023 in India	36
Figure 17. Eastern Maritime Corridor	41
Figure 18. India-Middle East-Europe Corridor	42
Figure 19. MSR and BRI	43
Figure 20. The UAE-Israel land corridor	45
Figure 21. Map showing the Northern Sea Route, the Northwest Passage, and the Transpolar Sea Route	45
Figure 22. Map showing INSTC	47
Figure 23. Map showing Ben Gurion Canal Project	48

## **CHAPTER 1: INTRODUCTION**

### **1.1 About Maritime transport sector**

The global maritime transportation and logistics industry forms the backbone of international trade, facilitating the movement of goods across continents. Central to this network is the

shipping industry, which accounts for approximately 90% of global trade by volume. Within this context, the Red Sea represents a critical maritime corridor, linking the Mediterranean Sea to the Indian Ocean via the Suez Canal. This route is essential not only because of its strategic geographic position but also due to its efficiency in reducing transit times and overall shipping costs.

In recent years, the industry has faced significant challenges due to geopolitical tensions and regional instability. The rise in maritime security threats—most notably, the Houthi attacks in the Red Sea—has exposed vulnerabilities in supply chain management and underscored the need for adaptive strategies. These disruptions have compelled stakeholders in international transportation and logistics to reconsider established routes, invest in advanced risk management technologies, and explore alternative pathways to ensure the continuity of global trade.

## **1.2 Statement of the Problem**

The escalating security challenges in the Red Sea, notably the Houthi attacks on commercial shipping, have raised serious concerns for global logistics. These incidents have led to increased transit times, rising freight rates, and uncertainties in supply chain planning. The traditional shipping routes through the Red Sea are no longer as reliable, forcing businesses to consider alternative routes or implement contingency measures that often involve higher operational costs.

Consequently, there was an academic interest created amongst logisticians and the maritime transporters to study how these disruptions affect global supply chains, and the extent of economic implications. It was also felt that one should understand and analyse the strategies businesses were adopting to mitigate these challenges. This study aims to bridge the gap by providing a desk research analysis of the impact of the Red Sea crisis on the logistics industry and the adaptive measures implemented by global businesses. It will be insightful to know how the entire supply chain would react in case such crises arose in future.

## **1.3 Objectives**

The primary objectives of this research were identified as follows:

- **Assess the Impact:**

Evaluate the direct effects of the Red Sea crisis, particularly Houthi attacks, on shipping operations, transit times, and freight rates.

- **Explore Alternative Routes:**

Investigate the viability and economic implications of alternative maritime routes that businesses have adopted or are considering in response to the crisis.

## 1.4 Research Methodology

This study will adopt a mixed-methods approach to comprehensively address the research objectives:

- **Literature Review:**

A thorough review of academic journals, industry reports, and case studies will be conducted to establish a theoretical framework and to identify existing research on maritime disruptions, geopolitical risks, and supply chain management.

- **Quantitative Analysis:**

Secondary data, including freight rate trends, transit time statistics, and trade volume records, will be collected from industry databases and maritime reports. Statistical methods will be applied to quantify the impact of the Red Sea crisis on shipping operations.

- **Qualitative Analysis:**

Semi-structured interviews and surveys will be conducted with industry experts, logistics managers, and maritime security professionals. These qualitative insights will help elucidate the practical challenges and adaptive strategies employed by businesses.

## 1.5 Scope

The scope of this research is focused on:

- **Geographical Focus:**

The Red Sea region and its role as a critical maritime corridor for global trade, with comparisons to alternative routes.

- **Temporal Focus:**

Recent developments in the past five years, a period marked by heightened geopolitical tensions and significant industry adaptations.

- **Thematic Focus:**

The impact of geopolitical disruptions on transit times, freight rates, and the broader

implications for global supply chains, along with the evaluation of strategic responses by industry players.

## **1.6 Limitations**

While this research aims to provide comprehensive insights, several limitations must be acknowledged:

- **Data Accessibility:**

Limited access to proprietary or real-time data regarding shipping incidents and freight rate fluctuations might constrain the depth of quantitative analysis.

- **Political Sensitivities:**

The geopolitical nature of the crisis may limit the availability of detailed and unbiased information, particularly from regions experiencing conflict.

- **Dynamic Environment:**

The ongoing and evolving nature of the crisis could mean that some findings may quickly become outdated as new incidents or policy changes emerge.

- **Sample Size:**

The scope of expert interviews and case studies may be restricted by the availability and willingness of industry professionals to participate.

## **CHAPTER 2: LITERATURE REVIEW**

1. The Red Sea Crisis: ramifications for vessel operations, shipping networks, and maritime supply chains

The global shipping industry operates within a dynamic and volatile environment, facing disruptions from geopolitical conflicts, climate-induced changes, and infrastructure constraints. The recent Red Sea crisis, underscores the intersection of geopolitical instability and maritime logistics. This literature review synthesizes existing research on maritime

disruptions, vessel rerouting strategies, supply chain resilience, and freight rate dynamics, offering a contextual framework for understanding the implications of the Red Sea crisis.

**Geopolitical Disruptions and Maritime Trade** Maritime trade has historically been vulnerable to geopolitical tensions, with major disruptions recorded during the Suez Crisis of 1956, the Iran-Iraq War of the 1980s, and the more recent Russia-Ukraine war (Cullinane et al., 2023). Guzansky and Eran (2018) highlight the Red Sea's strategic significance, given its role in facilitating international trade via the Suez Canal. The emergence of Houthi-led attacks on merchant vessels in late 2023 further exacerbated security concerns, disrupting key trade flows and necessitating military interventions

**Vessel Rerouting and Shipping Network Adaptations** The closure or risk-induced avoidance of critical chokepoints forces shipping lines to explore alternative routes. Historical precedents indicate that the Cape of Good Hope serves as a viable, though costlier, alternative to the Suez Canal. The research by Seadistance.net (2024) suggests that rerouting via the Cape adds approximately 12 days to Asia-Europe voyages, increasing fuel consumption and emissions. The impact on fleet capacity is substantial, requiring additional vessels to maintain service frequency (Linerlytica, 2024).

**Impact on Freight Rates and Insurance Costs** Maritime disruptions invariably lead to freight rate volatility. The Shanghai Containerized Freight Index (SCFI) recorded a 339% increase in rates to North Europe following the crisis outbreak (Xeneta, 2024). Similar trends were observed during the COVID-19 pandemic when supply chain disruptions caused unprecedented rate surges. Additionally, the increased security risks have driven up war-risk insurance premiums from 0.07% to nearly 1% of vessel value, significantly impacting operational costs (Bloomberg, 2024).

The Red Sea crisis exemplifies the multifaceted vulnerabilities of global maritime logistics. While short-term adaptations such as vessel rerouting and freight rate adjustments are inevitable, the crisis underscores the need for resilient supply chain strategies. The literature suggests that disruptions of this magnitude not only affect immediate trade flows but also catalyse long-term structural changes in global shipping networks. Future research should

explore the interplay between geopolitical risk management and maritime resilience, particularly in the context of evolving global trade routes.<sup>1</sup>

## 2. The Red Sea crisis and chokepoints to trade and international shipping

The Red Sea crisis has emerged as a significant disruption to global maritime trade, exacerbating vulnerabilities in international shipping networks. This literature review explores the geopolitical ramifications of the crisis, focusing on its impact on vessel operations, supply chain resilience, freight rate volatility, and maritime security. Drawing from prior research on trade chokepoints, historical maritime disruptions, and alternative shipping routes, this study contextualizes the crisis within the broader framework of global logistics. Findings suggest that rerouting strategies, increased insurance costs, and heightened security concerns have led to substantial delays and cost surges in global shipping. The crisis also underscores the necessity for adaptive supply chain strategies, including diversification of trade routes and investments in alternative transport corridors. The review concludes by highlighting potential long-term structural shifts in maritime trade patterns, emphasizing the role of geopolitical stability in ensuring resilient international logistics.<sup>2</sup>

## 3. The Impact Of Geopolitical Events On Ship Agents: The Red Sea Crisis

The Red Sea crisis has emerged as a major geopolitical event disrupting global maritime trade and supply chains. This literature review explores the crisis's ramifications on vessel operations, shipping routes, freight rates, and maritime security. Drawing from existing research on trade chokepoints and geopolitical instability, the paper examines how the crisis has led to significant rerouting of vessels, increased operational costs, and heightened risks for shipping companies. The review further discusses the resilience strategies adopted by shipping lines, including alternative transport routes and security measures. Findings suggest that while the crisis has caused short-term economic disruptions, it may also have long-term structural implications for global maritime trade. This study underscores the importance of strategic adaptation in mitigating geopolitical risks in international shipping.<sup>3</sup>

---

<sup>1</sup> Notteboom, T., Haralambides, H., & Cullinane, K. (2024). The Red Sea Crisis: ramifications for vessel operations, shipping networks, and maritime supply chains. In *Maritime Economics and Logistics* (Vol. 26, Issue 1, pp. 1–20). Palgrave Macmillan. <https://doi.org/10.1057/s41278-024-00287-z>

<sup>2</sup> Haralambides, H. (2024). The Red Sea crisis and chokepoints to trade and international shipping. In *Maritime Economics and Logistics* (Vol. 26, Issue 3, pp. 367–390). Palgrave Macmillan. <https://doi.org/10.1057/s41278-024-00296-y>

<sup>3</sup> *THE IMPACT OF GEOPOLITICAL EVENTS ON SHIP AGENTS: THE RED SEA CRISIS*. (n.d.).

#### 4. The Crisis In Red Sea Region: Legal And Socio-Economic Impact On International Commerce

The Red Sea crisis has had significant legal, economic, and geopolitical ramifications on international maritime trade, disrupting global shipping routes and supply chains. This literature review explores the crisis's impact on vessel operations, freight rates, and maritime security, contextualizing it within broader geopolitical conflicts and trade chokepoints. Drawing from academic research and industry reports, the study highlights the security threats posed by non-state actors, increased insurance premiums, and the rerouting of vessels via the Cape of Good Hope. Additionally, the review examines legal frameworks governing maritime security, including United Nations conventions and regional agreements, assessing their effectiveness in addressing piracy and geopolitical instability. Findings suggest that while immediate mitigation strategies focus on enhanced naval security and route adjustments, the crisis may prompt long-term shifts in global trade patterns, necessitating more robust international cooperation. This study underscores the need for adaptive maritime policies and resilient supply chain strategies to navigate the evolving geopolitical landscape.<sup>4</sup>

#### 5. Crisis Management in Global Trade: Analysis of Container Crises, the Red Sea Crisis, and the Suez Canal Crisis

Geopolitical crises have increasingly impacted global trade, with maritime chokepoints such as the Red Sea becoming focal points of disruption. This literature review explores the impact of the Red Sea crisis on vessel operations, freight rates, maritime security, and global supply chains. Drawing from academic research and industry reports, this study examines how geopolitical instability affects trade routes, leading to increased costs, delays, and security risks for international shipping companies. The review also highlights crisis management strategies employed by governments, shipping firms, and logistics operators to mitigate the impact of trade disruptions. Findings suggest that while immediate responses, such as vessel rerouting and security enhancements, are effective short-term measures, long-term solutions require structural adjustments in global trade patterns, enhanced international cooperation, and investment in alternative transport corridors. This study underscores the need for resilience in

---

<sup>4</sup> Antai, G. O., Aidonojie, P. A., Mukhlis, M. M., Maskun, Tajuddin, M. S., & Yeyeng, A. T. (2024). THE CRISIS IN RED SEA REGION: Legal and Socio-Economic Impact on International Commerce. *Al-Risalah: Forum Kajian Hukum Dan Sosial Kemasyarakatan*, 24(2), 17–35. <https://doi.org/10.30631/alrisalah.v24i2.1597>

maritime logistics and policy adaptations to address the evolving challenges posed by geopolitical conflicts.<sup>5</sup>

#### 6. Implied threats of the Red Sea crisis to global maritime transport: amplified carbon emissions and possible carbon pricing dysfunction

The Red Sea crisis has significantly disrupted global maritime transport, affecting vessel operations, freight rates, and supply chain resilience. This literature review examines the geopolitical ramifications of the crisis, with a focus on rerouting strategies, economic consequences, and environmental implications. The findings indicate that heightened security risks and increased insurance premiums have led to widespread rerouting via the Cape of Good Hope, resulting in longer transit times, elevated operational costs, and amplified greenhouse gas emissions. Additionally, the crisis exposes vulnerabilities in the EU Emissions Trading System (EU-ETS), raising concerns about carbon leakage and the effectiveness of maritime carbon pricing mechanisms. While short-term solutions involve enhanced naval security and logistical adjustments, the study underscores the necessity for long-term policy interventions, including alternative trade routes and robust international regulatory frameworks. This research highlights the critical need for adaptive crisis management strategies in global trade and maritime logistics.<sup>6</sup>

#### 7. Navigating through the Red Sea Crisis: A New Dimension of Regional Security Complex in the Middle East

The Red Sea crisis has emerged as a critical geopolitical flashpoint, disrupting global trade, maritime security, and regional stability. This literature review examines the crisis through multiple dimensions, including its impact on vessel operations, supply chain disruptions, environmental consequences, and regional security dynamics. The escalation of military tensions, particularly Houthi-led attacks on commercial shipping, has led to significant rerouting of vessels, increased insurance costs, and extended transit times, thereby straining global logistics networks. Furthermore, the crisis has amplified concerns regarding carbon emissions due to longer shipping routes and has exposed vulnerabilities in international

---

<sup>5</sup> Artemy Logvinov *Crisis Management in Global Trade: Analysis of Container Crises, the Red Sea Crisis, and the Suez Canal Crisis*. (n.d.).

<sup>6</sup> Peng, H., Wang, M., & An, C. (2024). Implied threats of the Red Sea crisis to global maritime transport: amplified carbon emissions and possible carbon pricing dysfunction. *Environmental Research Letters*, 19(7). <https://doi.org/10.1088/1748-9326/ad59b7>

regulatory frameworks, such as the EU Emissions Trading System (EU-ETS). The study highlights the broader geopolitical ramifications of the crisis, linking it to Middle Eastern power struggles, Western military interventions, and shifts in global trade patterns. While short-term responses focus on securing maritime routes and crisis management, long-term strategies emphasize alternative trade corridors, enhanced maritime security cooperation, and resilient supply chain mechanisms. This review underscores the necessity for adaptive policy measures to mitigate the risks posed by geopolitical conflicts to international transportation and logistics.<sup>7</sup>

#### 8. The Implications of the Political Events in the Eastern Mediterranean and the Red Sea for Israeli Maritime Trade

The Red Sea crisis has emerged as a significant geopolitical and economic challenge, impacting global maritime trade, regional security, and supply chain resilience. This literature review examines the crisis's implications by analysing the interplay between geopolitical conflicts, maritime logistics, and trade disruptions. The escalation of hostilities in the region, particularly the attacks on commercial shipping routes, has intensified security concerns, leading to rerouted trade flows, increased freight costs, and insurance premiums. Furthermore, the crisis has exposed vulnerabilities in global trade chokepoints, particularly the Bab el-Mandeb Strait and the Suez Canal, which serve as critical passageways for international commerce. By synthesizing existing research on crisis management in maritime logistics and geopolitical tensions in the Middle East, this study highlights the need for adaptive strategies, including alternative trade corridors, enhanced maritime security, and policy interventions. The findings suggest that while short-term responses focus on securing shipping lanes, long-term solutions require international cooperation and infrastructure investments to mitigate future disruptions. This review underscores the evolving nature of maritime security and the critical role of global governance in maintaining stable trade networks.<sup>8</sup>

#### 9. The Red Sea Crisis: Implications of The Houthi Attack on Maritime Trade and Global Security

---

<sup>7</sup> Sweta Basak, M., Basak, S., & Soltanieh, A. A. (n.d.). *ME Vienna International Institute for Middle East Studies Navigating through the Red Sea Crisis: A New Dimension of Regional Security Complex in the Middle East*. <https://foreignpolicy.com/2024/02/14/red-sea-crisis-china-middle-east-strategy-egypt-yemen/>

<sup>8</sup> Maor, Y. (2015). The Implications of the Political Events in the Eastern Mediterranean and the Red Sea for Israeli Maritime Trade. In *Strategic Assessment* | (Vol. 18, Issue 2).

The Red Sea crisis has become a significant geopolitical and economic challenge, disrupting global maritime trade and intensifying security concerns. This literature review examines the implications of the Houthi attacks on commercial shipping in the Red Sea, focusing on their impact on vessel operations, trade routes, freight rates, and international security. The crisis has led to the rerouting of major shipping lines, causing increased transit times, heightened fuel costs, and supply chain disruptions. Additionally, the escalation of military tensions has necessitated increased naval patrols and defensive measures by global powers, further complicating regional stability. The findings highlight how the crisis has not only affected maritime logistics but also raised concerns about energy security, international law, and economic resilience. By analysing existing research, this study underscores the need for adaptive crisis management strategies, enhanced maritime security policies, and coordinated international efforts to mitigate the long-term repercussions of the Red Sea crisis on global trade and security.<sup>9</sup>

#### 10. The Red Sea link. Geo-economic projections, shifting alliances, and the threats to maritime trade flows.

The Red Sea crisis has emerged as a critical geopolitical challenge, disrupting global trade and security due to escalating conflicts and shifting alliances. This literature review explores the geo-economic implications of the crisis, focusing on maritime trade flows, the economic impact of chokepoint vulnerabilities, and the strategic interests of global and regional powers. The crisis has led to rerouted shipping lanes, increased freight costs, and heightened security concerns, further complicating international logistics networks. Additionally, competition among major players—including Saudi Arabia, the UAE, China, and Western powers—has intensified, influencing trade policies and security measures. The study highlights the need for international cooperation and regional security frameworks to mitigate long-term economic and strategic risks. This review underscores the urgency of adaptive maritime strategies and policy responses to ensure the resilience of global supply chains amid ongoing geopolitical uncertainties.<sup>10</sup>

---

<sup>9</sup> Maarif, S., & Widodo, P. (2024). The Red Sea Crisis: Implications of The Houthi Attack on Maritime Trade and Global Security. In *International Journal Of Humanities Education And Social Sciences (IJHESS) E-ISSN* (Vol. 4, Issue 1). <https://ijhess.com/index.php/ijhess/>

<sup>10</sup> Luigi Narbone and Cyril Widdershoven. (2021).

## 11. Suez Canal blockage and its global impact on healthcare amidst the COVID-19 pandemic

The blockage of the Suez Canal in 2021 underscored the vulnerabilities of global maritime trade, disrupting supply chains, delaying shipments, and causing significant economic losses. This literature review explores the broader implications of the crisis, including its impact on global trade flows, logistics management, and risk mitigation strategies. The review synthesizes existing research on chokepoint disruptions, maritime crisis management, and the resilience of international shipping networks. Findings indicate that the Suez Canal blockage led to increased freight costs, rerouted trade via the Cape of Good Hope, and exacerbated supply chain delays, particularly in industries reliant on just-in-time logistics. Furthermore, the incident highlighted the need for enhanced crisis preparedness, investment in alternative trade routes, and improved maritime governance frameworks. This study underscores the necessity of proactive risk management strategies in maritime logistics to mitigate the effects of similar disruptions in the future.<sup>11</sup>

## 12. A Look Over The Red Sea Trade Crisis And The Indian Shipment Industry

The Red Sea crisis has had profound implications for global trade, particularly for maritime transportation routes and supply chain logistics. This literature review examines the crisis's impact on vessel operations, freight rates, and international shipping, with a focus on how geopolitical tensions in the region have disrupted traditional trade flows. The study explores key challenges faced by shipping companies, including increased security risks, rerouted trade routes, and heightened insurance costs. Additionally, it evaluates the response strategies adopted by maritime stakeholders, such as the exploration of alternative corridors and the role of international regulatory frameworks in crisis management. Findings indicate that while short-term adaptations have been implemented, long-term structural changes in global trade networks may emerge as a result of prolonged instability in the Red Sea region. This review underscores the need for resilient trade policies and cooperative security measures to safeguard maritime operations in geopolitically sensitive areas.<sup>12</sup>

---

<sup>11</sup> Ramos, K. G., Rocha, I. C. N., Cedeño, T. D. D., dos Santos Costa, A. C., Ahmad, S., Essar, M. Y., & Tsagkaris, C. (2021). Suez Canal blockage and its global impact on healthcare amidst the COVID-19 pandemic. *International Maritime Health*, 72(2), 145–146. <https://doi.org/10.5603/IMH.2021.0026>

<sup>12</sup> *Emerging Markets Economics and Business. Contributions of Young Researchers Proceedings of the 15 th International Conference of Doctoral Students and Young Researchers.* (n.d.).

### 13. The Blue Maritime Cluster Crisis: Financial Instability and Supply Chain Management Effects

The maritime industry is highly vulnerable to financial instability and supply chain disruptions, as evidenced by the crisis affecting the Blue Maritime Cluster. This literature review examines the impact of financial instability on maritime clusters, with a particular focus on the offshore crisis from 2015 to 2017. The study explores the role of financial leverage, supply chain management, and external market shocks in exacerbating economic downturns within the maritime sector. Findings suggest that overinvestment, high debt ratios, and reliance on volatile offshore markets contributed to the crisis, leading to severe financial distress among shipyards, shipping companies, and associated industries. Additionally, supply chain vulnerabilities intensified the downturn, as disruptions cascaded through interconnected maritime networks. The review underscores the importance of financial resilience, diversification strategies, and adaptive supply chain management in mitigating the risks posed by economic downturns in maritime clusters.<sup>13</sup>

### 14. The Suez Canal: Forthcoming Strategic and Geopolitical Challenges

The Suez Canal remains a vital maritime chokepoint, connecting Europe, Africa, and Asia, and serving as a strategic corridor for global trade. This literature review examines the forthcoming geopolitical and economic challenges that could impact the Suez Canal, analysing its significance within international supply chains, maritime security, and regional stability. Key concerns include the rise of alternative trade routes, security threats from geopolitical tensions and piracy, and the evolving role of the canal in Egypt's economic development. Additionally, the study explores the impact of global initiatives such as China's Belt and Road Initiative (BRI) on trade through the canal, along with Egypt's ongoing efforts to modernize and expand its infrastructure to accommodate increasing maritime traffic. Findings suggest that while the Suez Canal remains a critical global shipping lane, long-term sustainability depends on effective security measures, economic resilience, and international cooperation. This review highlights the necessity of adaptive strategies to mitigate disruptions and ensure the continued efficiency of global trade through the Suez Canal.<sup>14</sup>

---

<sup>13</sup> Koilo, V., & Grytten, O. H. (2019). *The Blue Maritime Cluster Crisis: Financial Instability and Supply Chain Management Effects*. <https://www.bluemaritimecluster.no/gce/reports--publications/cluster->

<sup>14</sup> Chorev, S. (2023). *The Suez Canal: Forthcoming Strategic and Geopolitical Challenges* (pp. 3–26). [https://doi.org/10.1007/978-3-031-15670-0\\_1](https://doi.org/10.1007/978-3-031-15670-0_1)

## 15. The Houthi insurgency in Yemen

Umurbaev Rustam Shakirjanovich, Tashkent State University of Oriental Studies, 2024<sup>15</sup>

The conflict between the Houthi rebel group and the Yemeni government, which began in 2004, stems from the death of Hussein Badr ad-Din al-Houthi during clashes with the Yemeni military. Al-Houthi, a respected religious figure in Saada province, initiated the "Believing Youth" movement, advocating for Zaydi ideology revival in North Yemen. The article sheds light on the historical ties between the al Houthi family and Iran, dating back to 1978 when Abdul Malik al-Houthi, the current leader, studied Shi'a Islam in Iran. This period likely influenced his affinity for Iran. The author continues by saying that before 2004, evidence of Iranian involvement in Yemen was scarce. However, following al Houthi's death, Iran began providing limited military, financial, and political support to the Houthis, which continued during the Arab Spring and notably increased in 2014. The article offers valuable insights into the geopolitical dynamics of the Yemeni conflict, emphasizing the role of religious and ideological motivations in fuelling the insurgency. It underscores the significance of historical connections between key actors and external influences, particularly Iran, in shaping the trajectory of the conflict. By highlighting the evolution of Iranian support for the Houthis over time, the article provides a nuanced understanding of the conflict's complexities. The gradual escalation of Iranian involvement, from limited assistance to substantial aid, reflects broader regional dynamics and power struggles.

---

<sup>15</sup> <https://doi.org/10.5281/zenodo.10517699>

## **CHAPTER 3: THE RED SEA AND ITS STRATEGIC IMPORTANCE**

### 3.1 Trade

The Red Sea is often described as a "Between Space" because it acts both as a connector and a divider between Africa and the Middle East. Its strategic value to the global economy is immense, as it significantly reduces the travel distance between Asia and Europe compared to routes that detour around Africa via the Atlantic Ocean. Roughly 12% of global trade passes through this sea, accounting for about 30% of the world's container shipping.

A key point within this region is the **Bab-al-Mandeb Strait**, also known in Arabic as the "Gate of Tears." This narrow but vital passage lies between the Arabian Peninsula and the Horn of Africa, and is often troubled by regional and international tensions. The area is affected by violence, piracy, terrorism, human trafficking, and smuggling—making it both strategically critical and geopolitically volatile. The strait is located just south of the Suez Canal and serves as a key chokepoint connecting the Red Sea to the Gulf of Aden



Figure 1. Bab-al-Mandeb Strait  
Source: vajiramandravi.com<sup>16</sup>

In 2022, over 23,000 ships carrying approximately 1.4 billion tonnes of cargo navigated through the canal, making up nearly 12% of all global maritime traffic. The Bab-al-Mandeb Strait is the only sea access point to major regional ports: Aqaba in Jordan, Jeddah in Saudi Arabia, and Eilat in Israel.

As shown in Figure 3.2, which marks operational ports in red and military installations in black, Egypt leads with nearly 20 ports along its Red Sea coastline. These include eight commercial

<sup>16</sup> [https://vajiram-prod.s3.ap-south-1.amazonaws.com/Bab\\_al\\_Mandab\\_straitt\\_3e802648c9.png](https://vajiram-prod.s3.ap-south-1.amazonaws.com/Bab_al_Mandab_straitt_3e802648c9.png)

ports and others dedicated to petroleum, mining, tourism, and industrial fishing. Saudi Arabia operates six major commercial ports on the Red Sea, while Sudan's primary port is Port Sudan, operated by the Sudanese Sea Ports Corporation. This organization also oversees Oseif and Prince Osman Digna ports at Suakin Island, which Turkey has leased for 99 years to redevelop as a tourism hub. Although Suakin was historically an important Ottoman port, it hasn't been used commercially for decades. Eritrea's main import gateway is Massawa Port.<sup>17</sup>



Figure 2. The active ports in the Red Sea before the crisis (red dots) and Military bases (Black dots)  
Source: [theafricareport.com](http://theafricareport.com)<sup>18</sup>

### 3.2 Military Presence along the littoral area

Numerous global powers, including the United States, United Kingdom, China, Japan, and South Korea, have established military bases throughout the Red Sea region. Egypt's largest military facility in this area is the Berenice base, strategically positioned along the coast.

Israel and Jordan share borders near Aqaba and Eilat, while Saudi Arabia's Western Fleet operates from the King Faisal Naval Base. The United Arab Emirates (UAE) has extended its

<sup>17</sup> <https://www.theafricareport.com/49957/ports-military-bases-and-treaties-whos-who-in-the-red-sea/>

<sup>18</sup> [https://prod.cdn-medias.theafricareport.com/cdn-cgi/image/q=auto,f=auto,metadata=none,width=732,fit=cover/https://prod.cdn-medias.theafricareport.com/medias/2020/11/Redsea\\_ok.jpg](https://prod.cdn-medias.theafricareport.com/cdn-cgi/image/q=auto,f=auto,metadata=none,width=732,fit=cover/https://prod.cdn-medias.theafricareport.com/medias/2020/11/Redsea_ok.jpg)

influence in the region by setting up military facilities, such as its naval base in Assab, Eritrea, which played a crucial role in joint Saudi-Emirati operations in Yemen.

Although the UAE initially planned to construct a base in Berbera, Somaliland, these plans were abandoned in early 2020. On the other hand, Russia maintains a naval presence in Port Sudan, thanks to a 2017 agreement. A further deal was reached to establish a Russian naval logistics hub in Sudan.

Figure 3.2 (previously shown) doesn't display the military bases located in Yemen, due to the region's extreme sensitivity and conflict status.

Several non-coastal (non-littoral) powers are also active in the region. Countries like South Korea, Iran, and India are key external players. India, aiming to counterbalance China's influence, is strengthening its naval operations in the Indian Ocean. In fact, India and Japan have signed an agreement that allows Indian naval vessels access to Japan's port in Djibouti, while granting Japanese access to India's bases in the Andaman and Nicobar Islands.

These collaborations and deployments serve not only to extend national interests but also support multilateral efforts to combat piracy—particularly off the Somali coast—and to respond to terrorism threats originating from Yemen and Somalia.

### **3.3 Economic Resources**

The Red Sea and its surrounding waters are home to a remarkably diverse array of marine life. This includes over 20% of all known marine species, with a high rate of endemism—meaning many of these species are found nowhere else. In response, various conservation efforts are underway to preserve these fragile ecosystems and combat pollution. Currently, about 1.5 million square kilometers of marine environments are under protection, covering essential habitats like seagrass meadows, mangrove forests, and coral reefs.

In terms of energy resources, a U.S. Geological Survey report estimated that the Red Sea Basin Province contains approximately 5 billion barrels of technically recoverable oil and around 112 trillion cubic feet of natural gas (Schenk, 2010). The region's wealth of resources isn't limited to oil and gas. The sea also harbors five key types of mineral deposits:

1. Petroleum reserves
2. Evaporite deposits (e.g., halite, sylvite, gypsum, dolomite)
3. Sulfur

4. Phosphates
5. Heavy metal deposits found in deep-sea basins like Atlantis II Deep and Discovery Deep

Surrounding countries have tapped into some of these resources to varying extents. For example, oil and gas have been extracted near the Gemsa Promontory, where the Red Sea meets the Gulf of Suez. While evaporite minerals are relatively easy to obtain, their use remains mostly localized.

Sulfur mining in the region, especially near the Jamsah area, dates back to the early 20th century. However, despite the economic promise of heavy metal deposits, none have been extracted yet. Notably, Atlantis II Deep has been identified as a potentially lucrative site. Analysis indicates it holds sediments containing approximately 29% iron, 3.4% zinc, 1.3% copper, along with smaller amounts of lead, silver, and gold—all of which could be commercially valuable if exploited in the future

### 3.4 Geo-political tensions

Geopolitical tensions have a powerful impact on global trade, often resulting in significant disruptions. Recent examples include the Ukraine war and the blockade in the Black Sea, as well as conflicts in the South China Sea. Just as one tension begins to ease, another often emerges to take its place, creating an ongoing threat to international trade stability.



*Figure 3. Damage on the US-owned ship Genco Picardy that came under attack from a bomb-carrying drone launched by Houthis in the Gulf of Aden, on Jan. 18 2024*  
Source: [newsroom.ap.org](https://newsroom.ap.org)<sup>19</sup>

---

<sup>19</sup> [https://mapi.associatedpress.com/v2/items/fb336ff1ad274beda06e6563a69870bd/preview/AP.jpg?wm=api&tag=app\\_id=1,user\\_id=undefined,org\\_id=undefined](https://mapi.associatedpress.com/v2/items/fb336ff1ad274beda06e6563a69870bd/preview/AP.jpg?wm=api&tag=app_id=1,user_id=undefined,org_id=undefined)

Despite the Red Sea's immense strategic value, the region remains underdeveloped and highly conflict-prone. Longstanding rivalries between Iran, Israel, and Gulf Cooperation Council (GCC) nations create persistent instability. The area's rich natural resources and its role as a trade artery have attracted both coastal (littoral) and non-coastal (non-littoral) powers to establish military bases in and around the Red Sea.

This growing foreign presence underscores the commercial and strategic interests of leading global economies like the United States, United Kingdom, Japan, and South Korea—all of whom have sought to secure influence in this crucial maritime region.

### **3.5 Competition of Iran with Other Military Presence**

One of the key geopolitical flashpoints in the Red Sea region today is the ongoing proxy rivalry between Iran and other military powers, primarily centered around securing commercial and strategic interests. This competition dates back to historical conflicts, beginning with the Suez Crisis of 1956, which involved Egypt, France, the UK, and Israel and led to a six-month closure of the Suez Canal.

Subsequent events like the North Yemen Civil War (1962–1970)—involving Egypt, Jordan, Saudi Arabia, Israel, the USSR, and the UK—further destabilized the area. The 1967 Arab-Israeli War resulted in the canal being shut until 1975, again halting a vital trade route. Additionally, territorial disputes like the Hala'ib Triangle conflict between Egypt and Sudan have also negatively affected regional trade.

Today, one of the most prominent modern threats to trade in the region is the escalating rivalry between Iran and the Arab Gulf states. This geopolitical tension not only disrupts maritime commerce but also reflects deeper political divisions, which continue to make the Red Sea a high-risk zone for global trade and military engagement.

### **3.6 Syrian Civil War**

The Syrian civil war, which began in 2011 during the broader wave of uprisings known as the Arab Spring, has evolved into a complex conflict involving multiple domestic factions and external powers. What started as peaceful protests demanding political reform quickly escalated into a prolonged war after the Assad regime's violent crackdown on dissent.

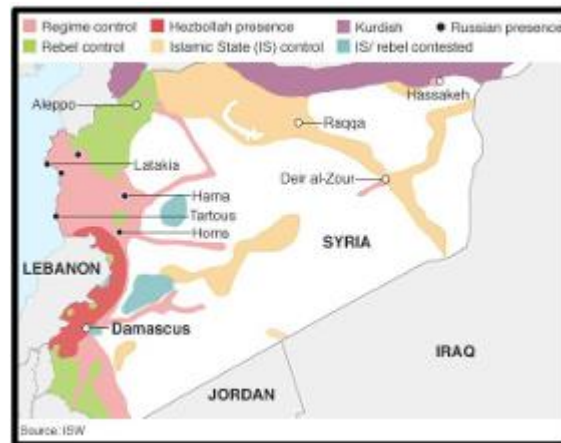


Figure 4. Map showing areas controlled by warring factions in Syria  
Source: [bbc.com](http://bbc.com)<sup>20</sup>

Foreign involvement has significantly influenced the course of the conflict. The Assad government, supported militarily by Russia and Iran, has managed to hold its ground. Meanwhile, various opposition forces have received backing from Western countries, deepening the divide and prolonging the fighting.

This external interference has destabilized the region and contributed to one of the most severe humanitarian crises of recent times. Neighboring countries such as Turkey, Lebanon, and Jordan have faced massive influxes of Syrian refugees, straining their infrastructure and resources.

The war has caused widespread devastation—including infrastructure damage, population displacement, and human rights violations. Reports of chemical weapons use and other atrocities have drawn global condemnation, underscoring the urgent need for justice and accountability.

To resolve this enduring conflict, a comprehensive peace strategy is essential. This must include efforts to address the root causes, foster dialogue among domestic and regional actors, and ensure cooperation from international stakeholders. Scholars examining the Syrian conflict emphasize the need to consider local, regional, and global dynamics, as the outcome has significant implications for broader Middle East stability.

<sup>20</sup> <https://www.bbc.com/news/world-middle-east-26116868>

### **3.7 Israel-Palestine Conflict**

The conflict between Israel and Palestine has spanned more than a century. It intensified after the UN's 1947 partition plan and Israel's declaration of independence in 1948, followed by a series of wars that transformed the geopolitical map of the Middle East.

One of the most significant of these was the Six-Day War in June 1967, fought between Israel and its neighboring Arab countries—Egypt, Jordan, and Syria. The immediate spark came when Egypt blocked Israel's access to the Straits of Tiran, a vital maritime route, and deployed troops in the Sinai Peninsula. In response, Israel launched a preemptive strike, destroying Egypt's air force and rapidly advancing on all fronts.

Within days, Israel captured the Sinai Peninsula, Gaza Strip, Golan Heights, West Bank, and East Jerusalem. Though heavily outnumbered, Israel's superior planning and execution gave it a decisive military advantage. The war not only expanded Israel's territory but also displaced hundreds of thousands of Palestinians, worsening tensions and setting the stage for future hostilities.

In 1979, Egypt and Israel signed a peace treaty, but the core issue of Palestinian statehood remained unresolved. The Oslo Accords in the 1990s introduced limited Palestinian self-governance, but the Second Intifada in 2000 reignited violence. The rise of Hamas in Gaza in 2006 deepened the divide with the Fatah-led West Bank.

The conflict has remained volatile. In 2014, another major war broke out between Israel and Hamas, followed by deadly clashes in 2018 at the Gaza border. The Trump administration recognized Jerusalem as Israel's capital, further shifting the political landscape and brokering normalization deals with several Arab states.

In May 2021, violence escalated again with an 11-day war between Israel and Hamas. Then in October 2023, Hamas launched a surprise attack involving rockets and ground forces into southern Israel. Israel responded with a full-scale military campaign, formally declaring war and besieging Gaza. By late October, a ground invasion was underway.

Unlike past conflicts, Egypt and Jordan—longtime hosts of Palestinian refugees—refused to take in more displaced people during this escalation, citing concerns over regional destabilization and security threats.

### 3.8 Upcoming projects & Developments

Multiple initiatives have been announced under development agendas aimed at enhancing municipal services and elevating quality of life in alignment with the objectives of Saudi Vision 2030. Several new projects are planned along the western coastline of Saudi Arabia. This positions the Red Sea as one of the world's most ambitious destinations for regenerative tourism, creating a distinctive synergy between sustainable luxury travel and environmental conservation.

#### SAUDI'S VISION 2030 RED SEA PROJECT

The Red Sea Project (TRSP) spans over 28,000 km<sup>2</sup> along the Red Sea coast, with the goal of transforming Saudi Arabia's western shoreline into a hub for eco-conscious luxury tourism. The project area includes the untouched Al Wajh lagoon, covering 2,081 km<sup>2</sup>, and comprising 92 islands that host species of global conservation significance and vital ecosystems such as coral reefs, mangroves, and seagrass beds.

The Red Sea Development Company (TRSDC), which oversees TRSP, has pledged to deliver a model of sustainable tourism that not only minimizes environmental harm but contributes positively to biodiversity.



Figure 5. Aerial view of a project under the development of Red Sea Global in Saudi Arabia  
Source: redseaglobal.com

A scientific paper highlighting the marine spatial planning models that influenced TRSP's master plan was published in the journal *Frontiers in Marine Science*. Professor Carlos Duarte, who serves as the Tarek Ahmed Juffali Research Chair in Red Sea Ecology at KAUST, noted

that historically, coastal development and marine conservation have often clashed due to ecological stress caused by development activities.

However, the study revealed that when conservation is prioritized from the beginning, sustainable development can harmonize with environmental goals, producing net-positive ecological outcomes. Professor Duarte, a co-author of the paper and a member of TRSDC's Advisory Board, emphasized that the team also introduced measures to eliminate current pressures on marine ecosystems.

These measures include organizing beach cleaning drives, regulating fisheries to restore marine life, expanding critical marine habitats like mangroves, seagrass, and coral reefs by 30%, Implementing electric-only marine and land transportation to curb pollution and reduce noise disturbance

The Sub-Projects include:

- a) Turtle Bay
- b) Ummahat Island
- c) Shura Island
- d) Southern Dunes
- e) Desert Rock
- f) Shebara Island
- g) Red Sea International Airport
- h) The Red Sea Nursery
  
- Jeddah Waterfront Project

In November 2023, Saudi Arabia announced the launch of its premier waterfront development—Jeddah South Obhur—which will span a 205,000 square meter area within the coastal city of Jeddah. The project is part of the country's efforts to modernize its urban infrastructure and enhance the quality of life in alignment with Vision 2030.

The development will feature a sea promenade, sandy beach areas, and extensive green zones, complemented by pedestrian-friendly walkways, cycling tracks, and multi-use public plazas. Additionally, the area will offer children's playgrounds, designated swimming beaches, a marina, food cart zones, and various retail spaces.



*Figure 6. City of Jeddah, Saudi Arabia*  
Source: Getty Images

The Jeddah Municipality is overseeing the project, which aims to create substantial investment prospects within the retail and infrastructure sectors. The site will be equipped with electricity, wastewater management, rainwater drainage, and flood control systems, ensuring that the infrastructure meets modern urban standards.

The entire project is valued at up to SAR 75 billion, and it encompasses a 5.7 million square meter area with a 9.5-kilometer shoreline, including 2.1 kilometres of sandy beaches and a world-class marina capable of hosting both domestic and international yachts.

The project is set to be implemented in three phases, the first phase is scheduled for completion by the end of 2027, after which the site will open to Jeddah's residents and visitors. The second phase will conclude by 2030. The final phase will continue with development efforts post-2030.

- Turkey's 99-year lease on Suakin

The ancient city of Suakin, located across the Red Sea from Jeddah, was once a thriving center for trade. However, it lost prominence when Sudan developed a new port—Port Sudan—to the north between 1905 and 1909. The main reason for Suakin's replacement was its limited access via narrow, coral-lined channels, which made it unsuitable for larger steamships.

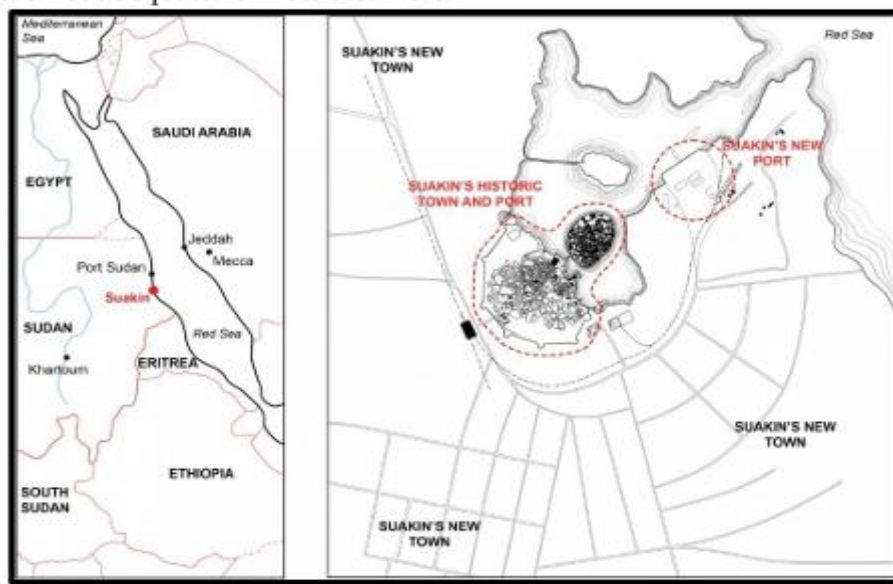


Figure 7. Map showing the Historic port and the proposed new port of Suakin  
 Source: researchgate.net

Over the years, several efforts were made to revive Suakin, but none were successful. That changed when Turkey signed a 99-year lease to restore the Ottoman-era port and transform it into a tourism destination. Suakin, settled by the Beja people over a millennium ago, has long been contested by regional powers. The 20-square-kilometer island, once under Ottoman control from the 16th century, served as a strategic naval base to defend the Hijaz province (modern-day western Saudi Arabia).

The island, accessible via a narrow Red Sea inlet and connected to the mainland by a 19th-century causeway, was historically the primary port for African Muslims heading to Mecca. Turkey's agreement with Sudan involves not only restoring Suakin as a tourism hub but also upgrading the existing port infrastructure.

Additionally, Turkey plans to establish a military presence farther north in Port Sudan. Turkish forces will support counterterrorism operations in the Horn of Africa and collaborate with Sudanese police and military, offering training and building a naval maintenance facility in Port Sudan.

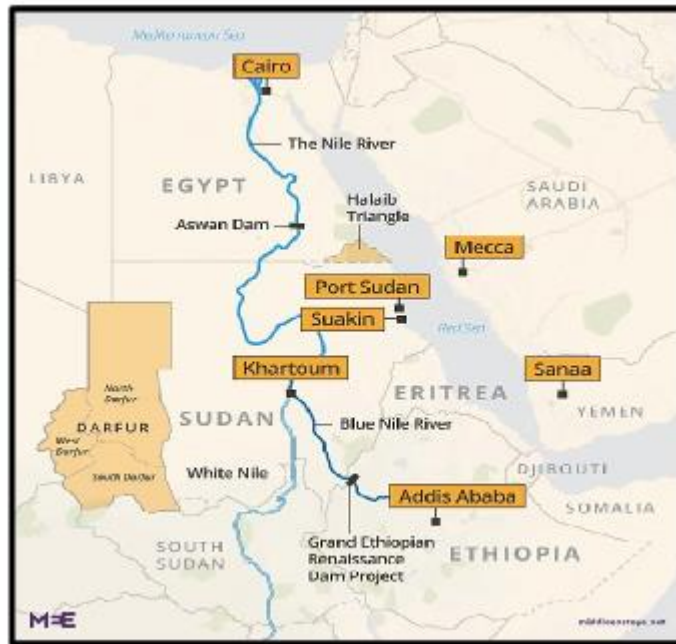


Figure 8. The Nile River Basin and Surrounding Countries

Source: middleeasteye.net

## **CHAPTER 4 - THE IMPACT OF RED SEA CRISIS ON WORLD TRADE**

## 4.1. The Global Economy and Trade

Maritime shipping is the backbone of international trade and a critical component of global manufacturing logistics. The World Economic Forum has identified disrupted supply chains as major threats to economic stability: 25% for essential goods and resources, 14% for energy, and 18% for food. Among the top short-term global risks, interstate conflict ranks fifth. The report also highlights that emerging flashpoints could divert the focus and resources of major powers over the next couple of years, weakening global security and shaking the stability of financial systems and supply networks.



Figure 9. Frequency of Maritime disruption occurred on the Red Sea (2023-2024)  
Source: portwatch.imf.org<sup>21</sup>

The pandemic, along with the Russia-Ukraine conflict, has severely strained the global economy and trade. These crises have disrupted supply chains worldwide, posed threats to food and energy security, and disproportionately impacted low-income countries.

The current Israel-Hamas conflict, similar to past Middle Eastern tensions, could trigger widespread economic instability. If more countries get involved, a global recession may follow. Heightened tensions could bring Israel into direct conflict with Iran, which funds and arms Hamas, designated as a terrorist group by the US and EU.

<sup>21</sup> <https://portwatch.imf.org/pages/disruption-monitor>

In a worst-case scenario projected by Bloomberg Economics, oil prices might climb to \$150 per barrel, reducing global growth to 1.7% and wiping \$1 trillion<sup>22</sup> from global output.

As a major oil producer and vital shipping zone, unrest in the Middle East has global implications. The fragile world economy, already grappling with inflation worsened by Russia's Ukraine invasion, risks another inflation surge if energy supplies are threatened. Broader effects could include political instability in the Arab world and influence over the next US presidential election, where fuel prices play a key role. However, these projections don't capture the full scope and complexity of possible outcomes. In such a volatile environment, even short-term economic consequences are hard to predict. The ongoing conflict includes different types of warfare, with varying effects on oil prices, as shown in Figure 4.2.

Scenario	Details	Impact on oil prices and VIX*	Impact on global GDP and inflation**
<b>Confined war</b>	- Ground invasion of Gaza - Limited broader regional conflict - Lower Iranian crude output	Oil: +\$4/barrel VIX: No impact	GDP: -0.1 ppts. Inflation: +0.1 ppts.
<b>Proxy war</b>	- Multifront war in Gaza, West Bank, Lebanon, Syria - Unrest in wider Middle East	Oil: +\$8/barrel VIX: +8 points	GDP: -0.3 ppts. Inflation: +0.2 ppts.
<b>Direct war</b>	- Israel and Iran in direct conflict - Unrest in wider Middle East	Oil: +\$64/barrel VIX: +16 points	GDP: -1.0 ppts. Inflation: +1.2 ppts.

Source: Bloomberg Economics  
 \*Impact calibrated based on 2014 Gaza War, 2006 Israel-Lebanon War, and 1990-1991 Gulf War.  
 \*\*Impact on year on year change in global GDP and inflation for 2024, estimated using Bayesian Global VAR

Figure 10. Chart showing 3 kinds of War Scenario  
 Source: bloomberg.com<sup>23</sup>

Iran has increased oil production by 700,000 barrels per day following some diplomatic easing with the US, including prisoner exchanges and unfreezing assets. Bloomberg Economics suggests this could add \$3-4 to oil prices. However, global impact may be limited if countries like Saudi Arabia and the UAE offset this with their spare capacity. Meanwhile, Iran-backed Hezbollah in Lebanon, which has fired on Israeli forces, may escalate involvement, especially if Israel intensifies operations in Gaza. This could lead to a direct Iran-Israel conflict, likely driving oil prices even higher. In 2006, oil rose by \$5 per barrel during the brief Israel-Hezbollah war.

<sup>22</sup> <https://www.bloomberg.com/news/features/2023-10-12/israel-hamas-war-impact-could-tip-global-economy-into-recession>

<sup>23</sup> <https://www.bloomberg.com/news/features/2023-10-12/israel-hamas-war-impact-could-tip-global-economy-into-recession>

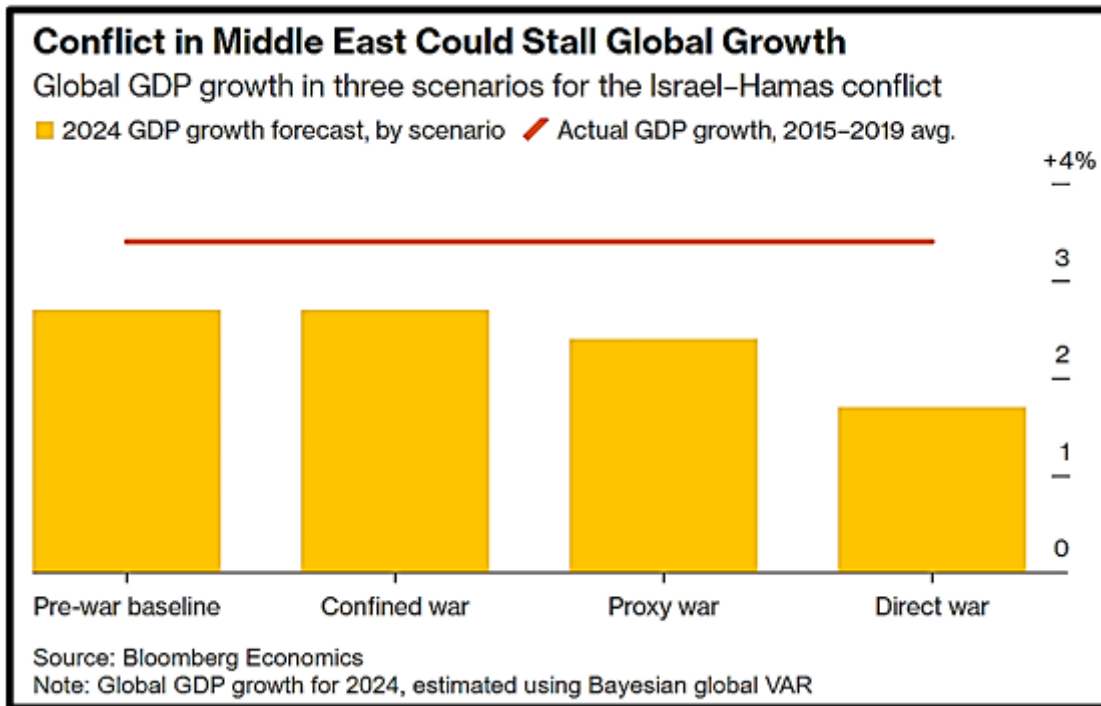


Figure 11. Global GDP according to 3 Kinds of War Scenario  
 Source: bloomberg.com<sup>24</sup>

In the confined-war scenario, if oil prices spike by 10% (similar to the 2006 event), prices could climb to \$94 per barrel. Financial markets may shift from risky assets, echoing reactions seen during the Arab Spring. The combined effect could cause a \$300 billion drop in global production and a 0.3 percentage point reduction in global growth—down to 2.4% for 2019. This would mark the weakest growth in decades, excluding the 2009 financial crisis and the 2020 pandemic.

Such a rise in oil prices would add 0.2 percentage points to global inflation, potentially keeping it near 6%, and pressuring central banks to sustain tight monetary policies despite weak economic performance.

Though a direct Israel-Iran war is considered unlikely, it remains a high-risk scenario. It could trigger a global recession, spike oil prices, and reduce investor confidence. Greater tensions between global powers would intensify instability. While the US backs Israel, Iran has growing ties with China and Russia. Western officials worry these rivals might use the crisis to divert

<sup>24</sup> <https://www.bloomberg.com/news/features/2023-10-12/israel-hamas-war-impact-could-tip-global-economy-into-recession>

global attention and military resources. Since about 20% of the world’s oil comes from the Gulf, prices would likely soar in this case.

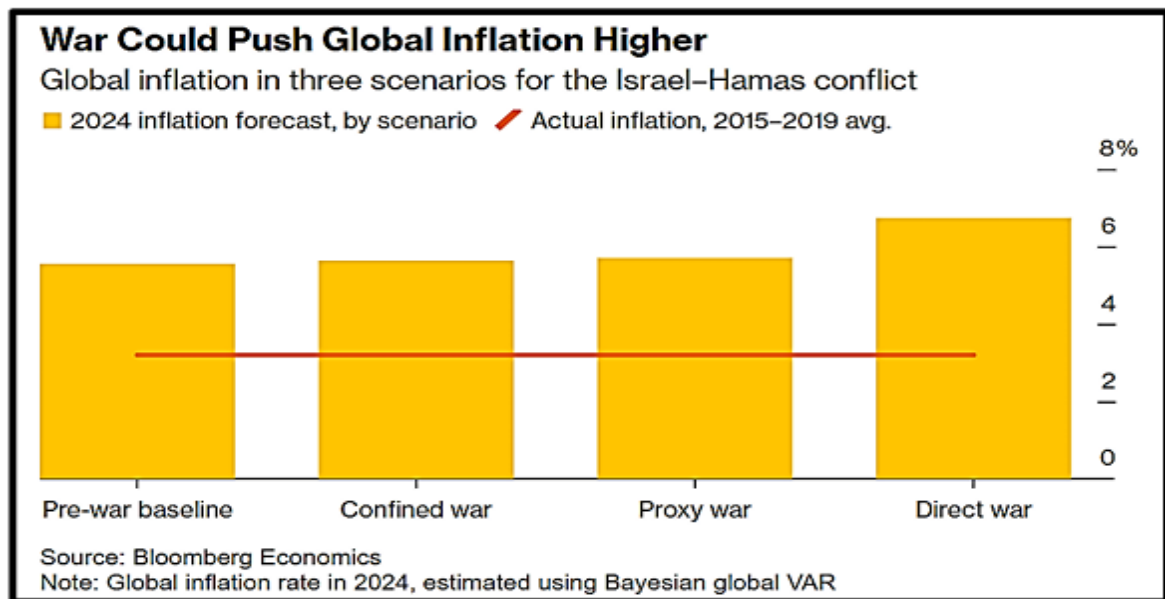


Figure 12. Inflation caused because of Israel-Hamas Conflict  
 Source: bloomberg.com<sup>25</sup>

A scenario resembling the 2019 attack on Saudi oil facilities by Iran-backed militants—which temporarily cut Saudi oil output in half—cannot be ruled out. While a quadrupling of oil prices, as seen during the 1973 Arab embargo, is unlikely, Bloomberg Economics estimates that such an event would still reduce global growth by 1 percentage point, bringing 2024 growth down to 1.7%. Apart from COVID-19 and the 2008 crisis, this would be the worst growth rate since 1982.

Bloomberg also notes that higher shipping costs may prompt central banks to delay interest rate cuts. JPMorgan analysts expect global goods inflation to rise by 0.7 percentage points in the first half of the year if the shipping disruptions continue.

## 4.2 Impact on shipping transport cost

The Red Sea, situated between Africa and the Arabian Peninsula, is a key artery for transporting vital goods like oil, natural gas, grains, consumer electronics, and even toys—primarily destined for the Suez Canal, through which around 12% of global trade flows.

<sup>25</sup> <https://www.bloomberg.com/news/features/2023-10-12/israel-hamas-war-impact-could-tip-global-economy-into-recession>



Figure 13. Alternative shipping route avoiding red sea  
Source: bbc.com<sup>26</sup>

Attacks by Houthi rebels in Yemen—who are backed by Iran—on commercial vessels navigating the Red Sea have made it a dangerous passage. As a result, many shipping companies are now avoiding this critical route altogether. The alternative path around Africa’s Cape of Good Hope adds over 3,500 nautical miles (6,500 km) to each journey, increasing voyage times by about two weeks and significantly raising shipping costs.

These reroutes have caused container shipping prices to surge dramatically. Aggregate cost indicators show rates have increased by 2.5 to 3 times compared to early December levels. Routes from Asia to Europe—normally through the Suez Canal—have seen prices jump by as much as fivefold, and rates from China to the US have also more than quadrupled.

<sup>26</sup>[https://ichef.bbci.co.uk/news/976/cpsprodpb/105F2/production/\\_132085076\\_suez\\_canal\\_alternative\\_route\\_2x640-nc2x-nc.png.webp](https://ichef.bbci.co.uk/news/976/cpsprodpb/105F2/production/_132085076_suez_canal_alternative_route_2x640-nc2x-nc.png.webp)

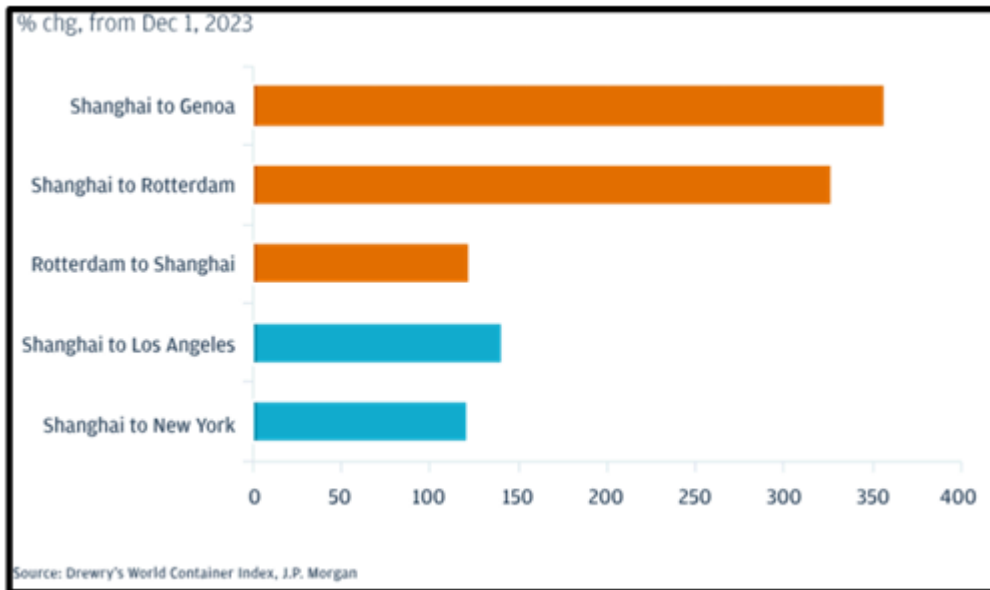


Figure 14. Increase in the shipping costs by route  
Source: jpmorgan.com<sup>27</sup>

For example, container shipping costs spiked by 161%, rising from \$1,521 on December 14 to \$3,964 by January 25. However, by the end of February 2024, the Drewry World Container Index had dropped slightly by 5%, settling at \$3,493 per 40-foot container.

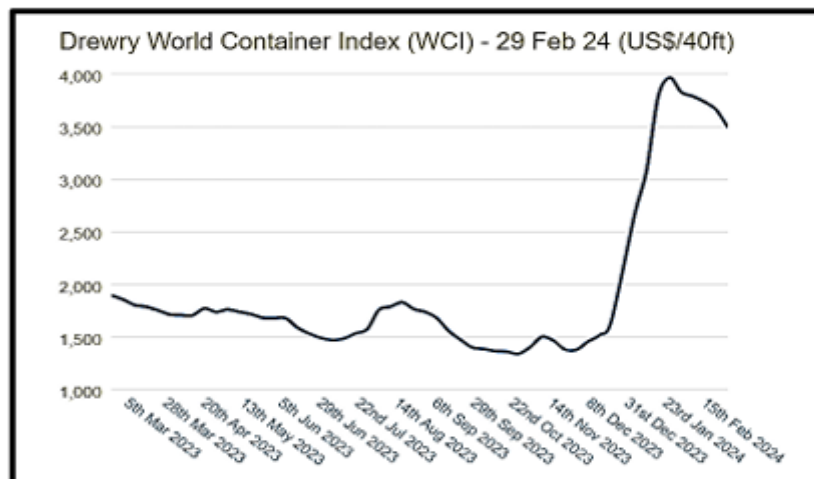


Figure 15. Drewry World Container Index (as of 29 February 2024)  
Source: drewry.co.uk<sup>28</sup>

<sup>27</sup> <https://www.jpmorgan.com/insights/global-research/supply-chain/red-sea-shipping>

<sup>28</sup> <https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world-container-index-assessed-by-drewry>

According to Forbes, the cost of insuring cargo moving through the Red Sea has also sharply increased. Insurance premiums have jumped from an average of 0.6% to around 2% of the cargo's value due to heightened risks.

China, a major exporter, is also facing serious challenges. Shipping costs to Europe have doubled from about \$3,000 in December 2023 to nearly \$7,000, which puts pressure on China's export-driven economy.

Shipping companies have started applying new surcharges to offset the higher costs of longer routes, faster sailing speeds, and extra fuel. For instance, Maersk is now consuming about 40% more fuel per journey, and charter rates have tripled. Although there was a temporary reduction in the Peak Season Surcharge (PSS), it has recently been raised again to help manage these new expenses. These surcharges will be adjusted regularly in response to changes.

Maritime insurance typically excludes coverage for damage caused by war or armed conflict. However, recent developments have made war-risk insurance essential. Such insurance operates on a "named peril" basis and is not always comprehensive. Protection and Indemnity (P&I) Clubs offer limited war coverage, often excluding high-risk zones. To cover these areas, shipowners must pay additional premiums for what's known as the Additional War Risk Premium (AWRP).

The ongoing unrest in the Gulf has made AWRP more expensive for ships passing through the Red Sea. However, the system isn't foolproof. Charterers sometimes deny claims made by shipowners for war-risk costs, especially if they operate their own fleet in the excluded zones. There are still several issues to resolve before a fully functional and universally accepted war insurance framework can be implemented.

### **4.3 Impact on Indian economy and trade**

India's trade is highly dependent on the Red Sea route via the Suez Canal, especially for commerce with regions like Europe, North America, North Africa, and the Middle East. In the fiscal year ending March 2023, these areas accounted for about half of India's exports, valued at ₹18 trillion (approximately \$217 billion), and roughly 30% of imports, worth ₹17 trillion (around \$205 billion), according to CRISIL Ratings.

The Red Sea disruptions have sparked concern in India. Several ships bound for India or crewed by Indians have reportedly been attacked or hijacked, allegedly by Houthis or pirates. In response, India has boosted its naval presence in the Arabian Sea, deploying about twelve

warships. Nonetheless, fears have grown to such an extent that about 25% of outbound shipments through the Red Sea are currently on hold. Moreover, around 95% of cargo vessels leaving India are now rerouting via the Cape of Good Hope. To avoid risk, many shipping operators have temporarily stopped using the Suez Canal. According to IMF Port Watch data, traffic through the canal dropped by about 46% over two months leading up to January 28, while traffic around the Cape of Good Hope rose by 32%.

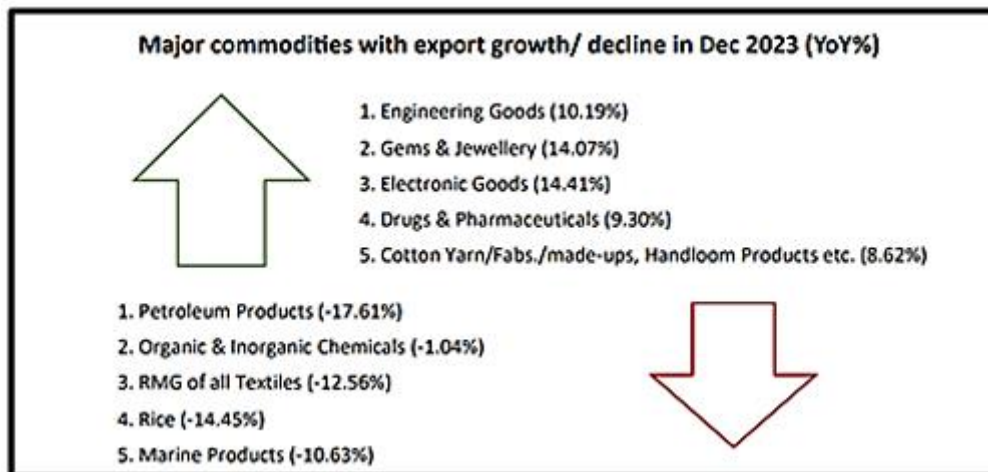


Figure 16. Major commodities with export growth/Decline in Dec 2023 in India  
Source: fieo.org<sup>29</sup>

Prolonged disruption in shipping routes—especially if it delays delivery times—could seriously affect the capital goods industry. Such delays might result in inventory pile-ups, hurting operational efficiency for companies involved in engineering, procurement, and construction (EPC). The supply chain challenges could slow down order execution and increase logistics costs, forcing companies to manage excess stock and delays in converting sales leads, which would harm overall performance. Some inventory remains stuck at ports or processing facilities, while the rest is now being sold domestically, pushing local prices down by about 8%.

India is the top global exporter of basmati rice, exporting more than 4.5 million tonnes each year. About 35% of the total production of 7.5 million tonnes is shipped to markets in Europe, North America, North Africa, and the Middle East—mainly via the Red Sea. Along with basmati, the crisis has disrupted exports of other agricultural and food products such as tea, spices, grapes, and buffalo meat, resulting in financial losses for Indian exporters. Similarly, delays in imports of fertilizers, sunflower oil, machinery parts, and electronics are raising the

<sup>29</sup> [https://fieo.org/uploads/files/file/PAGE\\_43\(1\).pdf](https://fieo.org/uploads/files/file/PAGE_43(1).pdf)

risk of increased costs for Indian consumers. There is rising concern that this instability will cause supply chain disruptions, limit trade growth, and slow efforts to curb food inflation.

Delivery timelines have already extended by 21 to 28 days. The ongoing crisis may lead to export losses of over \$30 billion for India in this fiscal year, reducing annual exports by about 6.8% from last year's \$451 billion, according to Sachin Chaturvedi, Director General of the Research and Information System for Developing Countries (RIS).

Meanwhile, shipping rates have soared. Drewry's World Container Index shows that the average cost to ship a 40-foot container rose by 161%, from \$1,521 on December 14 to \$3,964 by January 25.

India sources the bulk of its crude oil imports from Russia (37%), Iraq (21%), and Saudi Arabia (14%). While supply has remained stable so far, the recent escalation has driven up freight and insurance costs. Oil prices have also begun to edge higher due to geopolitical uncertainty. These factors could squeeze profit margins for Indian oil marketing companies. Europe, which received 21% of India's petroleum product exports in fiscal year 2023, may see a decline in imports due to shipping constraints, affecting the profitability of standalone Indian refiners.

The conflict has also delayed fertilizer shipments from the Middle East to India. Reports suggest that shipment timelines have extended by about 15 days, while freight rates have climbed. Imports of muriate of potash (MOP), a key fertilizer, have been particularly affected. Jordan and Israel, which contribute about 25–30% and 10–15% of MOP exports to India respectively, have seen delays. Although the Indian government has assured that there are adequate fertilizer reserves, continued disruption could affect future supply from these countries.

Logistics costs for Indian metal exports to Europe—representing about 2% of total Indian production—have risen by \$40–\$60 per tonne, potentially affecting profit margins for flat steel producers. Scrap-based steel producers in western and northern India, who represent 3–4% of national production, have also seen raw material costs increase by 5–8% due to higher scrap import expenses. For base metals like aluminum, copper, lead, and zinc, logistics costs have gone up by 0.25–2% of the product or input cost, though the overall impact is expected to be minor.

Small exporters—who are responsible for around 40% of India's annual merchandise exports, valued at roughly \$450 billion—are warning of rising job losses. These businesses already

operate on thin profit margins (typically 3–7%), and the prolonged crisis is worsening their vulnerability.

India's pharmaceutical industry, which earns about 50% of its revenue from exports, is also at risk. The US and Europe are major markets, with Europe alone contributing a third of India's bulk drug exports (as of April to November 2023). Two-thirds of pharmaceutical exports are shipped by sea, and with the Red Sea being the fastest link between Asia, Europe, and North America, ongoing disruptions may lead to increased shipping surcharges and freight costs. This would put additional strain on company margins, while delayed deliveries could add financial burdens<sup>30</sup>.

#### **4.4 Responses by Country Heads, Military bases, and other International Organisations**

- **United Nations (UN):** The UN Security Council has strongly denounced the attacks by the Houthis and called for an immediate ceasefire. However, diplomatic progress remains difficult due to ongoing rivalries and tensions among regional powers.
- **UN Conference on Trade and Development (UNCTAD):** UNCTAD has warned about the serious economic consequences stemming from the disruption of Red Sea shipping lanes. The organization has called for swift measures to enhance maritime security and ensure smooth international trade operations.
- **European Union (EU):** The EU has initiated a new naval mission named **Operation Aspides**, aimed at providing protective escorts and defensive support for European-flagged ships operating in the Red Sea.
- **Saudi Arabia and United Arab Emirates (UAE):** Both nations continue to support the Yemeni government in its fight against the Houthis. They have publicly condemned the attacks and reaffirmed their commitment to maintaining regional stability and security.
- **Iran:** Iran has denied any direct role in the Houthi attacks but continues to voice its backing for the group. This position further complicates peace efforts and makes diplomatic resolutions more difficult to achieve.
- **US Central Command (CENTCOM):** The US military has taken active steps, such as intercepting weapons shipments intended for the Houthis and increasing naval patrols in

---

<sup>30</sup> Sectoral impact of Red Sea trade disruptions, February 2024, CRISIL Ratings

the region. However, despite these efforts, the attacks have persisted, highlighting the difficulties in restoring maritime safety.

- **Djibouti:** This country, which hosts a US military base, plays a key role in operations across the Red Sea region. Djibouti has condemned the assaults and reiterated its dedication to supporting regional security.
- **Egypt:** Home to several foreign military bases, Egypt is a critical stakeholder in Red Sea security. Although it hasn't issued a detailed public statement on the crisis, Egypt is expected to engage in broader international security efforts.
- **India:** India has significantly bolstered its naval presence in the Arabian Sea—located strategically near the Red Sea—in order to safeguard its commercial vessels and deter future attacks.
- **Italy:** Italy has long contributed to security efforts around the Mediterranean and Indian Ocean chokepoints. It ranks as the second-largest contributor to **EUNAVFOR Atalanta** (operating in the Gulf of Aden) and **EMASoH**, a European-led maritime awareness mission in the Strait of Hormuz.<sup>31</sup>

#### **4.5 Emerging new trade routes in relation with Red Sea and Suez Canal**

The crisis in the Red Sea has emphasized the need to diversify global trade routes. It has paved the way for exploring alternate maritime and overland corridors that can strengthen trade resilience and improve global connectivity. Some of the key emerging routes include:

- **Eastern Maritime Corridor (EMC)**

India and Russia share a deep-rooted and expanding trade partnership, which has remained strong even amid global turbulence. Russia has continued to be India's primary crude oil supplier, contributing over 33.91% of petroleum imports, followed by Iraq (20.53%) and Saudi Arabia (15.87%).

---

<sup>31</sup> [https://ris.org.in/sites/default/files/2024-02/DCR\\_October-December%202023\\_0.pdf](https://ris.org.in/sites/default/files/2024-02/DCR_October-December%202023_0.pdf)

Traditionally, trade between India and Russia has taken the western sea route via the Suez Canal and Baltic Sea, connecting Mumbai and St. Petersburg—a distance of roughly 8,675 nautical miles, which takes between 28 to 35 days.

The proposed **Eastern Maritime Corridor (EMC)** offers a shorter and faster route, linking ports on India's east coast with Russia's Far East via the Malacca Strait, South China Sea, and Sea of Japan. This alternative is 40% shorter and reduces transit time to under 18 days. The EMC, connecting Chennai and Vladivostok, is expected to cut freight costs and open new trade opportunities in the Pacific region. Key commodities likely to benefit from this route include coking coal, crude oil, liquefied natural gas (LNG), fertilizers, and containerized goods.



Figure 17. Eastern Maritime Corridor  
Source: twitter.com<sup>32</sup>

#### • India-Middle East-Europe Economic Corridor (IMEEC)

Announced during the G20 summit in New Delhi on September 10, 2023, the **IMEEC** is a major strategic initiative. The project was formalized through a Memorandum of Understanding signed by India, the US, UAE, Saudi Arabia, France, Germany, Italy, and the European Union.

The goal of IMEEC is to boost inter-regional connectivity by integrating physical, digital, and financial networks across South Asia, the Gulf, and Europe through multimodal transport

<sup>32</sup> [https://twitter.com/shipmin\\_india/status/1704327981584576585](https://twitter.com/shipmin_india/status/1704327981584576585)

involving railways, highways, and shipping. It aims to reduce trade time between India and Europe by 40% and costs by 30%. Additionally, the corridor seeks to promote stability and counterbalance China's influence in the region, though on a smaller scale with more modest financial backing.

According to a White House announcement on September 9, 2023, IMEEC will have two key branches: one connecting India to the Persian Gulf and another linking the Gulf to Europe. A significant part of this corridor will be a rail network offering an efficient transport alternative to the current sea and road-based systems.

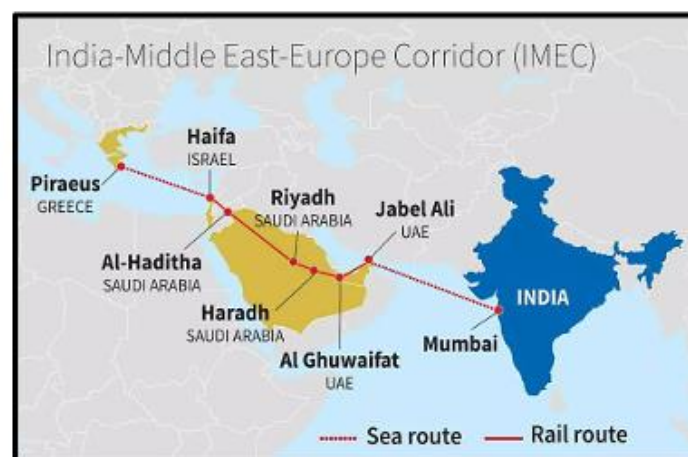


Figure 18. India-Middle East-Europe Corridor  
Source: [civildaily.com](https://civildaily.com)<sup>33</sup>

### • China's Maritime Silk Road and Belt and Road Initiative

Launched in 2013, China's BRI is a global network of transport corridors designed to connect China with regions including Central Asia, Europe, the Middle East, Africa, Latin America, and Oceania. The BRI's land-based corridors include major projects like the New Eurasian Land Bridge, China–Mongolia–Russia Corridor, and the China–Pakistan Corridor, among others.

A key maritime arm of the BRI is the **Maritime Silk Road (MSR)**. The Suez Canal, Red Sea, and Gulf of Aden are critical to the MSR's success. This explains China's significant investments in the region—including its first overseas military base in Djibouti, infrastructure development, and enhanced engagement with both African and Arab states.

<sup>33</sup> <https://www.civildaily.com/news/india-middle-east-europe-corridor/>

However, with greater involvement comes greater responsibility. China now faces increased pressure from regional governments, heightened exposure to risks, and more complex interactions with global powers in the Red Sea zone.

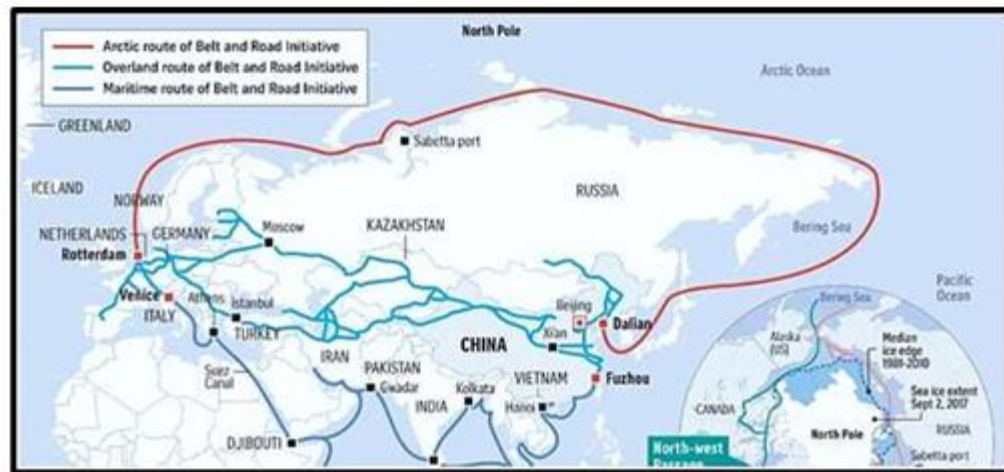


Figure 19. MSR and BRI  
Source: brisl.org<sup>34</sup>

China’s primary focus is maintaining freedom of navigation in the region, which is vital for the rapid and cost-effective movement of goods between China and Europe, North Africa, and parts of the Middle East. Notably, Chinese ships represent about 10% of all Suez Canal traffic annually. In 2020, China was the EU’s third-largest export destination and its top import source. The region is also central to China’s expanding naval presence and broader strategic goals.

#### • The UAE-Israel land corridor

Due to the instability in the Red Sea, shipping firms are exploring overland alternatives. One promising option is the **UAE-Israel Land Corridor**—a fast overland route connecting Dubai’s Jebel Ali Port to Haifa Port in Israel via Saudi Arabia and Jordan.

This corridor allows goods from South Asia to reach Israel overland, reducing transit time and expenses. In December 2023, two shipping companies successfully completed trial truck shipments along this route. They reported that the overland corridor cut freight costs by more than 80% compared to Red Sea-based sea routes.

<sup>34</sup> <https://brisl.org/>

This new route could become a vital part of the broader IMEEC initiative, with Haifa Port playing a central role.

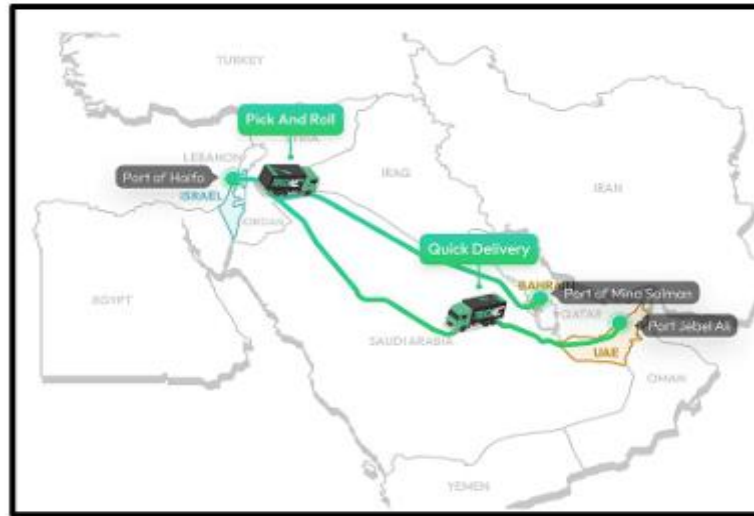


Figure 20. The UAE-Israel land corridor  
Source: jns.org<sup>35</sup>

• **Arctic Route**

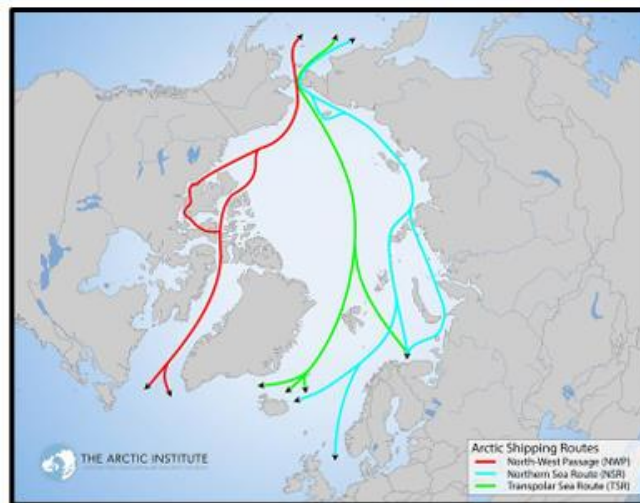


Figure 21. Map showing the Northern Sea Route, the Northwest Passage, and the Transpolar Sea Route  
Source: thearcticinstitute.org<sup>36</sup>

Several Arctic shipping routes are being considered as long-term alternatives:

<sup>35</sup> <https://www.jns.org/uae-israel-land-corridor-operating-despite-war/>

<sup>36</sup> <https://www.thearcticinstitute.org/future-northern-sea-route-golden-waterway-niche/>

a) **Northern Sea Route (NSR):** This route, running along Russia's Arctic coast, has the greatest commercial promise due to anticipated ice-free periods. Compared to the traditional route via the Suez Canal, the NSR reduces the East Asia–Europe distance from 21,000 km to 12,800 km, saving 10–15 days of travel time. In 2009, the first commercial NSR voyage took place with stops between Busan and Rotterdam, escorted by Russian icebreakers.

b) **Northwest Passage (NWP):** Running through Canada's Arctic waters, the NWP can cut the distance between East Asia and Western Europe from 24,000 km (via the Panama Canal) to 13,600 km.

c) **Transpolar Sea Route (TSR):** Still theoretical, this route would directly traverse the central Arctic Ocean between the Bering Strait and the Atlantic. It is dependent on future ice-free conditions.

d) **Arctic Bridge:** This route links the Canadian port of Churchill with Russia's Murmansk or Norway's Narvik, mainly for transporting grain. It connects central North America with northwest Europe, though it isn't a true trans-Arctic corridor.<sup>37</sup>

#### • **The International North-South Transport Corridor (INSTC)**

The **International North-South Transport Corridor (INSTC)**, involving Russia, Iran, and India, spans 7,200 kilometers and was officially established on September 12, 2000, in St. Petersburg. It is a multimodal logistics network that integrates sea, rail, and road links, aiming to connect the Persian Gulf with the Caspian Sea and extend onward to Russia and Europe.

Iran plays a central role in the corridor's infrastructure, with eight seaports along the Persian Gulf. Two of the most crucial—**Chabahar** and **Bandar Abbas**—serve as major nodes. From Bandar Abbas, a double-track railway connects to Tehran and branches into eastern, western, and northern directions. The corridor then continues via Anzali Port on the Caspian Sea, linking to **Russia's Astrakhan Port**, facilitating cargo movement to Moscow and other regions.

---

<sup>37</sup> Rodrigue, J.-P.: (2020). *The Geography of Transport Systems* (5th ed.). Routledge.pg:11-13

The INSTC also includes connections to Turkey and China, with routes leading to Istanbul and Turkmenistan. In 2016, the **Ashgabat Agreement** came into effect, signed by Kazakhstan, Uzbekistan, Turkmenistan, Iran, India, Pakistan, and Oman. This agreement facilitates trade links with Central Asia and includes future plans for rail services that would connect India with Azerbaijan’s capital, Baku.

A significant infrastructure addition to the corridor is the **Rasht–Astara Railway Link**, which enhances transport continuity along the Caspian coast.



Figure 22. Map showing INSTC  
Source: researchgate.net<sup>38</sup>

The estimated cost of completing the INSTC is around \$464 million. Once operational, it is expected to act as an alternative to the Suez Canal, cutting transportation expenses between India and Russia by about 30%. The corridor is also projected to reduce delivery time by 14 days compared to the traditional Suez Canal route—a valuable advantage given the current geopolitical instability affecting traditional trade channels.

#### • Ben Gurion Canal Project

Originally conceptualized in the 1960s, the **Ben Gurion Canal Project** is one of Israel’s most ambitious infrastructure plans. Named after David Ben-Gurion, the founding father of Israel, the project aims to create a new maritime corridor that would connect the **Red Sea to the**

<sup>38</sup> [https://www.researchgate.net/figure/Map-of-International-North-South-Transport-Corridor-INSTC\\_fig3\\_343796661](https://www.researchgate.net/figure/Map-of-International-North-South-Transport-Corridor-INSTC_fig3_343796661)

**Mediterranean Sea.** This would serve as a strategic alternative to the Suez Canal and could reshape the dynamics of global maritime trade.

The proposed canal would begin at the **Gulf of Aqaba**, the eastern arm of the Red Sea, and cut across the **Negev Desert** in southern Israel, eventually reaching the Mediterranean coast. The project would create a new route for East-West shipping and reduce dependence on current chokepoints like the Suez Canal.

The nations bordering the Gulf of Aqaba—**Egypt, Israel, Jordan, and Saudi Arabia**—would all be directly affected by the canal’s development. If the plan is realized, it would fundamentally alter geopolitical and trade frameworks by enabling smoother and faster cargo transit across the region.



Figure 23. Map showing Ben Gurion Canal Project  
Source: trtworld.com<sup>39</sup>

However, the main obstacle to the project is its enormous cost. The initial investment is estimated at around \$100 billion, raising doubts about its financial feasibility. Furthermore, political and logistical hurdles—especially the challenge of balancing regional interests—pose serious concerns. For the project to materialize, careful diplomatic negotiations among involved nations would be essential.

<sup>39</sup> Is there an alternative Israeli plan to the Suez Canal? (trtworld.com)

## **CHAPTER 5-FINDINGS AND CONCLUSION**

## 5.1 Findings

Summary of Findings Based on the comprehensive study done on the topic, the following statements can be inferred:

**Geopolitical trigger:** Beginning in late 2023, Iran-aligned Houthi forces launched over 100 attacks on commercial vessels transiting the Red Sea. These attacks – in solidarity with Gaza – compelled major carriers (Maersk, Hapag-Lloyd, COSCO, etc.) to suspend normal Red Sea transits and seek alternative routes.

**Transit delays:** As a result of rerouting, voyage distances have expanded by thousands of nautical miles. Vessels diverted around the Cape of Good Hope now face journeys about 30–50% longer than via Suez. One study found Asia–Europe trips lengthened by roughly one to two weeks (an average delay of ~7–14 days), reflecting the prolonged detour.

**Escalating freight rates:** The crisis has driven ocean freight rates sharply higher. For example, Asia–Europe container spot rates roughly tripled from pre-crisis levels to about \$5,500 per FEU by early 2024, and later spiked even further (peaking near \$8,400 in mid-2024). Limited capacity (as ships cover longer voyages) and port backlogs have exacerbated rate pressures. Industry analysts noted >100% increases in major freight indices since December 2023.

**Rising insurance and security costs:** The perceived risk of Red Sea transits has greatly inflated insurance premiums. Red Sea war-risk cover jumped from around 0.7% of a vessel's value to as high as ~2%. Carriers have also hired armed guards for transits, adding crew and security costs. These factors substantially increase the all-in cost of shipping through the region.

**Reduced chokepoint throughput:** Traffic through the Suez Canal has collapsed. Canal transits in 2024 were roughly 75% below normal levels, and late-2023 container ship passages fell on the order of 70% relative to expected volumes. In practical terms, hundreds of vessels that would normally use Suez are instead rerouted, greatly cutting Suez throughput and shifting trade flows.

**Logistical disruptions:** The diversion of traffic has created new bottlenecks. Ports in China, Singapore and South Africa have seen congestion as carriers offload and re-stow cargo for the longer routes. Extended voyages have increased fuel burn (e.g. a Shanghai–Hamburg container sailing emits ~38% more CO<sub>2</sub> when forced around Africa) and expanded transit uncertainty. Many industries reliant on just-in-time delivery (automotive, electronics, etc.) have had to carry

higher inventory buffers. On the Cape route, November 2024 median delays of 4–6 days were reported (improved from 13-day peaks earlier in 2024), illustrating ongoing schedule unreliability.

**Cost of detours:** Reaching alternate routes is expensive. Academic analysis finds that rerouting a typical Asia–Europe round-trip via the Cape adds roughly 20 sailing days, incurring about \$1 million in extra fuel costs alone. Charter and crew costs rise proportionally (on the order of another \$1 million), even after savings from avoided canal fees. In sum, a Cape-detoured Asia–Europe voyage can cost on the order of \$1.7–2.0 million more than via Suez under normal conditions, underscoring the heavy economic burden of longer routes.

**Alternate modes:** Some shippers have shifted cargo to land or air. For example, China–Europe rail routes have seen higher usage (on the order of tens of percent increases) as exporters seek to bypass maritime delays. Air freight demand has also surged; one report noted a ~91% one-week spike in China–Europe air rates, and carriers observed roughly 20–30% more inquiries for airlift. These alternative modes offer faster transit (e.g. ~12 days by rail vs. 35–45 by sea) but at substantially higher cost, and thus are used mainly for high-value or time-sensitive goods.

## 5.2 Conclusion

**Direct Shipping Effects:** The evidence strongly confirms that the Red Sea crisis has produced severe, direct disruptions to maritime operations. Virtually all large container lines have avoided the Bab al-Mandeb strait, rerouting via the Cape of Good Hope. This has lengthened transit times by roughly one week on average (7–14 days) and dramatically reduced Suez Canal throughput (traffic fell ~75% in 2024). These changes have in turn elevated freight rates many-fold – for example, spot rates on Asia–Europe lanes roughly tripled from late-2023 to early-2024 – and raised insurance and security surcharges significantly. In sum, consistent with Objective 1, the crisis has imposed major operational delays and cost increases: shipping capacity is down (~20% global capacity loss), schedules are stretched, and the price of ocean freight and insurance has soared in response to the Houthi attacks.

**Alternative Routes:** Carriers have indeed adopted alternate routes, but these come with clear economic trade-offs. The Cape of Good Hope route is fully viable but costly: analysis shows it adds roughly 10 days and ~3,000 nautical miles to an Asia–Europe voyage, requiring an additional ≈\$1 million in fuel (and similar increments in charter and crew costs) per round-trip. While Africa-bound diversions preserve continuity of trade, the much higher voyage costs will ultimately be passed to shippers. In parallel, intermodal options have grown – China–Europe

rail volumes are rising and air cargo utilization has jumped (up ~20–30% on some corridors) – but these modes remain limited by capacity and much higher unit costs. Thus, aligning with Objective 2, the study finds that alternate routes are used as emergency measures: they can circumvent Red Sea risks, but only at substantially greater expense. In economic terms, the alternatives partly mitigate supply-chain disruption but impose significant extra costs on trade.

**Overall**, this study’s findings provide a coherent picture across geopolitical, economic, logistical, and strategic dimensions: Houthi-led disruptions in the Red Sea have systematically escalated transit times and shipping costs, and while alternatives exist, they introduce new cost burdens. These conclusions directly address the research objectives by demonstrating the quantifiable impacts on shipping and by highlighting the high costs of detouring supply chains around the crisis zone. The crisis has thus materially reshaped global supply chain dynamics, fulfilling both research goals by detailing the scope of disruption and the constrained viability of response strategies.

## LIST OF REFERENCES

1. <https://www.jstor.org/stable/4329218>
2. <https://journal.media-culture.org.au/index.php/mcjournal/article/view/2969>
3. [https://www.researchgate.net/publication/368342054\\_The\\_Crowded\\_Red\\_Sea](https://www.researchgate.net/publication/368342054_The_Crowded_Red_Sea)
4. <https://besacenter.org/the-influence-of-sea-power-in-irans-proxy-war-part-1-houthi-aggression-in-the-red-sea/>
5. <https://doi.org/10.5281/zenodo.10517699>
6. <https://pubs.usgs.gov/fs/2010/3119/pdf/FS10-3119.pdf>
7. <https://besacenter.org/confused-seas-the-current-state-of-maritime-affairs/>
8. <https://besacenter.org/the-influence-of-sea-power-in-irans-proxy-war-part-2-us-navy-operations-and-options/>
9. <https://www.worldatlas.com/seas/red-sea.html>
10. [www.suezcanal.gov.eg](http://www.suezcanal.gov.eg)
11. [https://www.researchgate.net/figure/The-location-map-of-the-Suez-Canal-region-SCR\\_fig1\\_362509556](https://www.researchgate.net/figure/The-location-map-of-the-Suez-Canal-region-SCR_fig1_362509556)
12. [https://www.drishtiiias.com/images/uploads/1642585371\\_Houthi\\_drishti\\_ias\\_english.png](https://www.drishtiiias.com/images/uploads/1642585371_Houthi_drishti_ias_english.png)
13. [https://vajiram-prod.s3.amazonaws.com/Bab\\_al\\_Mandab\\_straitt\\_3e802648c9.png](https://vajiram-prod.s3.amazonaws.com/Bab_al_Mandab_straitt_3e802648c9.png)
14. <https://www.theafricareport.com/49957/ports-military-bases-and-treaties-whos-who-in-the-red-sea/>
15. <https://prod.cdn-medias.theafricareport.com/cdn-cgi/image/q=auto,f=auto,metadata=none,width=732,fit=cover/>
16. [https://prod.cdn-medias.theafricareport.com/medias/2020/11/Redsea\\_ok.jpg](https://prod.cdn-medias.theafricareport.com/medias/2020/11/Redsea_ok.jpg)
17. <https://www.thehindu.com/news/national/modi-abe-speak-on-phone-after-india-and-japan-sign-logistics-agreement/article32575638.ece>

18. [https://mapi.associatedpress.com/v2/items/fb336ff1ad274beda06e6563a69870bd/previ  
ew/AP.jpg?wm=api&tag=app\\_id=1,user\\_id=undefined,org\\_id=undefined](https://mapi.associatedpress.com/v2/items/fb336ff1ad274beda06e6563a69870bd/previ<br/>ew/AP.jpg?wm=api&tag=app_id=1,user_id=undefined,org_id=undefined)
19. <https://www.bbc.com/news/world-middle-east-26116868>
20. <https://www.redseaglobal.com/en/our-destinations/the-red-sea>
21. <https://en.majalla.com/node/69766/jeddah-the-bride-of-the-red-sea47>
22. [https://www.researchgate.net/publication/277728533\\_Assessing\\_stakeholders'\\_perspectiv  
es\\_towards\\_the\\_conservation\\_of\\_the\\_built\\_heritage\\_of\\_Suakin\\_Sudan](https://www.researchgate.net/publication/277728533_Assessing_stakeholders'_perspectiv<br/>es_towards_the_conservation_of_the_built_heritage_of_Suakin_Sudan)
23. [https://www.middleeasteye.net/news/suakin-forgotten-sudanese-island-becomes  
focus-red-sea-rivalries](https://www.middleeasteye.net/news/suakin-forgotten-sudanese-island-becomes<br/>focus-red-sea-rivalries)
24. [https://www3.weforum.org/docs/WEF\\_The\\_Global\\_Risks\\_Report\\_2024.pdf](https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf)
25. <https://portwatch.imf.org/pages/disruption-monitor>
26. [https://www.bloomberg.com/news/features/2023-10-12/israel-hamas-war-impact  
could-tip-global-economy-into-recession](https://www.bloomberg.com/news/features/2023-10-12/israel-hamas-war-impact<br/>could-tip-global-economy-into-recession)
27. <https://www.jpmorgan.com/insights/global-research/supply-chain/red-sea-shipping>
28. [https://ichef.bbci.co.uk/news/976/cpsprodpb/105F2/production/\\_132085076\\_suez\\_ca  
nal\\_alternative\\_route\\_2x640-nc2x-nc.png.webp](https://ichef.bbci.co.uk/news/976/cpsprodpb/105F2/production/_132085076_suez_ca<br/>nal_alternative_route_2x640-nc2x-nc.png.webp)
29. <https://www.jpmorgan.com/insights/global-research/supply-chain/red-sea-shipping>
30. [https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world  
container-index-assessed-by-drewry](https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world<br/>container-index-assessed-by-drewry)
31. Sectoral impact of Red Sea trade disruptions, February 2024, CRISIL Ratings
32. [https://fiec.org/uploads/files/file/PAGE\\_43\(1\).pdf](https://fiec.org/uploads/files/file/PAGE_43(1).pdf)
33. [https://www.aljazeera.com/economy/2024/1/31/how-escalating-red-sea-crisis-poses  
billions-of-dollars-of-risk-for-india](https://www.aljazeera.com/economy/2024/1/31/how-escalating-red-sea-crisis-poses<br/>billions-of-dollars-of-risk-for-india)
34. [https://ris.org.in/sites/default/files/2024-02/DCR\\_October-December%202023\\_0.pdf](https://ris.org.in/sites/default/files/2024-02/DCR_October-December%202023_0.pdf)
35. [www.dgft.gov.in/CP/?opt=bulletin-foreign-trade-statistics-details](http://www.dgft.gov.in/CP/?opt=bulletin-foreign-trade-statistics-details)
36. [https://twitter.com/shipmin\\_india/status/1704327981584576585](https://twitter.com/shipmin_india/status/1704327981584576585)

37. India-Middle East-Europe Economic Corridor: Will It Get Subsumed by Its Grand Vision? Jagannath Panda, Prospects & Perspectives No. 53, Prospect Foundation, October 2nd 2023
38. <https://www.whitehouse.gov/briefing-room/statements-releases/2023/09/09/fact-sheet-world-leaders-launch-a-landmark-india-middle-east-europe-economic-corridor/>
39. <https://www.civildaily.com/news/india-middle-east-europe-corridor/>
40. <https://brisl.org/>
41. <https://www.newarab.com/analysis/will-uae-israel-land-corridor-replace-red-sea-routes>
42. <https://www.jns.org/uae-israel-land-corridor-operating-despite-war/>
43. <https://www.thearcticinstitute.org/future-northern-sea-route-golden-waterway-niche/48>
44. Rodrigue, J.-P.: (2020). The Geography of Transport Systems (5th ed.). Routledge.pg:11-13pg:11-13
45. [https://www.researchgate.net/figure/Map-of-International-North-South-Transport-Corridor-INSTC\\_fig3\\_343796661](https://www.researchgate.net/figure/Map-of-International-North-South-Transport-Corridor-INSTC_fig3_343796661)
46. The Middle Corridor and opportunities for India (orfonline.org)
47. Is there an alternative Israeli plan to the Suez Canal? (trtworld.com)
48. [Transportation Research Part E: Logistics and Transportation Review | Journal | ScienceDirect.com by Elsevier](https://www.sciencedirect.com/journal/Transportation-Research-Part-E-Logistics-and-Transportation-Review)
49. [Taylor & Francis Online: Peer-reviewed Journals](https://www.tandfonline.com/journals)
50. [Journal of Business Logistics](https://www.tandfonline.com/journals)
51. [The International Journal of Logistics Management | Emerald Publishing](https://www.emerald.com/journal/the-international-journal-of-logistics-management)
52. [OKR :: Search](https://www.okr.com/search)
53. [reuters.comitf-oecd.org](https://www.reuters.com/itf-oecd.org)
54. [tomorrowsaffairs.comreuters.com](https://www.tomorrowsaffairs.com/reuters.com)
55. [itf-oecd.orgitf-oecd.org](https://www.itf-oecd.org/itf-oecd.org)

56.[unav.edu](http://unav.edu)

57.[freightos.com](http://freightos.com)

58.[reuters.com](http://reuters.com)

59.[unav.edureuters.com](http://unav.edureuters.com)

60.[project44.com](http://project44.com)