

# From Suez Canal to Bab al-Mandab Strait: Navigating Maritime Security in the World's Busiest Maritime Trade Corridor

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## Abstract

Using the sustainable maritime security framework as an analytical lens, this study examines the evolving dynamics of maritime security and geopolitical rivalries, and their impact on the safety and stability of trade routes through the Suez Canal and the Bab al-Mandab Strait in the post-COVID pandemic era. The study adopts a qualitative research approach, relying primarily on secondary data sources. It argues that the Red Sea region, which stretches from the northern tip of the Suez Canal to the southern tip of Bab-el-Mandeb, is not only a vital maritime trade route but also a geopolitically significant region for military presence and power projection by major and middle powers vying for influence. The findings reveal that maritime insecurity has intensified in the post-pandemic period, driven by military buildups, competitive port development, piracy, terrorism, Houthi attacks, and regional instability. This study contributes to the underdeveloped area of maritime security by presenting how sustainable maritime security in the region is undermined by mutually reinforcing and interrelated threats across four sectors: political, economic, environmental, and social.

**Keywords:** Maritime security, Maritime trade, Red Sea, Suez Canal, Bab al-Mandab Strait, Indian Ocean

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# Süveyş Kanalı'ndan Babülmendep Boğazı'na: Dünyanın En Yoğun Deniz Ticareti Koridorunda Deniz Güvenliğini Yönlendirmek

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## Özet

Bu çalışma, sürdürülebilir deniz güvenliği çerçevesini analitik bir mercekle kullanarak deniz güvenliğinin ve jeopolitik rekabetlerin değişen dinamiklerini ve bunların Covid-19 pandemisi sonrasındaki dönemde Süveyş Kanalı ve Babülmendep Boğazı üzerinden geçen ticaret yollarının güvenliği ve istikrarı üzerindeki etkilerini incelemektedir. Araştırma, nitel bir yöntem benimsemekte ve büyük ölçüde ikincil veri kaynaklarına dayanmaktadır. Çalışma Süveyş Kanalı'nın kuzey ucundan Babülmendep Boğazı'nın güney ucuna kadar uzanan Kızıldeniz bölgesinin yalnızca hayati bir deniz ticareti güzergâhı değil aynı zamanda nüfuz mücadelesi yürüten büyük ve orta ölçekli güçler için askerî varlık gösterme ve güç projeksiyonu açısından jeopolitik bakımdan son derece önemli bir alan olduğunu savunmaktadır. Bulgular, askerî yığınaklar, rekabetçi liman yatırımları, korsanlık, terör eylemleri, Husilerin saldırıları ve bölgesel istikrarsızlık gibi etkenlerin etkisiyle pandemi sonrasında deniz güvenliğine yönelik tehditlerin belirgin biçimde arttığını göstermektedir. Bu çalışma deniz güvenliği literatüründeki gelişmemiş bir alana katkı sunarak bölgedeki sürdürülebilir deniz güvenliğinin siyasî, ekonomik, çevresel ve toplumsal olmak üzere dört sektörde birbirini güçlendiren ve karşılıklı olarak bağlantılı tehditler tarafından nasıl zayıflatıldığını ortaya koymaktadır.

**Anahtar Kelimeler:** Deniz Güvenliği, Deniz Ticareti, Kızıldeniz, Süveyş Kanalı, Babülmendep Boğazı, Hint Okyanusu

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# من قناة السويس إلى مضيق باب المنذب: توجيه الأمن البحري في أكثر ممرات التجارة البحرية ازدحاما في العالم

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## ملخص

تستخدم هذه الدراسة إطار الأمن البحري المستدام كعدسة تحليلية، من أجل البحث في الديناميات المتغيرة للأمن البحري والتنافسات الجيوسياسية وتأثيرها على أمن واستقرار طرق التجارة عبر قناة السويس ومضيق باب المنذب في فترة ما بعد جائحة كوفيد-91. وتتبع هذه الدراسة منهجية نوعية وتعتمد بشكل كبير على مصادر البيانات الثانوية. لا ترى هذه الدراسة أن منطقة البحر الأحمر الممتدة من الطرف الشمالي لقناة السويس إلى الطرف الجنوبي لمضيق باب المنذب ممرا تجاريا بحريا حيويا فحسب، بل تعتبرها أيضا منطقة جيوسياسية بالغة الأهمية من حيث الوجود العسكري واستعراض القوة من قبل القوى الكبرى ومتوسطة الحجم المتنافسة على النفوذ في المنطقة. وتشير النتائج إلى أن التهديدات المتعلقة بالأمن البحري قد ازدادت بشكل كبير بعد الجائحة، جراء عوامل كثيرة مثل التعزيزات العسكرية والاستثمارات التنافسية في الموانئ والقرصنة والهجمات الإرهابية وهجمات الحوثيين وعدم الاستقرار الإقليمي. وتقدم هذه الدراسة مساهمات في مجال لم يتطور بعد في أدبيات الأمن البحري، وتكشف عن كيفية تقويض الأمن البحري المستدام في المنطقة جراء التهديدات المترابطة والمعززة لبعضها البعض من خلال أربعة قطاعات هي السياسية والاقتصادية والبيئية والاجتماعية.

**الكلمات المفتاحية:** الأمن البحري، التجارة البحرية، البحر الأحمر، قناة السويس، مضيق باب المنذب، المحيط الهندي

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## Introduction

The seas and oceans are the cradle of world civilizations. Paine notes that “the sea connects all things,” and that “global history is maritime history.”<sup>1</sup> Many ancient civilizations were built around the sea and ocean due to a combination of geographical, economic, and environmental factors that offered easy access to trade, cultural and social interactions, and sustenance. These factors were facilitated by man-made and natural harbors, the presence of mountainous terrain, accessibility to resources, and the existence of trade routes.<sup>2</sup> Prominent examples include the Phoenicians, Axumites, Greeks, Romans, ancient Egyptian civilization, Kingdom of Punt, Spanish, Portuguese, Dutch, British, and French empires, which were sea-based empires that contributed to the development of maritime trade and naval power.

Among these civilizations, the Axumite civilization was directly dependent on the trade routes on the Red Sea. Additionally, as Demerew stated, there has been ‘ideational construction,’ for instance, by Ethiopian popular opinion that the control over the Red Sea has been portrayed as a symbol of greatness. This sea has been critical in defining the politics and rivalries among regional and great powers.<sup>3</sup>

Around 70 percent of the world trade commodities are transported by ocean, sea, and other water bodies.<sup>4</sup> Additionally, global shipping business and fisheries have become a multibillion-dollar business. The commercial importance of the oceans has been increasingly re-evaluated due to the economic potential of offshore resources, such as fossil fuels, renewable energy (including offshore wind, wave energy, tidal energy, and ocean thermal), seabed mining, and the opportunities presented by coastal tourism.<sup>5</sup>

The Red Sea, the Suez Canal, and Bab al-Mandab are strategic waterways connecting three continents, Africa, Asia, and Europe, through facilitating

1 Lincoln Paine, *The Sea and Civilization: A Maritime History of the World* (Alfred A. Knopf, 2013), 8-10.

2 Barry Cunliffe, *On the Ocean: The Mediterranean and the Atlantic from prehistory to AD 1500*. (Oxford UP, 2017), Arthur Mirsky and Ellen Lux Bland, “Influence of Geologic Factors on Ancient Civilizations in the Aegean Area,” *Journal of Geoscience Education* 44, no. 1 (1996). Despoina Papageorgiou, “The Marine Environment and Its Influence on Seafaring and Maritime Routes in the Prehistoric Aegean,” *European Journal of Archaeology* 11, no. 2-3 (2008).

3 Kaleb Demerew, “From Red Sea to the Nile: Water, Power, and Politics in Northeast Africa,” *Third World Quarterly* 42, no. 12 (2021): 2883-2901.

4 Lingqun Li, “Building up a Sustainable Path to Maritime Security: An Analytical Framework and Its Policy Applications,” *Sustainability* 15, no. 8 (2023): 6757.

5 Christian Bueger, “What is Maritime Security?” *Marine Policy* 53 (2015): 159-164.

the transportation of goods, energy, and other container goods.<sup>6</sup> However, the Red Sea has been facing growing security challenges as a vital maritime trade route linking the Horn of Africa to the Arabian Gulf and serving as a corridor for trade between Asia and Europe. These challenges include the proliferation of non-state armed actors, piracy, terrorism, the competitive military build-up and port development by external powers, the lack of inclusive Red Sea governance, and the fragmentation and weakening of Red Sea states such as Yemen and Sudan, mainly due to civil wars – all of which have impacted the region.<sup>7</sup> As a result, the transportation of people, goods, arms, livestock, and oil across this body of water is increasingly threatened. The stability of these routes is critical for European, Asian, and African economies, requiring coordinated efforts among Red Sea littoral states (Egypt, Sudan, Yemen, Djibouti, Eritrea, and Saudi Arabia) and Red Sea basin states (such as Ethiopia) to reduce fragmentation and strengthen regional security against disruptive Gulf politics as well as major power rivalries.

The Suez Canal is the one of the most important chokepoints in the world, serving as a geostrategic link between the Mediterranean and the Red Sea. It serves as the maritime shortcut that reduces the travel distance between Europe and Asia by over 7,000 kilometers compared to the Cape of Good Hope route. Around 12 percent of global trade passes through this strategic canal, which accounts for 20 percent of global marine freight volume and 22 percent of container traffic. It has been popularly portrayed as a “sea transportation shortcut between the east and the west” and a “world throat-cutting seaway channel.”<sup>8</sup> The canal has long been the backbone of the Egyptian economy and a key source of strategic influence. For instance, according to the *European Institute of the Mediterranean Yearbook* (2016), it contributes 10 percent of Egypt’s GDP and is an essential source of hard currency.<sup>9</sup>

The Suez Canal alone facilitates the maritime transportation of nearly 12 percent of global trade that contains oil, gas, and container goods. These three waterways, the Red Sea, the Suez Canal, and Bab al-Mandab, have been a vital pathway for global trade, with 40 percent of Europe’s trade relations with Asia in general and the Middle East in particular passing through them. In addition, a significant part of the hydrocarbon trade has been pass-

6 Annette Weber, *Red Sea: Connector and Divider: Disruption Waves from the Arabian Gulf to the Horn of Africa* (German Institute for International and Security Affairs, 2017), 8, [https://www.swp-berlin.org/publications/products/comments/2017C50\\_web.pdf](https://www.swp-berlin.org/publications/products/comments/2017C50_web.pdf)

7 Weber, *Red Sea: Connector and Divider*.

8 Tian Guangqiang, “Suez Canal Economic Corridor (Egypt),” in *Routledge Handbook of the Belt and Road*, ed. Cai Fang, Peter Nolan, Wang Linggui (Routledge, 2019), 540-43.

9 *Mediterranean Yearbook 2016* (European Institute of the Mediterranean, 2016), <https://www.iemed.org/publication/iemed-mediterranean-yearbook-2016/>

ing through these waterways.<sup>10</sup> The Suez Canal is economically critical due to its importance in reducing costs and time associated with transporting goods, ultimately contributing to the global supply chain efficiency and effectiveness.<sup>11</sup> Nonetheless, the 2021 incident at the canal due to its blockage by Ever Given, a giant container ship that got stranded in the Suez, disrupted the global supply chain and increased shipping costs.<sup>12</sup> As a result of this disruption, for example, Maersk ships faced losses of nearly \$89 million and emitted an additional 44,574 tons of CO<sub>2</sub> due to the detour and delays.<sup>13</sup>

Likewise, the Bab al-Mandeb Strait is a geostrategically important chokepoint for maritime trade.<sup>14</sup> Located at the southern tip of the Red Sea, it connects the Red Sea with the Gulf of Aden. This strait plays a critical role in global trade, providing passage for oil and gas and other commercial goods.<sup>15</sup> Securing the free passage of ships on the strait is critical for regional and international peace and economic and social development, as stated by the UN Security Council's resolution 242. As the Strait is a gateway to the Indian Ocean, serving as a passage for ships from Europe to Asia and the Red Sea region, it has been a critical location for maritime traffic. It attracts the interests of various states and non-state actors like shipping companies, intergovernmental organizations, and others.<sup>16</sup>

Given the importance of global maritime trade and critical waterways to the world economy, geopolitics, military operations, intelligence, and communication infrastructure, there has been extensive research on maritime security. While most existing studies on maritime security in the Red Sea focus on traditional threats, such as piracy, terrorism, and great-power competition (e.g. the U.S., China, and Russia), few integrate sustainability (economic, environmental, and governance dimensions) into maritime security analysis. This study, therefore, seeks to examine the maritime security in the Red

10 Camille Lons and Benjamin Petrini, "The Crowded Red Sea," *Survival* 65, no. 1 (2023): 59, <https://doi.org/10.1080/00396338.2023.2172851>.

11 M. Mikhail Shumilov and E. Anastasia Malova, "The Commercial Importance of the Suez Canal in the Context of the Crisis of Economic Globalization and Modern Geopolitical Risks," *Eurasian Integration: Economics, Law, Politics* 18, no. 2 (2024): 2.

12 Abel Meza et al., "Disruption of Maritime Trade Chokepoints and the Global LNG Trade: An Agent-Based Modeling Approach," *Maritime Transport Research* 3 (Eylül 2022). <https://doi.org/10.1016/j.martra.2022.100071>.

13 Nguyen Khoi Tran et. al., "The Costs of Maritime Supply Chain Disruptions: The Case of the Suez Canal Blockage by the 'Ever Given' Megaship," *International Journal of Production Economics* 279 (2025): 1.

14 Ruth Lapidoth, "Passage through the Strait of Bab al-Mandeb," *Israel Law Review* 13, no. 2 (1978).

15 Adhithyan K. P., "Djibouti: A Strategic Choke Point in the Bab el-Mandeb Region," *Electronic Journal of Social and Strategic Studies* 5, no. 2 (2024), <https://doi.org/10.47362/EJSS.2024.5211>.

16 Ruth Lapidoth, "Passage through the Strait of Bab al-Mandeb," *Israel Law Review* 13, no. 2 (1978).

Sea region by adopting a sustainable maritime security approach. It aims to address the research question: How do evolving geopolitical rivalries influence maritime security and trade stability in the Red Sea region, with particular emphasis on the Suez Canal and the Bab al-Mandab Strait in the post-COVID era? In what ways has the post-COVID geopolitical landscape altered freedom of navigation and trade flows through these chokepoints?

Methodologically, the study draws on literature related to maritime security and geopolitics. We adopt a qualitative case study research design, which offers contextual depth and enables a critical exploration of the complex historical, political, economic, and geographic layers.<sup>17</sup> The case is selected due to ongoing insecurity incidents and the existence of high vulnerabilities to the geopolitical conflicts and rivalries in the region stretching from the Suez Canal in the north to Bab al-Mandab in the south. Our research is based entirely on secondary data from scientific articles, books, policy reports, newspaper and magazine articles, and official statements. This study is based on data that is publicly available.

In terms of scope, to answer how geopolitical rivalries have affected maritime security and trade stability, the study focuses exclusively on the emerging dynamics of the post-COVID era. This period is particularly significant, as geopolitical developments have intensified, including increased pirate attacks, competitive port development, military build-ups, and threats to freedom of navigation stemming from the Hamas-Israel conflict and Houthi attacks.

Accordingly, the paper is organized into four main sections. The first discusses the context of the study, followed by maritime security, and an illustration of a sustainable maritime security analytical framework. The third section analyses four sectors of sustainable maritime security in the Red Sea region. The final section presents the conclusion.

## **Maritime Security**

Maritime security has emerged as a critical issue for states and international organizations, encompassing security studies, international trade, logistics and supply-chain management, environmental protection, and global governance. While traditionally focused on threats like piracy, terrorism, and interstate disputes,<sup>18</sup> contemporary discourse increasingly links maritime

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17 Andrew Bennett and Colin Elman, "Qualitative Research: Recent Developments in Case Study Methods," *Annual Review of Political Science* 9 (2006).

18 Bueger, "What is Maritime Security?"

security to sustainability – balancing economic, environmental, and geopolitical stability.<sup>19</sup> This shift reflects the UN’s Sustainable Development Goal (SDG) 14, which emphasizes the sustainable use of oceans, suggesting that maritime security must extend beyond mere threat suppression to long-term ecological and economic resilience. In this study, we adopt the UN’s well-known definition of sustainable development: “the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>20</sup>

The term maritime security started to be used in academic literature in the early 2000s for three reasons. The first is due to the impact of the September 11 attacks that sparked the launching of counter-terrorism operations across the oceans and seas.<sup>21</sup> The second is due to the incidence of terrorist attacks on ships (USS Cole in 2001, French tanker Limburg in 2002, and Filipino passenger ship SuperFerry 14 in 2004). The third one was due to the proliferation of piracy in different maritime chokepoints at the beginning of the century.<sup>22</sup> While actors may generally agree on the importance of maritime security, its practical implications differ among them based on various factors such as context, time, and location.

Existing literature on maritime security has emphasized military and counterterrorism responses. Scholars including Bueger<sup>23</sup> expanded the concept to include the marine environment, human security, and economic development. Bueger’s work has offered a foundation for scholars including Li<sup>24</sup> who introduce a *sustainable maritime security* approach. However, its concept, scope, and measures to tackle security issues also have no definite meaning. Over the past decade, key maritime policy, ocean governance, and international security stakeholders have integrated maritime security into their mandate or reframed their work accordingly. Bueger<sup>25</sup> has developed three frameworks for understanding maritime security. The first framework, called the ‘semiotics’ framework, focuses on mapping various maritime security concepts such as sea power, marine safety, human resilience, and the blue economy. The second framework examines how different

19 Li, “Building up a Sustainable.”

20 United Nations, *Report of the World Commission on Environment and Development: Note by the Secretary-General*, A/42/251 82e Environment. (United Nations, 1987), 16.

21 Bueger, “What is Maritime Security?”

22 Basil Germond, “The Geopolitical Dimension of Maritime Security,” *Marine Policy* 54 (2015). <https://doi.org/10.1016/j.marpol.2014.12.013>.

23 Bueger, “What is Maritime Security?”

24 Li, “Building up a Sustainable.”

25 Bueger, “What is Maritime Security?”

threats are securitized as maritime security threats. The third framework explores security practice theory to analyze how various actors engage in maritime security practices.

Maritime security has often been defined in negative terms, that is, as the absence of threats on the maritime domain such as “maritime inter-state disputes, maritime terrorism, piracy, trafficking of narcotics, people and illicit goods, arms proliferation, illegal fishing, environmental crimes, or maritime accidents and disasters.”<sup>26</sup> On the other hand, maritime security has also been defined in positive terms, entailing economic growth and the call for coordination among actors, information sharing, enforcement of legal regimes, and capacity building among different actors. Germond defined maritime security as “the security of the maritime domain or as a set of policies, regulations, measures and operations to secure the maritime domain.”<sup>27</sup>

Bueger identifies two key issues stemming from the ambiguity surrounding the concept of maritime security. First, ocean-related problems may be indiscriminately securitized, leading to a focus on short-term strategies that are often ineffective and unsustainable. Second, while state actors have traditionally dominated maritime security, addressing nontraditional security issues in the maritime environment requires the involvement of a diverse range of actors (private military and security companies, shipping companies, intergovernmental organizations) to effectively maintain the security of the oceans and seas.<sup>28</sup> To bridge the gap, Bueger has connected maritime security with sustainability concepts. Indeed, the UN’s 14<sup>th</sup> SDG states that “conserve and sustainably use the oceans, seas and marine resources for sustainable development.”

Based on a semiotic understanding of maritime security, Bueger has introduced four main components: national security, marine environment, economic development, and human security.<sup>29</sup>

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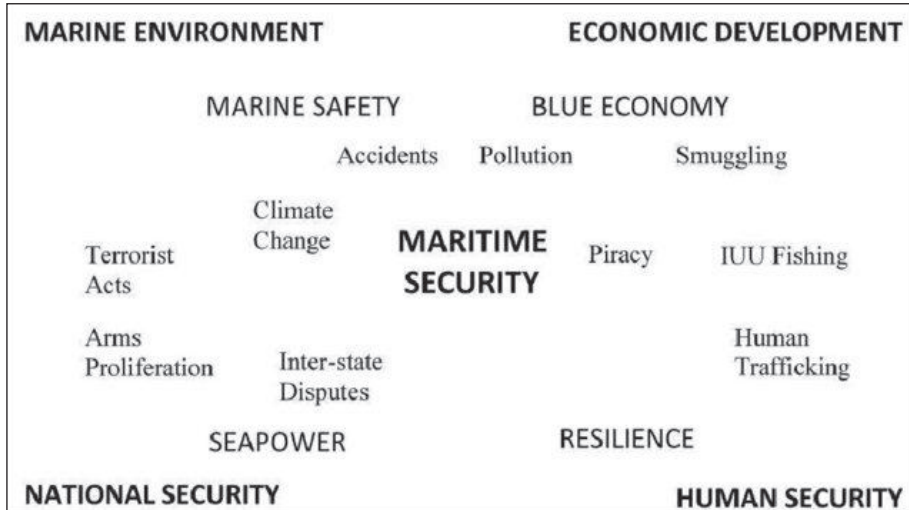
26 Bueger, “What is Maritime Security?”

27 Germond, “The Geopolitical Dimension”

28 Bueger, “What is Maritime Security?”

29 Bueger, “What is Maritime Security?”

**Figure 1.** Bueger’s Maritime Security Matrix



Intergovernmental organizations, such as NATO and the EU, have extended the concept and strategies of maritime security beyond ensuring the freedom of the seas.<sup>30</sup> Furthermore, different actors prioritize threats to marine security based on their interests. For instance, NATO’s alliance Maritime Strategy focused on the blue economy and human resilience. On the other hand, AU’s African Integrated Marine Strategy focused on threats damaging economic development. There are some actors, like the EU and UK, whose maritime strategies encompass a comprehensive approach that connects all four components<sup>31</sup>.

The Secretary-General of the UN’s report on the Oceans and Law of the Sea in 2008 outlines seven threats to marine security: piracy and armed robbery, terrorism, illegal arms trafficking, illicit drug trafficking, illegal human trafficking, illegal and unregulated fishing, and intentional and unlawful damage to the marine environment.<sup>32</sup> Based on Baldwin’s<sup>33</sup> seven dimensions of security (security for whom?, security for which values?, how much security? from what threats? by what means? at what cost? in what period?), we define maritime security as a condition in which coastal populations, states, commercial actors, and the wider international community can safe-

30 Germond, “The Geopolitical Dimension”

31 Bueger, “What is Maritime Security?”

32 United Nations, *Oceans and the Law of the Sea: Report of the Secretary-General, A/58/65* (United Nations, 2003), <https://docs.un.org/en/A/58/65>.

33 David A. Baldwin, “The Concept of Security,” in *National and International Security*, ed. Michael Sheehan (Routledge, 2018).

ly undertake their maritime activities, trade, and resource utilization based on international law, ensuring that any threats to human life, the marine ecosystem, trade, sovereignty, and unlawful activities are managed. Our definition mostly aligns with a positive way of defining maritime security. Our understanding of maritime security is influenced by the three critical security studies schools.

Maritime security intersects with the critical security schools' conceptualizations of securitization theory. For example, the Copenhagen School posits that maritime security encompasses extraordinary and extreme measures that cannot be managed through conventional political means.<sup>34</sup> These measures may include withholding information from the public, suspending civil liberties, and deploying military forces. Maritime security is enacted through speech acts and other forms of communication. It can be performed by high-level political elites (Copenhagen school), technical practitioners (Paris school), and individuals (Welsh School) alike. It affects human, international, environmental, and national security.<sup>35</sup> Additionally, maritime security pertains to various referent objects, including nation-states, coastal communities, individuals, and international trade.

States have extended their security perimeters to distant maritime regions due to the impact of insecurities in these areas, compelling them to take countermeasures beyond their immediate borders to address this transnational threat. This has made the projection of control over oceans and seas a top priority for states as they expand their influence in these water bodies, which is considered a form of post-modern territorial expansion.<sup>36</sup> Meanwhile, global shipping and fisheries have become multibillion-dollar industries. Furthermore, the commercial importance of the oceans has been increasingly re-evaluated due to the economic potential of offshore resources, such as fossil fuels, seabed mining, and the opportunities presented by coastal tourism.<sup>37</sup>

Maritime security threats are surfacing in geopolitical discourse as a rationale, among others, for extending security measures beyond national

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34 Barry Buzan et. al., *A New Framework for Analysis* (Lynne Rienner, 1998).

35 Didier Bigo, "Security and Immigration: Toward a Critique of the Governmentality of Unease," *Alternatives* 27, no. 1 (2002), <https://doi.org/10.1177/03043754020270S105>. Ken Booth, "Security and Emancipation," in *National and International Security*, ed. Michael Sheehan (Routledge, 2018). Buzan et. al., *Security: A New Framework*.

36 Germond, "The Geopolitical Dimension."

37 Bueger, "What is Maritime Security?"

borders.<sup>38</sup> Different states have established foreign military bases around critical maritime waterways across the world.<sup>39</sup> It is often argued that controlling distant maritime regions is necessary for land security.<sup>40</sup> A notable example of the proliferation of foreign military bases is the Red Sea region, where various states have established their overseas military bases. For instance, in Djibouti, the militaries of the U.S., China, the United Kingdom, Japan, Italy, France, Germany, and Spain maintain a presence.

Furthermore, the militaries of Türkiye and the UAE are present in Somalia and Yemen, respectively.<sup>41</sup> Russia has also shown a growing interest in Sudan and views its military presence in the Red Sea region as a strategic step toward reaffirming its status as a global power. This is partly influenced by the construction of threats along geographical lines and power projections, which greatly benefit from blurring lines between naval deployments and maritime security operations.<sup>42</sup>

It is evident that human actors operate in the maritime environment either to carry out illegal, disruptive, and destructive actions or to police and secure the sea against unlawful activities.<sup>43</sup> Coupled with regional instabilities, environmental factors, and global political complexities, the Red Sea region remains highly vulnerable to maritime security threats.<sup>44 45 46</sup> This has led to increased counterterrorism and counterpiracy operations in the Horn of Africa, where frigates are deployed as part of war-like coalitions.<sup>47</sup>

In addition, non-human factors such as climate change are emerging as serious threats to maritime security. A prominent example is the Panama Canal, where irregular rainfall patterns have disrupted full operations. The canal's functionality depends heavily on freshwater from Gatun Lake. Recent droughts – exacerbated by climate change and events such as El Niño – have

38 Abdikadir Issa Farah, "Shifting Tides amidst Regional Challenges: Navigating Horn of Africa's Geopolitical Chessboard – Literature Review," *Open Journal of Social Sciences* 12, no. 2 (February 2024). <https://doi.org/10.4236/jss.2024.122005>.

39 Estifanos Balew Liyew, "Geopolitics of the Red Sea: Implications of Foreign Military Bases Expansion to the Horn of Africa Security," *African Security Review* 33, no. 3 (2024): 294-306. <https://doi.org/10.1080/10246029.2024.2340015>.

40 Germond, "The Geopolitical Dimension."

41 Farah, "Shifting Tides amidst Regional." Liyew, "Geopolitics of the Red Sea," 294.

42 Germond, "The Geopolitical Dimension."

43 Germond, "The Geopolitical Dimension."

44 Long Ding, "The Evolving Roles of the Gulf States in the Horn of Africa," *Asian Journal of Middle Eastern and Islamic Studies* 18, no. 1 (2024), <https://doi.org/10.1080/25765949.2024.2340332>.

45 Farah, "Shifting Tides amidst Regional."

46 Thean Potgieter, "The Lack of Maritime Security in the Horn of Africa Region: Scope and Effect," *Strategic Review for Southern Africa* 31, no. 1 (May 2009).

47 Germond, "The Geopolitical Dimension."

drastically reduced water levels. As a result, the Panama Canal Authority has been forced to impose limits on ship transits, decreasing daily passages and causing increased costs and delays for international maritime trade.<sup>48</sup>

### **Conceptual Framework: Sustainable Maritime Security**

Li<sup>49</sup> has developed a conceptual framework called sustainable maritime security, which was built based on the critical security studies literature, sustainable development discourses, and maritime security conception by Bueger.<sup>50</sup> The maritime environment has important aspects for human-kind's sustainability. This is why the UN's SDGs, particularly the 14th goal, are clearly dedicated to "Life Below Water." This goal is dedicated to conserving and sustainably utilizing oceans, seas, and marine resources for development.

Life below water is critical for regulating the climate, providing resources, maintaining ecosystems, and supporting human well-being. Because underwater resources are finite, the current generation is compelled to preserve and utilize them sustainably for development while considering future generations. In response, Li developed this analytical framework to enhance understanding of the issue and help unify scattered policy efforts into a cohesive roadmap for achieving maritime security.<sup>51</sup> This framework encourages the integration of sustainable development principles while addressing a wide range of maritime security threats and challenges.

Li's framework has four foundational sectors, each with distinct values: political, economic, environmental, and social. Each sector faces specific maritime security threats that require different policy approaches. The political sector's core value is maintaining peace and stability in the maritime environment. It is threatened by interstate disputes, terrorism, and the proliferation of weapons of mass destruction. Addressing these issues requires state-centered approaches, including cooperation and negotiation. The economic sector focuses on achieving sustainable development of the blue economy, as it is affected by disruptions to navigation, irresponsible resource exploitation, and pollution. Policies for this sector should be business- and international-organization-centric, coupled with innovation and technology.<sup>52</sup>

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48 Thibault Denamiel and Evan Brown, "The State of Maritime Supply-Chain Threats," *Center for Strategic and International Studies*, November 4, 2024, <https://www.csis.org/analysis/state-maritime-supply-chain-threats>.

49 Li, "Building up a Sustainable."

50 Bueger, "What is Maritime Security?"

51 Li, "Building up a Sustainable."

52 Li, "Building up a Sustainable."

The environmental sector focuses on protecting and sustaining the marine environment and biodiversity. It faces challenges such as pollution, climate change, and biodiversity degradation. This sector requires a community- and international-organization-led policy approach that prioritizes preserving and conserving marine ecosystems. Furthermore, the social sector is concerned with the safety of vessels, installations, employees, and coastal communities. It faces maritime insecurity issues including piracy, human trafficking, labor abuses, maritime disasters, and disruptions to food chains. This sector benefits from individual- and community-led policy approaches. Overall, these four sectors are interrelated and mutually important. Because security and development are intertwined, focusing on one while neglecting the other does not lead to the desired outcomes.

The sustainable maritime security conceptual framework is chosen to address the impacts of maritime security dynamics and geopolitical rivalries on the safety and stability of maritime trade routes through the Suez Canal and the Bab al-Mandab Strait for two reasons. First, it provides a comprehensive picture of the interconnected yet distinct perspectives on maritime security threats across the waterway stretching from the Suez Canal to the Bab al-Mandab Strait. Second, it is well suited to offer an interdisciplinary policy approach to tackle maritime security issues that impede sustainable international maritime trade. This framework will be applied to analyze maritime security by classifying it into four sectors and examining the spill-over effects of each sector on the overall maritime security landscape.

## **Maritime Security Challenges in the Water Body Stretching from the Suez Canal to the Bab al-Mandab Strait**

### ***The Political and Economic Sectors***

Maritime security challenges in the political and economic sectors along the waterways stretching from the Suez Canal to the Bab al-Mandab Strait are multifaceted. The Red Sea region is crowded with various state and non-state actors, each wielding different degrees of influence and driven by geopolitical, economic, and military interests. This region has become a focal point of maritime competition due to its proximity to the Middle East, its political and economic significance to the world, its critical maritime trade routes, and its geostrategic location at the intersection of Asia, Africa, and Europe. Consequently, great and middle powers from Europe, North America, and Asia have established military bases and deployed naval forces. Each state actor pursues distinct maritime interests and strategies.

The presence of competing maritime strategies and interests among great and middle powers in the region constitutes one of the primary maritime security challenges the area faces. This situation has significant implications for the political and economic sectors of sustainable maritime security. For example, during the Cold War, the United States established Kagnew Station in present-day Eritrea in 1953, following a formal agreement with the Ethiopian government for intelligence and communication purposes that were strategic for the U.S. military and its allies (Bateman, 2025). Since then, the U.S. has maintained a physical presence in the region to counter the influence of the Soviet Union – not to create a sphere of influence – and later to address challenges posed by China and other actors whose interests conflict with those of the U.S.<sup>53</sup> After the Cold War, the U.S. established its military base, Camp Lemonnier, in the small country of Djibouti in 2002. This base has served as the central military command for Africa, aiming to counter rival powers, maintain naval dominance, uphold regional stability, and secure sea lines of communication in the region.

Around 10 kilometres from the U.S.' Camp Lemonnier, China established its first foreign military base in 2017 to expand its regional commercial and military influence. The presence of rival global powers in such proximity at the southern gateway of the Red Sea underscores the strategic importance of these waterways and reflects the broader geopolitical competition over securing global maritime trade and influence in the region. China's entry into the Red Sea aligns with its ambitious Belt and Road Initiative (BRI), pursued through aggressive infrastructure investments, commercial partnerships, and naval deployments. The Maritime Silk Road, a key component of the BRI with a vision of securing China's core interests in shaping global maritime governance and achieving maritime renaissance, involves \$1.2 trillion in investments. This initiative aims to extend China's sphere of influence beyond its adjacent waters, enhance the maritime economy, improve food and energy security, secure sea lines of communication, and strengthen its naval capabilities.<sup>54</sup>

The Indian Ocean Region, particularly the Bab al-Mandab Strait – which connects the Red Sea to the ocean – is a focal point of China's Belt and Road Initiative. This has, in turn, triggered increased militarization of the Red Sea and intensified maritime rivalry in the already complex and unstable Horn

53 Jeffrey Payne, "Crowded Horizons: A View on the Naval Strategy of the United States of America in the Western Indian Ocean," in *Changing Security Paradigm in West Asia* ed. Meena Singh Roy, Md. Muddassir Quamar (Routledge, 2022).

54 Richard Ghiasy et. al, *The 21st Century Maritime Silk Road: Security Implications and Ways Forward for the European Union* (Stockholm International Peace Research Institute, 2018).

of Africa region China emphasizes that the Red Sea is a critical maritime corridor for its economic and military expansion, as it links the Mediterranean Sea with the Indian Ocean.<sup>55</sup>

The Chinese military base in Djibouti aims to offer multipurpose, particularly intelligence, logistical support for naval operations and the BRI implementation.<sup>56</sup> Due to the presence of a Chinese military base adjacent to the Camp Lemonnier, together with the Chinese ambition of increasing its influence in the region and projecting its global power, the U.S. has responded to this by boosting its military base's capabilities while enhancing its capabilities to counter terrorism and piracy. This has further ignited the rivalries of global powers in the region.<sup>57</sup> The Red Sea region is associated with the existence of overlapping rivalries and conflicts, further complicated by the strong involvement of external powers, where China and the U.S., as well as Iran vs Israel and the U.S., counterbalance each other's influence in this strategically critical maritime corridor.<sup>58</sup> This area is the closest point in the world where the U.S. and Chinese militaries face each other. Tensions rise intermittently, and the risk of conflict in this area poses a threat to regional security.

The region has also seen a proliferation of the strong presence of middle powers like Iran. Iran's maritime strategy focuses on exploiting its geostrategic position to become a maritime transportation hub while reducing its dependence on the oil and gas economy by expanding its maritime trade with Asia, Europe, and Africa.<sup>59</sup> Iran's maritime strategy is designed to project the sphere of influence in the Strait of Hormuz and beyond, particularly the Red Sea region.<sup>60</sup> Furthermore, Iran has been significantly present in the region through its proxy, the Houthis, officially known as Ansar Allah in Yemen.

55 Shaul Shay, "China and the Red Sea Region," *Security Science Journal* 4, no. 2 (2023), <https://doi.org/10.37458/ssj.4.2.4>.

56 Jean-Pierre Cabestan, "China's Military Base in Djibouti: A Microcosm of China's Growing Competition with the United States and New Bipolarity," in *China's Big Power Ambition under Xi Jinping: Narratives and Driving Forces*, ed. Suisheng Zhao (Routledge, 2021).

57 Paul Fricker, "Sino-American Tensions and Their Effects on Counter-Terrorism Operations in Djibouti," *Politikon: The IAPSS Journal of Political Science* 49 (2021), <https://doi.org/10.22151/politikon.49.5>.

58 Lons and Petrini, "The Crowded Red Sea."

59 Hooman Peimani, "Strategic Alliance or Cooperation of Convenience: Iran's Linking the Chinese and Russian Transit Routes to Connect Asia to Europe," in *The China-Led Belt and Road Initiative and Its Reflections*, ed. Mehdi Parvizi Amineh (Routledge, 2022).

60 Raesha Syahnaz Zahra et. al., "Analysis of Iran's Maritime Strategy in the Strait of Hormuz under Admiral Tangsiri's Leadership," *Marco Polo: Journal of Maritime and Coastal Studies* 2, no. 10 (2024), <https://doi.org/10.55927/marcopolo.v2i10.11448>.

Among the many foreign military presences in Djibouti, the UK is one of the main actors. Although it has no separate military bases, its personnel are present inside Camp Lemonnier, collaborating with the U.S. military in intelligence sharing and military operations. The UK military presence in the Red Sea region has increased significantly amid growing geopolitical complexities and insecurities. From January 2024 to April 2025, the UK conducted targeted military strikes against the Houthis, both unilaterally and jointly with the U.S. military, to protect commercial and military vessels in the Red Sea region.<sup>61</sup>

In addition, the UK has been strengthening its defense cooperation with the UAE in the Gulf and Red Sea areas to enhance regional stability and fight against terrorism.<sup>62</sup> However, while underscoring the importance of foreign military presences in the Red Sea in countering piracy, maritime terrorism, military experience sharing, and intelligence sharing, it has also been criticized for complicating the regional security, becoming a battle ground for the great and middle powers, patronaging and interferences within affairs of states situated in the Red Sea region.<sup>63</sup>

Türkiye is another important middle power with strong interests in the Red Sea region. The country's largest foreign direct investment destination in Africa is in the Red Sea region, particularly in Ethiopia, accounting for more than half of its total investment there. Türkiye has multi-billion-dollar investments in the Horn of Africa, primarily in the construction, manufacturing, and infrastructure sectors.<sup>64</sup> It also maintains a strong presence in Sudan, with both defence and commercial cooperation. In December 2024, the Turkish president played a key role in mediating the ongoing civil war by facilitating dialogue between the Sudanese belligerent parties.<sup>65</sup> Ankara has also been instrumental in mediating between Ethiopia and Somalia regarding the memorandum of understanding signed between Ethiopia and Somaliland, which led to the signing of the Ankara Declaration on December 11, 2024. The Ankara Declaration marked a critical step toward regional

61 Christian Henderson, "US and UK Military Strikes in Yemen and the Jus ad Bellum," *International and Comparative Law Quarterly* 73, no. 3 (2024): 767-792. <https://doi.org/10.1017/S0020589324000216>.

62 Saul Kelly and Gareth Stansfield, "Britain, the United Arab Emirates and the Defence of the Gulf Revisited," *International Affairs* 89, no. 5 (2013), <http://www.jstor.org/stable/24538304>.

63 Estifanos Balew Liyew, "Geopolitics of the Red Sea: Implications of Foreign Military Bases Expansion to the Horn of Africa Security," *African Security Review* 33, no. 3 (2024), <https://doi.org/10.1080/10246029.2024.2340015>.

64 "Turkish Investment in Ethiopia Continue to Increase: Ambassador," Ethiopian News Agency, April 25, 2018, [https://www.ena.et/web/eng/w/en\\_86](https://www.ena.et/web/eng/w/en_86)

65 Sinan Ciddi and Sophia Epley, "Is Turkey Playing Both Sides of Sudan's Civil War?" *Foundation for Defense of Democracies (FDD)*, March 15, 2025, [https://www.fdd.org/analysis/op\\_ed/2025/03/15/is-turkey-playing-both-sides-of-sudans-civil-war/](https://www.fdd.org/analysis/op_ed/2025/03/15/is-turkey-playing-both-sides-of-sudans-civil-war/).

peace and cooperation in the Horn of Africa by addressing disputes and enhancing economic and security partnerships among these states.<sup>66</sup>

Türkiye has provided training programs for the Somali Police Force (SPF) and the Somali National Army since 2012. In 2017, the country established its first military base in Africa at Camp TURKSOM in Somalia.<sup>67</sup> Türkiye is also a major supplier of military ammunition to Horn of Africa countries, notably Ethiopia, Somalia, and Sudan. Alongside its economic cooperation in these Red Sea states, Türkiye has built a solid foundation for its military influence – not only through establishing a military base and leveraging its Muslim identity and cultural ties but also by exporting its latest military technologies and products.<sup>68</sup> Expanding from soft power projection to hard power, Türkiye’s presence in the region enhances its regional influence.

As the Red Sea maritime corridor is critical for oil and gas transportation – primarily from the Gulf states – ensuring the uninterrupted flow of supplies is integral to their foreign policy objectives. Any regional conflicts that threaten maritime trade in this waterway adversely affect these states. In addition to economic cooperation with the Horn of Africa states and Egypt, the GCC countries – particularly Saudi Arabia, the UAE, and Qatar – rely on the Red Sea African states for food security.<sup>69</sup> The Gulf States, led by Saudi Arabia, have also been counterbalancing Iran’s regional influence.<sup>70</sup> This is evident in Yemen, where Iran supports the Houthis and Saudi Arabia backs the Sunni rebels. The Gulf states have been heavily engaged in providing foreign aid to Egypt and the Horn of Africa, projecting their soft power. The GCC countries maintain multi-billion-dollar investments across various Horn of Africa states and Egypt.<sup>71</sup>

66 “Ankara Declaration by the Federal Democratic Republic of Ethiopia and the Federal Republic of Somalia Facilitated by the Republic of Türkiye,” Republic of Türkiye Ministry of Foreign Affairs, December 11, 2024, <https://www.mfa.gov.tr/etiyyopya-federal-demokratik-cumhuriyeti-ve-somali-federal-cumhuriyeti-nin-ankara-bildirisi.en.mfa>.

67 Ash Rossiter and Brendon J. Cannon, “Re-examining the ‘Base’: The Political and Security Dimensions of Turkey’s Military Presence in Somalia,” *Insight Turkey* 21, no. 1 (December 2019): 167-188.

68 Jordán Olivér Petrőcz, “Turkish Army and Military Industry Presence in Africa,” *Journal of Central and Eastern European African Studies* 3, no. 1 (2024), <https://doi.org/10.59569/jceas.2023.3.1.226>. Onur Sazak and Auveen Elizabeth Woods, “Thinking Outside the Compound: Turkey’s Approach to Peacebuilding in Somalia,” in *Rising Powers and Peacebuilding*, ed. Charles Call and Cedric de Coning, (Palgrave Macmillan, 2017). [https://doi.org/10.1007/978-3-319-60621-7\\_8](https://doi.org/10.1007/978-3-319-60621-7_8).

69 Ding, “The Evolving Roles of the Gulf.”

70 Lons and Petrini, “The Crowded Red Sea.”

71 Zuhair Khalid Afifi, “The Importance and Components of Economic Cooperation among Red Sea Countries,” *Journal of Economics, Management and Trade* 30, no. 1 (2024), <https://doi.org/10.9734/jemt/2024/v30i11187>. Neil Quilliam, “The Role of External Powers: Global Actors (Part I),” in *The New Regional Order in the Middle East: Changes and Challenges*, ed. Sara Bazoobandi and Neil Quilliam (Palgrave Macmillan, 2019).

The UAE had military bases in Eritrea that were closed in 2021 and currently operates military bases in Yemen.<sup>72</sup> Additionally, DP World, the UAE's major port operator, has invested in the port sectors of Somaliland and Djibouti.<sup>73</sup> Overall, the Gulf states maintain a strong commercial and military presence in the Red Sea region, aiming to ensure the security of this vital maritime corridor and to project their regional influence. Furthermore, geopolitical rivalries and wars in the Middle East have directly disrupted maritime transportation through the Red Sea, the Suez Canal, and the Bab al-Mandab strait, further impacting global markets.<sup>74</sup> The Red Sea region is associated with regional conflicts and great power rivalries, alongside the involvement of middle powers, with other actors such as Iran, Israel, and the GCC states also asserting their interests.<sup>75</sup> These dynamics have contributed to a resurgence of piracy, attacks on vessels by Houthi rebels, and the rerouting of ships around the Cape of Good Hope, resulting in increased transportation costs, higher insurance premiums, and disruption of the global supply chain.<sup>76</sup>

Another major maritime security challenge in the Red Sea region is infrastructural vulnerability, particularly in the Suez Canal. This vulnerability gained global attention following the blockage caused by the Panamanian-flagged container ship *Ever Given* in the Suez Canal from March 23 to 29, 2021. During those six days, a massive maritime traffic jam occurred along this vital shipping route.

The *Ever Given* incident caused delays for nearly 400 vessels, leading to significant disruptions in the global supply chain. As a result, economic losses of between \$15 billion and \$17 billion occurred, affecting stakeholders across various sectors worldwide.<sup>77</sup> This event led to increased container

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72 "UAE Dismantles Eritrea Base as It Pulls Back after Yemen War," AP News, February 18, 2021, <https://www.apnews.com/article/eritrea-dubai-only-on-ap-united-arab-emirates-east-africa-088f41c7d54d6a397398b2a825f5e45a>

73 Nasir M. Ali et. al., "Geopolitics-Ports Politics Nexus: The Case of Port of Berbera, Somaliland," in *The Horn of Africa since 2018: Continuities, Transformations, and Prospects*, ed. Jan Záhorký and Aleksí Ali (London: Routledge, 2025), 242-258.

74 Mikhail Shumilov and Anastasia E. Malova, "The Commercial Importance of the Suez Canal in the Context of the Crisis of Economic Globalization and Modern Geopolitical Risks," *Eurasian Integration: Economics, Law, Politics* 18, no. 2 (2024): 178-188. <https://doi.org/10.22394/2073-2929-2024-02-178-188>

75 Lons and Petrini, "The Crowded Red Sea."

76 Emilio Rodríguez Díaz et. al., "Challenges and Security Risks in the Red Sea: Impact of Houthi Attacks on Maritime Traffic," *Journal of Marine Science and Engineering* 12, no. 3 (2024), <http://hdl.handle.net/10498/36001>

77 Aleksander Gerson, "Stranding of the Mega-Ship *Ever Given* in the Suez Canal: Causes, Consequences, and Lessons to Be Learned," in *The Suez Canal: Past Lessons and Future Challenges*, ed. Carmela Lutmar and Ziv Rubinovitz (Palgrave Macmillan, 2023), [https://doi.org/10.1007/978-3-031-15670-0\\_12](https://doi.org/10.1007/978-3-031-15670-0_12)

prices, revenue losses for Egypt, and raised concerns regarding legal and liability issues.<sup>78</sup> Several key parties – primarily Egypt, shipping companies, and the international economy – were threatened by this maritime security challenge. In fact, this was not the first time infrastructural vulnerabilities have impacted the Suez Canal. Since its opening in 1869, the canal has experienced five blockages and closures, mainly due to wars, some of which lasted for years.<sup>79</sup>

The Houthi attacks on merchant vessels began on November 19, 2023, and continued through 2025, targeting ships affiliated with Israel in response to Israel's military operation in Gaza. This maritime security challenge has altered geopolitics and global maritime security dynamics. The attacks aimed to pressure Israel to end its operation in Gaza. The Houthi rebels, who control and have established a government in northern Yemen with Sanaa as their capital, have been backed by Iran as part of its broader geopolitical strategy. These attacks targeted commercial ships linked to Israel, disrupting global maritime trade in one of the world's most critical maritime corridors.<sup>80</sup>

The attacks by Houthi insurgents on maritime traffic in the Red Sea and the Gulf of Aden have caused a decline in shipping through the Suez Canal and the Bab al-Mandab Strait, ultimately forcing cargo ships to detour around the Cape of Good Hope. This detour has resulted in significant economic consequences due to increased transportation costs and longer travel times. In addition to soaring operational costs and freight rates, the disruption has impacted supply chains and the productivity of goods and services. It has also exacerbated climate change by increasing carbon emissions from vessels taking the longer route. This situation highlights the broader regional implications for global maritime trade and underscores the urgent need to secure uninterrupted maritime transportation.<sup>81</sup>

Disruptions and instabilities in the Red Sea region have had significant effects on the global economy and energy markets. Following the attacks, maritime activity in the Red Sea declined sharply, with container ship traffic dropping by 80 percent. This decline forced many vessels to detour around the Cape of Good Hope, resulting in increased operational costs, longer

78 Meza et al., "Disruption of Maritime Trade."

79 Yelena Dzhanova, "The Suez Canal Has Been Blocked and Closed Several Times Since Opening," *Business Insider*, March 28, 2021, <https://www.businessinsider.com/the-suez-canal-blocked-and-closed-several-times-since-opening-2021-3>.

80 Ethan J. Lee, "Red Sea Tensions, Tanker War Lessons?" *Survival* 66, no. 2 (March 3, 2024), <https://doi.org/10.1080/00396338.2024.2332064>

81 Rodríguez Díaz et. al., "Challenges and Security."

transit times, and disruptions to global supply chains.<sup>82</sup> According to a presidential statement released after a meeting between Egyptian President Abdel-Fattah El-Sisi and Osama Rabie, chairman of the Suez Canal Authority, the Houthi attacks caused Egypt's revenue from the canal to drop by 60 percent compared to the previous year. The statement revealed that "Egypt lost nearly \$7 billion in 2024 due to ongoing events in the Red Sea and Bab al-Mandab region, which have significantly disrupted navigational traffic through the canal and impacted global trade."<sup>83</sup> The Houthi attacks on vessels passing through the Red Sea have resulted in maritime insecurities, disruption of global maritime trade, and economic instabilities.

The Houthi attack has exacerbated the issuance of higher insurance premiums for shipping companies, which in turn has adversely affected the trading costs<sup>84</sup>. As a result, some of the world's largest shipping companies, including A.P. Møller-Mærsk, have decided to reroute their vessels around Africa to avoid operations in the Red Sea.<sup>85</sup> These economic consequences – such as soaring operational costs and freight rates caused by maritime insecurity and detours – have affected not only the economic and political sectors but also the environmental and social spheres. Longer travel routes lead to higher carbon emissions and increased pollution. Moreover, these attacks have resulted in the deaths and kidnappings of seafarers and crew members.<sup>86</sup> These attacks have further reignited the call for naval, military patrols, and international cooperation deployment to achieve maritime security.<sup>87</sup> For instance, Israel and UK navies have increased their military patrol to ensure maritime security, while the U.S. military, in response, has conducted military strikes against this group in Yemen.<sup>88</sup>

Maritime terrorism emerged as a critical security issue in the maritime space with the proliferation of piracy off the shores of Somalia in the Horn of Africa from 2007 to 2012, sparking expanded academic debates across multiple disciplines.<sup>89</sup> With the insurgency of Houthi rebels in the Red Sea re-

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82 Nandini Nandini et. al., "The Red Sea Crisis: Implications of the Houthi Attack on Maritime Trade and Global Security," *International Journal of Humanities Education and Social Sciences (IJHESS)* 4, no. 1 (2024), <https://doi.org/10.55227/ijhess.v4i1.1135>

83 "Egypt Suez Canal Revenues Fall by over 60% in 2024 due to Red Sea Tensions," *Ahram Online*, December 26, 2024, <https://english.ahram.org.eg/News/537603.aspx>

84 Lee, "Red Sea Tensions."

85 Harald Behrschmidt and Tobias Sick, "The Impact of Houthi Rebel Attacks on Cargo Shipping in the Red Sea," *Communications of International Proceedings*, no. 2 (2024), <https://doi.org/10.5171/2024.4331424>.

86 "Expanding Al Shabaab-Houthi Ties Escalate Security Threats to Red Sea Region," *Africa Center for Strategic Studies*, May 28, 2025, <https://africacenter.org/spotlight/al-shabaab-houthi-security-red-sea/>.

87 Rodríguez Díaz et. al., "Challenges and Security Risks."

88 Lee, "Red Sea Tensions."

89 Germond, "The Geopolitical Dimension."

gion, another significant maritime security threat has been the resurgence of piracy. Although piracy has significantly declined since 2015, this does not mean it will not reoccur, especially given the increasing instability and geopolitical rivalries in the region. As the Africa Center for Strategic Studies has pointed out, expanding ties between Al-Shabaab and the Houthis could create favorable conditions for the resurgence of piracy and maritime terrorism.<sup>90</sup> There are also indications that piracy attempts are rebounding; for example, on May 11, 2024, the Marshall Islands-flagged merchant vessel *Chrystal Arctic* was targeted by pirates off the coast of Somalia but was rescued by the European Union Naval Force's Operation Atalanta.<sup>91</sup> Overall, these maritime security challenges have impacted the political and economic sectors – not only of the Red Sea states but also of the global economy and politics. Egypt alone has faced a 40 to 50 percent decline in annual revenue previously generated solely from the Suez Canal.<sup>92</sup>

### ***Environmental and Social Sectors***

The Red Sea connects Africa and Asia, serving as a passage for ships traveling from Europe to Asia, facilitating migration from the Horn of Africa to the Gulf, and marking a division between Arab and African political and social cultures.<sup>93</sup> The Suez Canal and Bab al-Mandab Strait have faced significant security challenges for decades, threatening maritime trade routes in the Indian Ocean and the Red Sea.<sup>94</sup> These waterways – the Suez Canal, Red Sea, and Bab al-Mandab Strait – confront ongoing maritime security challenges that affect the political and economic sectors, as well as serious environmental and social security issues.

As a result of Houthi attacks on oil tankers, pollution in the Red Sea has increased. The spillage of environmentally hazardous substances into the water significantly affects marine life and has broader environmental consequences for humans. For example, following attacks on the *MV Sounion*, a Greek-registered oil tanker, in late August 2024, millions of barrels of crude

90 "Expanding Al Shabaab-Houthi Ties."

91 "Suspected Pirate Attack in the Gulf of Aden Raises Concerns about Growing Somali Piracy," AP News, May 10, 2024, <https://www.apnews.com/article/mideast-piracy-somalia-yemen-houthi-israel-hamas-war-463b3f1c87b059152cbb21133c3266e>

92 Ibrahim al-Khazen, "Egypt Says Suez Canal Revenues Down 40-50 % amid Red Sea Tension," Anadolu Agency, February 19, 2024. <https://www.aa.com.tr/en/middle-east/egypt-says-suez-canal-revenues-down-40-50-amid-red-sea-tension/3141964>.

93 Weber, *Red Sea: Connector and Divider*.

94 Shaul Chorev, "The Suez Canal: Forthcoming Strategic and Geopolitical Challenges," in *The Suez Canal: Past Lessons and Future Challenges*, ed. Carmela Lutmar and Ziv Rubinovitz (Palgrave Macmillan, 2023).

oil were spilled into the sea. This incident posed serious environmental and navigational hazards.<sup>95</sup>

Hundreds of attacks by the Houthis have resulted in vessels being sunk, damaged, burned, or seized. These attacks have also caused the deaths of seafarers and the kidnappings of crew members.<sup>96</sup> This challenge poses serious security threats to the marine environment, which ultimately impacts the social sector. The ripple effects of maritime insecurity – particularly the Houthi attacks in the waterways stretching from the Suez Canal to the Bab al-Mandab Strait – have climate change implications due to the detours vessels must take around the Cape of Good Hope. This rerouting adds several thousand kilometres to voyages, resulting in increased greenhouse gas emissions and further environmental hazards to the marine ecosystem. According to Deng and Mi,<sup>97</sup> the global shipping industry accounted for 3 percent of total carbon dioxide emissions during the Anthropocene and is projected to increase by 17 percent by 2050 if mitigation measures are not implemented. Therefore, maritime insecurities in the Red Sea region that force vessels to detour contribute significantly to the global shipping sector's carbon emissions in the Anthropocene.

The Red Sea region has also experienced what Bueger and Edmunds<sup>98</sup> refer to as “transnational organized crime at sea.” The environmental and political crises faced by the Horn of Africa states have contributed to increased human trafficking from Africa to the Gulf states, making the Red Sea a hotspot of maritime insecurity.<sup>99</sup> Organized smugglers widely conduct this maritime crime. In addition to human trafficking, illicit trade flourishes in the region. For example, the World Customs Organization's Illicit Trade Report states that “the global supply chain faces new challenges. Disruptions to maritime traffic in the Red Sea have diverted illicit cigarette flows destined for the Middle East.”<sup>100</sup> Beyond drug and human trafficking, the Red Sea and Indian Ocean regions are also vulnerable to illicit arms trafficking. The same report

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95 “Suspected Pirate Attack.”

96 “Expanding Al Shabaab-Houthi Ties.”

97 Shiyu Deng and Zhifu Mi, “A Review on Carbon Emissions of Global Shipping,” *Marine Development* 1, no. 1 (2023): 4, <https://doi.org/10.1007/s44312-023-00001-2>.

98 Christian Bueger and Timothy Edmunds, “Blue Crime: Conceptualising Transnational Organised Crime at Sea,” *Marine Policy* 119 (2020): Article 104067, <https://doi.org/10.1016/j.marpol.2020.104067>.

99 Abdelmageed M. Yahya and Abdalla Onour, “Local Perceptions and Experiences of Smuggling and Human Trafficking in Sudan: The Case of North Darfur and Northern State of Sudan,” Sudan Working Paper 2024-1 (Chr. Michelsen Institute, June 2024), <https://www.cmi.no/publications/file/9225-local-perceptions-and-experiences-of-smuggling-and-human-trafficking-in-sudan.pdf>

100 World Customs Organization, *Enforcement and Compliance: Illicit Trade Report 2023* (WCO, 2024), 24.

emphasizes that “social changes, including internal conflicts and ongoing struggles in the Middle East, have fueled attempts to illegally trade arms and ammunition along the crucial Asia-Europe transit corridor.”<sup>101</sup>

## Conclusion

Although the maritime waterways stretch from the Suez Canal in the north to the Bab al-Mandab Strait in the southern corner of the Red Sea, they serve as a lifeline for the world’s economy and remain sensitive to geopolitical tensions – not only from the states located within the region but also from rival powers farther afield. It is clear that this maritime corridor has been at the center of regional and global politics, and its centrality is likely to persist due to ongoing maritime insecurities.

Sustainable maritime security is challenged by threats across four sectors: political, economic, environmental, and social. A maritime security threat in one sector often produces ripple effects that impact the others. Within the political and economic sectors, the primary maritime security challenges to safe trade routes in these waterways include geopolitical rivalries, competing maritime strategies among middle and great powers, infrastructural vulnerabilities, and, most critically, the increasing attacks on vessels by the Houthis. These combined factors have led to a sharp decline in maritime traffic in the region, as well as rising costs related to shipping operations, freight, and insurance premiums for containers and vessels. Consequently, this has disrupted global supply chains and production, further destabilizing the global economy. Similarly, the Suez Canal, Red Sea, and Bab al-Mandab Strait face environmental and social maritime security challenges, including pollution from oil spills that pose serious environmental hazards; deaths and kidnappings of seafarers and crew members; and illicit trafficking of drugs, humans, and arms.

Maritime insecurities in this region have serious negative consequences for climate change, carbon emissions, and environmental hazards. These, in turn, have adverse effects on other sectors, particularly the economic and political realms. To address these maritime security challenges, it is essential to strengthen security protocols and foster cooperation among stakeholders, setting aside competition. It is equally important to empower Red Sea littoral and basin states to enhance both domestic and regional stability and to support their roles as key decision-makers and implementers in securing the region. Given that the maritime security of this area is linked to

<sup>101</sup> *Enforcement and Compliance*, 24.

the stability of other geographic regions, it is urgent that global and regional powers dedicate their resources to resolving the Israel-Gaza and Iran-Israel conflicts through diplomatic means.

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### **Conflicts of Interest**

The authors declare no conflict of interest.

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