

Proposing a Model for Combating Maritime Crimes in the Waters of the Islamic Republic of Iran with the Aim of Enhancing Security and Maritime-Oriented Development

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Abstract

Aquatic spaces (oceans and seas), as vast geographical ecosystems covering a major part of the Earth, are deeply intertwined with the lives of coastal nations through critical roles in global supply chains, food resources, and energy transfer. However, benefiting from these God-given resources not only requires advanced equipment and specialized knowledge but also depends on a country's ability to confront maritime crimes, which pose a significant security challenge to maritime-oriented development. The Islamic Republic of Iran, given its strategic location in the waters of the Persian Gulf, the Sea of Oman, and the Caspian Sea, is exposed to various forms of maritime crimes. Therefore, it is essential for Iran to design and implement an effective model to ensure maritime security and counter maritime crimes as part of its efforts to promote maritime development. Accordingly, this applied research, with a developmental approach and using a descriptive-analytical method, aims to review Iran's past measures and examine the dimensions, components, and indicators of combating maritime crimes. The findings indicate that the key pillars of the proposed model include policy-making, economic, military-security, legal, international, environmental, and socio-cultural dimensions.

Keywords: Development, Maritime-Oriented Development, Maritime Crimes

1-Introduction

Since the dawn of human history, the high seas have been the cradle and foundation of great civilizations. "A brief review of the factors behind the development and rise of nations throughout history reveals that maritime position and naval power have played an undeniable role in safeguarding national interests and shaping international relations,

with most advanced and powerful states having emerged from the shores of oceans and the high seas." Most developed and powerful countries have emerged from the coasts of oceans and open seas, whereas nations with vast territories and large populations—despite considerable effort, revolutions, and numerous reforms—due to geopolitical constraints resulting from landlocked conditions, have only advanced in a few limited areas and have made little progress in other industrial fields, failing to offer any significant products to the global market. In recent years, with the growth of maritime-related industries and the increasing awareness of the role of open waters in development, major powers have invested in this domain and, by forming great naval forces, have established "empires without sunset" in the world.

Iran, with 2,700 kilometers of maritime borders and 784 kilometers of oceanic coastline, and its strategic location between two major energy hubs, has become a central node for continental connectivity and a global transit crossroads. This position is further enhanced by control over the Strait of Hormuz. Considering the efforts of neighboring and rival countries to create geopolitical erosion against Iran, adopting a sea-oriented development approach is more necessary than ever. Sea-oriented development—entailing sustainable and comprehensive utilization of the economic, commercial, environmental, and security capacities of seas and coastlines can play a decisive role in economic growth, job creation, strengthening international trade, developing coastal regions, and enhancing Iran's position in regional and global relations. Conversely, neglect in this area could result in exclusion from global trade networks and increased vulnerability, while empowering adversaries of this ancient land. It is noteworthy that in recent years, with a strategic vision by national authorities, steps have been taken in policy-making, evidenced by the issuance of the Supreme Leader's general policies on sea-oriented development and Chapter 11 of the Seventh Development Plan, entitled "Transit and Sea-Oriented Economy." These policies emphasize the realization of national spatial planning objectives by considering existing and potential capacities, particularly in seas, coastlines, ports, and

border waters, and the practical implementation of priority measures in these areas (Seventh Development Plan, 2023–2027).

Given the country's emphasis and approach towards sea-oriented development and the existence of a conducive environment, and considering the definition of national interests in distant maritime borders and the extension of major conflicts of countries into seas and oceans (despite the existence of numerous international laws), it is necessary to effectively counter the challenges facing this goal, including maritime crimes. Since there is a perceived lack of a comprehensive and practical model to combat maritime crimes in the country, the main concern of the researcher is to study and propose a model for confronting maritime crimes in the waters of the Islamic Republic of Iran with the aim of enhancing security and sea-oriented development. This model, while taking into account the existing legal and institutional structures in Iran, also draws upon successful international experiences, aiming to pave the way for sustainable and security-driven development in the country's maritime domain.

1-1: Importance of the Topic

Maritime crimes, as one of the major challenges in the field of maritime security, pose a serious threat to the national interests, regional security, and sustainable development of the Islamic Republic of Iran in its maritime domains. Iran, with its extensive northern and southern maritime borders and its geopolitical and geostrategic position in the Persian Gulf, the Sea of Oman, and the Caspian Sea, is exposed to various maritime threats, including smuggling, piracy, illegal fishing, unauthorized entry of vessels, and violations of maritime boundaries.

The rise in maritime crimes not only challenges national security but also destabilizes maritime-related economic activities such as shipping, fishing, offshore energy, and tourism. On the other hand, sustainable maritime development—which is one of the country's major economic strategies outlined in high-level documents such as the General Policies of Development Plans and the 20-Year Vision—cannot be achieved without

ensuring security and effectively addressing maritime threats.

Therefore, the design and implementation of a comprehensive and indigenous framework to combat maritime crimes—tailored to the legal, geographical, political, and military characteristics of the Islamic Republic of Iran—is an undeniable necessity. Such a framework can enhance coordination among responsible agencies, strengthen deterrence capabilities, expand legal and international capacities, and ultimately reinforce maritime security and development. Addressing this issue not only responds to an immediate national need but also represents a fundamental step toward a more active role for the Islamic Republic of Iran in regional security management and international maritime cooperation.

1-2: Literature Review and Research Background

1-2-1: Definition of Concepts

Development

World War II and its devastating aftermath can be considered the starting point for scholars' attention to the concept of development. Linguistically, the term development is synonymous with progress and expansion; however, as noted, scholars and theorists, observing the destructive effects of World War II, sought with a broader perspective to understand and predict development in African, Asian, Middle Eastern, and Caribbean countries. Therefore, considering the various post-World War II interpretations of development, it can be stated that **“development is a comprehensive process of economic, social, cultural, and political activities aimed at the continuous improvement of the lives of all people, where activity, freedom, participation, and the equitable distribution of benefits are**

considered its fundamental pillars” (Bayat & Hatami, 2012)

Maritime-Oriented Development

Maritime-oriented development is a strategic concept that emphasizes the sustainable and purposeful utilization of marine resources and capacities to achieve economic growth, national security, and enhance the geopolitical position of a country. This approach encompasses the development of ports, maritime industries, fisheries, marine tourism, sea-based trade, transportation, and offshore energy. In the maritime-oriented development perspective, maritime security is considered not only as a defensive factor but also as a fundamental prerequisite for economic advancement and regional interactions.

Maritime-oriented development is closely associated with concepts such as the ocean economy or blue economy and includes all economic activities of ocean-based industries, along with the assets, goods, and services provided by marine ecosystems. These two domains are interdependent because many ocean-based industrial activities rely on marine ecosystems, while industrial activities often impact these ecosystems (OECD, 2022).

Based on the above definition, it can be stated that the maritime economy, given the existing capacities in marine areas, can act as a driving force for oceanic countries and stimulate other sectors of their economies.

Maritime Crimes

Maritime crimes refer to a spectrum of illegal activities that occur within territorial or international waters and threaten the order, security, and sovereignty of states. These crimes include piracy, human trafficking, smuggling of drugs and fuel, illegal fishing, violations of maritime boundaries, marine environmental pollution, terrorist attacks via the sea, and the destruction of maritime

infrastructure. According to the 1982 United Nations Convention on the Law of the Sea (UNCLOS), states are obligated to prevent and suppress piracy and other serious maritime crimes within their jurisdiction.

Another definition, which adopts a more legal perspective, states that **“maritime crimes refer to those criminal acts committed in seas and oceans beyond the territorial jurisdiction of states, primarily on the high seas, and pose a threat to maritime security, human life, property, the marine environment, and international order. The most significant example of such crimes is piracy, which is explicitly defined under international law”** (Ashrafi, 2019: 235)

It should be acknowledged that the primary reason for maritime crimes lies in the vastness of the seas and the lack of sovereign authority: **“Due to their vastness and the absence of permanent sovereign control, the seas provide a suitable environment for committing crimes such as smuggling, piracy, and even maritime terrorism”** (Ardebili, 2019: 167)

1-2-2: Research Background

By reviewing library documents and conducting internet searches on topics related to the present research, one can refer to the article "Rules and Mechanisms of the International Community and Iran Regarding Maritime Crimes" authored by Javad Foroughi, Ali Movahedi Sharrafabadi, and Mohammadreza Rahmat (2020). The authors, after outlining the three essential elements of piracy, conclude that due to the absence of domestic legislation, these criminals can be prosecuted under other criminal offenses.

Farzad Adibian, Abdolmahmad Afroogh, and Abbas Barzegarzadeh (2022) authored the article **“Maritime Terrorism: Threat to International Peace and Security, Violation of Human Rights and Fundamental Freedoms”**, in which they identify the impacts of piracy at the international level and consider it a violation of human, economic, health, food, and energy security, as well as a

contributing factor to the infringement of human rights and fundamental freedoms.

In another study, **Seyed Mohammad Kazem Sajjadpour and Arghavan Abdolhosseini (2017)**, in their research titled “**Iran and the Security Threat of Piracy**”, examine the threats posed by criminal activities in the Red Sea and the Gulf of Aden and the measures taken by Iran to counter them.

However, what constitutes the innovation of this study is that, in addition to addressing the issues highlighted in previous articles, it aims to examine and propose a comprehensive framework for combating maritime crimes in the waters of the Islamic Republic of Iran, which can be utilized in policymaking and the advancement of maritime-oriented development.

1-3: Objectives

Main Objective

To propose a comprehensive, indigenous, and efficient framework for combating maritime crimes in the waters under the jurisdiction of the Islamic Republic of Iran, with the aim of enhancing maritime security and providing the necessary foundations for sustainable maritime-oriented development

Specific Objectives

1. To identify the types and instances of maritime crimes in Iranian waters and examine the measures previously taken by the country to combat them.
2. To review national and international legal frameworks related to combating maritime crimes and analyze the extent to which domestic laws align with international instruments.
3. To identify existing legal, operational, and structural challenges and gaps in combating maritime crimes in Iran.
4. To identify the dimensions, components, and indicators that

effectively contribute to combating maritime crimes.

5. To develop and propose a coordinated, multidimensional framework (legal, security, operational, and institutional) for the prevention, detection, prosecution, and effective response to maritime crimes.

1-4: Research Hypotheses

Given that the approach of this study is exploratory, no formal hypotheses are proposed, and the research continues in a question-oriented manner.

1-5: Research Variables

Since this study does not seek to determine or measure the mutual influence of two variables, independent and dependent variables are not applicable in this research. Therefore, the term "variable" will be avoided.

2: Research Methodology

The approach of this study is mixed-methods, its method descriptive-analytical, and its type applied. It has been conducted with the aim of providing a localized model for combating maritime crimes in the waters under the sovereignty of the Islamic Republic of Iran, which leads to the enhancement of maritime security and sea-oriented development.

The data were collected using both documentary and field methods. In the documentary section, library sources, scientific articles, national and international laws and regulations related to maritime crimes, and upstream documents concerning sea-oriented development were reviewed. In the field section, semi-structured interviews were conducted with experts, maritime law specialists, and officials from maritime and military-security organizations. A purposive (non-random) snowball sampling method was employed to identify individuals with scientific and practical expertise in this field. Interviews continued until theoretical saturation was reached (11 participants holding Ph.D. degrees

and at least 10 years of experience in strategic positions, with publications in the relevant area).

The information collected from the interviews, legal and policy texts was then extracted and classified. Using content analysis, key concepts and influential components in combating maritime crimes were identified, and a model was designed based on the theoretical framework of the study.

To assess the validity of the research instruments, both face validity and content validity were employed. For this purpose, after designing the data collection tools (including questionnaires and semi-structured interview forms), the initial version was provided to several experts in international law, maritime law, maritime security, and maritime crime prevention. These experts were asked to provide corrective feedback regarding clarity, appropriateness, transparency, and comprehensive coverage of the questions. After collecting their feedback, necessary revisions were made and the final version of the instruments was prepared. This process ensured that the tools had satisfactory content validity in terms of covering key concepts and aligning with the research objectives.

To assess the reliability of the instruments, Cronbach's alpha coefficient was used to examine the internal consistency of the questions. The results of the data analysis indicated that the Cronbach's alpha for the various scales exceeded 0.7, demonstrating acceptable and satisfactory reliability of the research instruments.

3: Research Findings

3-1: Environmental Context (Maritime Crimes in the Waters of the Islamic Republic of Iran)

The Islamic Republic of Iran, with more than 5,800 kilometers of coastline and access to three important maritime regions (the Caspian Sea, the Persian Gulf - Strait of Hormuz, and the Sea of Oman - Indian Ocean), while located in an area rich in oil and gas resources,

has become a transit point for energy and goods. By connecting to international waters, it plays a key role in global trade and the energy and commodity supply chain. Although this exceptional position offers great potential for sea-oriented development, at the same time, Iran faces diverse maritime threats. This unique situation has led to various maritime crimes, posing a serious threat to maritime security and sea-oriented development. If these threats are not addressed and managed, they may cause significant economic, political, and security consequences. The most important maritime crimes threatening Iran are:

A) Maritime Crimes in the Southern Coasts of the Country (Specifically the Persian Gulf and the Sea of Oman)

Piracy and Maritime Robbery in the International Waters of the Sea of Oman

The Gulf of Aden and the Red Sea, due to their strategic location and the passage of numerous commercial vessels and oil tankers, have long been major hotspots for pirate activities, primarily originating from Somalia. Following the Somali civil war in the 1990s, piracy in this region increased significantly. Pirates attacked commercial ships and oil tankers, taking them hostage for ransom. This became a serious threat to international shipping. Iran, as one of the active countries in this region and a member of the international community, has taken effective measures to combat piracy within the framework of UN Security Council resolutions and the necessity of international cooperation.

It should be noted that regarding piracy, Iran, with its large commercial fleet and strategic location along international shipping routes for exporting its oil to Mediterranean countries, is more affected by Somali pirates than other Persian Gulf countries. On average, one Iranian ship passes through this route daily, and pirate activities over the past decade have caused significant damage to Iranian vessels (Sajjadpour & Abdolhosseini, 2017: 7–36).

Moreover, some pirate attacks in the past targeted Iranian citizens, raising concerns for the families of fishermen in southern waters. A

notable example is the *Saddis* fishing boat, one of the most tragic and prolonged incidents in the history of Iranian maritime navigation. In March 2014, this vessel, carrying 14 Iranian fishermen, departed from the port of Konarak in Sistan and Baluchestan province for offshore fishing. Due to engine failure, it drifted to the Somali coast, where the 14 fishermen were taken hostage by the terrorist group Al-Shabaab. The captivity lasted until 2021, during which the fishermen endured extremely harsh and inhumane conditions: their legs were chained to trees, and they received only one meal per day. Three of the fishermen died early in captivity due to illness and lack of medical care.

This serious threat to both the global economy and Iran's fishermen led the Iranian Navy to deploy over 100 naval task forces to international waters between 2009–2024. These task forces were tasked with protecting Iranian and even foreign vessels from pirate attacks. To date, they have escorted approximately 6,000 commercial ships and oil tankers, enhancing maritime security in the region. This presence has not only increased the safety of Iranian ships but also strengthened Iran's position as a regional maritime power.

It is also important to emphasize that disruptions to maritime security can lead to widespread economic problems. Pirate attacks, in addition to financial losses, can increase insurance costs, halt trade, and disrupt the supply of energy resources. Under this definition, piracy is not only a crime at the individual level but also a global threat that requires effective international cooperation to counter (www.tabnak.ir)

Large-Scale Fuel Smuggling

The southern coasts of Iran, particularly in the provinces of Hormozgan and Bushehr, constitute one of the main routes for smuggling goods, especially fuel, to neighboring countries. These activities have not only inflicted significant damage on the national economy but have also contributed to the formation of transnational criminal networks. According to the Speaker of the Islamic

Consultative Assembly, approximately 20 to 30 million liters of fuel are smuggled in Iran every day. Nearly half, or even more, of this amount is diesel, while several Iranian power plants have been completely shut down or are operating at a fraction of their capacity due to fuel shortages, particularly diesel.

Fuel smuggling in Iran is neither a new phenomenon nor a minor issue that can be attributed to the adventurous acts of a few individuals. The daily smuggling of 20 to 30 million liters cannot possibly be carried out by a single group or a small number of ordinary people; rather, it reflects an organized network. The destinations of the smuggled fuel are also well known: gasoline typically ends up in countries such as Turkey, while diesel is mostly trafficked to Pakistan and even Iraq (www.inergy.ir)

drug trafficking

Drug trafficking is common due to the high volume of ship traffic and the existence of active transit routes. In addition to financial losses, this crime reduces the confidence of traders and investors in the security of maritime routes.

Field research and published statistics show that organized smuggling networks have expanded their illegal activities using advanced equipment. Moreover, weaknesses in controlling and monitoring maritime borders have exacerbated this situation. The Secretary-General of the Anti-Narcotics Headquarters, stating that 70 percent of drug seizures take place along the country's eastern borders, said that drug trafficking has shifted toward the sea and maritime borders. (www.javanonline.ir)

One of the main reasons for the shift in drug trafficking routes toward the sea and maritime borders can be attributed to Iran's extensive counter-narcotics efforts and the large volume of seizures along land borders, the physical closure of many terrestrial border areas, and the lack of adequate technical infrastructure at sea for monitoring and tracking all vessels in transit.

Illegal fishing by domestic and foreign vessels

Trawl fishing, encircling (purse seine) fishing, and fishing without a license from the Fisheries Organization of coastal provinces are among the issues directly linked to the livelihood and well-being of coastal residents, as well as their motivation to remain by the country's waters and avoid migration. From the very beginning of the Islamic Revolution, national authorities showed sensitivity to this matter, and in August 1979, the Legal Bill on the Punishment of Illegal Fishing in the Caspian Sea and the Persian Gulf was approved (which was repealed in 2020 and replaced with a new bill). This bill prescribed penalties such as fines, confiscation of property, and other measures. It can be argued that factors such as high unemployment rates, the ease of engaging in illegal fishing, insufficient supervision, and the lack of legal and financial support for the enforcers of the illegal fishing bill are among the main causes of the spread of illegal fishing. ([www. ifsri.ir](http://www.ifsri.ir))

In addition to illegal fishing by domestic actors, the presence of illegal fishing vessels—especially from neighboring countries—in Iran's territorial waters not only harms the country's marine resources but also causes dissatisfaction among local communities and poses a security threat.

Violation of maritime borders by vessels of foreign countries (regional and trans-regional)

In recent decades, the increase in geopolitical rivalries and countries' attempts to extend conflict zones and disputes to the maritime domain have led to an increased presence of foreign military vessels in international waters and even close to the maritime borders of various countries. This presence is often justified by military maneuvers, innocent passage, or protection of shipping lanes, but in some cases, it involves unauthorized reconnaissance, assessment of military capabilities, collection of economic intelligence, electronic espionage, intimidation of coastal inhabitants, or demonstration of military power. Although such activities occur to a limited extent in the southern waters of the Islamic Republic of Iran, even this small presence can pose a serious threat to the country's national security. Effectively

countering this threat requires a combination of military, diplomatic, and technological approaches. It can be said that by enhancing monitoring capacity, improving regional coordination, and pursuing legal measures, our country can more effectively protect its maritime sovereignty and security.

Marine environmental pollution caused by oil activities and waste discharge

The southern seas of Iran, including the Persian Gulf and the Sea of Oman, due to their connection with the oceans, have facilitated Iran's integration into international trade and granted the country a prominent role in the global supply chain of goods and energy. Moreover, these waters host important marine habitats and valuable environmental resources of the nation. However, in recent years, these areas have been severely exposed to various types of environmental pollution, posing serious consequences for the marine ecosystem, human health, and sustainable maritime development. Among the most significant forms of pollution is the spillage of oil and petroleum products, which, due to the heavy traffic of oil tankers and the activities of offshore platforms, is considered one of the most serious threats.

The discharge of industrial and municipal wastewater is another environmental threat, mainly caused by the inadequate treatment of effluents in coastal cities. This leads to the release of chemicals, heavy metals, and pollutants into the sea, resulting in the gradual death of aquatic species.

Another plague that unfortunately affects all natural recreational and coastal areas of the country is pollution caused by plastic waste and solid garbage. The main reasons for this are the increasing population of tourists and disregard for waste management principles, which have led to severe pollution of the coasts and marine waters with plastics and litter. Noise and thermal pollution caused by ships and marine industries are insidious forms of pollution that disrupt the migration, feeding, and reproduction patterns of marine animals, resulting in impoverishment and dissatisfaction

among coastal residents and the gradual destruction of the marine environment.

Although the above issues are primarily examined from an environmental perspective, the degradation of fisheries and environmental resources gradually leads to coastal residents' dissatisfaction, a decline in tourism, increased cross-border migration, the emergence of new forms of crime in the region, and tensions among countries. These environmental factors can thus acquire security and military dimensions.

It should be noted that in recent years, the Department of Environment of Iran, the Ports and Maritime Organization, and other relevant institutions have undertaken measures such as monitoring the quality of coastal waters, expanding wastewater treatment facilities, supervising maritime industries, and conducting public education and awareness campaigns to reduce plastic consumption, all aimed at mitigating marine pollution. However, the preservation of the environment of Iran's southern seas requires national commitment, substantial investment, regional cooperation, and the development of more effective and enforceable regulations.

Maritime terrorism

Maritime terrorism, alongside piracy, constitutes one of the most significant maritime security threats that jeopardize global safety. The fragmented responsibility of states in combating maritime terrorism, coupled with the lack of a consensual definition, has exacerbated these threats at sea. However, comprehensive (or at least multilateral) legal, political, and operational frameworks could pave the way for enhanced international cooperation to effectively address maritime terrorism.

Maritime terrorism, as an emerging threat, affects the security of southern Iranian waters. Driven by political, economic, and ideological motives, this threat includes attacks on ships, maritime facilities, hostage-taking, and smuggling. Piracy activities, particularly in the Strait of Hormuz and the Sea of Oman, further

exacerbate the issue. Addressing this threat requires regional and international cooperation, enhanced maritime security, and intelligence sharing. Failure to manage this threat increases the likelihood of terrorist groups using the sea to target coastal facilities, ports, or commercial vessels, and it has consistently remained a major security concern in the maritime domain.

B) Maritime crimes in the Caspian Sea

The Caspian Sea, like the southern seas of Iran, plays a significant role in the economy, trade, and tourism due to its strategic location. Maritime crimes in the northern waters of Iran (the Caspian Sea) possess unique characteristics and limitations driven by the specific geographical, political, and economic conditions of the region, distinguishing them from other maritime areas of Iran, especially the southern waters. However, due to the high density of maritime activities and extensive borders, these areas provide a fertile ground for various maritime crimes, posing threats to security, the economy, and the environment. Understanding and combating these crimes is essential for maintaining regional stability and sustainable development. Among the major crimes in the Caspian waters, the following can be mentioned:

Smuggling of goods and narcotics

Given its geographical location and shared maritime borders with neighboring countries, one of the most prevalent maritime crimes in the Caspian Sea is the smuggling of goods and narcotics. Smugglers use small boats or large ships to transfer prohibited or illicit goods to the northern shores. These goods include textiles, household appliances, foodstuffs, fuel, and sometimes electronic equipment, which are either imported or exported via this route. These activities not only harm the national economy but also pose a threat to regional security.

Illegal fishing

Illegal harvesting of aquatic species, destruction of marine habitats, and environmental pollution are among the

environmental crimes that lead to the depletion of marine resources and damage to the ecosystem. Illegal fishing, particularly of valuable species such as sturgeon, is one of the common crimes in the Caspian Sea. This issue has caused severe environmental damage, putting aquatic species at risk of extinction. These activities, often carried out by organized groups, have led to a decline in aquatic populations and pose a threat to marine biodiversity.

Environmental Pollution

Like the southern waters of the country, the Caspian Sea also faces multiple environmental threats. The discharge of domestic and industrial wastewater into the sea, particularly from land-based sources, has led to significant environmental degradation. These pollutions not only harm the marine ecosystem but also threaten the livelihoods of local fishermen. In this regard, the "Tehran Convention" was signed by the Caspian littoral states with the aim of protecting the marine environment of the Caspian Sea.

The aforementioned crimes have multiple consequences, including creating insecurity and fear among maritime operators and tourists, reducing revenues from maritime transport, fishing, and tourism, destroying marine habitats, decreasing biodiversity, and raising concerns about maritime security and border control. Ultimately, these issues have led to citizen dissatisfaction with the central government and the emergence of social and security crimes in coastal cities. Without proper management, these threats could result in numerous security challenges.

3-2: The Islamic Republic of Iran's Measures to Combat Maritime Crimes

Today, maritime security is considered one of the fundamental pillars of stability and national development for coastal countries. The Islamic Republic of Iran, due to the unique geographical position of the Persian Gulf, the Sea of Oman, and strategic waterways such as the Strait of Hormuz, has constantly faced a variety of maritime crime threats including piracy, smuggling of goods and narcotics,

illegal fishing, and unlawful waste disposal. In recent years, Iran has adopted a comprehensive approach to protect its marine resources by implementing legal, executive, technological, and diplomatic policies.

On the legal front, the enactment and amendment of maritime-related laws and accession to international treaties such as the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA Convention) have established the necessary infrastructure for strengthening the rule of law at sea.

Operationally, the enhancement of the capabilities of the Navy, the Islamic Revolutionary Guard Corps Navy, and the Border Police through continuous patrols, the establishment of electronic monitoring bases and stations, and the deployment of Automatic Identification Systems (AIS) and radar systems have significantly increased the capacity for rapid response to various maritime crimes. These major national actions to combat maritime crimes can be summarized as follows:

Presence in International Waters through the Deployment of Naval Task Forces

More than three-quarters of the Earth's surface is covered by seas and oceans, highlighting the vast operational field for naval vessels worldwide. Consequently, in all countries with access to seas and oceans, the navy is considered a pillar of power. Since 2008, with the expansion of piracy in international waters, the Navy of the Islamic Republic of Iran, having fully transferred its missions in the Persian Gulf to the Navy of the Islamic Revolutionary Guard Corps, has prioritized combating piracy. After short preparations, on May 10, 2009, its first naval flotilla was dispatched to the Gulf of Aden with the mission of protecting Iranian vessels and national commercial shipping lanes in international waters. Since then, the Iranian Navy has deployed 100 operational naval flotillas for anti-piracy and other missions to international waters.(www.tasnimnews.com)

To date, the Iranian Navy has deployed 100 naval flotillas to international waters, successfully escorting approximately 6,000 oil tankers, cargo, and commercial vessels, providing protection against piracy. This contribution has had a substantial impact on maritime and economic security both for Iran and other nations. The Navy's performance has drawn admiration and recognition from major naval powers, as the deployment of Iranian vessels and naval assets in distant waters—despite stringent military sanctions—demonstrates the operational capability and maritime strength of the Islamic Republic of Iran Navy.

Beyond safeguarding the supply chain for goods and energy, these flotillas also undertake search and rescue operations for vessels in distress, engage in military cooperation, visit ports of friendly and allied countries, and escort commercial ships at the request of naval units (www.defapress.ir)

Regional and International Cooperation

Given Iran's geopolitical position and its proximity to strategic waters such as the Persian Gulf, the Sea of Oman, and access to the Indian Ocean, Iran, recognizing the importance of maritime security for sustainable development and international trade, has sought to play an active role in combating maritime crimes by relying on domestic capabilities and enhancing regional and international cooperation.

In this regard, the Islamic Republic of Iran, alongside maritime security coalitions with neighboring countries including Oman, Qatar, and Pakistan, and through security agreements with Oman on maritime traffic management and anti-smuggling measures, has endeavored to strengthen maritime diplomacy, leverage the capacities of international organizations, foster regional confidence-building, and maintain active membership in international organizations such as the International Maritime Organization (IMO) and the Indian Ocean Naval Symposium (IONS), thereby enhancing its position within maritime order.

Strengthening Legal and Regulatory Frameworks

Iranian laws to combat maritime crimes have been enacted to ensure maritime security, safety, and environmental protection, encompassing a wide range of regulations and penalties. These laws were formulated and implemented alongside Iran's systematic and active presence in the seas. The origins of these regulations can be traced back to 1934 (1313 in the Iranian calendar) with the "Law on Determining the Limits of Coastal Waters and the Government's Supervisory Zone in the Seas."

With Iran's expanding technical and operational activities in both coastal and international waters, domestic maritime legislation has been further strengthened. Notable examples include the Law on the Protection of Navigable Seas and Rivers Against Pollution by Oil (enacted in 2010) and the Law on the Maritime Zones of the Islamic Republic of Iran in the Persian Gulf and the Sea of Oman (enacted in 1993) (www.mop.ir)

However, in recent years, given the increasing strategic significance of the Persian Gulf, the Sea of Oman, and the Caspian Sea, as well as the emergence of new threats in the field of maritime crimes, the Islamic Republic of Iran has undertaken the revision, enactment, and strengthening of key maritime laws. Notable examples include the amendment of the Iranian Maritime Law (originally enacted in 1964 in 2012 and the "Anti-Piracy Bill" approved by the Cabinet in 2022 .

The preamble of this bill emphasizes that seas and oceans, as some of the most important communication lines of human civilizations, play a crucial role in establishing and developing international relations. It also stresses that freedom and the preservation of international maritime security are essential both for maintaining global peace and security and for promoting international trade. The recent surge in piracy in international waters has prompted countries, including the Islamic Republic of Iran, to take measures to protect international shipping routes and safeguard their commercial interests (www.irna.ir).

Iran is also a party to numerous international conventions, including:

The MARPOL Convention¹, which aims to prevent intentional marine pollution, fully address pollution caused by oil and other harmful substances, and minimize accidental discharges of these substances;

The Kuwait Regional Convention for Cooperation on the Protection and Development of the Marine and Coastal Environment against Pollution², aimed at preventing and reducing marine pollution and combating contamination in the waters of the Persian Gulf and the Sea of Oman

The Regional Cooperation Protocol for Combating Pollution from Oil and Other Harmful Substances in Emergency Situations³, which seeks to undertake all necessary and effective measures to protect coastal areas and the interests of the contracting states against pollution from oil and other harmful marine substances during emergencies and **The International Convention on Preparedness, Response and Cooperation for Oil Pollution.⁴**

Awareness-Building and Education

Maritime crimes are among the significant threats to national security, sea-based economies, and the marine environment. Countries need a multifaceted strategy to address these threats, with education and awareness-building being one of its main

pillars. The Islamic Republic of Iran has also undertaken effective measures to promote sustainable maritime security, notably through policy initiatives such as the issuance of general sea-based development policies, which emphasize education and awareness-building.

Moreover, this issue has been consistently highlighted by the country's senior leaders. As the Supreme Leader of Iran stated: "Utilizing the opportunities and vast potentials of the sea must become part of the general culture of the country." He also referred to the historical maritime activities of Iranians, which facilitated the spread of Iranian and Islamic culture and civilization to other parts of the world, and emphasized: "Despite this historical background and the long northern and especially southern coastlines of Iran, the culture of utilizing maritime opportunities has been neglected and must become part of the public culture. In recent years, the development of the Makran coast has been discussed and governments have welcomed it, but significant progress requires awareness-building. By using artistic productions and showcasing the country's maritime capabilities in both military and civil sectors, public enthusiasm to exploit these opportunities will increase." (www.hamshahrionline.ir)

In the field of education, it should be noted that with the aim of enhancing public awareness, empowering naval and maritime law enforcement forces, and facilitating inter-agency cooperation to prevent maritime crimes, as well as the necessity for prolonged deployment of naval fleets in oceans to combat crimes, specialized military and maritime personnel—such as those from the Navy of the Islamic Republic of Iran, the Islamic Revolutionary Guard Corps Navy, customs officials, port staff, maritime police, and shipping authorities—continuously undergo training courses. These courses focus on the identification, prevention, and response to maritime crimes such as smuggling, piracy, illegal fishing, and marine environmental pollution.

¹ - CONVENTION ON THE PREVENTION OF MARINE POLLUTION FROM SHIPS MARPOL - 1973 - 78

³ - KUWAIT REGIONAL CONVENTION FOR CO OPERATION ON THE PROTECTION OF THE MARINE ENVIRONMENT FROM POLLUTION KUWAIT - 1978

⁴ - REGIONAL CO_PROTOCOL CONCERNING COMBATING POLLUTION BY OPERATION IN HARMFUL SUBSTANCES IN OTHER OIL EMERGENCY CASE OF KUWAIT_1978

4 - _INTERNATIONAL CONVENTION ON OIL POLLUTION PREPAREDNESS, RESPONSE AND CO-OPERATION (OIL POLLUTION PREPAREDNESS) LONDON - 1990

In addition to formal training sessions, maritime universities including Imam Khomeini Maritime University (Nowshahr), Chabahar Maritime University, and Khorramshahr Marine Science University offer educational programs in maritime law, maritime security, and marine resource protection to prepare skilled professionals.

Developing the Transit Potential of the Country's Maritime and Oceanic Areas along the Southeastern Coasts

Given the necessity for continuous and extensive attention to the country's coastlines, particularly in the southeast, and the need for essential infrastructure as the foundation of a sea-based economy, since 1989 (1368 in the Iranian calendar) the government has been authorized under Note 19 of the First Development Plan Law to establish free trade zones at three border points—Kish, Qeshm, and Chabahar—to attract investment.

Although these efforts and planned infrastructures were undertaken, due to geographical isolation, Western sanctions, and perceived insecurity, the development of these regions did not progress as expected. Nevertheless, initial steps toward coastal security were taken with the establishment of Iranian Navy bases along the Makran coast (Jask and Konarak), serving as gateways to the oceans. These measures facilitated the creation of transportation infrastructure, welfare facilities, healthcare and recreational centers, and provided additional incentives for policymakers to prioritize the development of the Makran coast as a strategic objective.

Significant investments and initiatives in energy and infrastructure in the region have improved the livelihoods of coastal communities and revived their hope, motivating them to remain in the area and contribute to its development.

3-3: The Relationship between Maritime Crime Prevention and Sea-Oriented Development

Maritime security is not only a security necessity but also a fundamental

prerequisite for achieving sea-based development goals in the Islamic Republic of Iran. Sea-based development includes the growth of ports, expansion of maritime trade, investment in marine industries, and sustainable exploitation of aquatic resources, all of which face serious challenges without adequate security. The presence of maritime crimes such as piracy, smuggling, and illegal fishing can deter investors from engaging in marine sectors and deprive the country of valuable economic opportunities. Therefore, effective combat against these crimes will increase private sector confidence and facilitate investment in maritime infrastructure.

Ultimately, maritime security and economic development must advance simultaneously and in a coordinated manner, as any weakness in security can lead to economic setbacks and irreparable losses. On the other hand, in recent years, government planning has emphasized the development of the Makran coast, where creating employment, boosting maritime trade, and promoting marine tourism in the region require effective security measures and control over maritime crimes.

3-4: Multiple Dimensions for Combating Maritime Crimes

In this section, with the aim of achieving an effective and indigenous model for combating maritime crimes in waters under the sovereignty of the Islamic Republic of Iran, taking into account the factors influencing the formation and expansion of crimes, and utilizing extensive data from relevant maritime laws and conventions as well as analyzing the current situation, effective strategies are delineated to successfully counter crimes in order to enhance security and achieve sea-based development in various dimensions, components, and indicators.

The dimensions of combating maritime crimes represent the diverse aspects that must be

simultaneously and coherently addressed for countermeasures and policies to be effective. These dimensions provide the foundational framework for designing strategies, policies, operational actions, and national and international cooperation.

3-4-1: Policy Dimension

Policy-making plays a fundamental and essential role in combating maritime crimes, serving functions such as guiding development pathways, managing resources, addressing challenges, creating governance cohesion, and building trust among the national and regional populations. Therefore, the policy dimension in combating maritime crimes must be prioritized due to its central role in directing, coordinating, and effectively implementing security, legal, economic, and social measures. Clearly, without transparent, coherent, and forward-looking policies, fragmented and short-term actions cannot have a lasting impact on reducing maritime crimes.

Policy measures within the policy dimension for combating maritime crimes focus on three key components: **“formulating policies and establishing a coordinated maritime governance structure, providing mechanisms for performance monitoring, and conducting research and studies to refine policies.”**

A) Formulating Policies and Establishing a Coordinated Maritime Governance Structure

- Developing a comprehensive policy document for combating maritime crimes with a development-oriented approach
- Integrated policy-making for maritime affairs and national division of labor (clarifying and separating institutional responsibilities)
- Incorporating maritime crime prevention into five-year development plans
- Policy-making in education, awareness-raising, and capacity-building for maritime stakeholders
- Establishing the Supreme Council for Maritime Security and a Joint

Maritime Operations Center for combating maritime crimes

- Allocating stable budgets and financial resources for maritime crime prevention

B) Performance Monitoring

- Establishing intelligent systems for monitoring and reporting maritime crimes and countermeasures
- Launching an integrated monitoring system for the performance of naval forces, ports, customs, and coastal units
- Publishing annual reports on the status of maritime crimes and the performance of responsible institutions
- Establishing a system for receiving public reports and complaints regarding misconduct
- Ensuring transparency and public accountability
- Creating feedback mechanisms for local communities and stakeholders (designing participatory mechanisms for public oversight)

C) Policy Refinement

- Strengthening specialized research centers in the fields of maritime law, maritime security, and sea-based policy-making
- Establishing scientific and research advisory councils within maritime and security institutions
- Creating databases and intelligence systems to analyze maritime crimes for trend analysis and policy guidance
- Facilitating effective communication between researchers and policymakers (joint meetings, scientific conferences, etc.)
- Securing research funding from government or private sectors
- Conducting comparative studies with countries successful in maritime security
- Developing academic and interdisciplinary programs related to maritime security

- Periodically reviewing policies based on monitoring and research findings

3-4-2: Economic Dimension

The economic dimension in combating maritime crimes is one of the key and strategic aspects, as maritime crimes such as piracy, smuggling, illegal fishing, and the destruction of maritime infrastructure can have detrimental effects on both national and regional economies. Addressing these crimes not only contributes to security but also supports the sustainable development of a sea-based economy. Below, the main components and indicators of the economic dimension in combating maritime crimes are elaborated across three subcomponents: *“supporting coastal communities through sustainable employment, investing in coastal areas, and increasing the country’s share in maritime transport.”*

A) Supporting Coastal Communities through Sustainable Employment

- Creating sea-based jobs (fishing and aquaculture, maritime transportation, ports and logistics services, marine tourism and coastal recreation, shipbuilding and ship repair industries)
- Ensuring community access to supportive infrastructure and public services (roads, electricity, water, internet, local piers in coastal areas, and direct marketplaces for fishery products and handicrafts)
- Providing technical and vocational training for coastal communities (sustainable fishing practices, maritime safety, marine mechanics, boat navigation)
- Facilitating community participation in the protection of marine resources and coastal areas
- Supporting local and indigenous investors in development projects
- Establishing fisheries insurance, seasonal unemployment insurance, and compensation funds during crises

B) Investing in Coastal Areas

- Designing developed maritime zones (focusing on legal fishing, marine tourism, and offshore industries)
- Developing small local ports and fish landing centers under legal supervision
- Maximizing and optimizing the utilization of marine ecosystem capacities, resources, and reserves
- Creating a secure environment for domestic and foreign investment (in transportation, ports, fisheries, marine energy, and tourism)
- Facilitating the safe passage of ships along international trade routes and preventing disruptions in global supply chains
- Protecting strategic exports (oil, gas, minerals) and essential imports
- Allocating financial resources toward infrastructure development rather than constant threat mitigation
- Preventing tax evasion and smuggling via maritime routes
- Reducing financial losses to ships, cargo, ports, and infrastructure
- Removing obstacles to transforming the country into a secure maritime and transit hub in the region
- Reducing marine transport insurance costs in high-risk areas

C) Increasing the Country’s Share in Maritime Transport

- Expanding equipped berths for rapid loading and unloading of cargo in ports and reducing customs clearance times
- Attracting domestic and foreign investment in maritime and multimodal transport
- Promoting integration of multimodal transport (sea-rail-road)
- Increasing the country’s share in regional and international transit routes
- Facilitating customs procedures and implementing smart monitoring with integrated customs management systems
- Ensuring physical and cyber protection of transport routes and safeguarding infrastructure

- Managing maritime crimes or piracy along routes leading to national ports
- Utilizing modern technologies in the management of multimodal transportation

3-4-3: Military and Security Dimension

In recent years, seas and territorial waters have been recognized as one of the most important arenas for competition, threats, and opportunities at both regional and international levels. The increase in illegal activities such as smuggling of goods and narcotics, illegal migration, piracy, and even terrorist threats in maritime areas has highlighted the necessity of adopting a comprehensive approach to combat maritime crimes. In this context, the military and security dimension is considered one of the most effective and efficient tools for maintaining order, controlling threats, and exercising sovereignty at sea.

Naval forces, equipped with a cohesive organizational structure, advanced equipment, and rapid reaction capabilities, play a vital role in protecting maritime borders, ensuring shipping security, safeguarding marine resources, and countering organized threats. Without the active and deterrent presence of these forces, addressing maritime crimes—especially in sensitive and strategic areas—would face serious challenges. Therefore, examining and clarifying the role and importance of the military and security dimension in maritime crime prevention strategies is an undeniable necessity for protecting national interests, promoting sustainable sea-based development, and enhancing regional security. This dimension is further analyzed through two components: **“Strengthening Naval and Security Forces”** and **“Enhancing the Security of Ports and Maritime Facilities.”**

A) Strengthening Naval and Security Forces

- Equipping and reinforcing naval forces for effective presence in territorial and international waters (for escort operations and crime prevention).
- Strengthening and organizing coastal patrols and establishing joint patrols with allied countries.
- Utilizing warships, patrol vessels, maritime reconnaissance aircraft, and drones for continuous monitoring and surveillance.
- Employing modern and advanced radar, sonar, and satellite technologies to track maritime activities.
- Establishing rapid reaction forces to immediately counter maritime crimes.
- Providing specialized training for personnel in countering ambush operations and asymmetric threats.
- Demonstrating continuous military presence and power through naval exercises focused on maritime security.
- Exchanging information among countries and international organizations to identify organized criminal groups.
- Participating in international operations to protect shipping lanes.
- Updating and advancing the technology of deployed equipment.
- Establishing active naval bases along strategic coasts and developing military docks and naval command centers.
- Increasing the military budget allocated to the navy (for research, development, and modernization of naval equipment).
- Preparing scenarios to counter ambush operations in maritime environments.

B) Enhancing the Security of Ports and Maritime Facilities

- Creating a central database and sharing security information among relevant authorities.
- Strengthening security measures in ports, docks, and maritime transport terminals.
- Designating restricted areas and access levels for personnel and visitors.
- Strictly controlling loading, unloading, and movement of staff and vessels to prevent infiltration and criminal activities.
- Implementing entry and exit control systems for personnel, vehicles, and goods (e.g., smart cards, security gates, and CCTV).
- Deploying trained security personnel in ports and conducting regular land and maritime patrols within and around port areas.
- Establishing rapid response units for emergency situations.
- Developing maritime applications for reporting by local fishermen and the public.
- Using X-ray machines, container scanners, and equipment for detecting narcotics and explosives.
- Scanning and monitoring shipping documents with intelligent systems.
- Implementing policies and software to counter cyberattacks and information intrusions.
- Training staff in cybersecurity threats and adherence to information security protocols.
- Conducting joint drills with emergency services, firefighting units, maritime police, and medical teams.
- Cooperating with international organizations such as IMO, IAPH, and INTERPOL on port and facility security.

- Promoting a security culture among port personnel and users.
- Developing coastal defense systems and safeguarding sensitive maritime facilities

3-4-4: Legal Dimension

The legal dimension in combating maritime crimes is one of the most important pillars for ensuring maritime security and effectively addressing phenomena such as piracy, human and drug trafficking, deliberate marine pollution, and maritime terrorism. This dimension is strengthened through the development of domestic laws,

- the utilization of international treaties, and the expansion of judicial cooperation among countries. In this study, this dimension is examined through two components: **“Strengthening the Legal Dimension and Maritime Laws”** and **“Legal and Judicial Training.”**

A) Strengthening the Legal Dimension and Maritime Laws

- Drafting and amending national laws related to maritime conflicts and procedures for dealing with maritime criminals.
- Criminalizing maritime offenses under domestic law and increasing penalties for maritime crimes in national criminal codes.
- Continuous drafting and revision of criminal and administrative laws related to maritime offenses.
- Establishing specialized judicial branches in coastal regions with trained maritime judges.
- Amending executive regulations in the areas of border security, fishing, environmental protection, and maritime customs.

- Prescribing deterrent penalties and enabling the seizure of vessels and equipment of violators.
- Aligning domestic laws with international conventions.
- Facilitating legal cooperation among regional countries for handling maritime crimes, detaining and prosecuting criminal ships, and extraditing offenders.
- Enacting protective laws for naval forces, seafarers, fishing communities, and legitimate maritime operators.

B) Legal and Judicial Training

- Designing and implementing specialized courses to increase maritime actors' awareness of maritime laws and crimes.
- Integrating maritime law topics into higher education and university curricula.
- Developing academic programs or specializations in maritime law and international maritime law within law schools.
- Encouraging the production of theses and scientific research on maritime laws and rights related to maritime crimes.
- Utilizing the educational capacities of international organizations and training institutions.
- Leveraging technology for virtual education on maritime crime laws.
- Supporting specialized publications and research workshops.

3-4-5: International Dimension

Maritime crimes are among the growing challenges facing the global community. Offenses such as piracy, human and drug trafficking, maritime terrorist attacks, and violations of countries' sovereign rights not only threaten national security but also endanger regional and international

security. The transboundary and international nature of these crimes necessitates addressing them through international cooperation and mechanisms. In fact, no country can fully contain and control these threats on its own. It is essential to adopt a coordinated and coherent approach to effectively combat this phenomenon by leveraging the capacities of international organizations, agreements, maritime law conventions, and regional and multilateral cooperation.

The international dimension of combating maritime crimes is presented through two components: **“Strengthening Regional and International Cooperation”** and **“Maritime Diplomacy.”**

A) Strengthening Regional and International Cooperation

- Establishing and developing common regional and international legal frameworks.
- Drafting bilateral or multilateral agreements for information exchange and combating maritime crimes (e.g., piracy, drug and human trafficking, illegal fishing).
- Harmonizing domestic laws with international instruments, including the United Nations Convention on the Law of the Sea (UNCLOS).
- Participating in initiatives such as the Indian Ocean Maritime Security Program.
- Utilizing the capacities of the United Nations and international maritime organizations for training, technical assistance, and equipment provision.
- Developing economic, trade, and investment cooperation in major knowledge-based infrastructure, production, and service projects with neighboring and other countries.

- Ensuring the dissemination of necessary information to members of relevant conventions.

B) Maritime Diplomacy

- Establishing naval diplomacy channels.
- Creating permanent communication lines among naval forces for coordination during crises or maritime crimes.
- Concluding bilateral and multilateral maritime agreements for joint patrols, information exchange, and collaboration against threats.
- Using regional forums to develop operational and legal cooperation protocols.
- Actively participating in international maritime organizations to leverage opportunities provided by these institutions.
- Exchanging technical and diplomatic maritime delegations to enhance cooperation and reduce misunderstandings.
- Sending naval and maritime law students and experts to reputable international institutions and centers.
- Hosting international conferences and workshops on maritime law, maritime security, and crime prevention.
- Providing port facilities to vessels of friendly countries to strengthen maritime relations and cooperation.
- Investing jointly in ports and maritime corridors to enhance interaction and reduce opportunities for crime.
- Utilizing international media to showcase the country's efforts in combating maritime crimes.
- Organizing cultural programs and specialized maritime exhibitions to

increase regional awareness and interaction.

3-4-6: Environmental Dimension

Seas and oceans play a crucial role in sustaining life, maintaining ecological balance, supporting the economy, and ensuring food security. They are directly linked to the sustainability of natural resources, the livelihoods of coastal communities, and national security. However, despite these values, marine ecosystems are increasingly threatened by maritime crimes. It is evident that without attention to the sustainability of the marine environment, any countermeasures against crimes will be ineffective. Therefore, understanding the components and indicators of this dimension is essential for policy development and implementation. In this study, the components of the environmental dimension are addressed under “**Combating Oil Pollution and Waste Disposal**,” “**Coastal Protection and Conservation**,” and “**Marine Biodiversity Conservation**.”

A) Combating Oil Pollution and Waste Disposal

- Enforcing compliance with international conventions to prevent marine pollution from oil.
- Using double-hulled ships to reduce the risk of spills.
- Installing oil leak sensors on pipelines and platforms, and conducting periodic inspections of offshore oil equipment.
- Training ship and platform personnel and forming specialized teams for rapid oil spill response.
- Utilizing oil pollution response equipment (absorbents, floating containment booms, and dispersants) to contain oil slicks.
- Establishing cooperation agreements for joint responses to cross-border spills.
- Strictly monitoring the prohibition of discharging harmful substances,

plastic waste, toxic materials, and sewage from ships.

- Requiring ships to deliver waste to coastal stations.
- Tracking vessels and imposing financial penalties or seizing ships that violate regulations.
- Employing modern technologies to detect waste dumping or oil slicks.
- Developing contingency plans for accidental environmental pollution at sea.
- Establishing national and provincial plans for rapid and effective response to oil pollution incidents.
- Reviewing and updating necessary equipment.
- Implementing measures to prevent pollution from offshore exploration activities.
- Controlling pollution from land reclamation, dredging, and coastal dredging activities.
- Conducting scientific and technical assessments of all coastal activities with potential environmental impact.
- Coordinating with civil aviation pilots to report oil spills and other pollution.
- Prohibiting the incineration of waste at sea.

B) Coastal Protection and Conservation

- Organizing coastal cleanup campaigns.
- Encouraging the use of environmentally friendly materials and replacing plastic packaging with recyclable or biodegradable alternatives.
- Raising awareness among ship crews and coastal communities about the harmful effects of plastic waste on marine ecosystems.
- Establishing public reporting systems for environmental issues.

- Providing facilities in ports and coastal areas to receive waste from ships and tourists.

C) Marine Biodiversity Conservation

- Establishing and expanding marine protected areas for endangered species and vulnerable ecosystems.
- Combating marine pollution (reducing plastic pollution, managing municipal and industrial wastewater, and preventing oil pollution).
- Promoting sustainable fishing (setting quotas based on scientific assessments of fish stocks, banning the capture of endangered species, and using environmentally friendly fishing gear).
- Protecting sensitive habitats (coral reefs, mangroves, sea grass beds that serve as breeding and nursery grounds).
- Preventing damage to seas and sensitive areas from construction projects, excessive tourism, and pollution.
- Controlling invasive marine species and preventing the introduction of non-native species.
- Conducting thorough inspections of ships and monitoring ballast water.
- Enhancing ecosystem resilience to environmental changes through scientific management.
- Increasing environmental literacy in schools, media, and local communities.
- Investing in scientific research to better understand marine biodiversity.
- Supporting local communities in implementing indigenous marine conservation projects.
- Participating in relevant international conventions (biodiversity, trade in endangered species, etc.) and leveraging

international experience for
regional joint programs

3-4-7: Cultural and Social Dimension

In the cultural and social dimension, the primary goal is to institutionalize a culture of public participation in maritime security as one of the key pillars for achieving **“sea-based development”** and sustainably combating maritime crimes, marine environmental pollution, and security threats. Public participation, especially by coastal communities, fishermen, seafarers, and maritime economic actors, has both a preventive aspect and facilitates better cooperation with governmental institutions.

Institutionalizing a culture of public participation in maritime security requires a set of cultural and social strategies. The main components and their key indicators are presented under two categories: **“Public Awareness of Coastal Residents”** and **“Local Participation in Crime Control.”**

A) Public Awareness of Coastal Residents

- Organizing educational courses and local workshops for fishermen, coastal residents, and seafarers on the importance of the sea and its threats.
- Developing multimedia educational content on maritime threats and the role of people in prevention.
- Integrating concepts of sea protection and public participation into school textbooks in coastal areas.
- Producing artistic works (documentaries, clips, theater, paintings) and advertising campaigns focused on maritime security.

- Highlighting positive roles of people in detecting crimes or preventing harm to the sea.
- Engaging local figures, community leaders, and indigenous artists to promote sea-related messages.
- Using religious teachings about preserving the blessings of the sea and social responsibility.
- Utilizing Friday sermons, mosque gatherings, and religious meetings to foster a culture of participation.
- Strengthening and developing internship programs to reduce crimes.
- Involving people in marine environmental protection programs (e.g., beach cleanups).
- Establishing counseling centers in coastal areas.
- Increasing the presence of maritime regulatory bodies among local communities for better awareness.
- Developing educational apps on maritime crimes.

B) Local Participation in Crime Control

- Creating cooperative networks among fishermen, boat operators, environmental guards, and border guards.
- Collecting public reports through online or SMS-based systems.
- Establishing local councils for sea protection in coastal villages and cities.
- Deploying local response stations in ports and docks.
- Highlighting successful examples of public participation in maritime security.
- Creating formal and rapid communication channels between the public and the navy, port authorities, and maritime police command.

- Organizing festivals or competitions emphasizing the public's role in maritime security.
- Conducting periodic meetings between the public and maritime officials to hear opinions, concerns, and suggestions.
- Allocating budgets and providing material and moral incentives for community-based cooperation.
- Engaging local communities in monitoring pollution, protecting marine ecosystems, and controlling smuggling.
- Supporting local fishermen to prevent their recruitment into trafficking networks.
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3-5: Proposed Model for Combating Maritime Crimes in Iran

Considering domestic challenges and international experiences, the proposed model for the Islamic Republic of Iran is based on seven key dimensions: policy-making, economic, military–security, legal, international, environmental, and cultural–social . This proposed model is designed to be comprehensive, multi-layered, and cross-sectoralrelying on the interaction between security, development, technology, and diplomacy. Its objective is to establish a sustainable, efficient, and sea-oriented system for combating maritime crimes. Successful implementation of this model requires political will, reform of existing structures, provision of financial resources, and the training of human resources.

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| Policy dimension | Formulating policies and creating a coordinated maritime governance structure | <ol style="list-style-type: none"> 1) Drafting a comprehensive policy document for combating maritime crimes with a development-oriented approach 2) Integrated policymaking in maritime affairs and national division of responsibilities (clarification and separation of institutional duties) 3) Incorporating the fight against maritime crimes into five-year development plans 4) Policymaking in the field of education, information dissemination, and empowerment of maritime stakeholders 5) Establishing the Supreme Council of Maritime Security and the Joint Maritime Operations Center for combating maritime crimes 6) F- Allocating stable budgets and financial resources for combating maritime crimes |
| | Performance monitoring | <ol style="list-style-type: none"> 1) Establishing intelligent monitoring and reporting systems for crime statistics and countermeasures 2) Launching an integrated system for supervising the performance of naval forces, ports, customs, and coastal units 3) Publishing annual reports on the status of maritime crimes and the performance of responsible agencies 4) Launching a system for receiving public reports and complaints regarding misconduct 5) Ensuring transparency and public accountability 6) Creating a feedback system from local communities and stakeholders (designing mechanisms for public participation in oversight) |
| | Reform policies | <ol style="list-style-type: none"> 1) Strengthening specialized research centers in the fields of maritime law, maritime security, and sea-oriented policymaking 2) Establishing a scientific-research advisory council within maritime and security institutions 3) Creating databases and intelligence systems for analyzing maritime crimes in order to study trends and patterns 4) Establishing effective communication between researchers and policymakers (joint meetings, scientific conferences, etc) 5) Securing research funding from government or the private sector 6) Conducting comparative studies with countries successful in maritime security 7) Expanding university and interdisciplinary education related to maritime security 8) Periodic review of policies based on monitoring and research findings |
| Economic dimension | Supporting coastal communities in the form of creating sustainable employment | <ol style="list-style-type: none"> 1) Creating sea-based jobs (fishing and aquaculture, maritime transport, ports and logistics services, marine tourism and coastal recreation, shipbuilding and ship repair industries) 2) Ensuring public access to supportive infrastructure and public services (roads, electricity, water, internet, and local docks in coastal areas, as well as direct markets for fishery products and handicrafts) 3) Providing technical and vocational training for coastal communities (programs on sustainable fishing, maritime safety, marine mechanics, and boat navigation) 4) Enabling public participation in the protection of marine resources and coastal areas 5) Supporting local and indigenous investors in development projects 6) Establishing fishery insurance, seasonal unemployment insurance, and compensation funds for crisis situations |
| | Investing in coastal areas | <ol style="list-style-type: none"> 1) Designing advanced maritime zones (focused on legal fishing, marine tourism, and offshore industries) 2) Developing small local ports and fish landing centers under legal supervision 3) Maximizing and optimizing the use of capacities, resources, and reserves of the marine ecosystem 4) Creating a secure environment for domestic and foreign investment (in shipping, ports, fisheries, marine energy, and tourism) |

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| | | 5) Facilitating the safe passage of vessels along international trade routes and preventing disruptions to the global supply chain 6) Protecting the export of strategic goods (oil, gas, minerals) and the import of essential commodities 7) Prioritizing financial resources for infrastructure development instead of continuous crisis management against threats 8) Preventing tax evasion and smuggling of goods via maritime routes 9) Reducing financial losses to ships, cargo, ports, and infrastructures 10) Removing obstacles to transforming the country into a safe regional maritime and transit hub 11) Lowering maritime transport insurance costs in high-risk areas |
| | Increasing the country's share in maritime transportation | 1) Increasing the number of equipped docks for faster loading/unloading of goods in ports and reducing customs clearance time 2) Attracting domestic and foreign investment in maritime and multimodal transport 3) Promoting integration of multimodal transport (maritime–rail–road) 4) Expanding the country's share in regional and international transit routes 5) Facilitating customs processes and implementing smart monitoring through integrated customs management systems 6) Ensuring physical and cyber protection of transport routes and safeguarding infrastructures 7) Managing maritime crimes or piracy along routes leading to national ports 8) Utilizing modern technologies in the management of multimodal transport |
| Military and security dimension | Strengthening military and maritime security forces | 1) Equipping and strengthening naval forces for effective presence in territorial and international waters (for escort operations and combating crimes) 2) Enhancing and organizing coastal patrols and conducting joint patrols with allied countries 3) Utilizing warships, patrol vessels, maritime reconnaissance aircraft, and drones for continuous monitoring and surveillance 4) Employing advanced radar, sonar, and satellite technologies for tracking activities at sea 5) Establishing rapid response forces to immediately counter maritime crimes 6) Providing specialized training for forces in combating surprise operations and asymmetric threats 7) Demonstrating power and continuous military presence through naval exercises focused on maritime security 8) Exchanging information between countries and international organizations to identify organized criminal groups 9) Participating in international operations to protect shipping lanes 10) Modernizing and upgrading technologies and equipment used in naval operations 11) Establishing active naval bases in strategic coastal areas and developing military docks and maritime command centers 12) Increasing the share of the defense budget allocated to the navy (research, development, and modernization of naval equipment) 13) Developing contingency scenarios for countering surprise operations in the maritime domain |
| | Improving the security of ports and maritime facilities | 1) Establish a central database and share security information among relevant authorities 2) Strengthen security measures at ports, docks, and maritime transport terminals 3) Define restricted areas and access levels for staff and visitors 4) Strictly monitor loading, unloading, and the movement of personnel and ships to prevent infiltration and criminal activities 5) Implement access control systems for people, vehicles, and goods (e.g., smart cards, security gates, and CCTV cameras) |
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| | | 6) Deploy trained security personnel at ports and conduct regular land and sea patrols within and around the port area 7) Maintain a rapid response unit to handle emergency incidents 8) Develop maritime applications for public reporting, including local fishermen 9) Utilize X-ray machines, container scanners, and equipment for detecting drugs and explosives 10) Scan and control bills of lading and transport documents using intelligent systems 11) Implement policies and software to counter cyberattacks and information breaches 12) Train staff on cyber threats and adherence to information security protocols 13) Conduct joint drills with rescue teams, fire departments, maritime police, and emergency services 14) Cooperate with international organizations such as IMO, IAPH, and INTERPOL on port and facility security 15) Foster a security culture among port staff and users 16) Develop coastal defense systems and protect sensitive maritime facilities. |
| Legal dimension | Strengthening the legal dimension and maritime laws | 1) Draft and amend national laws related to maritime conflicts and the handling of maritime criminals 2) Criminalize maritime offenses in domestic law and increase penalties for maritime crimes in the country's criminal legislation 3) Continuously draft and review criminal and regulatory laws related to maritime offenses 4) Establish specialized judicial branches in coastal areas with training for judges in maritime law 5) Revise executive regulations related to border control, fishing, environmental protection, and maritime customs 6) Provide deterrent punishments, including the possibility of seizing vessels and equipment of offenders 7) Ensure alignment with international conventions 8) Facilitate legal cooperation among regional countries for addressing maritime crimes, seizing and prosecuting criminal vessels, and extraditing offenders 9) Enact supportive laws for coast guard personnel, sailors, the fishing community, and legitimate maritime actors |
| | Legal and judicial education | 1) Design and implement specialized courses to raise awareness among maritime actors about maritime laws and crimes 2) Integrate maritime law topics into higher education and university curricula 3) Develop academic programs or specializations in maritime law and international maritime law in law schools 4) Encourage theses and scientific research on maritime laws and crimes 5) Utilize the educational capacity of international organizations and training institutions 6) Use technology for virtual training on maritime crime laws 7) Support specialized publications and research workshops |
| International dimension | Strengthening regional and international cooperation | 1) Establish and develop common regional and international legal frameworks 2) Draft bilateral or multilateral agreements for information exchange and combating maritime crimes (e.g., piracy, drug and human trafficking, illegal fishing) 3) Harmonize domestic laws with international instruments, including the United Nations Convention on the Law of the Sea (UNCLOS) 4) Participate in mechanisms such as the Indian Ocean Maritime Security Initiative 5) Utilize the capacity of the United Nations and international maritime organizations for training, technical assistance, and equipment provision 6) Develop economic, trade, and investment cooperation in large-scale and knowledge-based infrastructure, production, and service projects with neighboring and other countries 7) Ensure dissemination of necessary information to members of relevant |

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| | | international conventions |
| | Maritime diplomacy | <ol style="list-style-type: none"> 1) Establish naval diplomacy initiatives 2) Create permanent communication lines between naval forces to coordinate during crises or maritime crimes 3) Conclude bilateral and multilateral maritime agreements for joint patrols, information exchange, and threat mitigation 4) Utilize regional forums to develop operational and legal cooperation protocols 5) Actively participate in international maritime organizations to leverage available opportunities 6) Exchange naval technical and diplomatic delegations to enhance cooperation and reduce misunderstandings 7) Send naval students and maritime law experts to reputable global centers and countries 8) Organize international conferences and workshops on maritime law, maritime security, and crime prevention 9) Provide port facilities to friendly countries' vessels to strengthen maritime relations and cooperation 10) Engage in joint investments in ports and maritime corridors to increase interaction and reduce crime opportunities 11) Use international media to showcase national efforts in combating maritime crimes 12) Conduct cultural programs and specialized maritime exhibitions to enhance regional awareness and interaction |
| Environmental dimension | Dealing with oil pollution and waste disposal | <ol style="list-style-type: none"> 1) Enforce compliance with international conventions for the prevention of marine pollution by oil 2) Use double-hulled vessels to reduce the risk of spills 3) Install oil leak sensors on pipelines and offshore platforms, and conduct regular inspections of marine oil equipment 4) Train ship and platform personnel and establish specialized teams for rapid oil spill cleanup 5) Utilize oil pollution control equipment (e.g., absorbents, floating containment booms, and dispersant chemicals) to contain oil slicks 6) Establish cooperation agreements for joint response to cross-border oil spills 7) Strictly monitor the prohibition of discharging harmful substances, plastic waste, toxic materials, and ship wastewater into the sea 8) Require ships to deliver waste to shore-based stations 9) Track vessels and impose financial penalties or seize ships that violate regulations 10) Use modern technologies to detect illegal waste discharge or oil slicks 11) Maintain contingency plans for accidental marine environmental pollution 12) Develop national and provincial plans for rapid and effective response to oil pollution incidents 13) Review and update necessary equipment regularly 14) Implement measures to prevent pollution from offshore exploration activities 15) Monitor and control pollution from land reclamation, dredging, and coastal dredging activities 16) Conduct scientific and technical assessments for all coastal activities that may pose environmental risks 17) Coordinate with civil aviation pilots to report oil spills and other marine pollution incidents 18) Prohibit the burning of waste at sea |

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| | Coastal protection and conservation | <ol style="list-style-type: none"> 1) Organize coastal cleanup campaigns across the country 2) Promote the use of environmentally friendly materials and replace plastic packaging with recyclable or biodegradable alternatives 3) Raise awareness among ship personnel and coastal communities about the harmful effects of plastic waste on marine ecosystems 4) Establish public reporting systems for waste-related issues 5) Provide facilities at ports and beaches for collecting waste from ships and tourists |
| | Protecting marine biodiversity | <ol style="list-style-type: none"> 1) Establish and develop marine protected areas for endangered species and vulnerable ecosystems 2) Combat marine pollution (reduce plastic pollution, manage urban and industrial wastewater, and prevent oil pollution) 3) Promote sustainable fishing (set quotas based on scientific stock assessments, prohibit harvesting endangered species, and use environmentally friendly fishing gear) 4) Protect sensitive habitats (coral reefs, mangroves, seagrass beds that serve as breeding and nursery grounds for many species) 5) Prevent degradation of seas and sensitive areas due to construction projects, uncontrolled tourism, and pollution 6) Address invasive marine species and prevent the introduction of non-native species 7) Conduct thorough ship inspections and control ballast water discharge 8) Enhance ecosystem resilience to environmental changes through scientific management 9) Increase environmental literacy in schools, media, and local communities 10) Invest in scientific research to improve knowledge of marine biodiversity 11) Support local communities in implementing community-based marine conservation projects 12) Join relevant international conventions (e.g., biodiversity, trade in endangered species) and leverage international experiences while implementing regional joint programs 13) . |
| Cultural and social dimension | Public awareness of coastal residents | <ol style="list-style-type: none"> 1) Organize local training courses and workshops for fishermen, coastal residents, and sailors on the importance of the sea and its threats 2) Develop multimedia educational content on maritime threats and the role of the public in prevention 3) Integrate concepts of marine conservation and public participation into school curricula in coastal areas 4) Produce artistic works (documentaries, clips, theater, paintings) and awareness campaigns focused on maritime security 5) Highlight the positive role of the public in detecting crimes or preventing harm to the sea 6) Engage local figures, community leaders, and artists to promote messages related to people and the sea 7) Use religious teachings to emphasize the preservation of marine resources and social responsibility 8) Leverage Friday sermons, mosque gatherings, and community assemblies to foster participatory culture 9) Strengthen and expand apprenticeship programs to reduce maritime crimes 10) Involve the public in marine environmental protection activities (e.g., coastal cleanups) 11) Establish advisory centers in coastal areas 12) Increase the presence of maritime regulatory bodies among the public to raise awareness 13) Develop educational apps focused on maritime crimes |

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| | Local participation in crime control | <ol style="list-style-type: none">1) Establish a collaboration network among fishermen, boat operators, environmental rangers, and border guards2) Collect public reports through online or SMS-based reporting systems3) Form local marine protection councils in coastal villages and towns4) Deploy local response stations at ports and docks5) Showcase successful examples of public participation in maritime security6) Create official and rapid communication channels between the public and the navy, port authorities, and maritime police7) Organize festivals or competitions highlighting the public's role in maritime security8) Hold periodic meetings between citizens and maritime officials to hear concerns, opinions, and suggestions9) Allocate budgets and provide material or moral incentives for community-based cooperation10) Engage local communities in pollution monitoring, ecosystem protection, and anti-smuggling efforts11) Support local fishermen to prevent their recruitment into smuggling networks |
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Figure 1: Model for combating maritime crimes in the waters of the Islamic Republic of Iran with the aim of promoting security and sea-based development (Researcher)

4. Discussion and Conclusion

Maritime crimes, with their wide scope and diversity, pose a serious threat to national security, the economy, the environment, and sustainable development of coastal countries, particularly the Islamic Republic of Iran. The current situation indicates that despite the existence of strategic maritime capacities, Iran's institutional framework for combating these crimes faces challenges such as lack of coordination, absence of advanced technologies, and a deficiency of a development-oriented perspective. International experiences confirm that successful maritime governance is based on integrated approaches, utilization of modern technologies, regional cooperation, and linking security with economic development. Accordingly, and considering the absence of comprehensive research on this topic, the proposed model in this study is based on establishing a coordinated institutional structure, enhancing smart monitoring, fostering active regional collaborations, and integrating security policies with sea-oriented development. Implementing this model can play an effective role in reducing maritime crimes and enhancing Iran's maritime position in the region.

4-1. Recommendations

Based on the research findings, the following measures are proposed to

enhance the fight against maritime crimes in Iran:

- Establish a **Supreme Council for Maritime Governance**, chaired by the President or the First Vice President, with strategic and coordinating authority.
- Develop a **National Maritime Crime Prevention Document** with a development-oriented approach, which is binding for all relevant institutions.
- The **Ministry of Foreign Affairs** and other responsible bodies should adopt a **balanced and smart foreign policy strategy** aligned with the requirements of Iran's geopolitical position.
- The **Navy of the Army** should establish a **special unit for combating maritime crimes**, considering its presence in international waters.

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