

## Law Enforcement within Maritime Zones of Pakistan: Impediments, Opportunities and Way Forward

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### Abstract

*Oceans are prime geographical entities holding massive volumes of activities including transport of food and nutrition, trade and commerce, communication, and exploration and exploitation of natural resources. There is enormous reliance of states on all these maritime activities. Pakistan, being a significant coastal state of the Indian Ocean Region (IOR) has vast areas as its maritime zones including continental shelf. It is Pakistan's responsibility to ensure law enforcement in order to promote safe navigation and other economic activities. The identification of variables underpinning maritime security in these zones of Pakistan and discussing the gaps in law enforcement as a steady challenge provide this research relevance with the cotemporary era requirements and implementation challenges. This research has been substantiated with the conceptual framework established on the ground of Hobbesian Social Contract Theory and the Agency-Structure approach. Therefore, this research is conferring upon existing maritime laws with the purpose to deal with the gaps and to find solutions to challenges in maritime zones of Pakistan by including social factions to ensure inclusiveness and enhanced efficacy. The research undertaken is qualitative and explanatory, directed at suggestions for better policy making and implementation. The data for the research has been collected through primary, secondary and tertiary sources, in which primary data utilized for this study is based on official, open-source documents, and discussions with practitioners and stakeholders. Secondary data has been collected from academic books, research papers, reports, and newspapers, and tertiary data used for the work undertaken relies on electronic sources.*

**Keywords:** *Maritime Law Enforcement, Indian Ocean Region, Law Enforcement Agencies (LEAs), Social Contract, Agency-Structure.*

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## Introduction

Oceans have emerged as the hub of activities involving geo-economy, geo-strategy and geo-politics in the contemporary era. Being global commons, oceans are considered a realm which is responsibility of every state as the seas and oceans support every state and non-state actor's interests. There are international laws and different legal instruments established to ensure and facilitate effective law enforcement in the maritime zones of littoral states. As, Pakistan is a significant coastal state situated in Western Indian Ocean, it plays a noteworthy role in ensuring human security indirectly and maritime security specifically besides humanitarian assistance wherever situation arises.

Therefore, the research undertaken has been conducted on the fundamentals of following core argument: The enhanced efficacy of maritime law enforcement is imperative for maritime security as well as sustainable socio-economic development, and human security calls for addressing current challenges in maritime zones of Pakistan. This could be achieved by capitalizing on the opportunities offered by prospective maritime environment by supporting burgeoning maritime activities by state and non-state actors.

According to *Maritime Crime: A Manual for Criminal Justice Practitioners, Third Edition* by the Global Maritime Crime Programme of UNODC, the related concerns are divided into three sections. It starts with an overview of maritime legislation and maritime zones; general principles are covered in the second section. These include maritime law enforcement, human rights issues at sea, conduct of boarding, search, and seizure operations and gathering of evidence at sea.

In the third section, specific maritime law enforcement issues are covered including piracy, hostage-taking and kidnapping, maritime terrorism, illegal drug trafficking, migrant smuggling, illicit oil and fuel activities, vessels without nationality, and the roles of ship riders and law enforcement detachments. The booklet provides succinct explanations of legislative frameworks, enforcement procedures, and important factors for practitioners

involved in maritime crime prevention.<sup>1</sup> Hobbes explores the idea of the social contract in this stimulating work, contending that in the natural world, people live in a disorderly and violent world that is governed by their own self-interests. In order to get out of this dangerous situation, people come to a collective accord or covenant, creating the *Leviathan*, a sovereign authority that upholds security and order but at the expense of some individual liberties. Furthermore, *Leviathan* continues to be a key classic in political philosophy, forcing readers to think critically about governance, human nature, and the fine line between freedom and security.<sup>2</sup>

Non-traditional security concerns have become more prevalent in Pakistan's maritime zones. Therefore, Pakistan Maritime Security Agency (PMSA) is essential. Maritime crimes could be combated through monitoring, interdiction efforts, and cooperation with regional and international partners; moreover, PMSA supports the preservation of marine ecosystems, safe trade routes, and maritime security. The complexity of the maritime domain demands an all-encompassing strategy. Legal frameworks, technology investments, and capacity building are all part of PMSA's initiatives. This holistic approach covers socioeconomic variables that contribute to instability as well as security risks.<sup>3</sup>

This research aims at establishing a conceptual framework by using sociological approaches, i.e. Hobbes' Social Contract and Agency-Structure to study and examine role of different stakeholders in the backdrop of Pakistan's maritime security, to discuss impediments in the way of law enforcement, to identify opportunities, and to conceive a way forward in order to make law enforcement effective by mitigating gaps among policy makers,

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<sup>1</sup> Global Maritime Crime Programme, *Maritime Crime: A Manual for Criminal Justice Practitioners - Third Edition* (Vienna, 2020),

[https://www.unodc.org/documents/Maritime\\_crime/GMCP\\_Maritime\\_3rd\\_edition\\_Ebook.pdf](https://www.unodc.org/documents/Maritime_crime/GMCP_Maritime_3rd_edition_Ebook.pdf).

<sup>2</sup> Thomas Hobbes, *Leviathan or the Matter, Forme, & Power of a Common-Wealth Ecclesiasticall and Civil* (London: Andrew Crooke, 1651), 79-98.

<sup>3</sup> Maliha Khan and Muhammad Sadiq, "Non-Traditional Security Threats in Maritime Zones of Pakistan and Law Enforcement by PMSA: An Overview," *Polaris - Journal of Maritime Research* 4 (December 1, 2022): 1, <https://doi.org/10.53963/pjmr.2022.005.4>.

law enforcement agencies (LEAs), and society. This research is explanatory, centred on analysing the impediments of maritime law enforcement in order to seek prospects and way forward. This research is based on understanding the causality of law enforcement. It endeavours to study law enforcement in Pakistan's maritime zones by configuring a framework for determining roles of different stakeholders and to confer upon impediments, opportunities and way forward. To enhance understanding, the case study method has been adopted to discuss the gravity of these issues. Nonetheless, the research undertaken is primary yet collaborative, and academic in nature. This research has been divided into five sections as follows: I. Conceptual Framework, II. Major Impediments in the Way of Maritime Law Enforcement, III. Enhancing Opportunities by Ensuring Maritime Security, IV. Way Forward, and V. Conclusion.

## Conceptual Framework

Since academic underpinning is an inevitable part of this research paper, a conceptual framework is developed in line with social contract theory and agency-structure debate of social sciences to support the argument.

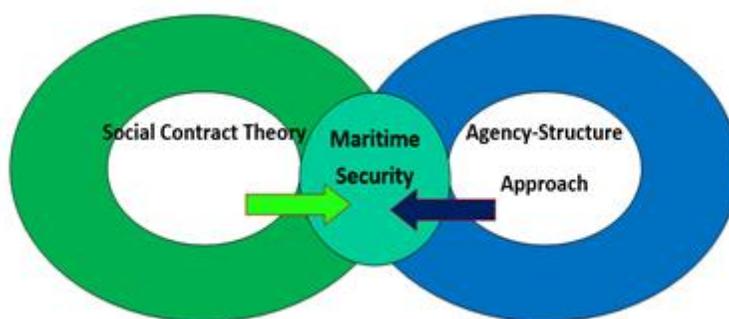


Figure 01: *Conceptual Framework Based on Synthesis of Theoretical Approaches*

Source: Author's compilation.

Societies are the core source of power and approval for states which get reasoning as well as validation of its actions, decisions and policies from their people. The biggest challenge for the state is to provide security to its people which is possible only through social justice, effective law enforcement and establishing order across the factions of society without discrimination. The authority and powers of the state have always been questioned since the beginning when civilizations started getting established. The fundamental question which has been gaining attention of statesmen, scholars, and critics equally since centuries is about the reason due to which societies agree upon formulation and enforcement of rules, regulations and laws. This study endeavours to seek an answer to this question in Thomas Hobbes' social contract theory. Hobbes favours systematic law enforcement to deal with threats to common people in order-less society.<sup>4</sup> He proposes a systematic approach to transfer authority aimed at providing security to societies.<sup>5</sup>

Social contract theory provides the causality of formulation of laws and its enforcement. Hobbes has established that in the absence of rule, regulations and laws, there is a 'state of nature' situation without any governing and ordering of human actions in societies. Hobbes suggests social contract theory, an undocumented understanding in which even the strongest and powerful elements of societies surrender their power before the states. Social contract theory ensures that societies live under certain securities provided through law enforcement to ensure smooth conduct of social behaviours. That describes the causality of law enforcement in societies in which people give up fewer types of freedom knowingly that different levels of authority could be exerted in the way of law enforcement but that is done in exchange of valued outcomes. It provides rationality to political societies in which social consent is important and political will is developed by inclusivity.

For the second theoretical approach within the above conceptual framework, the agency-structure approach is the one that pivots on the relationship of state and society with

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<sup>4</sup> Jason Neidleman, "The Social Contract Theory in a Global Context," *E-International Relations*, October 9, 2012, <https://www.e-ir.info/2012/10/09/the-social-contract-theory-in-a-global-context/>.

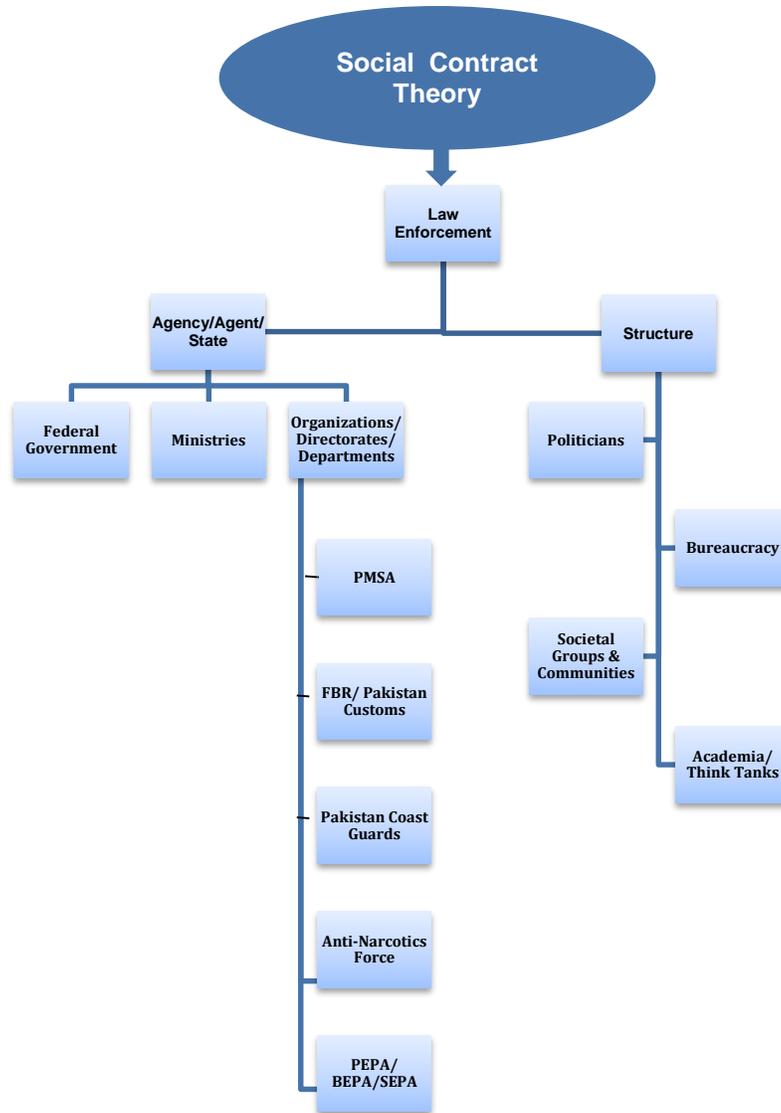
<sup>5</sup> Hobbes, *Leviathan*, 104, 120, 125, 132.

specific focus on individuals as the center point of this debate.<sup>6</sup> For this research, the term ‘agency’ reflects the capacity of different institutions like the state, organizations or people with particular authorities to make things behave in a certain manner or perform staying within the drawn limits or established rules, laws and regulations. Agency has the capability to adopt ways and employ authority. This is a highly processual approach by the responsible as well as the capable to organize social behaviors. For this research, Pakistan is a case study where state is the main agency under which federal government, ministries, and LEAs like Pakistan Maritime Security Agency (PMSA), Pakistan Customs, Pakistan Coast Guards, Anti-Narcotics Force, and different Environmental Protection Agencies are the agents to ensure formulations of policies, regulations and then enforcement for greater advantage.

On the other hand, structure denotes societal elements which make up society and have capability to limit or affect choices and decisions of agency. Structures are considered perpetual in nature and more robust as building blocks of society. They are stakeholders of the process, because law making in isolation will fail the social contract; whereas inclusion of structural pillars will eliminate challenges and constraints in law enforcement. For the study undertaken, politicians, bureaucracy, societal groups and communities, and academia have been identified as foundational pillars of structure in case of Pakistan which is significant to ascertain impediments in the way of maritime law enforcement and the way forward by suggesting few workable options.

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<sup>6</sup> David Imbroscio, “Structure, Agency, and Democratic Theory,” *Polity* 32 (September 1, 1999): 45, <https://doi.org/10.2307/3235333>.



*Figure 02: Infographic of the Suggested Conceptual Framework*

Source: Authors' compilation.

## **Major Impediments in the Way of Maritime Law Enforcement**

The most notable characteristics of the seas and oceans are numerous economic opportunities, their geostrategic significance, and quality to afford different zones with

distinct territorial status. Referring to the case of Pakistan in particular, and other coastal states in general, maritime domain is crucial for socio-economic growth and development of state and society besides maritime security for national and international interest. These factors include the complexity of states' interests in maritime domain, and their direct link with domestic and foreign policies covering different aspects of sea-related activities.<sup>7</sup> Therefore, Pakistan follows a maritime approach which supports state objectives along with being compatible with other economic activities and environmental considerations.<sup>8</sup>

Pakistan's maritime interests include all onshore and offshore sectors including mangroves, coastal development, ports and harbours, shipping, shipbuilding, shipbreaking, marine equipment, dredging, services, fisheries and seafood, maritime tourism, and research and development.<sup>9</sup> For ensuring maritime security through law enforcement, it is important to implement laws, rules and regulations supported by national and international legal frameworks for administrative governance and creation of a conducive environment for commercial and economic activities with political and social acceptance. The maritime laws adopted by Pakistan are derived from international conventions, treaties, agreements as well as local legislations and regulations. It is important that these laws remain sensitive to ground realities due to their impact, quest to sovereignty, and socio-economic significance.

Keeping in view that Pakistan is already trapped in socio-economic challenges which get intense due to interplay of actors and stakeholders, there are significant impediments being faced in the way of maritime law enforcement in maritime zones of Pakistan. The broader yet imperative areas being the most relevant ones, where certain challenges arise and maritime law enforcement is required, can be divided into four categories of laws, i.e.

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<sup>7</sup> European Parliament, "The Common Maritime Policy-Introduction (1)," [https://www.europarl.europa.eu/workingpapers/tran/w14/intro\\_en.htm](https://www.europarl.europa.eu/workingpapers/tran/w14/intro_en.htm).

<sup>8</sup> Zafar Ullah et al., "Improving Coastal and Marine Resources Management through a Co-Management Approach: A Case Study of Pakistan," *Environmental Research Communications* 4, no. 2 (February 2022): 025003, <https://doi.org/10.1088/2515-7620/ac5088>.

<sup>9</sup> Climate Change Government of Pakistan, *A Handbook on Pakistan's Coastal and Marine Resources*, 2016, <http://www.mangrovesforthefuture.org/assets/Repository/Documents/A-Handbook-on-Pakistan-Coastal-and-Marine-Resources.pdf>.

Fisheries Laws, Customs/ Immigration Laws, Environmental Protection Laws/ Regulations, and Labour Laws. The same is depicted as under:

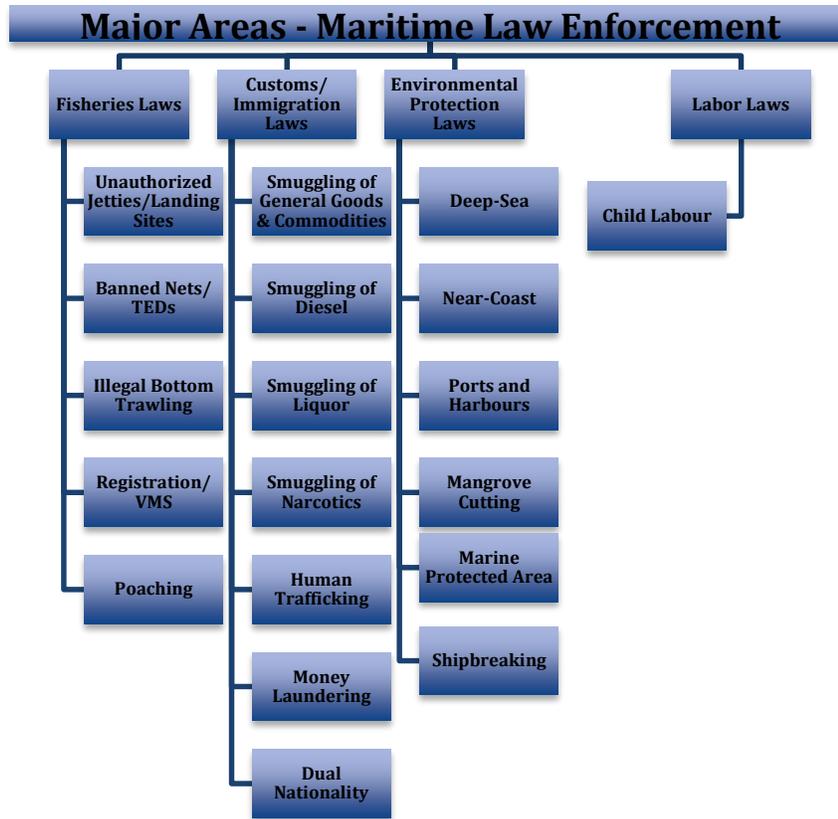


Figure 03: Infographic of Major Law Enforcement Area within Pakistan's Maritime Zone

Source: Authors' compilation

## Fisheries Laws

The broader architecture of Pakistan's marine fisheries sector is quite complex.<sup>10</sup> It, however, holds a major burden of domestic economy and nutrition besides export of produce and processed fish. Institutional landscape of Pakistan's fishery sector consists of several groups of stakeholders with different, diverse and conflicting interests,<sup>11</sup> i.e. public sector stakeholders at federal level as Marine Fisheries Department (MFD), Fisheries Cooperative Society (FCS), Pakistan Maritime Security Agency (PMSA), Korangi Fish Harbour

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<sup>10</sup> National arrangements after collecting of data from different state departments and ministries for implementation, control and enforcement of laws, regulations which regulate fishing and conservation and management measures which must be complied with by Pakistan's own fishing vessels are following: The Exclusive Fishery Zone (Regulation of Fishing) Act 1975 (ACT No. XXX11 of 1975 as amended in 1983, a. The Exclusive Fishery Zone (Regulation of Fishing) Act 1975 (Amendment) Ordinance, 1983(ORDINANCE No. XXIX of 1983); Territorial Waters and Maritime Zones Act, 1976 (ACT No. LXXXII OF 1976), a. Declaration baseline (S.R.O. 714(I) 96, dated 29-08-1996; the Exclusive Fishing Zone (Regulation of Fishing) Rules 1990, promulgated under section 16 of the Exclusive Fishing Zone (Regulation of Fishing) Act 1975. (S.R.O. DD-60(I)/90); Pakistan Fish Inspection and Quality Control Act. 1997 (ACT NO. XXXV OF 1997) a. Pakistan Fish Inspection and Quality Control (amendment) Ordinance, 1998 (ORDINANCE No. XI of 1998); Pakistan Fish Inspection and Quality Control Rules, 1998, promulgated under section 18(1) of Pakistan Fish Inspection and Quality Control Act, 1997. (S.R.O. 739(1)/98) as amended. a. Notifications about cleaning material and laboratories (S.R.O.147 (KE)/198) and S.R.O.73 (KE)/99. b. Notifications about testing laboratories (S. R. O. 179 (KE/98 and S.R.O. 123 (KE) 99). c. Notifications about Turtle Excluder Device(s) (TED) (Notification No.DD73/98/3342-48, dated 24-07-1999 and S.R.O. 104 (KE)/2005). d. Declaration of Fishery Officer by Govt. of Pakistan, S.R.O. 44 (KE)/92; Sindh Fisheries Ordinance. 1980 (SINDH ORDINANCE No. III of 1980); Sindh Fisheries Rule. 1983 (Notification No.5 (3) SO (F)/81. dated 31-07-1983). a. Notification about close season for catching shrimp (Notification No. 5(2) SO(F)/7: II dated 13-07-1982. b. Notification about the use of Turtle Excluder Device(s) in the shrimp trawls net (Notification No.3(5) SO(Fish)91, dated 15-06-1999 and Notification No.3(5) TED/SOL&F/2006, dated 25-01-2006. c. Notification about delegation of powers to Pak Navy as Fishery Officer (Notification No. SO (Fish) 5(6)/AL&F/2000, dated 18-08-2000. d. Notification about Ban nets (Notification No. 5(3) SO(Fish)L&F/2010, dated 22-0-2010. e. Notification about size of mesh (Notification No.5(3) SO(FISH)/L&F/16, dated 18-05-2016. f. Notification about catching size of the fish (Notification No.5(3) SO(FISH)/L&F/16/092, dated 18-05-2016; Balochistan Sea Fisheries Act No. IX, 1971 (Bain Ord. IX of 1971) as amended up to 2014; Balochistan Sea Fisheries Rule, 11V71. (Notification No. SOA (IV) 26/70, dated 12-071971; Korangi Fisheries Harbor Authority Ordinance, 1982 (ORDINANCE of XVI of 1982); Karachi Fisheries Authority Ordinance, 1984 (SINDH ORDINANCE of II OF 1984); Maritime Security Agency Act, 1994 (ACT. No. X of 1994); The Pakistan Coast Guards Act, 1973 (ACT NO. XVIII OF 1973); Merchant Shipping Ordinance, 2001 (Chapter 32 — Fishing Vessels); United Nation Convention on Law of the Sea, 1982 (relevant articles); The Pakistan Animal Quarantine (Import and Export of Animal and Animal Products) Ordinance, 1979 (use for import of fish); and Pakistan Trade Control of Wild Fauna and Flora Act, 2012(endangered species).

<sup>11</sup> Ana Mehak, Yongtong Mu, Muhammad Mohsin, and Xing-Can Zhang, "MCDM-Based Ranking and Prioritization of Fisheries' Risks: A Case Study of Sindh, Pakistan," *Sustainability* 15, no. 11 (2023): 8519, <https://doi.org/10.3390/su15118519>.

Authority (KoFH), and Live Stock & Fisheries Department and Karachi Fisheries Harbour Authority (KFHA) at provincial level. There are private sector stakeholders too such as Sindh Trawler Operator Fisherman Association, and mole owner's/ middlemen groups and bodies like FCS which are supposed to bridge public and private sector interests. At the same time civil society organizations such as international NGOs, International Union for Conservation of Nature (IUCN), World Wildlife Fund (WWF) and organizations of bona fide fishermen with varying degrees of representatives and legitimacy with agendas regarding welfare functions.

The jurisdiction of the federal as well as provincial governments for policy making, management and law enforcement is an important part. According to Clause 36 Fourth Schedule (Federal Legislative List) read with Article 70(4), fishing and fisheries beyond territorial water is a federal subject, whereas within the limits of territorial waters (12 nm) comes under provincial jurisdiction.<sup>12</sup> Jurisdiction issue is the foremost challenge which creates friction between provincial governments of Sindh and Balochistan post 18<sup>th</sup> amendment. Territorial sea, in which more than 70 % (approximately 734.5 km) is Makran coast of Balochistan, (730 to 770 km according to two scales of measurement) while 266.5 km is Sindh coast, had previously been a federal subject for fishing and fisheries-related law enforcement through PMSA. After the 18th amendment, both provinces have grievances against each other as well as PMSA regarding fishing and fisheries laws in territorial and international waters which need to be addressed effectively.<sup>13</sup>

Another significant challenge is establishment of illegal jetties and unauthorized landing sites, which hampers regulations regarding catch, facilities, security, disaster

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<sup>12</sup> The Territorial Waters and Maritime Zones Act, 1976, <https://dgps.gov.pk/SiteImage/Misc/files/The%20Territorial%20Waters%20and%20Maritime%20Zones%20Act%201976.pdf>.

<sup>13</sup> Stig S. Gezelius, "The Problem of Implementing Policies for Sustainable Fishing," in *Making Fisheries Management Work*, ed. Stig S. Gezelius and Jesper Raakjær, vol. 8, *Reviews: Methods and Technologies in Fish Biology and Fisheries* (Dordrecht: Springer Netherlands, 2008), 1–25, [https://doi.org/10.1007/978-1-4020-8628-1\\_1](https://doi.org/10.1007/978-1-4020-8628-1_1).

prevention and preparedness, health issues, and gender considerations. Therefore, effective monitoring and control surveillance mechanisms remain flawed. It affects real data collection by survey of jetties and landing sites to enumerate owners and operators for the purpose of strengthening of inspection, certification and enforcement of other regulations. The standing issues are the use of banned nets, illegal trawling, poaching, and gaps in registration of vessels and Vessel Monitoring System (VMS).<sup>14</sup>

Despite the fact that provincial governments of Sindh and Balochistan have passed Fisheries Ordinances which give them extensive powers to regulate fishing activities including banning illegal gear, closed areas, and restrictive seasons in their respective areas. However, the provincial fishery sectors have no overarching policy framework or wherewithal to implement these regulations and to govern their maritime zones. There are amendments made by provinces regarding mesh size regulations, but suitable strategy has not been developed to include ignored aspects like aquaculture and governance mechanisms to make current policy holistic.

There is lack of regular dialogue among legislature, policy makers, enforcement agencies and private sector operators. It is important to design an advocacy strategy for the provincial ministries to enable acceptance amongst stakeholders about reformed laws. For this activity, Fishery Sector Advisory Body (FSAB) was formulated in August 2021 to frame policies and to regulate the fisheries sector through regular meetings according to Statutory Notification “S. R. O. 981(I)/2021” issued by Ministry of Maritime Affairs, Government of Pakistan on July 26, 2021.<sup>15</sup> However, in the absence of regular meetings, this body has not been as effective as originally conceived.

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<sup>14</sup> “Fishermen Reluctant to Install Tracking System for Being Too Costly,” *The Express Tribune*, August 17, 2019, <https://tribune.com.pk/story/2035595/fishermen-reluctant-install-tracking-system-costly>.

<sup>15</sup> “The Gazette of Pakistan” Ministry of Maritime Affairs, August 3, 2021, [https://moma.gov.pk/SiteImage/Misc/files/SRO\\_981\(I\)\\_2021.pdf](https://moma.gov.pk/SiteImage/Misc/files/SRO_981(I)_2021.pdf).

## Customs/ Immigration Laws

Maritime domain does not only play a noteworthy role in positive global flows, but negative flows also use the seas as a conduit, in which smuggling, trafficking, illegal migrations are the menace being faced by states. These menaces, though infrequent, are significant enough to keep law enforcers always alive to the situation. On maritime front, illegal trade continues and state organs performing duties of customs and immigration remain engaged in implementation of relevant laws and regulations. The impediments arise when there is a mis-declaration of goods and their quantities, and crew; thereafter, implementation agencies come into effect to rectify the problem.

Traditional informal border trade with Iran has been disrupted due to fencing on the border necessitated due to sub-conventional threats. Resultantly, this informal trade has been re-directed towards maritime border. The issue of illegal trade, essentially rooted within socio-economic deprivation among local coastal communities along Makran coast of Pakistan, is a major factor behind illicit practices like smuggling of commodities and goods such as liquor, fuel, tyres, confectionery and cooking oil etc.<sup>16</sup> Likewise, inter-state lineage, dual nationality and familial and business links are other factors playing a role in undocumented economy.

A major impediment in law enforcement in such an environment is consequential domestic political uprising which at times leads to challenges to national security manifested in the form of closure of Gwadar or Karachi Port and Makran Coastal Highway not only restricting national economic activity but defaming the projects under CPEC.<sup>17</sup> To address such impediments at western maritime border of Pakistan, a number of policy initiatives have been undertaken to cater for sensitivities of the local communities. Furthermore, an MoU has been signed between PMSA and Border Security Forces of Iran to enhance mutual

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<sup>16</sup> Rizwan Asif, "How Smuggling Is Bleeding Pakistan's Revenue Dry," *The Express Tribune*, November 24, 2020, <https://tribune.com.pk/story/2273439/how-smuggling-is-bleeding-pakistans-revenue-dry>.

<sup>17</sup> Ali Abbas, "Maritime Security of CPEC," *Pakistan Observer*, July 07, 2023, <https://pakobserver.net/maritime-security-of-cpec/>.

collaboration against illegal activities.<sup>18</sup>

## Environmental Protection Laws

The federal government approved a National Conservation Strategy in 1991 which provided the fundamentals for Pakistan Environmental Protection Act of 1995 (revised in 1997).<sup>19</sup> It covers issues related to marine pollution and conservation of biodiversity in addition to air, water, and soil pollution, and handling of hazardous wastes. In order to exercise the powers and functions established by the Act, the government established Pakistan Environmental Protection Agency (PEPA) and created Pakistan Environmental Protection Council (PEPC) to approve national environmental policies. Similarly, each provincial government has established an Environmental Protection Agency (EPA) to exercise the powers and functions delegated to them by the PEPA. International obligations under Convention on Biodiversity, IUCN and Aichi 11 targets are baseline for national legislation.

Nonetheless, core responsibility stays with relevant governments, either provincial or federal, according to delimitation of maritime jurisdiction established after the 18th amendment.<sup>20</sup> Marine environmental pollution is a serious concern being faced in maritime zones of Pakistan including internal waters. It will be amiss if a complex situation of marine pollution, especially in Karachi Harbour is not highlighted in this paper. Nonetheless, the control of marine pollution within port limits or harbours is the responsibility of respective port authorities and provincial authorities. The marine pollution and presence of effluents at Karachi harbour resulting in increasing degrees of acidification is causing continuous

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<sup>18</sup> Radio Pakistan, "Pakistan, Iran Agree to Further Enhance Collaboration in Security, Counter Terrorism Measures," June 20, 2023, <https://www.radio.gov.pk/19-06-2023/pakistan-iran-sign-mou-to-enhance-maritime-cooperation>.

<sup>19</sup> David Runnalls, *The Story of Pakistan's NCS: An Analysis of Its Evolution* (Islamabad: Canadian International Development Agency: IUCN, The World Conservation Union, 1995).

<sup>20</sup> Hassan Niazi, "The 18th Amendment and the Supreme Court," *The Express Tribune*, May 18, 2020, <https://tribune.com.pk/story/2224292/18th-amendment-supreme-court>.

damage to marine ecosystems.<sup>21</sup> Although at federal and provincial levels, legislation for anti-pollution measures at Karachi Harbour exists in the form of PEPA Act (1997) as federal law, and KPT Ordinance (2002) and SEPA Act (2014) as provincial law to govern marine pollution; but major marine pollution is observed in Karachi Harbour due to improper waste management and sewage treatment in the city.

Marine pollution is not limited to internal waters. Rather, it has been observed close to the coast and even in deep sea. Since all ships have the right to navigate through maritime zones of other countries, some of these ships illegally discharge sludge in different maritime zones. In the case of Pakistan's EEZ, sludge, ballast, oil spill and resulting environmental disasters are a clear and present danger.<sup>22</sup> Post-Tasman Spirit incident, a national policy in the name of National Marine Disaster Contingency Plan (NMDCP) was implemented by the Government of Pakistan to respond to any oil or chemical spill disaster at sea.<sup>23</sup> As per NMDCP, all stakeholders must have requisite oil spill equipment for emergency responses. PMSA has been assigned the responsibility to audit these gears as per the requirement of IMO Member State Audit Scheme (IMSAS).<sup>24</sup>

Unfortunately, these inspections invariably indicate significant deficiencies in requisite equipment to deal with oil spill. Therefore, the matter is being reported to Ministry of Maritime Affairs (MoMA) quite regularly.<sup>25</sup> In Pakistan, an executive action or legislative approval is required to implement international treaties due to the complex yet chronic nature of marine pollution which may call for intense action by international instruments. In addition, pertinent municipal laws incorporating the provisions of such international

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<sup>21</sup> "Karachi Port Trust: The Gateway to Pakistan," <https://kpt.gov.pk/pages/23/marine-pollution>.

<sup>22</sup> These issues have been highlighted by mariners from different flag carriers, LEAs, and relevant agencies as standing challenges.

<sup>23</sup> Naveed Zafar Janjua et al., "Tasman Spirit Oil Spill in Pakistan – Research Response and Lessons Learned," *American Journal of Industrial Medicine* 56, no. 1 (January 2013): 124–31, <https://doi.org/10.1002/ajim.22039>.

<sup>24</sup> IMO, "Member State Audit Scheme," [https://www.imo.org/en/OurWork/MSAS/Pages/default.aspx / Member State Audit Scheme \(imo.org\)](https://www.imo.org/en/OurWork/MSAS/Pages/default.aspx/MemberStateAuditScheme(imo.org)).

<sup>25</sup> "Inspection by PMSA Teams," <https://pmsa.gov.pk/inspection>.

instruments are in a dire need of amendment by the national legislatures. In Pakistan, there are acts made at federal and provincial levels; however, powers to make rules as per act and/or mechanism are non-existent, resulting in low efficacy of law enforcement. Shipping and poor port management cause sea-based pollution basically through offshore drilling, seismic activity, oil transportation, and sewage from ships. The United Nations Convention on the Law of Sea (UNCLOS-82) in Part XII provides a broad but basic sketch for preservation of marine environment providing a general framework for the regulation of marine environmental issues. This provision not only focuses on pollution caused from ships and ports but also provides guidance for pollution from land based sources and dumping.<sup>26</sup>

International legislation leading to national legislation and jurisdiction is appended further highlighting few impediments of shipping sector.<sup>27</sup> Coastal cargo as well as cruise ships or recreational vessels are another element increasing marine pollution by discharging their ballast anywhere in maritime zones of Pakistan due to incapacity to hold waste as there are limited port reception facilities for sewage. The Convention on Biological Diversity (CBD) to which Pakistan is a signatory, requires nations under Article 2 to designate, regulate and manage geographically defined areas named as Marine Protected Areas (MPAs) to achieve specific conservation objectives.<sup>28</sup> In pursuance of that convention, there has been a strategic plan which includes certain targets identified as Aichi Targets.<sup>29</sup>

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<sup>26</sup> “United Nations Convention on the Law of the Sea (UNCLOS) - The Faculty of Law,” <https://www.jus.uio.no/english/services/library/treaties/08/8-01/unclos.html>.

<sup>27</sup> *Ibid.*

<sup>28</sup> “Pakistan Environmental Protection Agency,” <https://environment.gov.pk/NewsDetail/OWYwM2Y4ZDYtOWJjYi00ZTc0LWI3ZWQtMzVIMzJjA5Y2E4>.

<sup>29</sup> “Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets,” <https://www.cbd.int/sp/targets/> / [Aichi Biodiversity Targets \(cbd.int\)](https://www.cbd.int/sp/targets/).

Among which Aichi Target 11 under Strategic Goal C, Pakistan declared Astola Island as Marine Protected Area of Balochistan, Pakistan in 2017.<sup>30</sup> These MPAs are considered as any marine geographical area that is afforded greater protection than the surrounding waters for conservation of biodiversity and management of fisheries. By declaring Astola Island a marine protected area, Pakistan has started complying with the Aichi Target 11,<sup>31</sup> which required Astola MPA to be conserved by at least 17 percent of terrestrial and inland water areas and 10 % of coastal and marine areas till 2020.<sup>32</sup>

Further, Indus River Canyon (under administration of federal government) and Indus Delta Region (under Sindh government) rich in biodiversity are in process of being declared as MPA through Ministry of Climate Change (MoCC). After declaration, Pakistan will achieve its desired targets. The provincial government must declare sanctuaries based on scientific data research to conserve biodiversity in areas such as Ras Malan, Miani Hor, Khor Kalamat and Indus Delta Region. Rights and responsibilities of local communities in MPA need to be defined for LEAs. However, the legislation initiated has not been followed by comprehensive regulatory action and relevant Gazette Notification regarding the category of MPA which has not been issued.<sup>33</sup> This makes regulations ambiguous as there is no clarity vis-à-vis no-catch or low-catch policy; nonetheless, such issues need clear definition for

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<sup>30</sup> “Astola Island Declared Pakistan’s First Marine Protected Area,” Pakistan Environmental Protection Agency, accessed August 21, 2023, <https://environment.gov.pk/NewsDetail/OWYwM2Y4ZDYtOWJjYi00ZTc0LWI3ZWQtMzVIMzJjA5Y2E4>; Government of Pakistan, “Pakistan National Biodiversity Strategy and Action Plan for achieving Aichi Biodiversity Targets and Sustainable Development Goals, 2017-2030,” <https://www.cbd.int/doc/world/pk/pk-nbsap-v2-en.pdf> / [CBD Strategy and Action Plan - Pakistan \(English version\)](#).

<sup>31</sup> Aichi Target 11 states “By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.” For detail, see “Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets.”

<sup>32</sup> “Astola Island Declared Pakistan’s First Marine Protected Area,” Pakistan Environmental Protection Agency,

<sup>33</sup> Government of Balochistan, Forest and Wildlife Department, “Notification,” through a letter holding Reference No. SO (Dev: I) 5-20/FST/2017/2256-90, issued on 15 June 2017, Astola was declared MPA.

effective enforcement.

The Departments of Forestry of Sindh and Balochistan are responsible for the management of mangrove forests in Pakistan. These forests were declared ‘protected forests’ in 1958 under Pakistan Forest Act of 1927, and water channels were declared ‘wildlife sanctuaries’ in 1977 under the Sindh Wildlife Protection Ordinance of 1972.<sup>34</sup> The management of this ecosystem is very difficult and problematic due to inaccessibility of most of the areas and fishing and grazing rights of the local population.<sup>35</sup> However, the war of turf between departments hampers efficacy in implementation of laws, and marine pollution continues to damage mangroves and marine environment.

Mangrove forests are located in Sindh and Balochistan (97% in Indus Delta and 3% in Balochistan).<sup>36</sup> Though the area covered by mangrove forest has expanded over the decades; nonetheless, illegal mangrove cutting has been taking place and it has not been addressed fully due to socio-economic reasons, vested interests of different mafia being supported by local influential, and capacity issues of Sindh Forest Department.

The creeks of Karachi and its closer vicinity have been suffering from biodiversity loss due to large volumes of untreated industrial and domestic waste besides increase in extinct species of mangroves. Local industries are not exposed to extensive implementation of environmental laws and have remained unwilling and incapable to enter into international competition. Therefore, they are non-competitive in production and post-production technologies; hence, the processes are inefficient. Along with introduction of heavy fines on policy violation of industrial sewage treatment being discharged in sea, a strict enforcement

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<sup>34</sup> Mohammad Tahir Qureshi, “Rehabilitation and Management of Mangrove Forests of Pakistan,” in *Towards the Rational Use of High Salinity Tolerant Plants: Vol. 1 Deliberations about High Salinity Tolerant Plants and Ecosystems*, ed. Helmut Lieth and Ahmed A. Al Masoom, Tasks for Vegetation Science (Dordrecht: Springer Netherlands, 1993), 89–95, [https://doi.org/10.1007/978-94-011-1858-3\\_8](https://doi.org/10.1007/978-94-011-1858-3_8).

<sup>35</sup> Technology Times, “Endangered Mangrove Forest of Pakistan - Technology Times,” September 15, 2017, <https://www.technologytimes.pk/2017/09/15/endangered-mangrove-forest-pakistan/>.

<sup>36</sup> Nimra, Nasir Abbas, and Warda Habib, “Monitoring of Mangrove Cover of Western Indus Delta Karachi Pakistan,” *International Journal of Innovations in Science & Technology*, April 25, 2021, <https://journal.50sea.com/index.php/IJIST/Monitoring-of-Mangrove-Cover-of-Western>.

mechanism of existing laws is to be strengthened.

Mangrove protection requires a strategy aimed at increasing forestation, preserving patches of forests particularly of the dying out species, and increasing awareness in local populace by combining the efforts of locals, academia, ministries and departments. If environmental assessment policies are effectively implemented after thoughtful formulation, mangrove ecosystem could be preserved. Therefore, lack of regular satellite based mapping of mangrove inventories is an impediment in the way of marine forestation.<sup>37</sup>

Shipbreaking is a capital intensive industry. It has been done at Gadani, Balochistan since the early 1970s. This industry saw its peak in the 1980s in generating revenue for the Government of Pakistan. However, it declined in the years thereafter due to a number of factors. The most serious predicament is its regulatory framework for Gadani shipbreaking industry which is not comprehensive. There are no declared anchorages for ships arriving at Gadani for shipbreaking. The systematic presence of concerned authorities including Balochistan Development Authority (BDA),<sup>38</sup> Balochistan Environmental Protection Agency (BEPA), FBR/ Customs, FIA, Port Health Officer (KPT), Flag/ Port State Control Authority (Marine Mercantile Department-MMD), etc. is rather weak, and proper infrastructure or arrangements do not exist for them to board the ships destined for breaking/ recycling. This cumulatively leads to weak jurisdiction of these authorities and causes lapses. There is a significant impediment for the ships coming to Gadani; nonetheless, the process of shipbreaking has to be regulated by four to five federal and provincial bodies in the absence of single window arrangement.

These bodies are responsible for flag state control and port state control regimes. Due to divided jurisdiction, the shipbreaking industry becomes high risk, involving life threat and threats to marine ecosystems. Such practices are against national laws formulated according to various international conventions, i.e. Basel, Minamata, International Labour

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<sup>37</sup> SUPARCO, "Forestry | SUPARCO," <https://suparco.gov.pk/products-services/forestry>.

<sup>38</sup> "Balochistan Environmental Protection Agency - BEPA," <https://bepa.gob.pk/>.

Organization (ILO) etc. Departments like BEPA, Pakistan Customs and FIA have capacity issues due to which they cannot board ships at sea; and thus, beaching of ships takes place with probability of mis-declaration of goods including substances dangerous for marine ecosystem and humans alike. Mubarak village incident, 2019 is an example. The ship MT Aljawaza, on way to Gadani for shipbreaking, discharged its oil sludge which later proved harmful for human as well as marine health, making challenges of marine pollution a serious issue for shipbreaking industry of Pakistan.<sup>39</sup> Gross violations and malpractices during shipbreaking have led to multiple disasters which resulted in loss of life as well. Another example of hazardous substance found on-board is the ship MT Cherish enroute to Gadani for shipbreaking in the year 2021 which reportedly brought mercury with toxic levels as well as sludge.<sup>40</sup> This incident highlighted several gaps establishing the grounds for revisiting the protocols of this industry which can generate composite economic activity.

Pakistan is a state party to Basel Convention and must, therefore, ensure the environmentally sound management of hazardous wastes if it allows for the import of end-of-life vessels.<sup>41</sup> Moreover, new legislation such as the EU Regulation on Ship Recycling and the Hong Kong Convention, neither of which have yet entered into force, will demand an upgrade if the sector in Pakistan wants to compete with countries offering ‘green’ ship recycling.<sup>42</sup> Pollutant and dangerous scrapping has been a key area of concern for Pakistan’s shipbreaking industry as Gadani yard operates directly on the beach, without any impervious and drained operating areas to protect sand and sea from pollution. International obligations on the basis of which necessary domestic legislation and administrative jurisdiction between

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<sup>39</sup> Zaheer Zarf, “Who Was Responsible for the Oil Spill at Mubarak Village?” *Samaa*, 12:42:40+05:00, <http://www.samaaenglish.tv/news/1630367>.

<sup>40</sup> Baber Bilal Haider, “Mt Cherish — an untold story from Indonesia to Gadani,” *Pakistan Observer*, 2021, <https://pakobserver.net/mt-cherish-an-untold-story-from-indonesia-to-gadani-by-baber-bilal-haider/>.

<sup>41</sup> Sara Qayum and Weidong Zhu, “Ship Breaking Industry of Pakistan and Its Environmental Effect on Marine Life and Humans,” *INDIAN J. MAR. SCI.* 47, no. 07 (2018).

<sup>42</sup> Kanwar Muhammad Javed Iqbal and Patrizia Heidegger, “Pakistan Shipbreaking Outlook,” 2<sup>nd</sup> ed., Report by SDPI and NGO Shipbreaking Platform, June 2014, [https://shipbreakingplatform.org/wp-content/uploads/2022/01/SB-Pakistan-030714-WEB\\_compressed-compressed.pdf](https://shipbreakingplatform.org/wp-content/uploads/2022/01/SB-Pakistan-030714-WEB_compressed-compressed.pdf) / [SB-Pakistan-030714-WEB\\_compressed-compressed.pdf](https://shipbreakingplatform.org/wp-content/uploads/2022/01/SB-Pakistan-030714-WEB_compressed-compressed.pdf) (shipbreakingplatform.org).

federal and provinces take place are to be considered for policy making.

As Gadani shipbreaking area is not purpose built, it lacks required infrastructure for disposing off all hazardous substances besides materials with greater risks of polluting creek water and coastal sand; such as remaining oils, Printer Circuit Boards (PCBs) and asbestos.<sup>43</sup> Management of Gadani Ship Breaking Yard needs to be strengthened by stationing requisite offices and providing onsite capability to meet the regulatory requirement mandated by international conventions and safety matrix. The NOC for beaching of any vessel is mandated to be generated once the party has submitted the report regarding impact assessment over environment.<sup>44</sup> It has to be either an Initial Environmental Examination (IEE) performed and submitted to the federal agency or, the specifically targeted one for the identifiably vulnerable site. An environmental impact assessment has to be carried out and approval is obtained from that agency.

At present, the main regulatory requirement is the issuance of ‘No Objection Certificate’ by the Balochistan Environmental Protection Agency (BEPA) to start any beaching and breaking process. This is insufficient and needs regulatory legislation to avoid incidents of pollution like MT Cherish. Pakistan has to ensure that its shipbreaking yards practice the Environmentally Sound Management (ESM) of hazardous wastes as laid down in the Basel Convention and the technical guidelines. The Basel Convention has been ratified by Pakistan; however, a compliance mechanism is yet to be enacted. Furthermore, there is no specific regulation solely for the industry in compliance with the Basel Convention and the imminent Hong Kong Convention. Normally, the enforcement of the law which already exists such as the Pakistan Penal Code, the Factories Act 1934 and the Pakistan Environmental Protection Act 1997 has weak enforcement instruments.<sup>45</sup>

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<sup>43</sup> Iqbal and Heidegger, “Pakistan Shipbreaking Outlook,” 2<sup>nd</sup> ed., Report by SDPI and NGO Shipbreaking Platform, June 2014.

<sup>44</sup> Ibid.

<sup>45</sup> International Labour Organization, “Pakistan. The Factories Act, 1934,” <https://www.ilo.org/Dyn/Natlex/Docs/WEBTEXT/35384/64903/E97PAK01.Htm>.

## **Labour Laws**

Labour laws are another area where impediments in law enforcement at sea are observed. Juvenile labour is seen within fishing and related jobs at par with other labour. On inquiry, they are declared as family members of crew being taught ancestral profession. These social aspects are often abused to gain cheap labour.

## **Enhancing the Opportunities by Ensuring Maritime Security**

The coastline and marine resources are crucial to Pakistan's economy and serve as a gateway for stability and prosperity. Its functioning seaports and significant urban and industrial centers serve as economic growth hubs. Moreover, Pakistan's coastal and marine resources have been devised focusing on ecosystems, biological resources, and management challenges. It also emphasizes the numerous recent and planned initiatives and strategies that support Pakistan's efforts to manage its marine and coastal resources sustainably.<sup>46</sup> Maritime security is the fundamental predicament for socio-economic growth of state and society related to maritime businesses. The efficacy of maritime law enforcement in Pakistan's waters ascertains better upshots through the law enforcement process. Intact 'order at sea' encourages increased volumes of trade and commercial activities, economic ventures, and inclusivity of coastal communities, further supporting opportunities of investment and entrepreneurship linked with maritime domain.

The social contract supports the state as an agency and its subsidiaries as agents to enforce laws for ensuring lasting peace. In this case, it is the maritime environment which is ensured to be safe and secure for all socio-economic activities through law enforcement. It is further complemented by implementation of fisheries, customs, environmental and labour laws. PMSA is the implementation arm of Government of Pakistan for enforcement of relevant laws at sea, i.e. maritime zones of Pakistan.<sup>47</sup> The fundamental concepts like

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<sup>46</sup> International Labour Organization, "Pakistan. The Factories Act, 1934."

<sup>47</sup> Ibid.

rationality behind law enforcement, systemic support in terms of awareness, research and development, and policy debate generation are paramount to enhance maritime security comprehensively through LEAs. Academia can enhance awareness and information regarding maritime domain in general, and can generate knowledge and data sources through timely research. Academics and think tanks can also provide systematic analysis to enable policy makers regarding informed decisions about domestic policies and their conformity with international laws.

In Pakistan, consultation and evaluation by subject matter experts and experts from think tanks need to be included as mandatory features in policy making. A policy analyst must be mandated to use qualitative and quantitative data through a variety of approaches and appropriate methods to assess the ability of a policy to solve public problems, thus producing primary and secondary data as genuine research. Key stakeholders such as coastal communities are to be made part of the consultative process starting from policy formulation to implementation of any policy of public domain. The cost-benefit analysis of policy through scientific methods needs to be conducted by experts. Therefore, experts from academia, think tanks, technocrats, and practitioners need to assess the contours of policy before bringing it up to other stakeholders for better acceptance.

## **Way Forward**

The following is the way forward in light of informed discussion using the conceptual framework construed according to social contract theory and agency-structure debate by using the three perspectives of academia, policy makers and practitioners. The study has been conducted for the purpose to bridge the gaps for enhancing efficacy of law enforcement in maritime zones of Pakistan as the core issue. Therefore, four corollaries have been established on the basis of which following inferences have been drawn:

- **Fisheries as Prime Source of Sea-Based Economy**

Since subsistence of fishermen has been essential for socio-economic growth and development, it is significant to address the highlighted challenges. The bifurcated jurisdiction within the maritime zones of Pakistan has led to uncalled for debate in different circles between provinces to indicate biased behaviour of government functionaries. Use of banned nets, registration of boats, accountability of illegal jetties/ landing sites and check in bottom trolling is need of the hour. Further, use of VMS, TED, gill nets etc. are to be adopted to boost the socio-economic growth of people related to this industry.

- **Legislation, Policy Making and Implementation Grounded in Fundamental Social Contract**

Social contract is the responsibility of the state as prime agency and needs to be done in favour of all structural pillars. Stakeholders need to be included at different stages to enhance inclusiveness and efficacy. Similarly, research scope needs to be broadened based on primary as well as secondary research rooted in international conventions and models adopted by different states. Policy makers sometimes fall a prey to unfound and unseen fears which need to be overcome on the basis of credible research.

- **Smuggling and Narcotics Correspond to Dark, Illicit Economies**

Counter smuggling operations conducted at sea are complex and can best be carried out only through sound planning, actionable intelligence and swift execution. However, due to limited availability of resources, the illicit activities are restricted to some extent but not eliminated by and large. Following inferences are being presented as way forward:

- a. Access to real time satellite imagery, communication intelligence and tracking capability will certainly deter smugglers and transnational criminals.
- b. Dual nationalities and dual documentation of the same vessel needs to be curbed.
- c. Smuggling should be addressed seriously through coordinated national efforts by

inter-departmental and inter-agency harmonious involvement.

d. There should be practical manifestation to execute the MoU between Iran and Pakistan maritime border security agencies by joint patrolling or devising other mechanisms for effective border management.

e. Comparative advantage based economic approaches should be focused to deal with smuggling issues.

f. There should be phase-wise regularization for encouraging ‘documented economy’ to discourage smuggling of general goods and commodities.

- **Marine Pollution to be taken as a Serious Socio-Economic Threat**

Last but not the least by any means; marine environment is directly related to sustainable economy. Therefore, it needs to be addressed comprehensively. There are a few suggestions in the following part as a way forward:

a. In all three main regions I.E. Ports and Harbours, Close To Coast; and Deep Sea (within EEZ of Pakistan), marine pollution including solid waste and untreated sewage of Karachi needs to be monitored/ tracked with the help of modern technologies such as satellite analytics, use of aircraft, and UMVs.<sup>48</sup> However, in the case of Karachi Harbour, a national level approach involving federal and provincial authorities is required to address the grave issue.

b. For addressing law enforcement impediments for illegal mangrove cutting, there should be awareness campaigns. Besides local political support will strengthen the regime.

c. There is a need to revisit regulations to eliminate grey areas and ambiguities to get enlisted benefits of marine protected areas under IUCN. It is suggested that MPA (existing and prospective) should be brought within federal jurisdiction even if within territorial

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<sup>48</sup> Anjum Sarfraz, “Exclusive Economic Zone (EEZ) and Pakistan’s Economic Prospects” *Daily Times*, October 3, 2019, <https://dailymtimes.com.pk/477234/exclusive-economic-zone-eez-and-pakistans-economic-prospects/>.

waters.

d. Shipbreaking industry of Pakistan needs to be transformed on the modern trends as per international environment protocols mentioned before. Furthermore, it is suggested that the shipbreaking site should be developed as a port with clear anchorage for broader benefits and effective regulatory functions. There is a need to establish a single window to adhere to official formalities between government authorities and ship buyers at Gadani to facilitate the ship breaking industry.

## **Conclusion**

This research suggests a multi-pronged approach to address the core issue. This approach involves quite extensively the four pillars identified as structure in the beginning as politicians, bureaucracy, societal groups and communities, and academia to support and guide law enforcement at sea. To conclude the discussion, widespread advocacy and awareness at academic as well as political levels along with capacity building, modern technologies, coherent policies, harmonious and uniform regulations at policy making and practitioner levels would be the way forward for bridging the gaps to ensure effective maritime law enforcement.

## **Disclosure statement**

No potential conflict of interest was reported by the authors.