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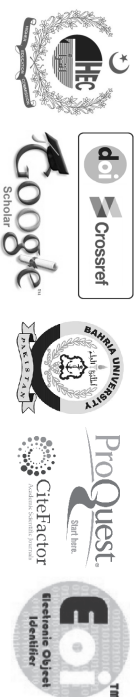
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## **Non-Traditional Security Threats in Maritime Zones of Pakistan and Law Enforcement by PMSA: An Overview**

Maliha Zeba Khan<sup>a</sup> and Muhammad Faisal Sadiq<sup>b</sup>

### **Abstract**

*The new millennium has witnessed massive transformations within international relations and geopolitics. There is a paradigm shift from traditional to non-traditional in the concept of security and modern warfare witnessed in contemporary era. A notable thing is spatial dimension which can bring significant change to nature of non-traditional challenges and threat perception of states. This paper is an endeavor to evaluate the nature of non-traditional security threats in maritime zones of Pakistan and the legal instruments enabling Pakistan for countering these security threats. Being global commons, oceans are taken as shared responsibility supported the international law and different regulations. There are different legal instruments established to ensure and facilitate effective law enforcement in maritime zones of littoral states. Therefore, in that regard, the undertaken research aims at application of these legal instruments and to seek the role of Pakistan Maritime Security Agency (PMSA) for securing the maritime zones of Pakistan and ensuring safe navigation in its seas. This research is exploratory for which synthesis of grounded research and case study method is used by utilizing primary quantitative and qualitative data besides secondary sources. The identification of a number of non-traditional security*

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*threats in maritime zones of Pakistan and studying the countering strategies make this research quite relevant as there is massive reliance of states over maritime activities, global shipping and commercial activities through Indian Ocean being primary conduit for economic and communication hub for their sustainable socioeconomic development.*

**Keywords.** *Pakistan Maritime Security Agency (PMSA), Non-traditional Security Threats (NTS), Securitization, Maritime Zones, Law Enforcement.*

## **1. Introduction**

The end of Cold War has been marked as a milestone not only for international politics, but also academic side, particularly International Relations, Political Science and Security Studies have gone through major transformation. It did not only prove an end to an era full of distrust, proxies, and extending realism-based foreign policies toward other states giving it a certain traditional outlook, rather it became dawning to a whole new era of adding up of non-traditional approaches to national security. There was emergence of new approaches and frameworks to study the transition and transformation in international relations in post-Cold War era. Historically, national security had largely been state-centric, realism-based, military-focused concept with significant attention to land-based relations and politics since the beginning of modern history. Trend reflected shortsightedness regarding maritime domain thus resulting into maritime or sea blindness. Therefore, the core preposition of this paper is following: Non-traditional security threats in maritime realm are different rather graver in nature than such threats on land eventually needing robust national response and strong law enforcement in accordance with international laws and regulations to

counter these threats and to mitigate the consequences for ensuring safe and free navigation of the oceans.

Simultaneously, another cult which has emerged and carries significant value to be studied in this shifting paradigm is geographical realities linked with this emerging discourse. Generally, geography is one of important determinants for states' significant policy choices and decision making. If the state is landlocked, its population, demographic profile, terrain, weather, natural resources, and other realities will determine the course of action and interplay with other actors; but if state is a littoral one, the interplay with other state and non-state actors would take place on basis of distinct geographical realities of oceanic spaces, particularly its policies in the sea would be involving international law and extensive number of actors. Therefore, scope of studying non-traditional security threats and challenges gets more depth in terms of nature, dynamics as well as countering strategies when performed in certain spatial dimension, i.e. land, air, outer space, or maritime with a pertinent role and guidance of international laws.

Since Barry Buzan set up five sectors-- military, political, economic, societal and environmental security within existing and largely traditional security discourse,<sup>1</sup> the inclusivity of non-traditional security has taken firm ground in academia and security practitioners.

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<sup>1</sup> Generally speaking, 'the military security concerns the two-level interplay of the armed offensive and defensive capabilities of states, and states' perceptions of each other's intentions. Political security concerns the organizational stability of states, systems of government and the ideologies that give them legitimacy. Economic security concerns access to the resources, finance and markets necessary to sustain acceptable levels of welfare and state power. Societal security concerns the sustainability, within acceptable conditions for evolution, of traditional patterns of language, culture and religious and national identity and custom. Environmental security concerns the maintenance of the local and the planetary biosphere as the essential support system on which all other human enterprises depend.'" For detail, see Barry Buzan, *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era*. 2d ed. (Boulder: Lynne Rienner; Hemel Hempstead: Harvester Wheatsheaf, 1991), 19-20.

Intrinsically Buzan has fetched the concept of security well away from traditional military aspect of security and has broadened the concept remarkably. Following Buzan, scholars have identified specific issues within non-traditional security. Cook discusses non-traditional security threats as ‘climate change, resource scarcity, infectious diseases, natural disasters, irregular migration, food shortages, trafficking in persons, drug trafficking and transnational crime’<sup>2</sup> but that was related largely to land. However, despite impressive volume of research about non-traditional security and its different aspects, there had been serious shortcomings regarding extensive research about non-traditional security in the maritime domain, and responsibility of policing and law enforcement in Western Indian Ocean Region (WIOR).

Studying non-traditional security as theory in maritime realm as well as its application and practice in oceanic spaces is really limited yet full of research gaps. It has largely been an ignored area despite the fact that oceans and human beings have been enjoying an inseparable relation ever since the unknown history; and spread of humanity, civilization, knowledge, technology, economy, commerce, energy, food needs, medicines, and all sorts of connectivity and communication have been reliant over the seas and oceans notwithstanding threats and challenges on the way. Historical evidences show that significant number of security threats, natural calamities, disasters, outbreak of diseases in the seas and extended maritime domain had been existent other than traditional threats and attacks by state and non-state entities. The modern era is no different regarding security threats in maritime domain. Rather these threats have become quite extensive and grave in these times.

In recent years, researchers have focused relatively more on these threats in maritime domain like piracy, crimes, smuggling and trafficking, illegal migrations, terrorism, theft or illegal use of marine

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<sup>2</sup> Alistair D. B. Cook, “Non-traditional Security and World Politics,” in *Issues in 21st Century World Politics*, 3rd ed. Edited by Mark Beeson and Nick Bisley (UK: Macmillan, 2017), 39-40.

resources etc. Among threats in the seas, piracy is believed to be wide spread with a history in different seas. Piracy as a threat to maritime economic activity and shipping particularly is an ancient phenomenon which has become far more advanced in different regions with technological developments and pirates' hands-on technologies. Susumu exclaims that piracy is defined differently everywhere like Japan considers every attack and even terrorist activity or politically-motivated attacks on ships in any maritime zones as piracy.<sup>3</sup> This is international law which provides guidance to deal with these challenges in a coherent way, involving different mechanisms to ensure safe navigation. However, effective law enforcement is not possible in absence of reliable intelligence. It is exchange of such information at national and international level which enables different actions and operations done by law enforcement agencies (LEAs) and task forces in effective manner. Mak believes that intelligence exchange has become critically important for effective law enforcement due to changing patterns of crimes at sea.<sup>4</sup>

The land and sea are distinctive geographical realms, so is the nature of threats and intensity which is different in both domains. Therefore, the undertaken research is exploratory regarding non-traditional security threats and law enforcement activities in the seas and oceans. The data for this research has been collected through synthesis of primary and secondary sources. Since this is the research being conducted to understand these threats and law enforcement particularly in maritime zones of Pakistan, case study method has been used and Pakistan Maritime Security Agency (PMSA) has been studied and analyzed as the case study and law enforcement agency

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<sup>3</sup> T. Susumu, "Suppression of Modern Piracy and the Role of the Navy," *NIDS Security Reports*, no. 4, March 2003, National Institute of Defense Studies, Tokyo, 38-58.

<sup>4</sup> JN Mak, "Securitizing Piracy in Southeast Asia: Malaysia, the International Maritime Bureau and Singapore" in *Non-Traditional Security in Asia: Dilemmas in Securitisation*, edited by Mely Caballero-Anthony, Ralf Emmers, and Amitav Acharya (London and New York: Routledge, 2016), 81.

responsible to secure maritime zones of Pakistan. The theoretical underpinnings have been induced based on securitization theory and to test them in a different spatial dimension from land as typical domain.

The undertaken research paper has been structured under six sections: 1) Securitization Theory and Non-Traditional Security, 2) Non-Traditional Security in Maritime Zones of Pakistan: Conceptual Framework, 3) Maritime Zones of Pakistan, 4) NTS Threats and Law Enforcement in Maritime Zones of Pakistan by PMSA, 5) NTS in Maritime Spaces: Corollaries after Analyzing Theoretical Postulates, and 6) Conclusion.

## **2. Securitization Theory and Non-Traditional Security**

Extending research on non-traditional security threats in maritime space is a question related to securitization of oceans and how to conceptualize and perceive threats related to different sectors. Traditionally, concept of security has been defined in terms of military and political security. Nevertheless, there had been gradual awareness and intellect emerging over other important aspects having impact on the hard-core security paradigm like international regimes, economy and environment. However, it was the era after the Cold War which encouraged academics, policy makers and practitioners to think out of the established norms, traditional security paradigm and warfare. Since then, shifting focus from traditional to non-traditional security has effectively broadened the horizon of international relations, international law, security and strategy related studies.

The redefinition of concept of security by Barry Buzan in post-Cold War period gave a reason to think out of established limits. It was Buzan's theoretical framework of securitization and de-securitization based on identification of five sectors which encouraged academics, practitioners, statesmen, and international organizations to start thinking about threats and challenges coming from other sectors as explained by Buzan et al. This multi-sectoral approach disaggregates the whole concept of security making it more understandable,

however, making it more inclusive for other referent objects other than the state,<sup>5</sup> opening avenues for further research. According to Buzan, “Securitization is understood as the discursive process through which an understanding is constructed within a political community to treat something as an existential threat, and to enable a call for urgent and exceptional measures to deal with the threat.”<sup>6</sup> The process of securitization has been aimed at bringing attention towards those issues which could become serious at any point of time, making it an emergency situation and a serious security concern. Buzan believes that securitization is politicizing of any, previously apolitical issue in any sector, i.e. politics, military, economy, society or environment, beyond the normal limits to reflect it as an emergency situation requiring urgent action.<sup>7</sup>

Being a constructivist approach by Copenhagen School of thought, the securitization theory acts both at macro and micro levels. At macro level, securitization theory acts largely as a meta-theory guiding about the way ‘to see and talk about security’ focusing on looking beyond objectivism and encouraging further constructions about newer realities ‘different from a reflection of some material development’ which supports adding up of sectors and widening the scope of security studies from traditional to non-traditional. At micro level, the theory supports deep understanding when it needs to go to specific issue from generalized one for purpose of research or analysis. At this level, securitization theory is utilized and threat is constructed.<sup>8</sup>

According to Buzan, non-traditional security issues can be placed in quite broader manner on suggested spectrum of five sectors as required by circumstances, but that could vary state to state, time to

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<sup>5</sup> Barry Buzan, Ole Waever, and Jaap de Wilde, *Security: A New Framework for Analysis* (Boulder, London: Lynne Rienner, 1998), 8.

<sup>6</sup> Barry Buzan, “Asia: A Geopolitical Reconfiguration” [barrybuzanengpe22012.pdf](http://barrybuzanengpe22012.pdf) (ifri.org)

<sup>7</sup> Buzan et.al., *Security: A New Framework*, 24.

<sup>8</sup> Barry Buzan and Ole Waever, *Regions and Powers: The Structure of International Security* (Cambridge and New York: Cambridge University Press, 2003),

time, and issue to issue. There is higher possibility of substantive difference of opinion regarding existential threat, e.g. religion, social issues, environment. And inclusion of non-state actors has given chance to such entities to securitize any issue as existential threat making it so in absolutely non-traditional way.<sup>9</sup> But as part of process, de-securitization of previously constructed reality or threats or securitized agendas eventually would need to be done which is basically normalizing of securitized issue and putting it for political bargaining process.<sup>10</sup>

When securitization in one sector is done, it creates chain reactions on other sectors too and can change order or interplay of actors substantially, sometimes needing to override binding rules at internal level. Since securitization in sectoral arrangement is done for clarity and understanding of interaction between or among units, there can be two response or correlations of this process. First is that the units and their characteristics belonging to certain sector are identifiable, but can be present in other sectors too. Secondly, description of security in terms of survival as well as threat or constructed reality as explained by Buzan et al. can be different depending upon circumstances across these five sectors,<sup>11</sup> hence providing ample space for research on the sector-based securitization or non-traditional security threats in maritime zones of Pakistan.

### **3. Non-Traditional Security in Maritime Zones of Pakistan: Conceptual Framework**

Since Pakistan borders Indian Ocean at strategically important coordinates; there comes a great responsibility on Pakistan to deal with a number of non-traditional security threats, e.g., piracy, blue crimes

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<sup>9</sup> Buzan et. al., *Security: A New Framework*, 23-5.

<sup>10</sup> According to Wæver, desecuritization is the “shifting of issues out of emergency mode and into the normal bargaining processes of the political sphere,” as quoted in Buzan et. al., *Security: A New Framework*, 4.

<sup>11</sup> Ibid.

like gun running, arms smuggling, abductions, theft of marine resources, maritime terrorism, environment related issues, contraband economic activities, transnational organized crimes, cyber threats etc. in its maritime zones to ensure good ocean governance and ‘order at sea’. The concept of good and stable ‘order at sea’ has intrinsic linkage with safe and secure navigations of the seas, and uninterrupted global flows to ensure states about their national interests related directly or indirectly with maritime domain. According to guiding definition given by Council for Security Cooperation in the Asia Pacific,

“Good order at Sea ensures the safety and security of shipping and permits countries to pursue their maritime interests and develop their marine resources in an ecologically sustainable and peaceful manner in accordance with international law.”<sup>12</sup>

Therefore, any threat to global flows, particularly economic activities and commercial flows like shipping would be considered threat not only to states’ economies but international order at sea. These threats are sporadic in nature, nonetheless by and large linked with non-traditional security description. Theoretically, non-traditional security is addressed under five sectors, but when theory is applied in maritime domain, different dimensions do emerge due to entirely different geography than land mass and its related realities. The undertaken study shows that non-traditional security threats in maritime zones can generally be analyzed under three sectors, i.e., economic, societal and environmental security, whereas remaining two domains, political and military security do grey out and lose their distinct posture due to national and international laws as regulatory mechanisms within oceans. Every major issue emerging in maritime spaces do have impact on sustainability of economy of state, social progress and societal growth and development, and everything taking

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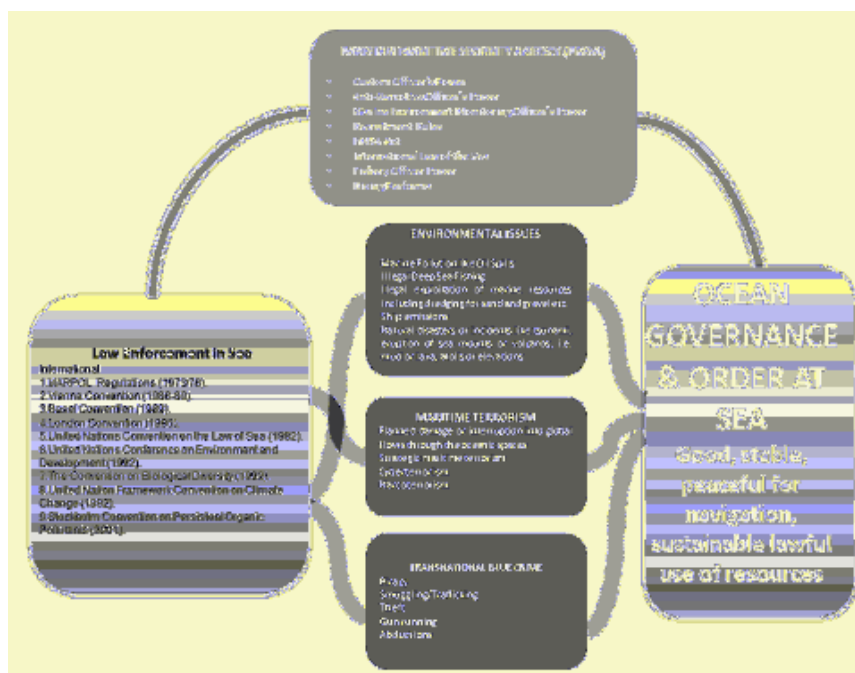
<sup>12</sup> Principle for good order at sea,” Council for Security Cooperation in the Asia Pacific, accessed on July 12, 2021, CSCAP - Principle for good order at sea.



place in those waters do have certain impact on marine environment. All three sectors are directly or indirectly affecting socio-economic conditions of littoral states, and similar is the case with Pakistan.

For the undertaken research, the non-traditional security threats in maritime zones of Pakistan have been identified under three headings- environmental issues, maritime terrorism, and transnational blue crime, which are dealt by Pakistan Maritime Security Agency (PMSA) which is civil armed force working under Ministry of Defense with legal support through the Act of Parliament, passed in 1994 as PMSA Act, further supported by international instruments for the purpose.

Following infograph reflects complete conceptual framework of this research:<sup>13</sup>



PMSA focuses on ensuring peace and good order at sea through a mechanized, well-equipped and well-organized force. While at same time with maintaining deterrence at sea by catching illegal

<sup>13</sup> Both authors have created this infograph for the purpose of clarity and understanding about the research after extensive deliberations.

narcotics and smuggling of goods in and out of Pakistan, human rights and welfare goes hand in hand with law enforcement and PMSA does it all. Owing to its civil outlook and a sole law enforcement agency in maritime zones of Pakistan, the agency plays an immense role in situations of distress, and extends search and rescue efforts and humanitarian assistance.

### ***3.1. Environmental Issues***

Environmental issues do come on top of concerns at the non-traditional security matrix. Since oceans are great source of economic activities and a wide range of communication and global flows do take place through maritime zones, marine environment and sustainable ecology have emerged as a priority for littoral states and other stakeholders. There can be established a laundry list of non-traditional maritime security issues which include illegal, Unreported and Unregulated (IUU) fishing, and use of prohibited equipment for the purpose of fishing. There are pollution-related issues coming from shore to sea, and marine pollution like oil spills and vessel emissions. The illegal exploitation of marine resources including dredging for sand and gravel ruining ecological balance has emerged as an intense challenge. This list includes natural disasters or incidents like tsunami, earth quakes, eruption of sea mounts or volcanos resulting into major challenges for states as well as maritime economic activities. There are geographical changes like appearance or disappearance of atolls or elevations as a regular feature of the sea but with serious implications if not assessed, documented or shared properly with other departments and stakeholders. Hence all legal and illegal activities do have implications which need to be studied.

Notably, such endeavors at sea at times result in continuous yet unpredictable challenges which require humanity-based decision making like helping out vessels in distress without discriminating on basis of legal or illegal activities. Such search and rescue missions of

people and vessels to save them from situations of crisis at sea. These issues do come under maritime safety by definition, but have implications for state and non-state actors with their stakes involved in maritime milieu.

### ***3.2. Maritime Terrorism***

Maritime terrorism is an umbrella term which is being securitized by different entities now. Oceans as hub of numerous activities including military, economic, social, and political ones, and SLOCs and ISLs beside ports and harbors are considered easy access if any terrorist activity would be planned by terrorists. Although terrorist incidents in maritime spaces are not widespread, there have been steady flow of activities which are alarming, and several other scenarios as existential threats can be constructed in line with implicit gaps in security mechanisms. The UNODC considers any damage or terrorist attack, armed robberies, acts of violence which could harm its safety or sink, destroying cargo, and trying to seize and control the vessels, ships and fixed platform like rigs, oil terminals, pipelines, and fiber optic cables as maritime terrorism.<sup>14</sup> Besides intentional or planned damage or interruption into global flows passing through oceanic spaces, there are also emerging types of terrorism which can prove challenge in future. There might be incidents of strategic maritime terrorism taking place if any mercenary or terrorist group with its roots in land like ISIS, or Tamil Sea Tigers or any other group plans terrorist activity against any port, strait, or any particular ship carrying certain cargo or even use fake flag or the sake of confusion pitch stateless vessel to instigate conflict. Another potential maritime threat is cyber threat including GPS/AIS spoofing incidents taking place even at high seas, manipulation of Global Navigation Satellite

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<sup>14</sup>The global framework against maritime terrorism in the international legal context” Workshop for ASEAN Member States by UNODC, Singapore, June 09, 2009, Microsoft PowerPoint - Walter Gehr & Stefano Betti - Singapore 09062009 general.ppt (unodc.org).

System signals,<sup>15</sup> and similar kind of threats to reroute the ships toward the directions the perpetrators want them to go and prey. Similarly, narcoterrorism can take place and cause lethal clash between mafias and security agencies.

### ***3.3. Transnational ‘Blue’ Crimes***

Transnational ‘blue’ crimes are very broad in nature including piracy, smuggling and trafficking, theft, gun running, abductions for ransom etc. Piracy is one threat which is looming around since ancient times. In contemporary era, piracy has not remained only about looting of the vessels but in several incidents, kidnappings and even killings of the seafarers also took place in certain regions of Africa and Southeast Asia within IOR. Piracy has gone through confluence of motives and interests quite dramatically, and focus has shifted from cargo to seafarers. Similarly, pirates have potential to act as mercenaries for terrorism, facilitators to illegal migrations and other transnational crimes. Smuggling and trafficking of contrabands are not only threat to legal economies, but society gets affected. Similarly, other crimes occurring across the oceans, whether done by transnational organized criminal groups or lone operators are equally problematic. Dealing with such issues could prove a gruesome task making law enforcement in maritime zones challenging as there are hurdles at structural level, as well as geopolitical complexities make curbing these menaces difficult.

## **4. Maritime Zones of Pakistan**

The United Nations Convention on Law of the Sea (UNCLOS) which designates different maritime zones to littoral states subject to their national jurisdiction and establishes grounds for regulating the

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<sup>15</sup> Center for Advanced Defense Studies (C4ADS) that Russia has been doing so since 2016, as quoted by Gary C. Kessler, “GNSS/AIS Spoofing: Issues in Maritime Cyber Security,” June 15-17, 2021, "GNSS/AIS Spoofing: Issues in Maritime CyberSecurity" by Gary C. Kessler - YouTube.

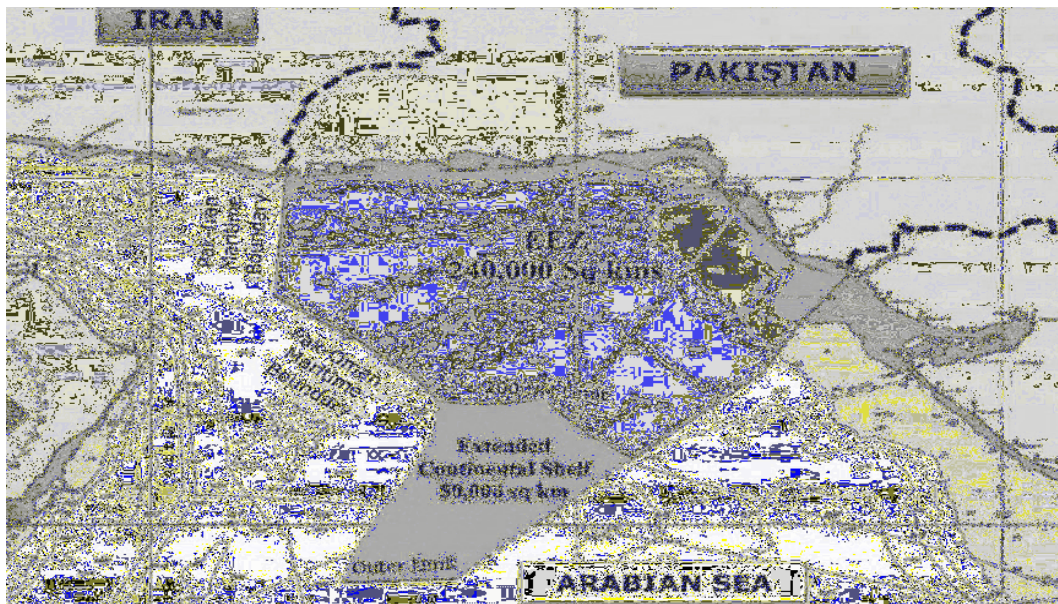
maritime spaces due to their attribute of global common from where the concept of shared responsibility of mankind regarding oceans comes afore. For Pakistan, there is 290,000 square km of maritime zones which are regulated and provided with security to facilitate safe navigation and other economic activities. The first 12 nautical miles (NM) are called territorial waters or territorial sea of Pakistan which makes first maritime zone. The state has complete sovereign rights and jurisdiction over its territorial waters, but other states and their ships have the right of innocent passage, but littoral state enjoys certain rights too. If there is a warship not in compliance with the state laws can be asked to leave. Next 12 NM make up contiguous zone from where international waters start, and states have to follow international laws to regulate activities and navigation in these zones. However, from baseline till 200 NM is considered as Exclusive Economic Zone.

The Continental Shelf of Pakistan comprising upon additional 150 NM to the then existing 240,000 sq. km was awarded 2015,<sup>16</sup> for which Pakistan had submitted its claim for grant of Continental Shelf to the Commission on the Limits of the Continental Shelf in April 30, 2009 according to the UNCLOS Article 76, paragraph 08.<sup>17</sup> It added 50,000 square km making it 290,000 sq. km. of area as 350 NM of maritime zones of Pakistan.

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<sup>16</sup> Continental Shelf, *Dawn* (Karachi), March 27, 2015, Continental shelf - Newspaper - DAWN.COM.

<sup>17</sup> Commission on the Limits of the Continental Shelf (CLCS) Outer limits of the continental shelf beyond 200 nautical miles from the baselines: Submissions to the Commission: Submission by the Islamic Republic of Pakistan,” updated on May 06, 2015, accessed on April 22, 2021, Continental Shelf - submission to the Commission by Pakistan (un.org)



**Figure 01. Exclusive Economic Zone and Continental Shelf of Pakistan**

Source: Pakistan Maritime Security Agency

## **5. NTS Threats and Law Enforcement in Maritime Zones of Pakistan by PMSA**

Intrinsically law enforcement to maintain order at sea and to govern oceans is established through legal adherence of national and international laws and regulations by littoral states in their maritime zones. Since the undertaken research is aimed at understanding non-traditional security threats and law enforcement in maritime zones of Pakistan, it establishes clear grounds for understanding of ocean governance in larger part of WIOR which as a region has attracted much international attention because of its geostrategic location and economic activity and connectivity through SLOCs (Sea Lines of Communication) and ISLs (International Shipping Lines) besides securitization of this oceanic space.

### ***5.1. Legislation/ Legal Support***

Pakistan signed the UNCLOS in 1982 along with other countries; wherein it was ratified in 1997. Taking the advantage of this Convention, Pakistan initially declared its baseline and territorial

waters, contiguous zone, and EEZ. After that, the delimitation of maritime boundary with Iran and Oman took place between the years 1997 and 2000. On the other hand, maritime delimitation with India is still pending due to land boundary issue over Sir Creek.<sup>18</sup> After ascertaining the maritime zones of Pakistan, there was the need to raise a force for law enforcement at sea which was established in 1987 with the name of Maritime Security Agency (MSA). The newly established force (MSA) was provided with legislative justification in 1994 when its Act was passed by the parliament. To give the organization a distinctive identity, 'Pakistan' was prefixed with the name of MSA; thereafter, MSA was renamed as Pakistan Maritime Security Agency (PMSA).

PMSA performs its roles and tasks as per PMSA Act of 1994 which gives it necessary legislative support to work as Federal Agency.<sup>19</sup> PMSA's tasks and operations are aligned with international laws/ conventions and agreements ratified by Pakistan to regulate role of the said agency. Among these, IMO Regulations, Safety of Life at Sea (SOLAS) – 1974, United Nation Convention on Law of Seas (UNCLOS) – 1982, International Convention on Marine Pollution (MARPOL) – 1973/78, Pakistan Territorial Water & Maritime Zone Act 1976, Customs Act 1969, Exclusive Fishery Zone Act 1975, Prevention of Smuggling Act 1977, Pakistan Environmental Protection Act 1997, Control of Narcotic Substances Act 1997, Prevention of Trafficking in Persons Act 2018, and National Marine Disaster Contingency Plan 2019 are highly significant in guiding PMSA's duties and responsibilities in light of instruments of international laws.

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<sup>18</sup> Pakistan and India have territorial dispute over a marshy land between Gujrat (India) and Sindh (Pakistan) which extends to Sir Creek between the two states. For details, see Sajid Mehmood Shahzad, *Impact of Pakistan Maritime Affairs on Blue Economy in Backdrop of CPEC* (Lahore: MQ Printers, 2020), p. 42, 167-174.

<sup>19</sup> Article 3, para (1) of PMSA Act 1994 declares constitution of PMSA an agency by Federal Government.

## ***5.2. Functions and Responsibilities of PMSA***

PMSA Act 1994 ascertains twelve functions of the agency in article 10, para (2) which are required to be performed to maintain good order at sea as the end. These tasks legalized by national laws and supported by international laws are different dimensions of law enforcement and humanitarian assistance to people or vessels in distress without any discrimination. These twelve functions have a vast array of impact in terms of ensuring non-traditional security in maritime zones of Pakistan. The responsibilities and functions of PMSA, in the light of the PMSA Act can be identified as; i. Assisting and coordinating SAR in the assigned area, ii. Preventing unauthorized exploitation of economic resources, iii. Protecting Pakistani fishing vessels and crew, iv. enforcing national and international laws, agreements and conventions, v. Undertaking counter-narcotics and anti-human trafficking/ smuggling operations, vi. Assisting other departments and agencies in safeguarding and protecting offshore installations/ infrastructures in the EEZ, vii. Acting as coordinating agency for prevention and control of marine disasters including pollution, viii. Providing assistance for hydrographic and oceanographic research, ix. Providing assistance for oil, gas and other mineral exploration, x. Rendering assistance to other assessment agencies in acquisition of mineral exploration and seismic data etc., and xi. Providing an effective secondary maritime force for deployment in any emergency, war or conflict.

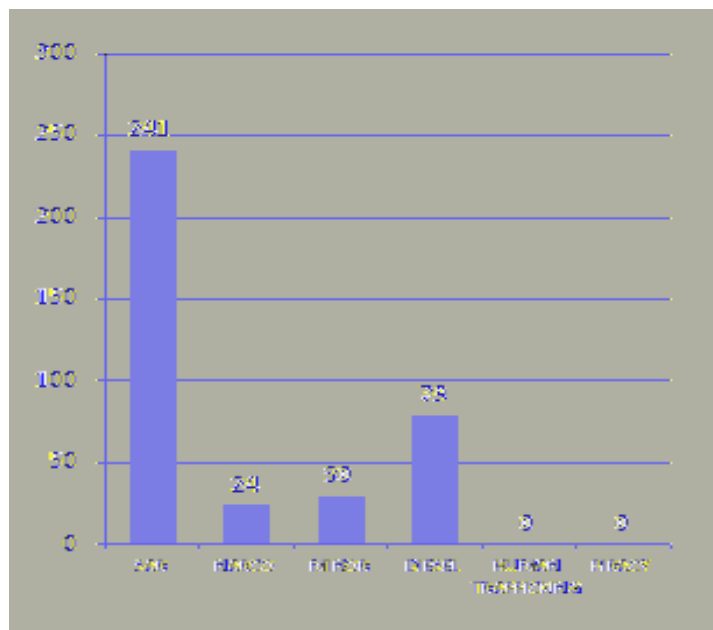
## ***5.3. Additional Legal Powers to Deal with NTS Threats***

In addition to responsibilities defined in PMSA Act 1994, PMSA officers are delegated with legal powers of Customs Officers (Customs Act 1969), Fishery Officers (Exclusive Fishery Zone Act 1975), Police Officers (Police Act 1861 & Code of Criminal Procedure 1898), and Environmental Protection Officer (PEPA Act 1997) to facilitate legal procedures undertaken in maritime zones of Pakistan.

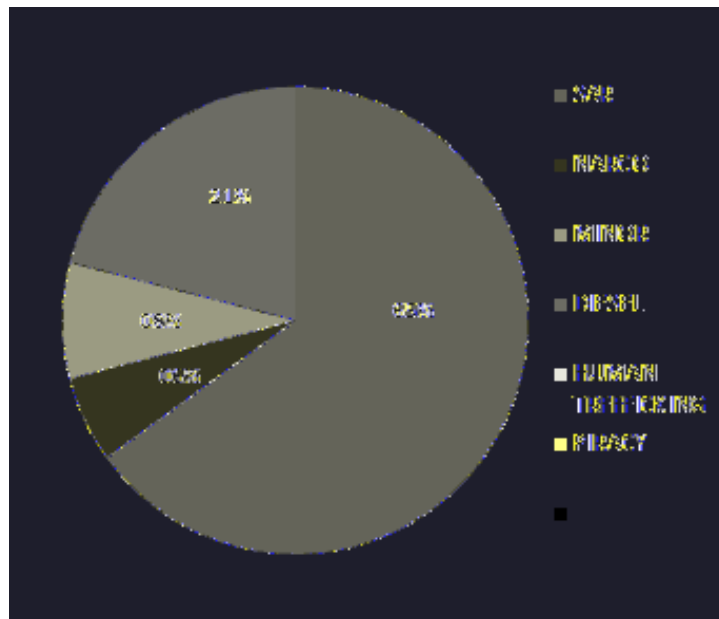


### 5.4. PMSA Contributions in Maritime Security Operations (MSO)

Non-traditional maritime security requires a range of actions and operations with the purpose to ensure utmost secure and safe environment for economic activities, safe navigation, research activities, and good order at sea. Within Pakistan’s maritime zones as well as in assigned Area of Responsibility by IMO for humanitarian operations, PMSA makes sure that safety, security and economic interests of Pakistan are not infringed upon by any state or non-state actor/s by continuous patrolling, surveillance and conducting maritime security operations (MSO) in these areas for Search and Rescue (SAR), anti-poaching, anti-marine pollution, anti-narcotics, anti-smuggling, and miscellaneous tasks undertaken. The role and efficacy of PMSA can be assessed through following data:



**Figure 2: Total Number of Operations Conducted by PMSA (From 1987-2021)**



**Figure 03: Percentage of Incidents Handled by PMSA**

Source: PMSA official data sources.

‘Minor’ indicates at cases of child labor rescued from boats and vessels, whereas major cases of smuggling of narcotics and diesel have been mentioned as ‘Narcos’ and ‘Diesel’ in above charts.

#### **5.4.1. Search and Rescue (SAR)**

Pakistan being signatory to SOLAS Convention has been allocated a vast area extending up to 840 NM for coordination of Search and Rescue operations. In line with international obligation of Pakistan, PMSA also provides human resource to Maritime Rescue Coordination Center (MRCC) 24/7 for responding to all kinds of maritime disasters in the region. From 1987 till 2020, PMSA has rescued more than 2513 precious lives and responded to 202 vessels in distress at sea which include fishermen from regional countries, even belonging to India and Iran.

#### **5.4.2. Anti-Poaching Operations**

Preservation of Pakistan’s EEZ with respect to Illegal, Unreported and Unregulated (IUU) fishing as well as illegal deep-sea

fishing in enormously rich, both living and non-living resources, is one of PMSA's prime duties. Poaching, mainly by Indian fishermen, is common in Pakistan's resource rich Indus Delta region. Based on Pattern of Life (POL) data of last five years (July 2016- July 2021), it has been observed that on average approximately 1150 boats are reported every year within Pakistan's EEZ, out of which 55-60 boats are apprehended by PMSA surface units; while others are repelled outside EEZ even before they start catching fish from maritime zones of Pakistan. Calculations based on average fish catch per boat and cost of fish per kg reveal that potential loss, if not thwarted, could range from approximate PKR 1.0 to 2.66 billion per annum for stolen natural resource, besides damage to eco-system and sustainability which is not calculable numerically. Since establishment of PMSA, this potential loss has been progressively averted. There have been 8841 fishermen apprehended mainly from Eastern region of EEZ. With efforts of PMSA, a total amount of approximately PKR. 427 million has been deposited in Government of Pakistan's treasury. These calculations are based on the agency's detection and actual number might be much more. In order to conserve fish resource in Pakistan's waters, over 5000 banned nets have been confiscated by PMSA during the year 2021. It would be extremely difficult to estimate net worth of our fish resource exploitation by unauthorized fishing trawlers and boats prior establishment of PMSA.

#### ***5.4.3. Anti-Marine Pollution***

Pakistan faces a complex situation due to severe marine pollution, especially in Karachi Harbor. Coastal development activities have also accelerated impacts of pollution leading to deterioration of coastal environmental quality, depletion of coastal resources, public health risks and loss of biodiversity to be brief. PMSA undertakes pollution control in Pakistan's maritime zones through effective monitoring and surveillance. In addition, PMSA enforces Port State Control measures in which regular checking of

vessels is undertaken through inspection of wastes & garbage records onboard to control pollution within ports and harbors in order to protect its marine environment and port and harbor installations besides overall environment.

#### ***5.4.4. BARRACUDA Exercises***

As an aftermath of grounding of MT Tasman Spirit at Karachi Port in 2003, and later on oil spillage on shores of Karachi, the National Marine Disaster Contingency Plan (NMDCP) was developed in the year 2007 to deal with such incidents. To rehearse responses as per national strategy, PMSA conducts international oil spill exercise named as BARRACUDA, which provides all stakeholders a common platform to practice response mechanism. PMSA has conducted a series of eleven BARRACUDA exercises till January 2022. In last exercise of BARRACUDA series, over 15 countries and 35 national stake holders/ agencies participated in exercise to broaden the spectrum and enhance regional cooperation.

#### ***5.4.5. Anti-Narcotics/ Smuggling***

Serving the citizens and coastal communities is one of the core functions of PMSA. This includes getting rid of narcotics from Pakistani society. Since war-torn Afghanistan has been source of large amount of cultivation of illicit opium and production of narcotics at global level, countering narcotics efforts on land are much easier and cost effective as compared to maritime domain. However, PMSA takes up this responsibility at sea zealously despite threats of narco-terrorism and other challenges in operations of interdiction of drugs at high seas due to high volume of sea traffic, multitude of containerized cargo and vast extents of sea open in all directions. PMSA has apprehended approximately 137 tons of various drugs including heroine and crystal meth worth approximately PKR. 83 billion from 1990 till July 2021. Anti-Narcotics efforts of PMSA have also been acknowledged in

*Compendium of Drug Seizures at Sea* published jointly by Combined Maritime Forces and United Nations Office on Drugs & Crime. Smuggling of goods and humans including illegal immigrations have gained significant attention during last decade. PMSA has conducted 228 successful anti-smuggling operations including 24 cases of narco-smuggling, and seized various kind of illicit cargo including liquor and illegal fuel having street value of over PKR. 15 billion.

#### ***5.4.6. Miscellaneous Tasks Undertaken***

As per the Act of 1994, PMSA undertakes other significant tasks, i.e. anti-human trafficking through sea routes, anti-piracy operations, and discouraging child labor. Since PMSA is responsible for securing socioeconomic capital, the agency keeps close check on these issues, particularly discourages employing of minors/children in any capacity at boats and ships.

### **6. NTS in Maritime Spaces: Corollaries after Analyzing Theoretical Postulates**

With evolution and advancement in means of communication and increased volume of trade, Sea Lines of Communication (SLOCs) besides the maritime zones of states have been marked with intense activities like shipping, fishing, exploration and exploitation of marine resources, and enhanced role of state and non-state actors including multinational companies (MNCs), law enforcement agencies, navies, international and regional task forces, researchers, smugglers, traffickers, or other transnational organized criminals within the oceanic spaces giving birth to multiple threats and challenges which are overwhelmingly non-traditional in nature, making it enough reason to research in these dimensions.

Empirically the five sectors mentioned by Buzan do not remain equally distinct when applied in the maritime space due to oceans being global common which limits littoral states' responses to the

emerging threats and challenges. Hence the first corollary which comes afore in this research is spatial dimension which does determine the level or sectors of non-traditional security in specific space or domain like land, air, space, or sea maritime.

The second corollary is potential of greying out of political security limits when non-traditional security threats emerge in oceans. This greying out of limits or sectors is unique angle emerged in theoretical postulate of Buzan having serious repercussion. The understanding of ownership and rights over national territory changes dramatically in the oceans. Despite the fact that every littoral state has its territorial sea of 12 nautical miles with complete jurisdiction over it, it cannot restrict any ship particularly trade ships from passing through that zone due to their intrinsically accepted 'right of innocent passage'. Similarly, every vessel has principle right of freedom of navigation through Exclusive Economic Zone (EEZ), Continental Shelf or other special zones of littoral states, as well as 'transit passage' through straits. That usage of maritime zones does not damage political independence or territorial integrity of littoral states until there is external aggression or other questionable conditions harmful to the referent states' national laws and rights over maritime zones under the 'United Nations Convention on the Law of the Sea (UNCLOS)',<sup>20</sup>

The third corollary is diffusing or diminishing boundaries of military security in maritime or oceanic space which may have a broader role in certain conditions. The determining factor is nature of calamity in sea and requirement of humanity-based action which might not wait for formal orders by the relevant department if someone or any vessel will be in disastrous situation amidst the seas. Naval forces can be sought to assist civil-armed forces or law enforcement agencies in maritime zones in terms of expertise, training, intelligence or

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<sup>20</sup> The official draft and relevant details can be seen at [United Nations Convention on the Law of the Sea - Main Page](#).

equipment. Similarly, there are some threats which are non-traditional in nature like acts of terrorism but may require naval forces' assistance due to its graver threat to national security.

There comes up another noteworthy, thence fourth corollary too when Buzan's securitization theory and its five sectors are applied on maritime space that besides inclusivity of other actors as referent objects like international agencies, states do remain as a referent object in terms of law enforcement in maritime zones of Pakistan. That reflects constructivist nature of securitization which enables number of actors including state machinery and international agencies to perform as referent objects. Nevertheless, the undertaken research is reflecting four corollaries within theoretical framework of Buzan and the fundamental concept of non-traditional security.

## **7. Conclusion**

The emergence of concept of non-traditional security (NTS) has changed security paradigm by inclusion of ideas like human security, environmental security, economic security, health-related issues and communicable diseases, ideologies, cultures etc. which were once totally unconceivable as security issues on comparison with traditional security with overwhelming role of military aspect and political power in that discourse. Further shift comes within the discourse of NTS when spatial dimension like land, maritime, air or space is associated to study nature of these threats making it more relevant for states and non-state actors to determine and administer their role. However as mentioned previously as four identified corollaries during the undertaken research, even theoretical postulate has certain capacity to construct further realities to extend the grounds of NTS discourse on the basis of spatial dimension. Since law enforcement in the sea is challenging task keeping in view nature of threats which are more non-traditional than traditional security issues. In case of maritime zones of Pakistan, the responsibility of law

enforcement and maintaining of good order at sea for the purpose of safe navigation and other activities stays with Pakistan Maritime Security Agency (PMSA) by and large. This task is divided and subdivided into various components supported and guided by national and international legal instruments providing well-deliberated strategies to counter all issues and scenarios to deal with NTS in these zones. PMSA not only ensures safe and secure navigation and stable order in Pakistan's maritime zones having area of 350 NM, but additional responsibility of Search and Rescue (SAR) operations is also performed till 840 NM under SOLAS. Nevertheless, inclusion of NTS in security discourse has provided enough ground for effective role of PMSA to deal with various challenges, and has helped relevant stake holders to stay functional in peaceful maritime zones of Pakistan.

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Both authors have created this infographic for the purpose of clarity and understanding about the research after extensive deliberations.

Buzan et. al., *Security: A New Framework*, 23-5

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## Causality Analysis between Poverty and Environment: A Case Study of Pakistan's Coastal Belt

Shahid Aslam Mirza<sup>a</sup>, Shoukat Ali<sup>b</sup> and Ayesha Shoukat<sup>c</sup>

### Abstract

*The current study explores the impact of poverty on environmental degradation and impact of environment on poverty in the Coastal Belt of Pakistan. Poverty is measured by using headcount ratio measure. While environmental proxies used in this study are fossil fuel energy consumption from fossil fuel (FFEC), combustible waste and renewable (CRW), and carbon dioxide emission from the use of liquid fuel (CELF). The study indicates a strong long-run correlation between poverty and environmental degradation. This relationship has been investigated by using Augmented Dicky-Fuller, co-integration as well as Granger causality tests. Pakistan's secondary data from 1971 to 2018 on poverty and environmental variables have been used for analysis purposes. The results of the study indicate that poverty contributes to environmental degradation and results in lowering the pace of economic growth and development. Moreover, environmental degradation also is a cause of poverty and may affect economic development adversely. The present study predicts the evidence of a bi-directional relationship between environmental factors and poverty in Pakistan.*

**Keywords:** Poverty, Environment, Coastal Belt of Pakistan

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## 1. Introduction

The poverty–environment nexus has been widely discussed in the literature. However, insufficient approaches have been used to show the relationship between environmental proxies and poverty. These approaches have failed to differentiate between hypotheses i.e., (1) environmental factors affects poverty; (2) poverty affects environmental factors; (3) both variable have a bi-directional relationship; (4) Both variables are causality independent (but highly correlated). Environmental degradation and poverty are widely discussed areas in academic circles. Research indicated that environmental degradation affects poor and increases their poverty level <sup>1</sup>. There are different factors i.e., owing to migration and job scarcity that compel the poor to live with inadequate services. The poor’s savings and productivity reduces due to the health hazards that are the result of natural disasters such as

the earthquake, flood, etc. On the other hand, the environment is polluted by poor by illegal removal of wastes and wastewater due to inadequate services<sup>2</sup>.

Developmental organizations have also noted that improper use of natural resources results in poverty and poverty causes the environment to degrade. Environmental degradation adversely affects the sources of poor’s earnings. The dependency of poor on natural resources is a reason of their vulnerability to environmental degradation<sup>3</sup>. The poor have less alternative resources and are least

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<sup>1</sup> Moral, Md. Jahan Boksh, and Ruslan Rainis. “The Nexus between Urban Poverty and Local Environmental Degradation in Rajshahi City.” *The International Journal of Environmental, Cultural, Economic, and Social Sustainability: Annual Review*, vol. 5, no. 2, 2009, pp. 229–240, 10.18848/1832-2077/cgp/v05i02/54583. Accessed 30 Sept. 2021.

<sup>2</sup> Ibid

<sup>3</sup> World Bank. World Development Indicators (WDI) 2009 CD-ROM. Washington: The World Bank 2009

capable of handling environmental issues<sup>4</sup>. Nowadays, poverty and environmental conditions are not plausible in Pakistan and both are rising adversely, especially within the coastal regions of Pakistan. In rural areas income of poor mainly depends on agriculture, therefore, in these areas poverty and environmental degradation is high. Out of the total population in Pakistan, nearly 37% live in urban areas and remaining 67% live in rural areas. 31.95% of the rural population are living below the line of poverty<sup>5</sup>.

The rural areas, the availability of basic needs, i.e. potable water, education, sanitation, and healthcare is not sufficient. Moreover in Pakistan, the problems of high infant mortality, low life expectancy, and malnutrition are very high<sup>6</sup>. In rural areas, access to land and productive assets is highly skewed and unequal which creates differences in earning opportunities and increased poverty. Moreover, in barani (rain fed) areas, yield potentials, and crop production is very low<sup>7</sup>. Environmental degradation is also increasing due current pattern of water consumption. The agricultural productivity also reduces by losses of earth fertility due to soil erosion, salinity, and inefficiencies in water allocation<sup>8</sup>. Pakistan is bearing heavy losses due to environmental degradation. The above discussion shows that there is a

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<sup>4</sup> Yusuf, A.A. Poverty and environmental degradation: searching for theoretical linkages. Working paper in Economics and Development Studies No. 200403. Bandung, Indonesia: Center for Economics and Development Studies, Department of Economics, Padjadjaran University Jalan Cimandiri No. 6. 2004 <https://ideas.repec.org/p/unp/wpaper/200403.html>

<sup>5</sup> UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific) (2008). Country reports on the local government system [online]. Available from: [www.unescap.org/huset/lgstudy/new-countrypaper/Pakistan.pdf](http://www.unescap.org/huset/lgstudy/new-countrypaper/Pakistan.pdf) [Accessed 14 June 2011].

<sup>6</sup> Mirza, B.B. and Khan, N. Rural development in Pakistan: from vision to action, the rural citizen: governance, culture and wellbeing in the 21st century. University of Plymouth. 2006

<sup>7</sup> World Bank (2007). Pakistan rural growth and poverty reduction. World Bank Report, 6 March. <https://documents1.worldbank.org/curated/en/900181468098989142/pdf/393030PK.pdf>

<sup>8</sup> Ibid.

strong relationship between poverty and environmental proxies such as FFEC, CRW, and CELF.

The rest of the paper is organized as follows; the next section summarizes the review of the literature. The following section consists of the sample and methodology, while the third section discusses the results of the study. The last section concludes the study.

## **2. Literature Review**

Poverty and environment nexus is the most burning issue in current writings on sustainable development. Many research studies have been conducted on how poverty and environment affect each other? Some suggest that vicious circle of poverty affects the environment. The studies which presented the belongings of poverty on environment recommended that poverty influences environment due to the over-population; moreover, poor's have more children than non-poor. The overpopulation results in degradation of environment i.e., land, forest, river, lakes, and fisheries. For achieving this goal, there must be a reallocation of resources toward the poorer sector of society. Political determination can play an important role in achieving the goal of poverty reduction and environmental betterment.

### ***2.1. Poverty and Environmental Degradation***

Research shows that poverty is one of the most important causes of environmental pollution, which is affecting environment very badly<sup>9</sup>. In order to understand the complex links between environment and poverty, it is necessary to differentiate between direct and indirect reasons for environmental degradation. The direct causes are easily recognizable in the field, behind them there may be a long sequence of indirect causes. In rural and urban areas, the effects of

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<sup>9</sup> Carter, Michael R., and Christopher B. Barrett. "The Economics of Poverty Traps and Persistent Poverty: An Asset-Based Approach." *Journal of Development Studies*, vol. 42, no. 2, Feb. 2006, pp. 178–199, 10.1080/00220380500405261.

environmental degradation on poor are stronger than their well-being from their limited assets and greater dependence on common resources for livelihoods. The stock of wealth including natural, human, physical, and social capital has also been considered by the economist for eradication of poverty<sup>10</sup>.

Research also suggests that the industrial sector is more responsible for environmental problems than service sector<sup>11</sup>. Industrial production can be used as an indicator of pollution in developing nations. Moreover, wastewater is thrown into canals and rivers without treatment<sup>12</sup>. Urban population is also another determinant of water pollution. Researchers have also identified that factors responsible for water, noise, and pollution are mostly based in urban areas<sup>13</sup>. Researchers also suggested that the means of vehicle transportation, like buses, motorcycles, cars etc., are in use more intensively in cities as compared to rural areas<sup>14</sup>. Moreover, the transportation of food items from rural areas to urban areas also contributes to air pollution in urban areas. Research pointed that the population growth along with the change in lifestyle and modern

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<sup>10</sup> World Bank. Pakistan rural growth and poverty reduction. World Bank Report, 6 March. 2007 <https://documents1.worldbank.org/curated/en/900181468098989142/pdf/393030PK.pdf>

<sup>11</sup> Neumayer, Eric. "Are Left-Wing Party Strength and Corporatism Good for the Environment? Evidence from Panel Analysis of Air Pollution in OECD Countries." *Ecological Economics*, vol. 45, no. 2, June 2003, pp. 203–220, [www.sciencedirect.com/science/article/pii/S0921800903000120](http://www.sciencedirect.com/science/article/pii/S0921800903000120), 10.1016/s0921-8009(03)00012-0. Accessed 7 Apr. 2019.

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<sup>13</sup> Reddy, A. K. N. Energy and Social Issue. In T. B. Johansson & J. Goldemberg (Eds.), *Energy and the challenge of sustainability*. New York: UNDP, UNDESA and WEC. 2004.

<sup>14</sup> Cole, Matthew A., and Eric Neumayer. "Examining the Impact of Demographic Factors on Air Pollution." *Population and Environment*, vol. 26, no. 1, Sept. 2004, pp. 5–21, 10.1023/b:poen.0000039950.85422.eb.

technologies has also put effects on sewage. Moreover, human activities also affect water quality<sup>15</sup>.

## ***2.2. Deforestation, Agricultural Environment and Water availability***

The poor people mostly contingent upon natural resources have fewer alternative resources, have a low ability to manage environmental risk, and consequently are more defenseless to environmental degradation<sup>16,17</sup>. The classic Malthusian theory introduced the demographic pressure on forest lands. This theory suggests that an increase in population density results in deforestation<sup>18</sup>. Research concluded that there is an association between rural poverty (headcount ratio) and environmental measures i.e., electricity consumption for agriculture and water availability<sup>19</sup>. There is a stable and unidirectional association in the agricultural environment and poverty in the framework of Pakistan. The study also proposes that only a particular equation/conventional view is not enough to measure the strong association. Therefore, simultaneous equations can be formulated for the long-term relationship.

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<sup>15</sup> Kemp, David D. *Exploring Environmental Issues*. Routledge, 31 July 2004. 10.4324/9780203647448

<sup>16</sup> World Bank. World Development Indicators (WDI) 2009 CD-ROM. Washington: The World Bank. 2009

<sup>17</sup> Yusuf, A.A. Poverty and environmental degradation: searching for theoretical linkages. Working paper in Economics and Development Studies No. 200403. Bandung, Indonesia: Center for Economics and Development Studies, Department of Economics, Padjadjaran University Jalan Cimandiri No. 6. 2004 <https://ideas.repec.org/p/unp/wpaper/200403.html>

<sup>18</sup> Walker, Robert. "Theorizing Land-Cover and Land-Use Change: The Case of Tropical Deforestation." *International Regional Science Review* 27 (3): 247–270. 2004 <https://doi.org/10.1177/0160017604266026>

<sup>19</sup> Zaman, Khalid, et al. "Bivariate Cointegration between Poverty and Environment: A Case Study of Pakistan (1980–2009)." *Journal of Environmental Planning and Management*, vol. 53, no. 8, 12 Oct. 2010, pp. 977–989, 10.1080/09640568.2010.495537. Accessed 5 Apr. 2020.

Many research findings indicated that the issue of deforestation is closely related to poverty due to the habitation of poor people near a forested area. The relationship between poverty and forests was examined by using occasion studies in different countries such as Malawi, Indonesia, Brazil, Vietnam, etc<sup>20</sup>. Similar findings of a strong link between forests and the location of the rural poor have also been identified by researchers in India, Nicaragua and China<sup>21,22,23</sup>. These studies only provide information regarding where the poor most likely to live, and are unable to explain the reasons of this close association of poor with forests. The reasons of deforestation can be seen from two perspectives i.e., demographic and economic.

Environmental degradation associated with different factors such as industrial pollution, urbanization, sewage pollution, toxic waste disposal problems, forests degradation as well as more alarming political unwillingness in developing countries like Pakistan. Previously, it was assessed the association between environmental degradation and air pollution and used CO<sub>2</sub> emissions as a measure of environmental degradation<sup>24</sup>. Moreover, research estimated the relationship of poverty with environmental degradation in terms of the

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<sup>20</sup> Sunderlin, W. D., Hatcher, J., & Liddle, M. From exclusion to ownership? Challenges and opportunities in advancing forest tenure reform: Rights and Resources Initiative. 2008 <https://agris.fao.org/agris-search/search.do?recordID=GB2013202125>

<sup>21</sup> Shah, Amita, and D. C. Sah. "Poverty among Tribals in South West Madhya Pradesh: Has Anything Changed over Time?" *Journal of Human Development*, vol. 5, no. 2, July 2004, pp. 249–263, 10.1080/1464988042000225159. Accessed 17 Mar. 2020

<sup>22</sup> Naufal, George S. "Why Remit? The Case of Nicaragua," IZA Discussion Papers 3276, Institute of Labor Economics (IZA). 2008 <https://ideas.repec.org/p/iza/izadps/dp3276.html>

<sup>23</sup> Zhang, Weijiong, et al. "Can China Be a Clean Tiger?: Growth Strategies and Environmental Realities." *Pacific Affairs*, vol. 72, no. 1, 1999, pp. 23–37, [www.jstor.org/stable/2672334?seq=6#metadata\\_info\\_tab\\_contents](http://www.jstor.org/stable/2672334?seq=6#metadata_info_tab_contents), 10.2307/2672334. Accessed 11 Mar. 2022.

<sup>24</sup> Alam, Shaista. "Globalization, Poverty and Environmental Degradation: Sustainable Development in Pakistan." *Journal of Sustainable Development*, vol. 3, no. 3, 19 Aug. 2010, 10.5539/jsd.v3n3p103.



agricultural environment, water availability, and electric consumption for agriculture<sup>25</sup>. The current study, to the best of my knowledge, is the first systematic measurable study about relationships between poverty and environmental degradation in relation to environmental proxies such as fossil fuel energy consumption (% of total energy), CO<sub>2</sub> emission from liquid fuel (% of total), combustible renewable and waste (in terms of oil equivalents).

### 3. Material and Methods

We are going to find out the bi-directional relationship between poverty and environment. The general function included in this study is;

$$\text{Environment} = f(\text{poverty})$$

$$\text{Poverty} = f(\text{environment})$$

In the study, we used secondary time series annual data for the sample period of 1971-2018. For this study, the data were obtained from World Bank. Rural poverty measured by using official poverty line of 2450 calories per adult equivalent per day. The poverty has been measured by headcount ratio (PHCR) and the environmental proxies used in this study were energy consumption from fossil fuel (FFEC), Combustible waste and renewable (CRW), and carbon dioxide emission from the liquid-used fuel (CELFL). The following regression equation has been used to measure the relationship between poverty and environment.

$$\text{Log (PHCR)} = a_1 + a_2 \text{ log (FFEC)} + \mu \quad (1)$$

$$\text{Log (FFEC)} = b_1 + b_2 \text{ log (PHCR)} + \mu \quad (2)$$

$$\text{Log (PHCR)} = c_1 + c_2 \text{ log (CRW)} + \mu \quad (3)$$

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<sup>25</sup> Zaman, Khalid, et al. "Bivariate Cointegration between Poverty and Environment: A Case Study of Pakistan (1980–2009)." *Journal of Environmental Planning and Management*, vol. 53, no. 8, 12 Oct. 2010, pp. 977–989, 10.1080/09640568.2010.495537. Accessed 5 Apr. 2020.

$$\text{Log (CRW)} = d_1 + d_2 \log (\text{PHCR}) + \mu \tag{4}$$

$$\text{Log (P HCR)} = e_1 + e_2 \log (\text{CELF}) + \mu \tag{5}$$

$$\text{Log (CELF)} = f_1 + f_2 \log (\text{PHCR}) + \mu \tag{6}$$

Where:

FFEC represents fossil fuel energy consumption (% of total)

CRW represents combustible renewable and waste (metric tons of oil equivalents)

CELF represents CO<sub>2</sub> emission from liquid fuel (% of total)

PHCR represents poverty measured by headcount ratio

#### 4. Results and Discussion

##### 4.1. Testing the Stationarity of the Poverty and Environment Time Series

For measuring stationarity of all variables in the study, Augmented Dicky-Fuller test (ADF) was used. The results obtained for poverty (PHCR) and environmental proxies i.e., PHCR, ECELF, ECRW, and EFFEC were shown in the Tables 1.

**Table 1. Augmented Dicky-Fuller test on the levels and on the first difference for stationarity of data for PHCR variable (1971-2018)**

Variables	Level	First Difference	Critical values			Decision
			1%	5%	10%	
PHCR	-2.591127	-3.890416	-2.650	-1.953	-1.609	I(1)
ECELF	-1.406660	-3.776113	-2.650	-1.953	-1.609	I(1)
ECRW	-0.666251	-7.094880	-2.650	-1.953	-1.609	I(1)
EFFEC	-0.305562	-5.870687	-2.650	-1.953	-1.609	I(1)

**Note:** Null hypothesis about the time series data variables was that the series contains unit root, or non-stationary. The MacKinnon critical values have been used to accept or reject null hypothesis. SIC criteria ranging from lag-zero to lag-two have been used for the selection of lag length.

The results indicated that all the variables are non-stationary at levels and stationary at the first difference. Moreover, all variables have order one integration i.e., I (1).

#### **4.2. Testing co-integration between PHCR and CELF**

The co-integration test is applied to measure the long-run relationship between poverty and environmental variable Co<sub>2</sub> emission from liquid fuel (CELF). The results will indicate whether there is any existence of a relationship between both variables. The results for regression and ADF test for residual manifested in (Table 2 and Table 3) respectively. The results indicated that residual has order one integration i.e., it is stationary at first difference. This implies the presence of the long-run correlation (co-integration) between these variables.

**Table 2. Empirical findings of the model – CELF (1971–2018)**

Dependent variable: log [Corbin Dioxide Emission from Liquid Fuel (CELF)]	
Constant	-0.259 (-0.775)*
Log (PHCR)	-1.856 (-2.423)*
AR(1)	0.770 (5.337)*
R-square	0.802
Adjusted R-square	0.781
Durbin-Watson statistics	2.103
F-statistics	45.125
Probability (F-statistics)	0.0000*
Number of observations	48

**Note:** The values of t-statistics are shown in parentheses. The \* sign indicates the 1% level of significance.

**Table 3. Augmented Dickey-Fuller (ADF) test for residuals – CELF**

Residual Integration	Level	Critical values			Decision	Integration Order
		1%	5%	10%		
Residual	-	-	-	-1.609	Stationary at level	I(1)
	4.150	2.650	1.953			

ECM is applied to capture the short-run disequilibrium phenomenon and long-term stability between variables. Table 4 indicates that the results of the model are significant at 5% level. The findings revealed long-run convergence of variables because the adjustment parameter (p) has a negative value. It means that 35.4% of the disequilibrium in CELF arises due to PHCR is corrected every year. This indicates a stable and long-term relationship between PHCR and CELF. Granger causality test has used up to four lags to check the causal relationships between PHCR and CELF. The results of the

**Table 4. Empirical findings for Error Correction (EC) Model – CELF**

Dependent variable: log (CELF)]	
Constant	-0.346 (-1.570)
Log (PHCR)	-1.259 (-1.541)**
p	-0.354 (-2.243)**
R-square	0.740
Adjusted R-square	0.707
Durbin-Watson statistics	1.951
F-statistics	5.657
Probability (F-statistics)	0.042**
Number of observations	48

**Note:** The values of t-statistics are shown in parentheses. The \*\* sign indicates the 5% level of significance.

Granger causality test are presented in table 5. The findings indicate that null hypothesis “PHCR does not Granger cause to CELF” has been rejected. Moreover, another null hypothesis of CELF causes PHCR has also been rejected. This finding revealed the presence of a bidirectional relationship between PHCR and CELF. It supports the conventional hypothesis of a bidirectional relationship between poverty and environment.

**Table 5. Causality results – CELF**

Years (Lagged)	Null hypothesis	Decision
1	log (PHCR) does not granger cause log (CELF)	Rejected
	log (CELF) does not granger cause log (PHCR)	Rejected
2	log (PHCR) does not granger cause log (CELF)	Accepted
	log (CELF) does not granger cause log (PHCR)	Accepted
3	log (PHCR) does not granger cause log (CELF)	Accepted
	log (CELF) does not granger cause log (PHCR)	Accepted
4	log (PHCR) does not granger cause log (CELF)	Accepted
	log (CELF) does not granger cause log (PHCR)	Accepted

#### ***4.3. Testing co-integration between PHCR and CRW***

The co-integration test is applied to measure the long-run relationship between poverty and environmental variable Co<sub>2</sub> emission from liquid fuel (CELF). The results of the test would indicate whether there is any relationship between these two variables. Table 6 and Table 7) indicated the results for regression and ADF test for residual respectively. The results indicated that residual has order one integration i.e., it is stationary at first difference. This implies the presence of the long-run correlation (co-integration) between these variables.

**Table 6. Empirical findings of the model – CRW (1971-2018)**

Dependent variable: log [Corbin Dioxide Emission from Liquid Fuel (CRW)]	
Constant	8.259 (0.875)*
Log (PHCR)	15.046 (0.123)*
AR(1)	0.670 (6.437)*
R-square	0.702
Adjusted R-square	0.681
Durbin-Watson statistics	1.903
F-statistics	38.225
Probability (F-statistics)	0.0000*
Number of observations	48

**Note:** The values of t-statistics are shown in parentheses. The \* sign indicates the 1% level of significance

**Table 7. Augmented Dickey-Fuller test for the residuals – CRW**

Residual Integration	Level	critical values			Decision	Integration Order
		1%	5%	10%		
Residual	-4.550	-2.650	- 1.953	-1.609	Stationary at level	I(1)

ECM is applied to capture the short-run disequilibrium phenomenon and long-term stability between variables. Table 8 indicates that the results of the model are significant at 5% level. The findings reveal a long-run convergence of variables because the adjustment parameter (p) has a negative value. It means that 49.9% of the disequilibrium in CRW arises due to PHCR being corrected every year. This indicates a stable and long-term relationship between PHCR and CRW. Granger causality test has used up to four lags to check the causal relationships between PHCR and CRW. The findings indicate (Table 9) that null hypothesis “PHCR does not granger cause to CRW” has been rejected at lag one. Moreover, another null hypothesis of CRW causes PHCR has also been rejected at lag 3. This finding

reveals the presence of a bidirectional relationship between PHCR and CRW.

**Table 8. Empirical findings of Error Correction Model – CRW**

Dependent variable: log (CRW)]	
Constant	49.292 (1.047)
Log (PHCR)	77.266 (-1.541)**
p	-0.499 (-3.401)**
R-square	0.440
Adjusted R-square	0.370
Durbin-Watson statistics	2.081
F-statistics	9.657
Probability (F-statistics)	0.000**
Number of observations	48

**Note:** The values of t-statistics are shown in parentheses. The \*\* sign indicates the 5% level of significance.

**Table 9. Causality results – CRW**

Lagged years	Null hypothesis	Decision
1	log (PHCR) does not granger cause log (CRW)	Rejected
	log (CRW) does not granger cause log (PHCR)	Accepted
2	log (PHCR) does not granger cause log (CRW)	Accepted
	log (CRW) does not granger cause log (PHCR)	Accepted
3	log (PHCR) does not granger cause log (CRW)	Accepted
	log (CRW) does not granger cause log (PHCR)	Rejected
4	log (HCR) does not granger cause log (CRW)	Accepted
	log (CRW) does not granger cause log (PHCR)	Accepted

#### **4.4. Testing co-integration between PHCR and FFEC**

The co-integration test is applied to measure the long-run relationship between poverty and environmental variable CO<sub>2</sub> emission from liquid fuel (CELF). The results of the test would indicate whether there is any relationship between these two variables. Table 10 and Table 11 indicated the results for regression and ADF test for residual respectively. The results indicated that residual has order one

integration i.e., it is stationary at first difference. This implies the presence of the long run correlation (co-integration) between these variables.

**Table 10. Empirical findings of the model – FFEC (1971–2018)**

Dependent variable: log [Corbin Dioxide Emission from Liquid Fuel (FFEC)]	
Constant	0.671(4.443)*
Log (PHCR)	0.151(2.343)*
AR(1)	0.692(3.435)*
R-square	0.672
Adjusted R-square	0.621
Durbin-Watson statistics	2.182
F-statistics	40.335
Probability (F-statistics)	0.0000*
Number of observations	48

**Note:** The values of t-statistics are shown in parentheses. The \* sign indicates the 1% level of significance.

**Table 11. Augmented Dickey-Fuller test for the residuals – FFEC**

Residual Integration	Level	critical values			Decision	Integration Order
		1%	5%	10%		
Residual	-4.081	-2.650	-1.953	-1.609	Stationary at level	I(1)

ECM is applied to capture the short-run disequilibrium phenomenon and long-term stability between variables. Table 12 indicates that the results of the model are significant at 5% level. The findings reveal long-run convergence of variables because the adjustment parameter (p) has a negative value. It means that 30.5% of the disequilibrium in FFEC arises due to PHCR is corrected every year. This indicates a stable and long-term relationship between PHCR and FFEC. Granger causality test has used up to four lags to check the causal relationships between PHCR and FFEC. The results of the



granger causality test indicated that null hypothesis “PHCR does not granger cause to FFEC” has been rejected at lag 2 (Table 13). Moreover, another null hypothesis of FFEC causes PHCR has also been rejected at lag 2. This finding reveals the presence of a bidirectional relationship between PHCR and FFEC.

**Table 12. Empirical findings of Error Correction Model – FFEC**

Dependent variable: log (FFEC)]	
Constant	0.696 (-1.220)
Log (PHCR)	1.116 (0.331)**
p	-0.305 (-0.199)**
R-square	0.560
Adjusted R-square	0.527
Durbin-Watson statistics	1.991
F-statistics	7.552
Probability (F-statistics)	0.042**
Number of observations	48

**Note:** The values of t-statistics are shown in parentheses. The \*\* sign indicates the 5% level of significance.

**Table 13. Causality results – CELF**

Lagged years	Null hypothesis	Decision
1	log (PHCR) does not granger cause log (FFEC)	Accepted
	log (FFEC) does not granger cause log (PHCR)	Accepted
2	log (PHCR) does not granger cause log (FFEC)	Rejected
	log (FFEC) does not granger cause log (PHCR)	Rejected
3	log (PHCR) does not granger cause log (FFEC)	Accepted
	log (FFEC) does not granger cause log (PHCR)	Accepted
4	log (PHCR) does not granger cause log (FFEC)	Accepted
	log (FFEC) does not granger cause log (PHCR)	Accepted

## **5. Conclusions**

The present study investigates the long-run correlation between environmental degradation and poverty in the coastal regions of Pakistan. The environmental degradation was measured by energy consumption from fossil fuel, CO<sub>2</sub> emissions from liquid fuel, combustible renewable, and wastes while the poverty level was estimated by headcount ratio. The study revealed a bidirectional relationship between environmental degradation and poverty in Pakistan. It means that the causal relationship between environmental degradation and poverty works in both directions. That is, natural environmental degradation leads to increased poverty and a rise in poverty level may affect the environment negatively.

There is a bidirectional relationship between CO<sub>2</sub> emission from liquid fuel and poverty in Pakistan. Poverty is the main cause of high population growth in Pakistan. With the increase in population, the need for the liquid fuel has also increased. The poverty is the cause of higher consumption of liquid fuel and the use of liquid fuel generates CO<sub>2</sub> in the air that is the main cause of air pollution. The higher rate of use of liquid fuel has also increased the emission of CO<sub>2</sub> in the air, resulting extreme air pollution. The emission of CO<sub>2</sub> in the air is damaging the ozone layer and increasing the heat in the weather whereas, the rise in the heat level is creating global warming. The global warming is affecting the production of agricultural products adversely and creates uncertainty in the weather. The recent floods in Pakistan are a result global change in weather conditions. The floods affected the poor very much and created different types of problems for them. The poor people affected by floods have lost their scarce resources. Moreover, they faced health hazards and their earning ability and living standards have affected.

The energy produced in Pakistan is mostly from fossil fuel such as oil, gas and coal. This increasing use of energy producing

resources also creates environmental problems such as air pollution. Because the increasing use of fossil fuel also increased the emission of greenhouse gases in the air; causing damaging of the ozone layer and generating global warming. Moreover, the greenhouse gases are also creating health problems for poor people in Pakistan. This health damage and global warming have increased the severity of poverty level. On the other hand, the economic growth has inequality in Pakistan. Because the rich people have got more benefits of economic growth than poor people and it has widened the gap between poor and rich. This unequal distribution of wealth has also increased the use of energy resources. Because rich people have more income from economic growth, therefore, they mostly use energy to provide sources for their luxurious lifestyle.

## **6. Policy Proposals**

1. There is a need to reduce poverty and environmental improvement by policymakers in Pakistan. Because the policies are only made for environmental conservation. The policies for poverty alleviation might also be not fruitful for poverty reduction in Pakistan.
2. The government of Pakistan should also devise policies for the proper dumping of industrial and municipal wastes because unsafe dumping is creating health problems in the country. Moreover, the regulations and procedures for the use of these wastes for the purpose of energy production must also be formulated to minimize the chances of environmental degradation.
3. Industrial units must be established in unpopulated areas to minimize the effects of industrial waste. The people could also be safe from health hazards generated due to the unsafe dumping of industrial wastes.

4. Environmental conservation policies must be developed and implemented by policymakers without political influence for the improvement of the environment in the country. This will reduce health problems for people in Pakistan.
5. There must be policies for reducing the emissions of greenhouse gases in the air. For this purpose, policymakers must encourage the use of energy resources that produces less air pollution. It means environment-friendly energy resources must be used.
6. The policies must be devised for equal distribution of benefits of economic growth among the poor and rich. This will be helpful for reducing poverty and also be helpful in reducing fossil fuel consumption by rich people for their luxurious lifestyles.

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## Maritime Border Management and Challenges in Western Indian Ocean (WIO)

Sehrish Qayyum<sup>a</sup>

### Abstract

*Unsettled maritime boundaries can hinder economic exploitation of offshore resources and complicate the management of maritime borders. They thwart states from getting on paths of prosperity and progress. This article explores factors that when taken together make most likelihood of effective border management in WIO. It uses descriptive-analytical method of qualitative research to conduct retrospective analysis. The paper highlights key factors concerning WIO's border management in terms of theoretical subjects. In terms of the importance of the components, the greatest scale corresponds to the political dimension, and among the factors is the foreign policy of WIO states. Geopolitical, geostrategic, and topographical realities all have a significant impact on the efficient administration of maritime boundaries. To make matters worse, WIO's geostrategic location has the greatest intervening influence on states. The research concludes that as per guidance of UN collective security patrols, forces had to be raised in CTF model as no country could be a 'Net Security Provider' in IO region singlehandedly.*

**Keywords:** Border Management, JMICC, Piracy, Western Indian Ocean, UNCLOS.

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## **1. Introduction**

Global-level developments dictate the nature of relationship between states. In the anarchic international system, the states relentlessly try to secure national security in an international arena. It is further compounded by presence of fraternity among states. Maritime boundary is a “conceptual division of the Ocean water areas using physical and geographical features of a littoral state and adjoining seas”.<sup>1</sup> It often encompasses regions of sovereign national rights over sea commerce, immigration, customs, etc. as well as mineral, biological and other living and non-living resources. It embraces maritime features, Islands, estuaries, bays, etc. In general, a maritime border is defined by a certain measure from the authority of the coastline.<sup>2</sup> Included are all inland waterways, Territorial Waters, Contiguous Zones, and EEZs. Regardless, the phrase does not include lake or river borders, which are treated in the context of land boundaries.

## **2. UNCLOS and Maritime Zones**

Understanding UNCLOS-82 will help to understand maritime borders, more appropriately maritime boundaries. UNCLOS-82 is reckoned as ‘Constitution of the Seas’.<sup>3</sup> According to Article 3 of UNCLOS-82, “a state has sovereign right to establish the breadth of its territorial sea up to limit not exceeding 12 nautical miles, measured from baseline.”<sup>4</sup> For all legal reasons, these seas are regarded to be

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<sup>1</sup> USDCOM (US Department of Commerce), “Maritime Zones and Boundaries,” National Oceanic and Atmospheric Administration, accessed December 17, 2022, <https://www.noaa.gov/maritime-zones-and-boundaries>

<sup>2</sup> USDCOM, “Maritime Zones and Boundaries,” 2022.

<sup>3</sup> UNCLOS, “United Nations Convention on the Law of the Sea - Main Page,” United Nations (United Nations), accessed August 15, 2022, <https://legal.un.org/avl/ha/uncls/uncls.html>.

<sup>4</sup> UNCLOS, “United Nations Convention on the Law of the Sea (UNCLOS) - the Faculty of Law,” United Nations Convention on the Law of the Sea (UNCLOS) -



part of a country's territory. According to UNCLOS-82, "the low-water line along the coast is typically chosen as the baseline" from which all maritime zones are calculated.<sup>5</sup> "The zone extending 12 (NM) Nautical Miles from the baseline is **TTW**, and the area extending 24 Nautical Miles from the base is **CZ**, whereas **EEZ** may extend to 200 Nautical Miles from the baseline."<sup>6</sup> The primary goal of an EEZ is economic, and it may include the exploration, exploitation, development, management, and protection of all living and nonliving resources.

The aim of the research is to find the importance of maritime boundaries, and how they are demarcated and secured. Moreover, varied impacts of challenges to maritime security are observed and discussed to find a plausible mitigating plan. This study will help out to understand how naval power is clear in its objective and success rate of measurements done for security so far.

### 3. Methodology

Research is qualitative in nature employing a phenomenological approach. The research population is probabilistic and convenient sampling is used for data collection. Data for this study were acquired using a "descriptive-analytical" qualitative research approach. Data was gathered from libraries and free sources. While thematic analysis method is used for analyzing data. The following are the primary research questions addressed in this article: What are the primary factors that when taken together make most likelihood of effective border management in WIO? How maritime border management provides a window of opportunities and challenges in WIO? The factors responsible for effective maritime

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The Faculty of Law, accessed August 15, 2022, <https://www.jus.uio.no/english/services/library/treaties/08/8-01/unclos.xml>.

<sup>5</sup> Ibid.

<sup>6</sup> UNCLOS, "United Nations Convention on the Law of the Sea," United Nations (United Nations), accessed August 15, 2022, [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/part2.html](https://www.un.org/depts/los/convention_agreements/texts/unclos/part2.html).

border management are primarily identified in terms of theoretical subjects which are discussed as follows.

#### **4. Theoretical Subjects**

##### ***4.1. Maritime Boundary Disputes***

Sometimes, international disagreement to determine maritime boundaries leads to disputes turning into violent clashes. For example, China claims 90% of the South China Sea.<sup>7</sup> This claim is based on the U-shaped Nine-Dash line, which a Chinese geographer drew on a map in the 1940s to denote control over the sea, encompassing the Spratly and Paracel islands.<sup>8</sup> A discontinuous line shows that shipping can freely pass through. Clash appears as littoral countries claim it illegal with overlapping assertions. This jeopardises the sovereignty of many governments that have exclusive economic zones in the South China Sea.

Add to it, another important maritime border dispute in the IO is Sir Creek Issue between Pakistan and India. Delayed resolution of Sir Creek issue continues to infringe UNCLOS-82 section II article 118 which encourages ‘cooperation of states in the conservation and management of marine resources’.<sup>9</sup> Under international law, Sir creek’s issue has to be dealt with under thalweg principle.<sup>10</sup> The principle states that “the middle of the primary navigable channel of

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<sup>7</sup> Srijan Shukla, “What Is Nine-Dash Line? the Basis of China's Claim to Sovereignty over South China Sea,” *The Print*, July 28, 2020, <https://theprint.in/theprint-essential/what-is-nine-dash-line-the-basis-of-chinas-claim-to-sovereignty-over-south-china-sea/469403/>

<sup>8</sup> Ibid.

<sup>9</sup> UNGA, “United Nations Convention on the Law of the Sea - Main Page,” United Nations (United Nations), accessed August 15, 2022, <https://legal.un.org/avl/ha/uncls/uncls.html>

<sup>10</sup> Sikander Ahmad Shah, “Rule of the Thalweg,” *Oxford Reference*, accessed August 15, 2022, <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803103515186>

a waterway that defines the boundary line between states”.<sup>11</sup> India denies Pakistan's position, claiming that the creek is navigable at high tide and that the thalweg concept is applied to international borders in tidal seas. Moreover, fishing trawlers utilize Sir Creek to reach the open sea. In this backdrop, the existence of well-defined borders and implementation of law and order is crucial for thwarting maritime security and border issues. Apart from India, Pakistan has settled maritime boundary issues with all maritime neighbours including Oman and Iran.

#### ***4.2. Crimes at High Seas and Possible Impacts***

With ever-evolving technology and foray of Violent Non-State Actors (VNSAs), use of maritime domain for illicit activities by various crime syndicates and cartels are common. Resultantly, this renders flow of legitimate maritime commerce, security of maritime traffic and even economic growth vulnerable. In 2003 after Mogadishu government was toppled, it created a vacuum on protecting vast EEZ of Somalia. A zone of 8,30,389 square kilometers was left unattended.<sup>12</sup> This encouraged IUUF by Korean, Iranian, and vessels from other countries. When this went on for some time the local warlords were concerned about the stealing of their valuable deep-sea resources, they reacted shortly by kidnapping for ransom. This trend later turned into piracy. Piracy has become a huge threat to international commerce, global trade, and security off the coast of Somalia. The international community was expected to respond forcefully. The total cost of ransom money, military protection, and cargo insurance as a consequence of Somali piracy is estimated to be

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<sup>11</sup> Sikander Ahmed Shah, “Sir Creek and Its Legal and Political Significance and Resolution,” *Polaris Journal of Maritime Research PJMR*, October 21, 2021, <https://bahria.edu.pk/polaris/sir-creek-and-its-legal-and-political-significance-and-resolution/>

<sup>12</sup> Raza Ali Khan, “The EEZ of Somalia in Dark Blue,” accessed August 15, 2022, [https://researchgate.net/figure/The-EEZ-of-Somalia-in-dark-blue-Source-Sea-around-Us-Project-originally-from-FAO\\_fig1\\_34983643](https://researchgate.net/figure/The-EEZ-of-Somalia-in-dark-blue-Source-Sea-around-Us-Project-originally-from-FAO_fig1_34983643)

between \$7 and \$12 billion in 2010.<sup>13</sup> This figure does not include the aggregate loss of trade income from neighbouring countries like as Egypt, Kenya, Yemen, and Nigeria, which is believed to be at least \$1.25 billion every year. .<sup>14</sup> CTF 151 under US 5<sup>th</sup> Fleet was then assembled as an anti-Somali piracy force under UNSCR 1846 of 2008.<sup>15</sup>

## **5. Maritime Security and Border Management:**

It seems superfluous to underscore that maritime security requires effective border control measures which could only be ensured through collaborative efforts. It would subsequently encourage states in dealing with organized transnational crime including piracy, terrorism, drug, human, and weapons trafficking, etc. Maritime border security also involves maintaining freedom of navigation and overflight. For example, the Indo-Pacific region encompasses the Indian Ocean, the South and East China Seas, and the Pacific Ocean (a vast maritime space). These waterways include very important fish species as well as significant hydrocarbon potential, notably in the East and South China Seas. A major power competition is also under way in the region called ‘Indo-Pacific’ i.e., FOIP strategy has been coined by US and its allies.

These waterways also feature multiple major Sea Lines of Communication (SLOCs) for global business, which are critical to the economies of many regional governments, notably East Asian ones. This area has the majority of the world's busiest container ports, and a significant amount of global marine commerce transits via these seas.

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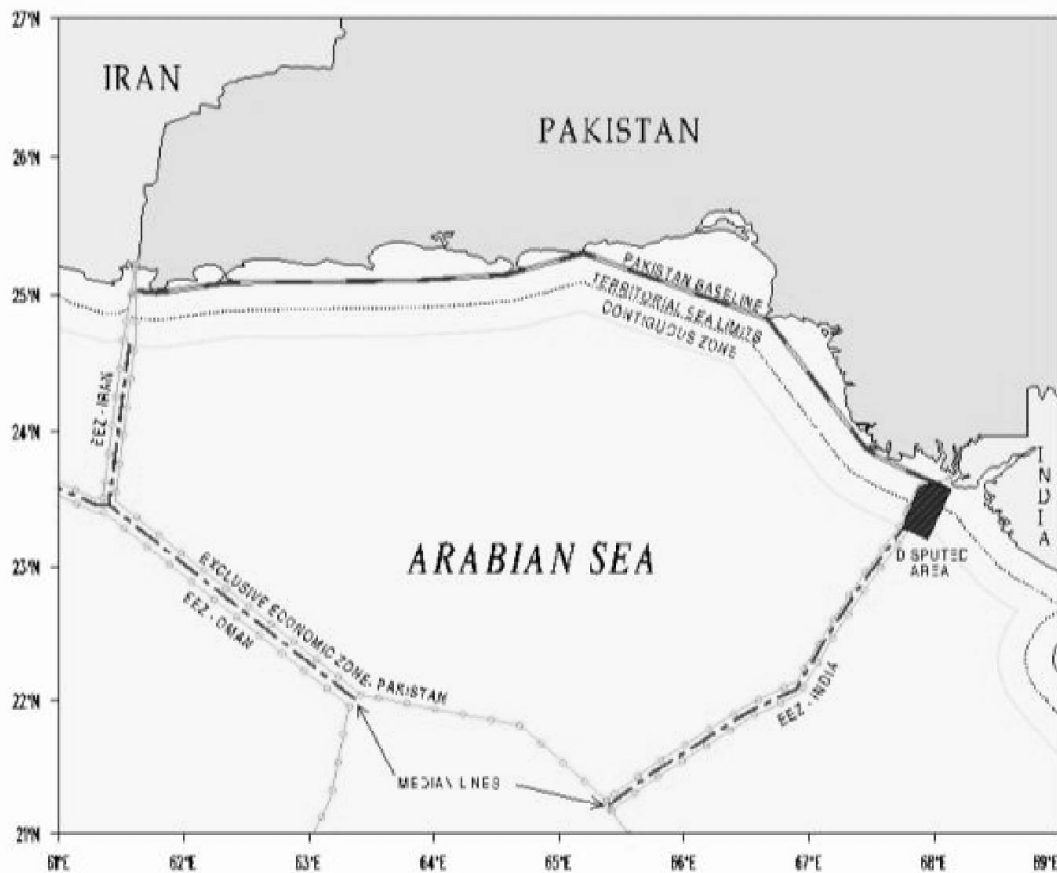
<sup>13</sup> Miles G Kellerman, “Somali Piracy: Causes and Consequences,” *Inquiries Journal*, September 1, 2011, <http://www.inquiriesjournal.com/articles/579/somali-piracy-causes-and-consequences>

<sup>14</sup> *Ibid.*

<sup>15</sup> United Nations High Commissioner for Refugees, “Security Council Resolution 1846 (2008) [on Repressing Acts of Piracy and Armed Robbery at Sea off the Coast of Somalia],” *Refworld*, accessed August 15, 2022, <https://www.refworld.org/docid/493e3f852.html>

This necessitates a high priority on ensuring marine peace, security, and unhindered legal access for everyone.

## 6. Pakistan's Maritime Zone and Boundary



**Figure 1. Pakistan's Maritime Zone and Boundaries (Source- IILSS International Institute of Law of Sea Studies)**

UNCLOS-82, by “articles 76, paragraph 9, and 84, paragraph 2 of the Convention, of a chart, containing a list of geographical coordinates of locations and related information, permanently defining the outer boundaries of its continental shelf.”<sup>16</sup> According to the given reference, Chart no. PAK-57 issued by UNO, Pakistan has claimed

<sup>16</sup> “United Nations Convention on the Law of the Sea (UNCLOS) - the Faculty of Law,” United Nations Convention on the Law of the Sea (UNCLOS) - The Faculty of Law, accessed August 15, 2022, <https://www.jus.uio.no/english/services/library/treaties/08/8-01/unclos.xml>

over 200 nautical miles from baseline as its continental shelf. Figure 1 exposit Pakistan's maritime zone and boundaries with adjacent countries and their EEZs. Only one disputed maritime zone is with India i.e., Sir Creek Issue. The delayed resolution of Sir Creek issue continues to infringe UNCLOS-82 section II article 118 which encourages cooperation of states in the conservation and management of marine resources.<sup>17</sup> Under international law, Sir creek's issue has to be dealt with under Thalweg principle. The principle states that "the middle of the primary navigable channel of a waterway that defines the boundary line between states".<sup>18</sup> India opposes Pakistan's position by saying Sir Creek seems to be navigable at high tide, the thalweg concept is utilized for international borders in tidal waterways, and fishing trawlers use Sir Creek to travel to sea. In this backdrop, the existence of well-defined borders and implementation of law and order is crucial for thwarting maritime security and border issues. Except for India, Pakistan has settled maritime boundary issues with all maritime neighbours including Oman and Iran.

The absence of tangible borders creates illusion of managing maritime border security and Border Crossing Points (BCPs) within seas. 'The International Organization for Migration (IOM) and Immigration and International Border Management (IBM) Division assist member nations in improving marine security by providing technical advice on suitable policies, laws, administrative structures, and operational systems'.<sup>19</sup>

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<sup>17</sup> "United Nations Convention on the Law of the Sea (UNCLOS) - the Faculty of Law," United Nations Convention on the Law of the Sea (UNCLOS) - The Faculty of Law, accessed August 15, 2022, <https://www.jus.uio.no/english/services/library/treaties/08/8-01/unclos.xml>

<sup>18</sup> Editorial, "Rule of the Thalweg," Oxford Reference, accessed August 15, 2022, <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803103515186>

Maintaining freedom of navigation and overflight is also part of maritime border security. These waters also contain numerous important Sea Lines of Communication (SLOCs) for commerce that are vital for national trade. This requires us to place a premium on maintaining maritime peace, security, and unimpeded lawful access for all.

## **7. Sea Cognizance and Maritime Border Security**

Paradigm shift from “maritime oblivion” to “maritime cognizance” is gaining currency amongst contemporary thinkers.<sup>20</sup> As a power competition in the Indo-pacific region is intensifying the Indian Ocean is also becoming a vibrant theater of traditional and non-traditional security challenges. This, too, is linked with legal governance of the region that would require regional solutions and commitments beyond strategic thinking. The role of non-state actors and environmental threats pose grave challenges to the IOR countries, and no single country can act as a net security provider for this region. These two variables can potentially stifle the movement of more than half of the world’s container traffic and one-third of all maritime traffic traversing between Indian Ocean and South China Sea.

## **8. Dimensions to be Focused Under Maritime Border Management Strategy**

Pakistan’s maritime agencies along with Pakistan Navy require operational capabilities to detect, deter, interdict, and investigate illegal maritime activity. As fencing of land borders is likely to increase infiltration through sea routes it demands proactive measures to actively safeguard maritime boundary of Pakistan. The challenge affecting these missions is the lack of data and limited capacity with insufficient spatial and temporal density to enable automated analytics.

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<sup>20</sup> John Bradford, “Dynamics of evolving threats from sea – Perception Inversion,” PNWC Library, accessed August 16, 2022, <https://pnwc.paknavy.gov.pk/pnwclibrary/>

The unification of those analytic outputs to permit the allocation of resources to the right place at the right time is aggravating challenge due to budget constraints. The following areas need to be managed under ‘Maritime Border Management Strategies’<sup>2122</sup>.

## 9. Boundary Control Centers

Maritime security agencies need to manage a system of checking travel license of every vessel i.e., cargo, passenger, and warships entering the maritime zones.<sup>23</sup> Travel licenses of every surface vessel need to be revised periodically on intra-ship travel document identification and security effective policy. Intangible borders demand development of remote command and control centers (Ship-based) within state waters to manage entry and exit in its maritime zones to avoid trafficking, smuggling, piracy, and prospect entries of adversaries.<sup>24</sup>

## 10. Port and Coastal Surveillance

The inability of marine management agencies to identify, priorities, define, and communicate actionable information and intelligence on maritime risks remains an ongoing challenge. Surveillance data must be strategically disseminated in an appropriate way to promote unity of effort and intelligence-driven operations across all maritime security and management organizations. Marine border operational agencies have limited capabilities to detect, monitor, and identify low-profile maritime threats such as IUUF, non-

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<sup>21</sup> UNO, “Border Security and Management | Office of Counter-Terrorism,” United Nations (United Nations), accessed August 16, 2022, <https://www.un.org/counterterrorism/cct/border-security-and-management>

<sup>22</sup> Miles G Kellerman, “Somali Piracy: Causes and Consequences,” *Inquiries Journal*, September 1, 2011, <http://www.inquiriesjournal.com/articles/579/somali-piracy-causes-and-consequences>

<sup>23</sup> UK Official, “Code of Federal Regulations,” GovInfo, February 23, 2022, <https://www.govinfo.gov/help/cfr>

<sup>24</sup> Ibid.



emitting tiny vessels, and go-fast boats conveying contraband or persons illegally into maritime zones. Furthermore, operational components must use technology as a force multiplier to increase operational effectiveness, efficiency, or to minimize operating and maintenance costs.

By building an enterprise capacity for port and coastal surveillance, the project will help to the unity of efforts, initiative, and development of solutions to increase marine situational awareness to:

- a. access more data sources, including Human Intelligence (HUMINT), Open-Source Intelligence (OSINT), unmanned systems and space-based sensors.
- b. Provides decision-support tools to turn data into useful insight.
- c. share actionable information and intelligence with local interagency and regional cross-border agencies.<sup>25</sup>

It will increase sensor systems' capacity to identify and monitor waterborne hazards by increasing detection rates and decreasing false alarms. These initiatives will also aid in the identification and development of technologies that will enable operational components to more effectively use and allocate resources, as well as lower operational and maintenance costs. Local, international, public, and commercial partners will benefit from improved, created, or combined sensors, platforms (including autonomous), information sharing technologies, mission support tools/techniques, and decision support capabilities.<sup>26</sup>

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<sup>25</sup> US\_DHS, "Port and Coastal Surveillance - DHS," accessed August 16, 2022, <https://www.dhs.gov/sites/default/files/publications/Port-and-Coastal-Surveillance-factsheet-12-22-17.pdf>

<sup>26</sup> Ibid.

## **11. Port and SLOCs Management**

Develop and adapt analytical visualisation tools, data, and technology to help waterway managers plan for, mitigate, react to, and recover from an MTS event or catastrophe. We can concentrate more on:

- a. Inclusion of private players in the maritime security particularly port and ship infrastructure and SLOCs management.
- b. Enhanced interaction with friendly countries for adopting the best practices being followed by them and customizing those policies as per own requirements.
- c. Formulation of standards and policy for the procurement in equipment for coastal and port security

## **12. Integrated Domain Enterprise**

Flexible data access and interoperable technologies must assist corporate domain knowledge to build critical information-sharing, capacity gaps, and information silos. Increased detections, interdictions, and deterrent will result from technological advancements that improve operational effectiveness and marine domain awareness. Increased efficacy and situational awareness, in particular, will result in enhanced assessment of criminal activity to understand the existing condition and the effects of more resources or other measures done to improve security. It may increase risk assessment even further by recognising present dangers as well as upcoming patterns and trends. While better resource-to-risk alignment for current and future operations will benefit maritime security and management agencies on both a tactical and strategic level. Inter-service integration for data and intelligence sharing is necessary for coordinated operations.

### **13. Remote Maritime Technologies:**

Conduct research and create methods to identify and react to unlawful marine activities or emergency situations in distant maritime locations in a timely way. Maritime technology development and advancement “Space systems to improve Intelligence, Surveillance, and Reconnaissance (ISR) and command, control, and communications (C3) capabilities; data analytics to provide timely alerting to illicit behaviours or emergency situations; technologies to aid in effective hazard prevention and response; and solutions to prevent loss of life”<sup>27</sup>

### **14. Coastal Operational Analysis:**

Coastal operational tool enables station commands and headquarters decision makers focus on mission requirements and operational unit tasks related to asset capabilities, procurement, allocations, unit placements, policies, and operational concepts, and mission tradeoffs. Situational analysis aids incorporate mission- or unit-specific analyses. Strategic tools convey. Two areas need attention:

- a. The Boat Allocation Strategy assists users in determining the quantity and kind of boats required to complete objectives at each station.
- b. The Boat Station Search and Recovery Strategy will help evaluates SAR actions at boat stations, calculate operational effectiveness, and estimate the effects of asset capability or policy changes.

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<sup>27</sup> Editorial-MT, “Maritime Technology Challenges 2030,” *Maritime Technology*, accessed December 17, 2022, [https://marine-digital.com/article\\_maritime\\_challenges\\_2030](https://marine-digital.com/article_maritime_challenges_2030)

## **15. WIO and Maritime Border Security**

Some important choke points of WIO: these are: Strait of Hormuz, Babel e Mandab and Suez Canal.<sup>28</sup> The said choke points provide major transit routes of international sea-based trade. It is primarily driven by oil trade across the globe.

Therefore, any political friction or clash in the Indian Ocean may sabotage this trade. The absence of tangible borders create illusion of managing maritime border security and Border Crossing Points (BCPs) within seas.

## **16. Conclusion**

The Indian Ocean is a geopolitical flashpoint the world economy depends on it. Secured borders are symbols of sovereign states. Demarcation of borders and their management represents state's capacity to defend itself from any possible traditional and non-traditional threats. After the delimitation of the maritime boundaries, littoral states of IO must realize the need for safe and secure territorial waters. Besides country based maritime patrols private security provision companies are providing security to vessels and maritime movement in IO i.e., UAE based Neptune security, UK based ESPADA, Anti-Piracy maritime security services, and MAST, regional maritime patrol. Under auspices of UN collective security patrol forces had to be raised on the footings of CTF. Put simply, no single country could be a 'Net Security Provider' in IO region. Learning from the lessons of Somalia's coasts, nine-dash line disputes ranging to crisis in SCS, and sensitivity of choke points all regional geostrategic alliances of littoral states have to shift focus on maritime security.

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<sup>28</sup> SC-Editorial, "Strait of Hormuz - Other Chokepoints," The Strauss Center, July 8, 2020, <https://www.strausscenter.org/strait-of-hormuz-other-chokepoints/>

## **17. Recommendations**

Secured borders are symbol of sovereign states. Demarcation of borders and their management represents state's capacity to defend from any possible traditional and non-traditional threats. In order to counter such challenges following recommendations may be considered for developing national maritime border management strategy.

1. Ratification of UNCLOS-82 by all major stakeholders of maritime zones.
2. Travel document inspection, data management, and risk analysis leading to a coordinated marine border management system for increased security.
3. Improving maritime security requires combating transnational crime, particularly migrant smuggling.
4. Implementing an integrated Border Management Information System (BMIS), incorporating the IOM-developed Migration Information and Data Analysis System (MIDAS), would be a realistic and practicable solution for border management under the international system. The BMIS and MIDAS systems are intended to gather, process, and retain information on passengers at border crossing points (BCPs). Reviewing national and INTERPOL alert lists, it improves states' ability to detect and detain passengers who pose a security concern. On similar grounds, Pakistan Navy developed JMICC for inter-departmental coordination and information sharing to respond to maritime security challenges within its EEZ. This setup could be extended for international coordination among maritime states on consensus-based areas i.e., tourists, shipping vessels, and warships navigation from waters despite sharing any confidential information impacting any states' sovereignty.

5. These coordination centers may develop specialized intelligence and evidence-based risk profiles focusing on regional littoral states - Regional Information Fusion and Coordination Centers (RIFCCs).
6. Consensus-based international security organizations and forces such as Task Forces are needed for maritime security and boundary management issues.
7. Analyzing travel documentation, detecting fraud, and identifying impostors are needed to regulate immaterial boundaries. Establishing forensic laboratories for document examination will help to share valid and reliable information regarding any entity entering and exiting i.e., individual and ship[s] within maritime zones.
8. Control over High seas crimes and managing maritime borders will add to achieving SDG-16 which is Peace, Justice, and Strong Institutions via inter-agency coordination, for maritime security and managing borders for maintaining peace, contributing to global armistice and development.
9. Incorporation of coastal and shipborne unmanned aerial systems or extension of intelligence surveillance and reconnaissance (ISR) envelop of Pakistan's maritime security agencies.
10. Expansion and modernization of Pakistan Maritime Security Agency (PMSA) particularly the air arm by inducting helicopters and recon aircraft with longer range and better sensor suites for all weather and long-range surveillance capabilities with superior endurance.
11. Consolidation of cooperation between federal and provisional agencies regarding maritime border management and security.

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## **BRI and Geopolitical, Geo-economics, and Maritime Security Dynamics of South Asia: Significance of Gwadar Port**

Sami Ullah<sup>a</sup>

### **Abstract**

*China-Pakistan Economic Corridor (CPEC) is the pioneer project of the Belt and Road Initiative (BRI), and the development of Gwadar port is part of it. This research explains the geo-economics and geopolitical significance of Gwadar port for China and Pakistan. It discusses the role of Gwadar port in successfully implementing BRI and its economic security outcomes for Pakistan, China, and other partners in BRI. A qualitative research approach is used to examine the geo-economics effects of Gwadar port on the economic and political relations of China and Pakistan. Official reports and government documents are used for data analysis. The findings show that Gwadar port could be a solution to the economic security targets of China and Pakistan. China will also gain energy security by finding an alternate, more secure route for the supply of oil and export of goods and better access to markets of Central Asia, Europe, and the USA. Moreover, Pakistan is expected to observe a significant rise in maritime trade capacity to support the dwindling economy. Furthermore, naval security will improve by reducing reliance on ports in Karachi, close to the Indian border.*

**Keywords:** *Maritime Security, Economic Security, Geo-economics, Geopolitics, Belt and Road Initiative, China-Pakistan Economic Corridor*

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## 1. Introduction

Economic security is the top priority among the national security preferences in the modern world<sup>12</sup>. China-Pakistan Economic Corridor (CPEC) is the pioneer project of the Belt and Road Initiative (BRI), and the development of Gwadar port is part of it. BRI and CPEC have gained significant global attention due to their strategic and economic importance to the region, and Gwadar port is pivotal to the success of these projects<sup>34</sup>. Several geopolitical and economic factors are used to analyze Gwadar Port's significance in the BRI's success and its implications for Pakistan and China. This research explains the geo-economics and geopolitical significance of Gwadar port for China and Pakistan. It discusses the role of Gwadar port in successfully implementing BRI and its economic security outcomes for Pakistan, China, and other partners in BRI.

The coastline of Pakistan is more than 700 km long, with two most significant strategic points: The ports of Karachi and Gwadar. Karachi Port is on the east side, sharing a border with India, whereas Gwadar Port is on the western coast, sharing borders with Iran and Middle Eastern countries. The geostrategic position of Gwadar Port is crucial due to its proximity to sea trade routes<sup>56</sup>. The location of

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<sup>1</sup> Andrusac, Gabriel. "Economic Security—New Approaches in the Context of Globalization." *CES Working Papers* 7, no. 2 (2015): 232-40. <https://www.ceeol.com/search/article-detail?id=282660>

<sup>2</sup> Zhengyi, Wang. "Conceptualizing Economic Security and Governance: China Confronts Globalization." *The Pacific Review* 17, no. 4 (2004): 523-45. doi:10.1080/0951274042000326050.

<sup>3</sup> Kamel, Maha S. "China's Belt and Road Initiative: Implications for the Middle East." *Cambridge Review of International Affairs* 31, no. 1 (2018): 76-95. <https://doi.org/10.1080/09557571.2018.1480592>

<sup>4</sup> Khan, Muhammad Zahid Ullah, and Minhas Majeed Khan. "China-Pakistan Economic Corridor." *Strategic Studies* 39, no. 2 (2019): 67-82. <https://doi.org/10.53532/ss.039.02.00112>

<sup>5</sup> Bashir, Rabia, Sawaira Rashid, Muhammad Ikram, and Ameena Tanveer. "Geo-Strategic Importance of Gwadar Port." *Journal of Indian Studies* 4, no. 1 (2018): 53-64. <https://prdb.pk/uploads/publications/1539253061803.pdf>

Gwadar port provides an opportunity to choke (presumably allowing control) several important sea trade routes from Africa, and Europe through the Red Sea, the Strait of Hormuz, the Persian Gulf to East Asia and the Pacific region, making it even more vital for maritime trade route security.

Gwadar is in the province of Baluchistan on the western side of Pakistan. Although Baluchistan is vital to successfully implementing the China-Pakistan Economic Corridor (CPEC), the province suffers from a poor socioeconomic profile, has the lowest per capita income, and contributes only 4.3% to the national GDP. Nevertheless, the province is rich in natural resources, and access to these resources through CPEC infrastructure development is expected to make this region attractive for investment. However, the volatile security conditions of this region are the biggest challenges to implementing CPEC development projects<sup>789</sup>. The terrorist groups, including Baluchistan Liberation Army, seeking autonomous control over the province, have repeatedly attacked foreigners and local citizens, leading to a precarious security situation. The recent rise of the Taliban in Afghanistan further complicates the security situation in Baluchistan.

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<sup>6</sup> Kalim, I. "Gwadar Port: Serving Strategic Interests of Pakistan." *South Asian Studies* 31, no. 1 (2016): 207-21. <http://dx.doi.org/10.18588/202111.00a205>

<sup>7</sup> Hussain, Mehmood, and Ahmed Bux Jamali. "Geo-Political Dynamics of the China–Pakistan Economic Corridor: A New Great Game in South Asia." *Chinese Political Science Review* 4, no. 3 (2019): 303-26. doi:10.1007/s41111-019-00128-y.

<sup>8</sup> Ishaq, Muhammad, Ruan Jian Ping, and Bilal Ahmed. "Pakistan-China Economic Corridor (Cpec): Opportunities, Threats and Challenges." *International Affairs and Global Strategy* 52 (2017): 9-16. doi: 10.17051/ilkonline.2021.05.414

<sup>9</sup> Kuszewska, Agnieszka, and Agnieszka Nitza-Makowska. "Multifaceted Aspects of Economic Corridors in the Context of Regional Security: The China–Pakistan Economic Corridor as a Stabilising and Destabilising Factor." *Journal of Asian Security and International Affairs* 8, no. 2 (2021): 218-48. <https://doi.org/10.1177/23477970211017719>

Although challenges from the implementation of CPEC have been discussed in the previous research, the geopolitical significance of CPEC, particularly Gwadar Port, has not been discussed in detail. Most studies in this direction have focused on the economic benefits of CPEC for both countries. However, this research adopts a geo-economic theory perspective to comprehensively analyze the geostrategic significance of Gwadar Port in achieving political and economic benefits of CPEC and the Belt & Road Initiative (BRI) in general. Geo-economics means the geostrategic use of economic power as a foreign policy strategy to achieve strategic objectives<sup>10 1112</sup>.

## 2. Geo-economics of BRI

BRI is China's most remarkable economic project, aiming for development in more than 140 countries to transform the lives of more than 60% of the world's population. It has received unprecedented attention at the global level and is widely discussed in political and economic development forums. In the international relations domain, several studies have analyzed BRI as a policy tool to increase China's influence in the region<sup>1314151617</sup>. On the contrary, studies by

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<sup>10</sup> Li, Mingjiang. "The Belt and Road Initiative: Geo-Economics and Indo-Pacific Security Competition." *International Affairs* 96, no. 1 (2020): 169-87. <https://doi:10.1093/ia/iiz240>.

<sup>11</sup> Scholvin, Sören, and Mikael Wigell. "Power Politics by Economic Means: Geo-economics as an Analytical Approach and Foreign Policy Practice." *Comparative Strategy* 37, no. 1 (2018): 73-84. <https://doi.org/10.1080/01495933.2018.1419729>

<sup>12</sup> Wigell, Mikael. "Conceptualizing Regional Powers' Geo-economic Strategies: Neo-Imperialism, Neo-Mercantilism, Hegemony, and Liberal Institutionalism." *Asia Europe Journal* 14, no. 2 (2016): 135-51. <https://doi:10.1007/s10308-015-0442-x>

<sup>13</sup> Beeson, Mark. "Geo-economics with Chinese Characteristics: The Bri and China's Evolving Grand Strategy." *Economic and Political Studies* 6, no. 3 (2018): 240-56. <https://doi.org/10.1080/20954816.2018.1498988>

<sup>14</sup> Gong, Xue. "The Belt & Road Initiative and China's Influence in Southeast Asia." *The Pacific Review* 32, no. 4 (2019): 635-65. <https://doi.org/10.1080/09512748.2018.1513950>

<sup>15</sup> *ibid*

Benabdallah (2019)<sup>18</sup>, Parepa (2020)<sup>19</sup>, and Deng (2021)<sup>20</sup> have used a cost-efficient approach to argue that inter-regional connectivity and trade benefits of BRI will lead to socioeconomic development in the host countries. Wang (2016)<sup>21</sup> highlighted that China had adopted a regional cooperation approach for transnational development in Asia, Africa, and Europe.

Moreover, Gong (2019)<sup>22</sup> and Liu (2020)<sup>23</sup> argued that China adopted BRI in response to uncertain relations with neighboring countries in the region and rising US influence over Asia. Thus, BRI can be a coping strategy to mitigate regional security risks and boost Chinese influence in the regional and international political order. China has adopted “*infrastructure diplomacy*” to achieve regional connectivity and strengthen its relations with countries on its continental periphery<sup>24,25,26</sup>.

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<sup>16</sup> Ohashi, Hideo. "The Belt and Road Initiative (Bri) in the Context of China's Opening-up Policy." *Journal of Contemporary East Asia Studies* 7, no. 2 (2018): 85-103. <https://doi.org/10.1080/24761028.2018.1564615>

<sup>17</sup> Rahman, Zia Ur. "A Comprehensive Overview of China's Belt and Road Initiative and Its Implication for the Region and Beyond." *Journal of Public Affairs* (2020): e2298. <https://doi.org/10.1002/pa.2298>

<sup>18</sup> *ibid*

<sup>19</sup> Parepa, Laura-Anca. "The Belt and Road Initiative as Continuity in Chinese Foreign Policy." *Journal of Contemporary East Asia Studies* 9, no. 2 (2020): 175-201. <https://doi:10.1080/24761028.2020.1848370>.

<sup>20</sup> Deng, Yong. "How China Builds the Credibility of the Belt and Road Initiative." *Journal of Contemporary China* 30, no. 131 (2021): 734-50. <https://doi:10.1080/10670564.2021.1884958>.

<sup>21</sup> Wang, Yong. "Offensive for Defensive: The Belt and Road Initiative and China's New Grand Strategy." *The Pacific Review* 29, no. 3 (2016): 455-63. <https://doi.org/10.1080/09512748.2016.1154690>

<sup>22</sup> *ibid*

<sup>23</sup> Liu, Feng. "The Recalibration of Chinese Assertiveness: China's Responses to the Indo-Pacific Challenge." *International Affairs* 96, no. 1 (2020): 9-27. <https://doi:10.1093/ia/iiz226>

<sup>24</sup> Garlick, Jeremy, and Radka Havlová. "China's "Belt and Road" Economic Diplomacy in the Persian Gulf: Strategic Hedging Amidst Saudi-Iranian Regional

Another perspective to look at BRI is provided by a neorealist, Chan (2017)<sup>27</sup>, who argued that China takes the US presence in Asia as a threat to its national security. Therefore, in response to US influence in Asia, China has initiated plans like BRI, Chinese Dream or Asia for Asians and established Asian Infrastructure Investment Bank (AIIB) to project China as a norm maker in global governance. China has rebalanced the US and its allies in Eurasia through these initiatives and enhanced economic relations with BRI partner countries. In addition, China ensures energy security and the development of Western parts through BRI<sup>282930</sup>.

The debate about the primary objective of BRI bringing economic development or grand political strategy of China is ongoing; however, the desegregation of geopolitical and economic motives is rather a futile effort. We have used both economic and geopolitical factors to adopt a geo-economic approach to analyze the political and

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Rivalry." *Journal of Current Chinese Affairs* 49, no. 1 (2020): 82-105. <https://doi.org/10.1177/1868102619898706>

<sup>25</sup> McConnell, Fiona, and Chih Yuan Woon. "Mapping Chinese Diplomacy: Relational Contradictions and Spatial Tensions." *Geopolitics* (2021): 1-26. <https://doi.org/10.1080/14650045.2021.1966417>.

<sup>26</sup> Wilson, Jeffrey. "Infrastructure Choices and the Future of the Indo-Pacific." *Security Challenges* 16, no. 3 (2020): 64-68. [https://regionalsecurity.org.au/security\\_challenge/infrastructure-choices-and-the-future-of-the-indo-pacific/](https://regionalsecurity.org.au/security_challenge/infrastructure-choices-and-the-future-of-the-indo-pacific/)

<sup>27</sup> Chan, Lai-Ha. "Soft Balancing against the Us 'Pivot to Asia': China's Geostrategic Rationale for Establishing the Asian Infrastructure Investment Bank." *Australian Journal of International Affairs* 71, no. 6 (2017): 568-90. <https://doi.org/10.1080/10357718.2017.1357679>

<sup>28</sup> Hussain, Mehmood. "Cpec and Geo-Security Behind Geo-Economics: China's Master Stroke to Counter Terrorism and Energy Security Dilemma." *East Asia* 38 (2021): 313-32. <https://doi.org/10.1007/s12140-021-09364-z>

<sup>29</sup> Klinger, Julie Michelle. "Environment, Development, and Security Politics in the Production of Belt and Road Spaces." *Territory, Politics, Governance* 8, no. 5 (2020): 657-75. <https://doi.org/10.1080/21622671.2019.1582358>

<sup>30</sup> Chauhan, Priyanshi. "Energy Dimension of the Belt and Road Initiative." *Indian Journal of Asian Affairs* 32, no. 1/2 (2019): 119-52. <https://www.jstor.org/stable/26902688>

economic significance of Gwadar Port and its implications for the successful implementation of BRI.

### 3. Significance of CPEC in BRI

CPEC is a pioneer project under BRI. It is a mix of roads, railway, communication, energy, and industry development to be completed by 2030 with an investment of more than USD 62 billion (the details of projects are presented in Figure 1). Along the silk road, a 3000 km long road and railway infrastructure will be developed from Kashgar to Gwadar to connect the north and south link of BRI. Moreover, Gwadar Port is a strategically significant point for the security of the Maritime Silk Road. This massive FDI in Pakistan's energy and infrastructure development is the lifeline for the fragile economy of Pakistan<sup>31</sup>. In addition to increasing the bilateral trade between China and Pakistan, CPEC is a gateway to Africa.

The CPEC is vital for the success of BRI, and it will have far-reaching economic and political effects on the entire region, but it can mainly change Pakistan's fate. According to estimates of Khan and Liu (2019)<sup>32</sup>, socioeconomic development would be more evident in the regions along CPEC, and Baluchistan will observe a rise of 6.4% in the social welfare index, followed by Sindh, KPK, and Punjab with an increase of 6.31%, 5.19%, and 3.5% respectively. According to the World Bank (2020)<sup>33</sup>, Pakistan's trade volume with its neighbours will increase more than three times its current trade and reach up to USD 58 billion per year. Moreover, CPEC is the gateway to Africa and the

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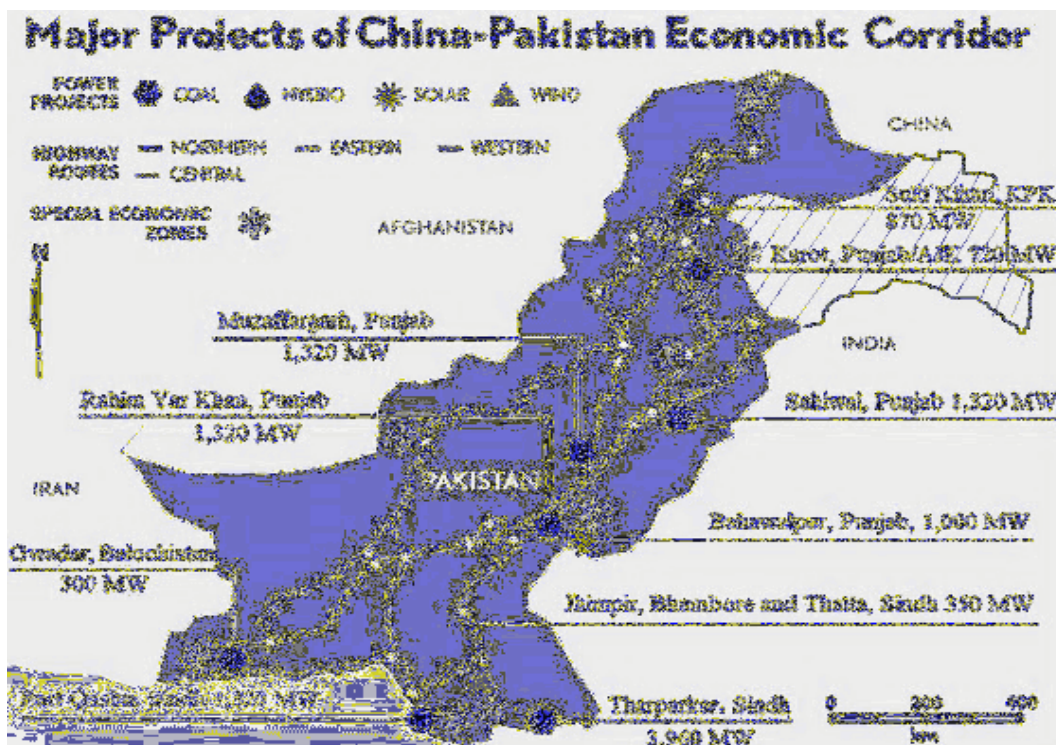
<sup>31</sup> Khalid, Iram, Tooba Ahmad, and Sami Ullah. "Environmental impact assessment of CPEC: a way forward for sustainable development." *International Journal of Development Issues* 21, no. 1 (2022): 159-171. <https://doi:10.1108/IJDI-08-2021-0154>.

<sup>32</sup> *ibid*

<sup>33</sup> World Bank. "Modernizing Trade in Pakistan: A Policy Roadmap." In *Pakistan trade strategy development*. Washington, DC: The World Bank, 2020. <https://documents1.worldbank.org/curated/en/855261578376618421/pdf/Modernizing-Trade-in-Pakistan-A-Policy-Roadmap.pdf>

Middle East; therefore, it will work as a regional hub for trade activities, increasing tax collection and allowing convergence and spread of logistics, people, and information in the region.

Besides trade benefits and development of China's Xinjiang province, CPEC will enhance economic integration among the countries in the south Asian region to bring socioeconomic and political stability. CPEC is not just beneficial to China and Pakistan; rather, it offers valuable opportunities to Iran, Afghanistan, India, and



**Figure 1. Projects under CPEC**

Source: Ministry of Planning, Development, and Reform (2017)<sup>34</sup>

the Central Asian region<sup>3536</sup>. Thus, enhanced geographical linkages through the Silk Road and maritime Silk Road will improve people-to-

<sup>34</sup> Ministry of Planning Development and Reform. *Long Term Plan for China-Pakistan Economic Corridor (2017-2030)*. Islamabad: Government of Pakistan, Ministry of Planning Development and Reform, (2017). <https://www.pc.gov.pk/web/cpec>

<sup>35</sup> ibid



people connections, regional knowledge, cultural integration, business cooperation, and higher bilateral trade volumes. This win-win model of development will play a vital role in deciding the shared destiny of the region.

#### 4. Methodology

This research adopts a qualitative approach to analyze the geopolitical and geo-economic significance of Gwadar Port in the successful implementation of CPEC and BRI. Data from official documents, government reports, and developmental organizations are used for analysis. Geo-economic theory has been used to understand the developments<sup>3738</sup>. Several studies have investigated the Chinese motives behind BRI, focusing only on the political, geopolitical, or economic perspective. This hegemonic approach overlooks the interplay of economic, political, and geographic factors driving foreign policies in the modern world. According to Tsai and Liu (2017)<sup>39</sup>, economic security is the single most crucial concern, outweighing the earlier political and defence priorities, of the power players in international politics in the post-Cold War era. Therefore, a geo-economic lens for analyzing foreign policy is the right approach to determine economic and geopolitical motives<sup>4041</sup>. Thus, analyzing these developments using the geo-economics approach will enable us

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<sup>36</sup> Farooq, Umar, and Dr Asma Shakir Khawaja. "China-Pakistan Economic Corridor: Geo-Political Implications, Regional Constraints and Benefits of Cpec." *South Asian Studies* 34, no. 2 (2020), 583-594. <http://journals.pu.edu.pk/journals/index.php/IJSAS/article/view/3287>

<sup>37</sup> ibid

<sup>38</sup> Kim, Dong Jung. "Making Geo-economics an Ir Research Program." *International Studies Perspectives* 22, no. 3 (2021): 321-39. <https://doi.org/10.1093/isp/ekaa018>

<sup>39</sup> Tsai, Tung-chieh, and Tony Tai-ting Liu. "Cross-Strait Relations and Regional Integration: A Review of the Ma Ying-Jeou Era (2008–2016)." *Journal of Current Chinese Affairs* 46, no. 1 (2017): 11-35. <https://doi:10.1177/186810261704600102>.

<sup>40</sup> ibid

<sup>41</sup> ibid

to understand the strategic space of Pakistan and the profound expansion of the strategy of China to increase its influence in global politics.

## 5. Gwadar Port: Geostrategic Significance for China and Pakistan

Pakistan has remained attractive to global powers due to its strategic geographical importance. Pakistan shares borders with India, China, Afghanistan, and Iran in the east, northwest, west, and southwest, respectively, whereas the southern border has the Oman sea. Pakistan connects South, West, and Central Asian countries with western regions of China.

Pakistan has a coastline of approximately 700 km, and two international seaports are functional in Pakistan: Karachi Port and Port Qasim. Karachi port is on the east and is only 200 km from the Indian border. The foundation of Karachi port was laid during the colonial period, and it is the largest commercial and military port in Pakistan. However, the security depth of this port is compromised by its proximity to the India-Pakistan border<sup>42</sup>. For instance, in the 1964 war, India blocked this port and caused a huge security problem for Pakistan. Similarly, in the 1971 war, India attacked Karachi port and severely damaged several parts of the port and merchant ships.

In addition, the demand growth shows that these ports' capacity will be insufficient in the future and expansion programs are slow, creating a gap in demand and supply. The rapid expansion of the residential area of Karachi city has created physical space limitations for Karachi port; therefore, expansion plans cannot keep pace with the rise in demand<sup>43</sup>. On the other hand, Port Qasim has no space limitations; however, the upstream location of this port—40km away

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<sup>42</sup> *ibid*

<sup>43</sup> Ali, Ghulam. "China–Pakistan Maritime Cooperation in the Indian Ocean." *Issues & Studies* 55, no. 03 (2019): 1-20. <https://doi.org/10.1142/S1013251119400058>

from the open sea—increases the turnaround time for ships and hampers further development of the port. This upstream location is not an issue for cargo shipments of industries near Port Qasim; however, other locations have a cost disadvantage. Therefore, Pakistan has been pursuing the establishment of Gwadar port for a more secure passage to sea since 1964<sup>44,45</sup>. Also, another international seaport to meet the rising demand is in the economic interest of Pakistan. Moreover, the demand is expected to escalate in the future; therefore, capacity for expansion should be part of the plan for Gwadar port.

Gwadar port has 88 berths and anchorage capacity for mother ships of 100,000-200,000 dead weight tonnage, which makes it a candidate for the world's largest deep-water port in future. It can handle approximately 400 million tons of cargo annually<sup>46</sup>. Transit trade of over \$60 billion per year is expected to pass through Gwadar port<sup>47</sup>. The location of Gwadar Port has several strategic advantages. The strategic importance of the geographical position of Gwadar port makes it central to the developments in CPEC and BRI. Gwadar port is at merely 400km distance from the global energy supply channel, the Strait of Hormuz, and it is located at the throat of maritime routes connecting the Persian Gulf, East Asia, and the Pacific. Through this chokepoint, approximately 26 oil tankers and other trade vessels pass through in a day, and in peak hours, this traffic increases up to one tanker every six minutes<sup>48</sup>. Thus, Gwadar can choke the maritime route of the red sea and influence trade routes connecting Africa and Europe.

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<sup>44</sup> ibid

<sup>45</sup> ibid

<sup>46</sup> ibid

<sup>47</sup> Hussain, Sarfraz, Muhammad Rafiq, Abdul Quddus, Nisar Ahmad, and Phat Tien Pham. "China-Pakistan Economic Corridor: Cooperate Investment Development and Economic Modernization Encouragement." *Journal of Contemporary Issues in Business Government* 27, no. 1 (2021): 96-108. <https://cibg.org.au/>

<sup>48</sup> ibid

The control over Gwadar Port will ensure energy security in China, providing safe passage to oil supplies<sup>49</sup>. Moreover, proximity to the Persian Gulf will increase influence over maritime routes to East Asia and the Pacific region. China is investing in more ports along the Arabian Sea to increase its influence in this region of political instability<sup>5051</sup>.

Traditionally, the US has remained influential in the Persian Gulf region, and it would not want to relax security in this region. Therefore, China has abandoned the Persian Gulf and avoided conflict of interest with the US. However, Gwadar Port allows China to bypass the Persian Gulf. Thus, bypassing the Persian Gulf has provided China access to oil from African countries, increasing its energy security.

Moreover, the naval vessels of several navies are looking after the route of the Indian Ocean, and the Chinese navy is one of them, particularly in the Somalian naval region<sup>5253</sup>. These naval vessels get fuel resupply from ports of Yemen and other countries, but deficient supplies have remained an issue. Presently, Gwadar port is developed only for trade purposes; however, in the future, it can certainly be used

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<sup>49</sup> Chang, Yen-Chiang, and Mehran Idris Khan. "China–Pakistan Economic Corridor and Maritime Security Collaboration: A Growing Bilateral Interests." *Maritime Business Review* 4, no. 2 (2019): 217-35. <https://doi.org/10.1108/MABR-01-2019-0004>

<sup>50</sup> Daniels, Rorry. "Strategic Competition in South Asia: Gwadar, Chabahar, and the Risks of Infrastructure Development." *American Foreign Policy Interests* 35, no. 2 (2013): 93-100. <https://doi.org/10.1080/10803920.2013.776887>

<sup>51</sup> Ejaz, Ahmad, and Unsa Jamshed. "Review of China's Role in Development of Gwadar Port." *Journal of Pakistan Vision* 19, no. 2 (2018): 270-80. <https://www.prdb.pk/article/review-of-china-s-role-in-development-of-gwadar-port-5399>

<sup>52</sup> Brewster, David. "An Indian Ocean Dilemma: Sino-Indian Rivalry and China's Strategic Vulnerability in the Indian Ocean." *Journal of the Indian Ocean Region* 11, no. 1 (2015): 48-59. <https://doi.org/10.1080/19480881.2014.994822>

<sup>53</sup> Holmes, James R, and Toshi Yoshihara. "China's Naval Ambitions in the Indian Ocean." *Journal of Strategic Studies* 31, no. 3 (2008): 367-94. <https://www.andrewerickson.com/2008/06/china%E2%80%99s-naval-ambitions-in-the-indian-ocean/>

to help the Chinese navy maintain the safety of trade activities in the Indian Ocean region. Thus, Gwadar port is vital to safeguard Chinese foreign trade interests. A list of funded projects is presented in Table 1.

## **6. Gwadar Port: Geo-economic Significance for China and Pakistan**

More than 60% of Pakistan's maritime trade occurs through Karachi Port. Therefore, if tension on the Indian border escalates or even a new military conflict, which is not unprecedented given the long-term tension history of both states, it could significantly disrupt the economic activity at Karachi Port and hurt the fragile economy of Pakistan. Recently, during the military confrontation with India in 2019, the Indian Minister of Defense warned Pakistan quoting events from the wars of 1964 and 1971<sup>54</sup>. Therefore, it is vital for the economic security of Pakistan that an alternative to Karachi Port is developed to gain secure access to free waters. Thus, the development of Gwadar port will provide economic security to Pakistan by reducing its reliance on Karachi port<sup>55</sup>.

For years, East Asian countries have posed several challenges at regional and international levels. For instance, Japan, South Korea, and the USA have remained cautious of the rising influence of China through BRI and formed an economic coalition to restrict or derail China's economic growth<sup>56,57</sup>. India is another emerging power in South Asia with concerns about Chinese influence. In these

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<sup>54</sup> *ibid*

<sup>55</sup> *ibid*

<sup>56</sup> Bae, Jeeho. "Reshaping Us–South Korea–Japan Trilateral Relations." In *From Trump to Biden and Beyond*, 91-109: Springer, 2021. [http://doi: 10.1007/978-981-16-4297-5\\_7](http://doi: 10.1007/978-981-16-4297-5_7)

<sup>57</sup> Cha, Victor D. "Powerplay: Origins of the Us Alliance System in Asia." *International Security* 34, no. 3 (2010): 158-96. <http://www.jstor.org/stable/40389236>.

**Table 1: Chinese funding details for major projects in CPEC**

<b>Project Type</b>	<b>Project Name</b>	<b>Amount (in million \$)</b>
<b>Infrastructural development and communication projects</b>	Upgradation of Karakorum Highway	1315
	Motorways from Karachi to Lahore and Sukkur to Multan	2889
	Orange line metro train in Lahore	1626
	Expressway Gwadar	143
	Medical centre and China-Pakistan friendship school in Gwadar	2
	Development of Gwadar Port and free zone	250
	Master plan for Gwadar smart port city	4
	The pilot project of Digital Terrestrial Multimedia Broadcast (DTMB)	23
	Optical Fiber Cable from Rawalpindi to Khunjrab	44
	The wind power plant of 50 MW capacity in Gharo, Thatta	115
<b>Total Funding:</b>		<b>6411</b>
<b>Power projects</b>	The wind power plant of 100 MW capacity in Jhimpir, Thatta	252
	Winder power plant of 50 MW capacity in Jhimpir, Thatta	134
	The solar power plant of 300 MW capacity in Bahawalpur, Punjab	460
	Two coal-fired power plants of 660 MW capacity each in Port Qasim, Karachi	2085
	The coal-fired power plant of 1320 MW capacity in Sahiwal, Punjab	1800
	Hydropower project of 720 MW capacity on Jhelum River in Rawalpindi	1698
	The coal-fired power plant of 660 MW capacity in Hub, Baluchistan	1995
	Three Gorges wind power project of 100 MW capacity in Jhimper, Thatta	224
	Suki Kinar hydropower project of 870 MW capacity in Kaghan, Khyber Pakhtunkhwa	1802
	Two coal-fired power plants of 330 MW capacity each in Thar, along with a 3.8 Mta open surface lignite mine	2000
<b>Total Founding:</b>		<b>12450</b>

*Source: The World Bank (2020)<sup>58</sup>*

challenging geopolitical and economic circumstances, China has expanded its diplomatic and economic relations with other Asian

<sup>58</sup> *ibid*

countries to use economic and commercial opportunities and keep up the pace of economic development<sup>5960</sup>. As part of China's economic security strategy, CPEC, a pioneer project of BRI, can play a vital role in achieving Beijing's economic security targets.

Gwadar port can provide economic and energy security to China. China imports more than 55% of its oil from Middle Eastern and North African countries and exports a massive quantity of goods to Middle Eastern, African, and European countries. The maritime oil transportation route from the Middle East to China is 14490 km long. The shipments take two to three months to reach China, and there is no alternate route through the Indian Ocean and the Malacca Strait. This maritime route is a lifeline and security risk for the economy of China because 80% of energy imports depend on this route<sup>61</sup>. Therefore, problems in this trade route can cause massive trouble for China's economic growth. Due to unprecedented economic growth and expansion of economic interests in other countries, it is vital to ensure the security of this trade route and find alternatives.

Gwadar port is the shortest land route to China's Xinjiang province, saving transportation costs in trade activity<sup>62</sup>. The estimates suggest a 70% reduction in transit time for goods transportation from Gwadar to China and Central Asia<sup>6364</sup>. In addition, the railway

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<sup>59</sup> ibid

<sup>60</sup> ibid

<sup>61</sup> ibid

<sup>62</sup> Conrad, Ms Portia B. "China's Access to Gwadar Port: Strategic Implications and Options for India." *Maritime Affairs: Journal of the National Maritime Foundation of India* 13, no. 1 (2017): 55-62. <https://doi.org/10.1080/09733159.2017.1317123>

<sup>63</sup> Anwar, Zahid. "Development of Infrastructural Linkages between Pakistan and Central Asia." *South Asian Studies* 26, no. 1 (2020): 103-15. <http://journals.pu.edu.pk/journals/index.php/IJSAS/article/view/2814>. [https://www.academia.edu/3677542/Development\\_of\\_Infrastructural\\_Linkages\\_between\\_Pakistan\\_and\\_Central\\_Asia](https://www.academia.edu/3677542/Development_of_Infrastructural_Linkages_between_Pakistan_and_Central_Asia)

connection from Gwadar to Kashgar will decrease 85% of the energy transportation mileage from the Middle East to China. Thus, a fully functional Gwadar port is an alternative to the Indian Ocean route as it connects China with the Strait of Hormuz and the Oman Sea and provides energy and trade security<sup>656667</sup>.

Moreover, China has also planned to transport oil from the Middle East to China through an oil pipeline, and Gwadar port will be the starting point. It will reduce dependence on the Indian Ocean and the Strait of Malacca and reduce the transportation distance from 12000 km to 2395 km. The proposed routes and present routes are explained in Table 2. Beijing has also planned to build facilities for storing and refining oil to transport via the land route to Xinjiang.

The Xinjiang province is relatively less developed, but access to international waters through Gwadar port will provide new business opportunities and improve the regional economic conditions<sup>6869</sup>. Moreover, economic development in western and northwestern China will eliminate all internal security challenges, and the involvement of people in political and economic activity in these parts of China will improve the security of the western region. Thus, Gwadar port is vital to the BRI's success in achieving China's political and diplomatic purposes.

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<sup>64</sup> Hussain, Fakhar. "Geostrategic Imperatives of Gwadar Port for China." *The Korean Journal of International Studies* 18, no. 2 (2020): 145-67. <https://doi:10.18588/202111.00a205>

<sup>65</sup> *ibid*

<sup>66</sup> *ibid*

<sup>67</sup> Shibasaki, Ryuichi, Satoshi Tanabe, Hironori Kato, and Paul Tae-Woo Lee. "Could Gwadar Port in Pakistan Be a New Gateway? A Network Simulation Approach in the Context of the Belt and Road Initiative." *Sustainability* 11, no. 20 (2019): 5757. <https://doi:10.3390/su11205757>.

<sup>68</sup> *ibid*

<sup>69</sup> Rizvi, Hasan Askari. "The China-Pakistan Economic Corridor." *Strategic Studies* 34, no. 4 (2014): 1-17.



**Table 2: The present and proposed routes for energy supply to China**

Route	Description	Name
Western Africa to China	Maritime route	Route A
The Middle East to China	Maritime route	Route B
Western Africa to Myanmar to China	Maritime and pipeline route	Route C
The Middle East to Myanmar to China	Maritime and pipeline route	Route D
The Middle East to Pakistan to China	Maritime and pipeline route	Route E
<i>(Proposed)</i>		

*Source: Shaikh et al. (2016)<sup>70</sup>*

CPEC also allows China to access markets of central Asia and improve the economic outlook of northwestern regions. An onshore oil pipeline is also part of CPEC that will ensure smooth supply to western provinces of China. Thus, China will get an alternative to the “Strait of Malacca” for oil trade with Middle Eastern countries, and it is short and more secure than the pirate-infested maritime route of the “Strait of Malacca”. The instability in maritime security of the South China Sea, East China Sea, and the Yellow Sea will improve, and western regions of China will gain economic development opportunities<sup>7172</sup>. Moreover, this pipeline will reduce 85% of oil trade traffic between the Middle East and China.

In addition, the successful completion of the Gwadar port and naval base in Gwadar will substantially enhance the energy and trade security of the maritime routes of China. Also, in the future Chinese naval fleet will enter the Indian Ocean to further strengthen the

<sup>70</sup> Shaikh, Faheemullah, Qiang Ji, and Ying Fan. "Prospects of Pakistan–China Energy and Economic Corridor." *Renewable and Sustainable Energy Reviews* 59, no. June (2016): 253-63. <https://doi.org/10.1002/ise3.32>

<sup>71</sup> *ibid*

<sup>72</sup> Wood, John Robert. "China’s Maritime Strategy and National Security in the South China Sea." *Intelligence and National Security* 36, no. 3 (2021): 444-50. <https://doi.org/10.1080/02684527.2019.1620548>

security of Chinese international waters. The energy supply which remains under threat by the US will be secured by the oil pipeline from Gwadar to Xinjiang<sup>7374</sup>. Therefore, successfully completing these development projects will enhance China's maritime, energy, and economic security.

## 7. Gwadar Port: Significance for BRI

Since 2010, the alliance of the US with Asian countries, including Japan, the Philippines, and Vietnam, as part of the “re-Asia Pacific 2.0” strategy, has tried to create problems for China in the eastern and southern waters<sup>7576</sup>. This alliance tried to encircle and squeeze Chinese activities to stall economic growth. However, China has avoided this collision by turning to the west to develop Gwadar port and bridge its connection with South Asian countries.

In the present economic order of the world, China has excess capital and production capacity; however, the economic growth may slow down, and China wants to avoid this looming threat<sup>77</sup>. Therefore, China can use Gwadar port to expand its production capacity and invest excess capital in maintaining its rapid economic growth. China is not new in port construction; it has vast experience, updated technology, and excess capital. On the other hand, Pakistan needs infrastructural development to optimize its abundant natural resources,

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<sup>73</sup> *ibid*

<sup>74</sup> Javed, Hafez Muhammad, and Muhammad Ismail. "Cpec and Pakistan: Its Economic Benefits, Energy Security and Regional Trade and Economic Integration." *Chinese Political Science Review* 6, no. 2 (2021): 207-27. <https://doi.org/10.1007/s41111-020-00172-z>.

<sup>75</sup> Auslin, Michael R. "The Us Alliance Structure in Asia." In *Strategy in Asia*, 73-91: Stanford University Press, 2020. <https://doi.org/10.1515/9780804792820-009>

<sup>76</sup> Liff, Adam P. "Unambivalent Alignment: Japan's China Strategy, the Us Alliance, and the 'Hedging' fallacy." *International Relations of the Asia-Pacific* 19, no. 3 (2019): 453-91. <https://doi.org/10.1093/irap/lcz015>

<sup>77</sup> Clarke, Michael. "The Belt and Road Initiative: China's New Grand Strategy?." *Asia Policy* 24, no. July (2017): 71-79. <https://doi.org/10.1353/asp.2017.0023>

low-cost labour, and a market that needs industrialization<sup>7879</sup>. Thus, the development of Gwadar port is a win-win option for both stakeholders.

Moreover, Gwadar port is a vital component of BRI, potentially becoming a hub of regional business activity. It serves China's and Pakistan's economic objectives and connects South Asian, Central Asian, and Middle Eastern markets. Gwadar port is crucial for landlocked Central Asia because, through CPEC, the partner countries will gain access to free waters<sup>8081</sup>. Moreover, it provides secure access to energy supplies of the Middle East and is undoubtedly a crucial addition to regional infrastructure. Moreover, the dependence on the Strait of Malacca for energy supplies is an energy security concern for China due to the influence of the US and Japan and developing Gwadar port will significantly reduce this dependence.

The Gwadar port is situated at the heart of Asian commercial maritime routes connecting the Middle East, Central Asia, and South Asia. The Persian Gulf and the Strait of Hormuz on the east of Gwadar port are gateways of global energy supply. The US Energy Information Administration estimates suggest that more than 20% of the global oil supply uses the Strait of Hormuz maritime route<sup>82</sup>. Therefore, being at the choke point of this energy hub provides additional strategic benefits to Gwadar port.

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<sup>78</sup> ibid

<sup>79</sup> ibid

<sup>80</sup> ibid

<sup>81</sup> Khetran, Mir Sher Baz, and Muhammad Humayun Khalid. "The China-Pakistan Economic Corridor: Gateway to Central Asia." *China Quarterly of International Strategic Studies* 5, no. 03 (2019): 455-69. <https://doi:10.1142/s2377740019500179>

<sup>82</sup> EIA. "Short-Term Energy Outlook." Washington, DC: Energy Information Administration 2020. [https://www.eia.gov/outlooks/ieo/pdf/0484\(2016\).pdf](https://www.eia.gov/outlooks/ieo/pdf/0484(2016).pdf).

## **8. Conclusions and Recommendations**

Economic security is the top priority of the Chinese government, and due to recent economic threats, China has initiated the security of its maritime and land routes. Gwadar port is one such initiative as part of BRI. Gwadar port provides economic security against external threats, particularly in western China and South Asia. The economic benefits for Pakistan are also significant and will provide better access to international waters. The geostrategic position also increases the importance of Gwadar port in China-Pakistan bilateral relations.

Gwadar port will improve China's energy security by providing an alternative to the Malacca Strait maritime route. The Middle East and Russia are the leading suppliers of crude oil to China, and the crude oil from Russia is transported through an oil pipeline to western China. However, oil imports from the Middle East and North Africa use the maritime route of the Strait of Hormuz to the Indian Ocean to the Malacca Strait to the South China Sea to China. Malacca Strait is strategically important in this route, and Singapore, Malaysia, and Indonesia claim sovereign positions over it. Moreover, a recent coalition of the USA and Japan has tried to influence trade activity in the Malacca Strait. The fully functional Gwadar port will be an alternate route for Chinese oil imports from the Middle East. Thus, eventually, the Strait of Malacca will be replaced by Gwadar port in the near future, providing energy security to China.

Consequently, Kashgar will become the hub of economic activity in China, making it another Shanghai. The current trade route “China cargo to Shanghai through train to shipments through Malacca to Europe and Africa” will be replaced by “China Cargo to Kashgar through train to Gwadar through China-Pakistan railway to shipments to Europe and Africa”. Thus, Gwadar will be the hub of trade activity in Pakistan, and Kashgar will be the new trade hub in China. The

concentration of economic activity in Kashgar and energy imports through this route will improve the economic outlook of this relatively less developed northwestern part of China. That is why BRI is vital for the economic growth plans of China and regional development.

On the other hand, Gwadar port and other infrastructural and economic developments under CPEC are vital to “China-Pakistan friendship”. These developments will improve the fragile economic conditions of Pakistan. The estimates suggest that 95% of Pakistan’s trade is seaborne, contributing 65% to the country's GDP growth. The current reliance on twin ports in Karachi, which can be blocked by the enemy or even vessel collision, can trouble the seaborne trade activity, thereby affecting the trade of Pakistan and inflicting severe damage to the economy. The development of Gwadar Port is thus strategically essential to mitigate this threat. Other than economic benefits, Pakistan aims to use Gwadar Port for the development and uplifting of the people of insurgency-inflicted province of Baluchistan. A fully functional Gwadar port has the potential to provide employment opportunities to two-third of the population of Baluchistan<sup>83</sup>.

Gwadar port also has the advantage of the geographic position being the hub and spoke port for the connecting regions. Moreover, it is considered among the world's largest ports, and its deep waters allow China to use its submarines and defender ships to secure trade and energy supply. This maritime security collaboration between China and Pakistan will strengthen the naval forces of Pakistan against archrival India, which outmatched Pakistan through its naval expansion. Therefore, besides economic benefits and socioeconomic developments in Baluchistan, the government of Pakistan is using Gwadar port to uplift its stature in global politics.

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<sup>83</sup> Hussain, Fakhar, and Saadat Nawaz. "Geostrategic Imperatives for Pakistan of Gwadar Port." *Asian Journal of Peacebuilding* 9, no. 2 (2021): 427-41.

Pakistan and China are neighbors and boast long-term friendship. Security is equally important for both countries. After developments under CPEC and its vital role in BRI, it can be said that “insecurity in Pakistan will also hurt China”. In other words, the success of BRI depends on the safety of Gwadar port. However, the secure and fully functional corridor will also bring considerable benefits to the fragile economy of Pakistan. Therefore, a developed and fully functional Gwadar port will play an essential role in the geostrategic, geopolitical, and geo-economics conditions of the South Asian region.

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## Outlook of Power Re-alignment in Indian Ocean

Imran Raza<sup>a</sup>

### Abstract

*Pakistan and China have uplifted decades old bondage to economic cooperation on a win-win basis through CPEC. In the Chinese equation this initiative is economic integration of the 21st century; whereas, the US endeavors to ensure implementation of international order at sea. This paper, employing Mahan's theory of sea power, explains the future maritime scenario in South Asia which will evolve with the US and China as leading players. This paper also answers the question of how IOR littorals will align themselves in the Indian Ocean. In-depth understanding of economic interests of IOR littorals through BRI and gaining of benefits through strategic partnerships with the USA will provide insight of future power re-alignment in South Asia. Paper concludes that in order to secure energy requirements China will make collaborative maritime security arrangements with BRI partners; whereas, India, Japan and South Korea along with USA under QUAD will endeavor to impede the economic progress of China hence, forming a second power block in the Indian Ocean.*

**Keywords:** CPEC, Re-alignment, South Asia, Maritime interests, Littorals, IOR.

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## **1. Introduction**

International system revolves around the Uni or Bi or Multi-polar system depending on the major players. Balance of power between two states is achieved when one state correctly perceives the intentions and threats of the other<sup>1</sup>. In this system smaller or relatively weaker states align themselves with the powerful ones<sup>2</sup>. The process of alignment is continuous, fluid and oscillatory in nature but alliance is a two way process.

Post nuclearization, South Asia's significance in global politics has increased manifold<sup>3</sup>. Because out of nine declared global nuclear states, two lie in this region. Due to this fact, involvement of global players in this region has become a new normal. Since WWII the USA has maintained its presence in this region. Similarly formulation of QUAD has put impetus on implementation of US Indo-Pacific strategy. On the other hand China through its Belt and Road Initiative (BRI) has given a new concept of global connectivity.

Various Indian Ocean littorals including Pakistan, Sri Lanka, Myanmar, and Bangladesh are partners with China in BRI. Upon materialization of BRI and advancement of QUAD, the water space of the Indian Ocean will see a prominent change. Most of the academic discussions have discussed distinctly the QUAD<sup>4</sup> and BRI but have not

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<sup>1</sup> Ashley Thomas Lenihan, "A Theory of Non-Military Internal Balancing", Published online by Cambridge University Press: 30 March 2018 pages 31-61, 32.

<sup>2</sup> Kenneth N. Waltz, "Theory of International Politics", University of California, Berkeley, Addison-Wesley Publishing Company, Massachusetts Menlo Park, California, pages 1-129, 109.

<sup>3</sup> Why South Asia Matters in World Affairs, Interview of Professor Sandy Gordon conducted by Sergei De Silva-Ranasinghe in Mar 2011, published by cis.org Policy • Vol. 28 No. 1 • Autumn 2012, 53-56, 53.

<sup>4</sup> Jagannath P. Panda, "India's Call on China in the Quad: A Strategic Arch between Liberal and Alternative Structures", Institute for Defence Studies and Analyses (IDSA), New Delhi, Rising Powers Quarterly Volume 3, Issue

discussed both issues in light of the future outlook of the Indian Ocean.

### 1.1 Theoretical Perspective

*“Command of the sea is not ‘navel.’ It is one of national policy, national security, and national obligation.”* —A. T. Mahan<sup>5</sup>

<sup>6</sup>This research is based on Mahan’s concept of sea power that the national power of any littoral state lies in achievement of sea power because good control overseas will result in control of trade and resultantly will control the world. Concurrently geography and history of any state also play a decisive role in its international relations.

Mahan has used dependent and independent variables in his theory in which the state is a dependent variable; whereas, its sea power is an independent variable. Though Mahan has explained his theory through examples of ancient times but Mahan’s theory is still valid today and times to come. Like Mahan, Julian Corbett<sup>7</sup> also emphasized on attaining sea power to achieve nation’s power. Corbett was the pioneer of maritime strategy in which he explained that states can tackle superior continental powers during war through better maritime strategy.

Apparently both USA and China are following the Mahan’s concept of sea power and building their military muscles for achieving upper edge in power contestation in Indian Ocean Region<sup>8</sup>. USA through its Indo-Pacific strategy; whereas, China through BRI/CPEC.

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<sup>5</sup> Alfred T. Mahan, “The Importance of Command of the Sea: For an Adequate Navy, and More,” *Scientific American*, Vol. 105, No. 24, December 1911, p. 512.<sup>5</sup>

<sup>6</sup> John B Hattendorf, “What is a Maritime Strategy?” *Soundings* Vol No. 1, October 2013, 1-13, 4. 17.

<sup>7</sup> Shi Xiaoqin, “An Analysis of China’s Concept of Sea Power”, Institute for Security and Development Policy, Sweden 2012, 1-23

<sup>8</sup> H. D. P. Envall, “The Quadrilateral Security Dialogue: Towards An Indo-Pacific Order?”, Policy Report September 2019,1-11,4.

Hence, both are very rapidly moving towards formulation of alliances in the Indian Ocean. For successful alliance and alignment common interests and common goals of two or more states are considered essential. Therefore, for alignment of South Asian states it is imperative to understand their common interests and goals in the Indian Ocean.

States in South Asia including Pakistan which are part of BRI are having common interests and goals. Similarly USA and Asian states including India as a member of QUAD are having common goal and objective to covertly impede the economic progress of China<sup>8</sup>. This situation of power contestation in Indian Ocean will further compound in future<sup>9</sup> and may become the cause for formulation of two distinct power blocks in the Indian Ocean. As Pakistan is also a coalition partner with USA as well as partner of China in CPEC so maritime interests of Pakistan will be used as main argument to entice relevant lessons.

## **1.2 Main Argument**

### ***1.2.1 Indian Ocean – an Overview***

The Indian Ocean with more than 28 littorals covers about 25% of the global space having five strategically significant choke points. The Middle East being the single largest source of oil export also situated here hence sea routes passing through this ocean are crucial for many states due to their dependence on imported oil. As per survey export of oil to the world market from various parts of the world is as under<sup>10</sup>:

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<sup>9</sup> Bruce Vaughn, “China-India Great Power Competition in the Indian Ocean Region: Issues for Congress”, April 20, 2018, 1-53, 2

<sup>10</sup> www.statista.com Distribution of oil production worldwide in 2020, by Region.



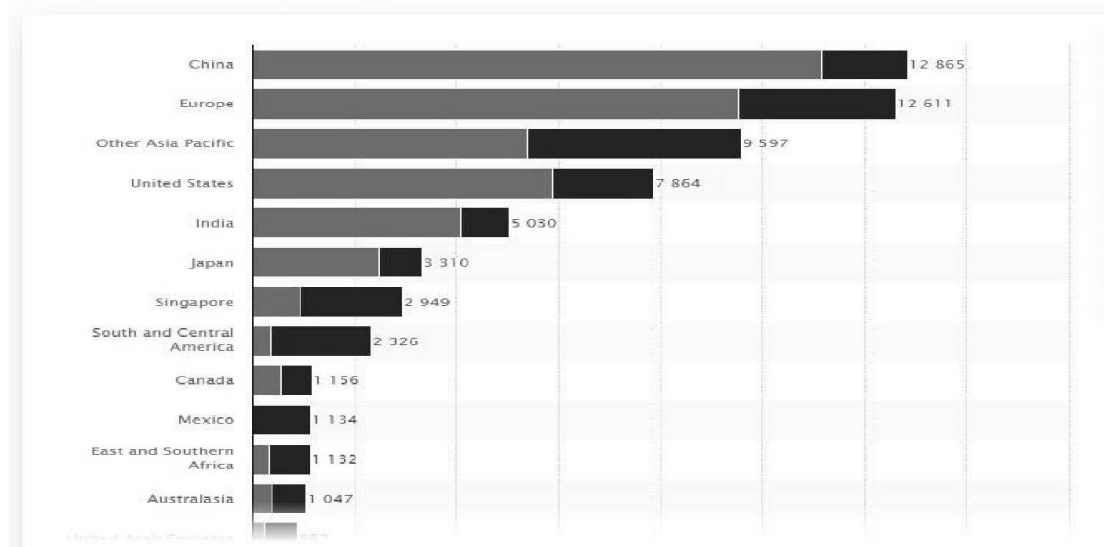
Place	Oil Export to World Markets
Africa	7.8%
Asia Pacific	8.4%
North America	26.6%
Central and South America	6.6%
Europe and Eurasia	19.3%
Middle East	31.3%

Source: Distribution of oil production worldwide in 2020, by Region.

Above mentioned table depicts that the Middle East region is the leading oil exporter to the world market and it is expected to sustain this position in future too because China was the chief consumer of oil in 2020<sup>11</sup> and it is expected to remain the main consumer of oil in the near future also.

### Leading global crude oil importers in 2020

(in 1,000 barrels per day)

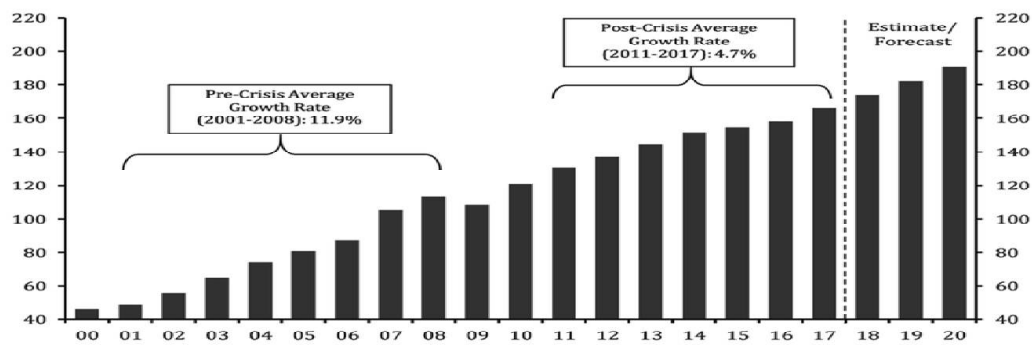


Source<sup>11</sup>: Leading oil importers in 2020, by country.

Indian Ocean is not only contributing the major share in export of oil to the world markets, but this ocean is also fuelling the global economies including Europe, Asia and US through transportation of finished merchandize to these destinations and raw material from

<sup>11</sup> www.statista.com Leading Oil Importers in 2020, by Country.

Africa other continents to various industries<sup>12</sup>. It is pertinent to mention that for merchandize trade this ocean is having 25 out of top 100 ports of the world which handles merchandize trade<sup>13</sup>. Trade passing through this ocean is continuous on the rise as it was 166 Million TEUs in 2017 which after increment of about 12% became more than 195 Million TEUs in 2020 same is evident from below mentioned graph:



Source:<sup>14</sup> LKI calculations based on UNCTAD, Maritime Transport Database

### 1.3 Raison of BRI/CPEC

According to a US survey about 20 M Barrels oil & 4M Barrels LNG traversed daily through Strait of Malacca which becomes global second highest transportation of oil & gas following the Strait of Hormuz. Approximately 70% of Chinese oil & gas transportation is crossing the Strait of Malacca; hence, this strait has a critical role to play in current and future Chinese economic progress. However, this route is passing through a choke point near Malacca which may become vulnerable if exploited by the enemy. In 2003, this

<sup>12</sup> Rupert Herbert-Burns, “Energy in the Indian Ocean Region: Vital Features and New Frontiers”, STIMSON Indian Ocean Rising: Maritime Security and Policy Challenges, July 2012, 113, 87.

<sup>13</sup> PabasaraKannangara, Adam Collins and Barana Waidyatilake, “The Importance of the Indian Ocean: Trade, Security and Norms”, LKI Explainer Sri Lanka, October 2018, pp1-10,2.

<sup>14</sup> LKI calculations based on UNCTAD, Maritime Transport Database, and Available at: <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx>, 2020 data are based on the continuation of post-crisis average growth rate.

shortcoming was first coined as Malacca Dilemma by then Chinese President Hu Jintao<sup>15</sup>. This issue of Malacca was debated in and abroad China since 2003 and after long discussions a solution came out in the form of alternate routes other than Malacca. BRI is basically an initiative to offset Malacca and have safer alternative energy routes for China.

In mid of last decade, China promulgated its new military strategy which diverted Chinese decision makers<sup>16</sup> mindset towards safeguarding Chinese oversea interests including SLOCs. Hence, shifting focus from continental to maritime through optimum utilization of sea routes and overseas assets.

#### **1.4 Chinese Interests in South Asia**

Through its BRI initiative, China has invested in Myanmar<sup>17</sup>, Bangladesh, Sri Lanka and Pakistan. Under the umbrella of BRI, China is laying a gas pipeline, in addition to establishing Special Economic Zones and constructing deep sea ports in Myanmar. Deep sea port through 750 km pipeline will link Maday Island of Chinese Yunnan province<sup>18</sup> with Myanmar Port. After announcing BRI, China offered Bangladesh to join this initiative which finally Bangladesh

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<sup>15</sup> Chen Shaofeng, “China’s Self-Extrication from the “Malacca Dilemma and Implications”, *International Journal of China Studies* Vol. 1, No. 1, January 2010, pp. 1-24, 2.

<sup>16</sup> Thitinan Pongsudhirak, “BRI as China’s ‘manifest destiny’? A Thai perspective”, *LSE IDEAS-CARI Special Report*. October 2018, pp 39-42, 40.

<sup>17</sup> Anthony H. Cordesman and Steven Colley, “Chinese Strategy and Military Modernization in 2015: A Comparative Analysis”, *A Report of the CSIS Burke Chair in Strategy*, October 5, 2015, pp 625, 147.

<sup>18</sup> MiMiGyi, “The Belt and Road Initiative” (BRI) and Its Implication on Myanmar”, *Mandalay University of Foreign Languages Research Journal* 2019, Vol. 10, No. 1, pp 106-113, 108.

decided to accept Chinese offer through construction of multichannel Tunnel at Karnaphuli<sup>19</sup>.

Till the completion of CPEC and other projects Chinese requires safety of its cargo passing through Indian Ocean for that China acquired Hambantota on port of Sri Lanka on lease. Acquisition of this port is a strategic decision due its location at almost midway between Gulf of Hormuz and Chinese ports. Initially this port was constructed on Built on Transfer basis: but, due availability of dues by Sri Lankan authorities this port has been transferred on 99 years lease to Chinese authorities<sup>20</sup>. Though this port does not have direct road/railway/pipeline connection to China like other states such as Pakistan, Bangladesh and Myanmar due its geographical location it can create a strategic impact on adversaries of China. Besides providing a springboard to western Indian Ocean, this port also became another foreign base of China after Djibouti. In the near future, the presence of Chinese Naval forces will be there for protection of the port as well as its shipment.

China Pakistan Economic Corridor (CPEC), a flagship project of BRI, is also considered as a jewel in the crown of BRI. The project will provide direct connection of China with the Indian Ocean through Gwadar port. State of art with international standards port and special processing zones are an integral part of this project beside network of Motorways & rail link from Kashgar to Gwadar<sup>21</sup>

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<sup>19</sup> Iffat Ishrat Khan, “Belt and Road Initiative (BRI) and China’s “Love” for Bangladesh: What Bangladesh Could Actually Expect from It”, *Asian Regional Review Diverse Asia* Vol.3 No.2 (2020), pp 1-7, 3.

<sup>20</sup> Maria Adele Carrai, “China’s Malleable Sovereignty along the Belt and Road Initiative: The Case of the 99-Year Chinese Lease of Hambantota Port”, *International Law and Politics* [Vol. 51:1061,pp 1060-1099,1065.

<sup>21</sup> Navid Khan, Riaz Ahmad and Ke Xing, “China Pakistan Economic Corridor (CPEC): Regional Development, Employment Opportunities and Policy Challenges”, *Global Political Review (GPR)* Vol. III, No. I (Spring 2018) | Pages: 12 – 23, 13.

## **1.5 US Presence in Region**

Since the culmination of World War II, USA is maintaining its presence in Indian Ocean with Bahrain as port of US Middle East Fleet and till to date also Bahrain is hosting US fifth fleet<sup>22</sup>. Since Gulf War and Operation Enduring Freedom (OEF) many USAF aircraft like F-15s, F-16s and B-2 Bombers are stationed at Bahrain as a result of USA and Bahrain defense cooperation agreement which was signed in early 2000. As per this defense agreement Military Consultative Committee meeting between two states is also being held regularly. In addition to Bahrain, US forces also maintain their presence in Saudi Arabia, Qatar, Kuwait, and Oman. Since the Gulf Wars, the US fleet has maintained its presence in this region.

Diego Garcia which is a British-occupied Mauritius Island has also been under USA utilization for decades through a bilateral agreement of USA and UK. This Island is having long range communication facilities, aircraft landing strip from which nuclear weapon capable B-52 Bombers, AWACS, Maritime Surveillance aircraft can operate. Furthermore, US SSBNs can also berth at Diego Garcia. Operations of nuclear capable platforms from Diego Garcia provide significant leverage to US while operating away from home ports<sup>23</sup>

### **1.5.1 US - India Nexus**

While having a significant presence in the Indian Ocean, the USA has also signed strategic partnerships under the umbrella of military collaboration and undertook various defense agreements. Salient of these agreements is given below:

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<sup>22</sup> ami G. Hajjar, “U.S. MILITARY PRESENCE IN THE GULF: CHALLENGES AND PROSPECTS”, ISBN 1-58487-085-0, e, U.S. Army War College, 122 Forbes Ave., Carlisle, March 2002, pages 1-83,1.

**1.5.1.1. BECA** is an agreement for supply of high-end equipment besides sharing of real-time intelligence between the states<sup>23</sup>.

**1.5.1.2. LEMOA** is an agreement which allow both states to replenish from each other's designated military facilities<sup>242526</sup>

**1.5.1.3. COMCASA** is an agreement for maintaining secure communication net between the states<sup>27</sup>.

**1.5.1.4. GSOMIA** is an agreement for sharing of military information such as geomagnetic and gravity data, maps, nautical and aeronautical charts.

**1.5.1.5. QUAD** is a platform for informal strategic talks between the United States, Australia, Japan and India. QUAD may become another platform for sharing of intelligence, exchange of logistics & joint military exercises.

## **1.6 US Relations with Japan, South Korea and Australia**

After the demise of WW-II the USA realized that a security structure is vital for peace and stability in the Asia pacific region. But due to the USA focused on the erstwhile USSR during the Cold war therefore the focus of the USA for security structure in this region was manifested after the Cold war. The visible appearance of USA military

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<sup>23</sup> Dr. Peter Harris, A Footprint of Unfreedom- The Future of Naval Support Facility Diego Garcia, Summer 2020 Journal of Indo-Pacific Affairs, pages 78-99,86.

<sup>24</sup> Moneeb Jaffar Mir, "Pakistan & BECA Threat", Islamabad Policy Institute, Pakistan, 5 Nov 2020, Pages 1-5, 1.

<sup>25</sup> Zeeshan Muneer, "Logistics Exchange Memorandum of Agreement", www.CSCR.pk, Pp 1-8, 3.

<sup>26</sup> Mark Rosen and Douglas Jackson, "The U.S.-India Defense Relationship: Putting the Foundational Agreements in Perspective", CNA Analysis and solution USA, February 2017,PP 1-35, 4.

<sup>27</sup> Misbah Mukhtar, India-US Military Agreement: BECA And Its Implications for the Region", Institute of Strategic Studies Islamabad, ISSUE BRIEF, November 17, 2020,Pp 1-4,1

collaboration in this region came through Japan–America Security Alliance (JASA)<sup>28</sup> which basically is a military alliance but on ground fact is that Japan takes all military decisions after the tacit approval of the USA. The USA also made another military alliance in this region which is the Korea–America Security Alliance (KASA)<sup>29</sup>. These two military alliances further boosted through a modified Australia–New Zealand–United States (ANZUS) military treaty<sup>30</sup>. These three alliances together provide a strong hold of US forces in this region. These military alliances are not bound by a treaty like NATO but it is providing all sorts of military cover to these states including a nuclear threat. Hence, this arrangement is a robust military arrangement against the common enemy in this region which at the moment is China. With the further advancement in economic prowess of China this animosity will further enhance. One point must be kept in mind that Japan and other western powers are mindful of centuries of humiliation.

Chinese leadership many times has spoken in the public gathering that they have not forgotten that time and may decide to take revenge at the suitable time<sup>31</sup>.

### **1.7 Current Maritime Security in IOR**

At present naval forces of US, Europe, Asia and Australia are maintaining their presence in this part of Indian Ocean<sup>31</sup>. Significant

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<sup>28</sup> Congressional Research Service, *The U.S.-Japan Alliance*. Updated June 13, 2019, pp 1-57, 2.

<sup>29</sup> Young-Wan Goo, *Military Alliances and Reality of Regional Integration: Japan, South Korea, the US vs. China, North Korea*”, *Journal of Economic Integration*, Vol.29 No.2, June 2014, 329-342, 330

<sup>30</sup> Allan Behm, “ANZUS and Australia’s Security”, *The Australia Institute*, July 2020, pages 1-25, 6.

<sup>31</sup> Sheikh Imran Nasir and Muhammad Zeeshan Munir, “Sino-Indian Strategic Competition in the Indian Ocean Region and Future of China’s Maritime Interests”, *JSSA Vol. VI, No. 1*, pages 33-55, 35.

presence among these forces is of US coalition forces and independent players like China, Russia and Japan. US coalition forces mainly of NATO states are maintaining their presence near the Gulf of Oman under the umbrella of CTF 150 & 151. Chinese Ships and independent players are maintaining their presence near the Gulf of Aden for the protection of respective merchandise from pirates. Good law & order at sea is ensured by US coalition forces in the region similarly various naval forces are operating near Somalia coast in order to ensure safety and security of international shipping.

At present US coalition forces and independent players are operating in this region of Indian Ocean to protect their respective maritime interests but in future when the maritime interests of these players will clash or maritime interest will be in competition then real contestation between the poles will emerge.

### **1.8 Future Scenario of Indian Ocean**

Emerging geo-economic situation in the region is affecting geo-political situation around Indian Ocean as both USA and China are endeavoring to attain maximum influence in this region<sup>32</sup>. Current US Iran standoff in Middle East<sup>33</sup>, after 20 years of war in Afghanistan US withdrawal from Afghanistan, re-emergence of QUAD after a gap of 10 years, promulgation of Indo-Pacific strategy by USA, US-India military cooperation, fast growing economic rise of China, BRI, CPEC, modernization of Chinese military are few issues which can create friction between USA and China<sup>34</sup>.

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<sup>32</sup> Ashley J. Tellis, Alison Szalwinski, and Michael Wills, “US.-China competition for global influence”, *Strategic Asia 2020*, The National Bureau of Asian Research Washington DC USA, 2019, pages 1-43, 7.

<sup>33</sup> Ville Sinkkonen, “THE UNITED STATES-IRAN STANDOFF”, *FIIA Comments*, June 2019, pages 2, 1.

<sup>34</sup> USIP SENIOR STUDY GROUP FINAL REPORT, “China’s Influence on Conflict Dynamics in South Asia”, US Institute of Peace, 2020, pages 1-56, 31.



This friction is becoming evident in their International relations as US leadership overtly and Chinese leadership covertly talking about this in public forums. This friction is also taking geo-politics once again in the cold war era. USA and Chinese contestation in the Indian Ocean has started a new dimension of geopolitics in the Indian Ocean for its future. As both desire influences in the region, US through FOIP and China through Belt-Road Initiative (BRI). Economic prowess is becoming the decisive factor in the global arena where major issues are being resolved and decided on economic factors. The USA and Chinese competition in the Indian Ocean is expected to affect Pakistan and India to a greater extent mainly due to their alignments to China and US respectively.<sup>35</sup>

As the international system is anarchic in design hence in the overall global political system states act and react keeping their national interests in view. In order to have a viable maritime collaboration in the littoral states of Indian Ocean, it is obligatory that there persists a desire to have a common goal, interests, objectives and thinking for a common maritime environment which need to be safeguarded by littoral states at all stakes. Similarly for robust collaboration it is also essential that regional maritime security interests of littorals should also be converging. Likewise common maritime security interests of all the states must not clash with the overall national interests of littoral states because alignment of national interests of littorals with respective national interests is a precondition for maritime cooperation and collaboration<sup>36</sup>.

Due these pre-conditions for maritime cooperation the evolving strategic situation of IOR is predictable to be bifurcated in two distinct power blocks. USA, Japan, Australia, India and Gulf states may form one block. Similarly, China, Russia, Iran, Bangladesh, Myanmar and

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<sup>35</sup> Arzan Tarapore and David Brewster, "Indian Ocean Strategic Futures: Re-examining Assumptions of Capability and Intent", *Asia policy*, volume 16, number 3 (july 2021), 1–56, 6.

Pakistan may form another. The division of these blocks is quite obvious through series of indications which includes re-emergence of QUAD, FIOP strategy, IONS and other various meetings which usually comprising of USA and its Asian allies<sup>36</sup>. The remaining littorals of this region will ultimately and systematically will be pushed back into a second alliance in the region headed by China.

It is true that at this moment China is militarily not in a position to contest USA in Indian Ocean but the fast growing expansion of PLA (N), it can be anticipated that in coming decades with the naval prowess China will be able to defend its maritime interests and its SLOCs in the Indian Ocean right from the origin till its destination. Littorals of the Middle East are also expected to move towards these two possible blocks as per their national interests.

Hence, it can be deduced that the existing mechanism of maritime security in the IOR will not serve its purpose in future. Future of maritime security in the Indian Ocean in times to come will be a complex and multifaceted<sup>37</sup>. It will depend upon how QUAD and BRI will shape up in future. Due peculiar maritime security requirements of both QUAD and BRI will dictate the future of maritime collaboration by member states of these two blocks as per the situation at that time. Likewise upon the culmination of CPEC project requirements of maritime security for both China and Pakistan will also shape up as per the scenario of that time.

In any of the situations in future it is clear that there will be two main players in this region one will be the USA for the maritime

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<sup>36</sup> Enrico D'Ambrogio. Graphics: SamyChahri, "The Quad: An emerging multilateral security framework of democracies in the Indo-Pacific region", EPRS | European Parliamentary Research Service, March 2021, pp 1-12

<sup>37</sup> Dr. Manuel Vermeer, "Maritime Power Politics in the Indian Ocean Region (IOR)", ISPSW Strategy Series: Focus on Defense and International Security, Issue No. 519 Nov 2017, pages 1-9, 4.

security of its allies and second will be China for the maritime security of its allies.

The visible main objective of USA and its allies in this region is to impede the economic progress of China in order to defer the process of China to become the global super power as far as possible. Whereas, China is expected to keep its progressive pace peacefully till attainment of decisive military capabilities in this region may be in the last of current or beginning of next decade<sup>38</sup>.

## **2. Power Realignment in Indian Ocean**

Power is an attribute of particular actors in their interactions, as well as a social process that constitutes the social identities and capacities of actors. International relations scholars use the term polarity to describe the distribution of power in the international system. balance of power, in international relations, the posture and policy of a nation or group of nations protecting itself against another nation or group of nations by matching its power against the power of the other side.

As a theory, balance of power predicts that rapid changes in international power and status—especially attempts by one state to conquer a region—will provoke counterbalancing actions. For this reason, the balancing process helps to maintain the stability of relations between states.

'Alignment' theorists such as Stephen Walt and Stephen David, define 'alignment' as 'a relationship between two or more states that involves mutual expectations of some degree of policy coordination on security issues under certain conditions in the future'.

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<sup>38</sup> Aasia Khatoon , Nazim Rahim and Barkat Ali, “A Historical Perspective of China’s Peaceful Policies and its Rise as World Economic Power”, *Liberal Arts and Social Sciences International Journal (LASSIJ)*, Vol. 2, No. 1, (January-June) 2018, 65-74,66.

Balance of Power ensures the preservation of small and weak states. Its rule that no nation is to be completely eliminated, favors the continued existence of all states. Each state feels secure about its security in the balance of power system.

In near future the prime need of China will endeavor to secure its SLOCs which are emerging from Middle East in order to have sustained flow of energy.<sup>39</sup> China needs to have a considerable presence of its naval armada in this region of the Indian Ocean, hence the presence of the PLA (N) in this region will increase in future. It is expected that this enhancement in presence of PLA (N) in this region may ring bells for Asian allies of US because few presumed them as a net security provider in the region ultimately it will result in the enhanced presence of USA and its coalition forces in this region. Most of the US allies in Asia are having apprehension that with the increased involvement of China in the region through BRI and CPEC this region will become Sino centric and their grip on the region will dilute as the economic interests of regional states of South Asia will be linked with the interests of China in this region. Those South Asian states which are having partnership or stakes in BRI with China will become the natural allies of China for collaborative maritime security arrangements in the Indian Ocean Region. Therefore, if any collaborative maritime security arrangements are formed in this region the partner states automatically will have enhanced diplomatic and military activities with China in this region due convergence of interests and patronage of BRI<sup>40</sup>.

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<sup>39</sup> Nazir Hussain and Amna Javed, “The Contours of New Regional Alignments in South Asia”, *South Asian Studies A Research Journal of South Asian Studies* Vol. 34, No. 1, January – June, 2019, pp. 25 – 35, 27.

<sup>40</sup> Frank Umbach, “China’s Belt and Road Initiative and its Energy-Security Dimensions”, *S. Rajaratnam School of International Studies Singapore*, 3 JANUARY 2019, pp 1-47, 9.

India, Japan and South Korea are also receiving energy from the Middle East. There will be a classical geo-political situation in this region because on one hand these states are trying to impede the economic progress of China<sup>41</sup> and for that their playing field is this part of the Indian Ocean and on the other hand they are also dependent on the steady flow of energy from this region for their economic progress. Therefore, the wisdom of energy security will be at the top priority in the strategic calculation of these states. Similarly to counter BRI US and its allies have formulated FOIP strategy which will also have some implications in future because if US and its allies put hurdles in front of China to use its front yard i-e South China sea than it will further increase the contestation in the region and both the blocks will undertake measures to enhance its grip in the region<sup>42</sup>.

## **2.1 Implications on Pakistan**

Since decades Pakistan is maintaining close relations with both China and USA as per the strategic dictates. Pakistan has been strategic ally of USA in first Afghan War against erstwhile USSR and on previous US declared GWOT. Repeatedly different US Presidents on various occasions has publically admired the role which Pakistan had played as USA coalition partner first against communism and second War on Terrorism is praised worthy. Pakistan has remained a key player for successful talks between USA and Taliban for bilateral discussions in Doha Qatar and elsewhere.

On the other hand in 70s Pakistan had introduced China to the western world. After the imposition of military hardware from western world in the late 90s, China was the sole source of military hardware

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<sup>41</sup> Alexandra Sakaki and Gudrun Wacker, “China – Japan – South Korea”, SWP Research Paper, April 2017, Berlin, pages 1-34, 10.

<sup>42</sup> Ashley J. Tellis, Alison Szalwinski, and Michael Wills, “US.-China competition for global influence”, Strategic Asia 2020, The National Bureau of Asian Research Washington DC USA, 2019, pages 1-43, 7.

to Pakistan. Since then Pakistan and China have undertaken many joint military projects including Al-Khalid Tanks, F-22 Frigates and JF17 Thunder fighter jets<sup>43</sup>. This bond of friendship between China and Pakistan is going to be further cemented through an economic corridor worth USD 62 B which is going to resolve many problems of China and will provide easy access to the North Arabian Sea. The Strained relationship between the US and China in the Indian Ocean will affect Pakistan the most. Now in future Pakistan has to navigate its future course of action in the Indian Ocean very cautiously.

## **2.2 Options for Pakistan**

Pakistan is to handle both the powers simultaneously very carefully and cautiously due to considerable sensitivities involved in it<sup>44</sup>. Following policy options are considered necessary for Pakistan to accrue optimum success keeping the national maritime interest in view:

Maintaining good order at sea and especially in the North Arabian Sea is in the favor of Pakistan and other regional states which Pakistan is already doing since decades attaining considerable reputation and reputation in the other maritime nations. Keeping its international obligation in view Pakistan may continue its fullest contributions in the coalition forces. This participation will also provide Pakistan an opportunity to work in close liaison with western as well as eastern naval forces including German, UK, Japan and South Korea and close operations with these forces.

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<sup>43</sup> Ashley J. Tellis, Alison Szalwinski, and Michael Wills, "US.-China competition for global influence", *Strategic Asia 2020*, The National Bureau of Asian Research Washington DC USA, 2019, pages 1-43, 7.

<sup>44</sup> Major Powers' Interests in Indian Ocean: Challenges and Options for Pakistan, Islamabad Policy Research Institute (IPRI), two-day international conference held on November 18-19, 2014 at Serena Hotel, Islamabad, pp 1-219,14.

Regional and extra regional forces are present in the region and engagement with these forces through bilateral naval exercises will not only enhance cooperative engagement with these forces but will also remain helpful in increasing interoperability of Pakistan with these states.

Among these bilateral exercises AMAN is an important naval exercise which is being conducted biennially which provides an excellent opportunity for Pakistan to showcase its soft image to the world by inviting almost all the major navies of the world including USA, China, Japan, UK, Australia, Germany etc. Pakistan should keep engaging all the leading navies of the region as well as the extra region in the Indian Ocean through exercise AMAN.

QUAD was initially formed to provide disaster relief in the region after the 2004 Tsunami. Pakistan being one of the significant littoral of the Indian Ocean having a sizable armada of naval force; may become part of QUAD for providing necessary assistance in maritime cooperation and coordination for safe navigation in the region<sup>45</sup>.

Bilateral naval exercises provide exceptional opportunities for working together for the safety and security at sea<sup>46</sup>. Pakistan is having considerable experience of operations in this region with which other extra regional states can be benefited through bilateral naval exercises. Hence Pakistan needs to engage regional as well as extra regional states for bilateral naval exercises. Pakistan can propose bilateral exercises with leading naval powers visiting NAS as a good will gesture and ensure maximum presence of Pakistan in this area.

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<sup>45</sup> Dr. Manuel Vermeer, “Maritime Power Politics in the Indian Ocean Region (IOR)”, ISPSW Strategy Series: Focus on Defense and International Security, Issue No. 519 Nov 2017, pp 1-9, 4.

<sup>46</sup> Arzan Tarapore and David Brewster, “Indian Ocean Strategic Futures: Re-examining Assumptions of Capability and Intent”, Asia policy, volume 16, number 3 (July 2021), 1–56, 6.

Beside bilateral exercises with regional as well as extra regional countries, Pakistan is also maintaining an independent Maritime Security patrol in the area of responsibility as well as area of interest. Pakistan may also offer other regional states to be benefitted from this maritime patrol by joining military collaboration in this regard.

Though CPEC will be fully materialized by the end of the current decade, work on the requirement of maritime security in the region needs to be done prior completion of the project. For maritime security of CPEC provision of ISR of the area of interest is considered essential. This requires substantial resources including provision of assets for various security mechanisms. Long range surface surveillance radars as well as other related equipment are required to be installed on the coast near Gwadar to attain meaningful security in the region. As China is a partner with Pakistan in the CPEC project hence, China may be taken onboard for provision of resources for seaward security of the CPEC project.

CPEC is a joint project of Pakistan and China, hence, interoperability of both the naval forces for provision of maritime security in the Indian Ocean is considered essential for smooth and steady flow of merchandise in this area. At present PLA (N) is only maintaining its presence near the Gulf of Aden in the domain of anti-piracy. In order to curb the menace of piracy in the North Arabian Sea, the presence of Chinese Naval Forces near the Gulf of Oman is also considered essential. Hence, there is a requirement that Chinese forces must show its presence in North Arabian Sea under the requirement of CPEC<sup>47</sup>.

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<sup>47</sup> Shirin Lakhani, "The China-Pakistan Economic Corridor: Regional Effects and Recommendations for Sustainable Development and Trade", *Denver. J. Int'l Law & Policy Journal*, vol 45, Article 4, pages 417-426, 419.



Various South Asian states have become the part of BRI hence maritime interests of all these states are converging in nature. South Asian states including Bangladesh, Sri Lanka and Maldives may be engaged through naval exercises in order to achieve common interest in maritime security under the patronage of CPEC.

Undertaking investment in CPEC projects various states of the Gulf region including Saudi Arabia and UAE will become part of the project and their maritime interests will also be converging with Pakistan and China hence naval engagement with these states is also a requirement of CPEC.

Time has arrived that all the participating states of BRI/CPEC may join together to form a coalition in the Indian Ocean region for the maritime safety and security of CPEC. It is a fact that currently the menace of piracy and terrorism is restricted north of Somalia coast but in future when economic activities in this region increase after the operationalization of CPEC these menaces may move up towards north Arabian sea hence the partner states of CPEC and BRI are required to visualize this threat and must do for the safety and security of the SLOCs from these menaces.

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## **Russia's Permanent Military Presence in Syrian Tartus Port for the Coming 49 Years: Increasing Maritime Security Challenges In the Region**

Ayesha Zafar<sup>a</sup>

### ***Abstract***

*Relations between states are always the result of permanent interests as there can never be permanent friends or foes in international relations. The changing geopolitical dynamics have engaged all the states in a struggle to maintain dominance across the world. Consequently, Russia's leasing of the Syrian Tartus port for the coming 49 years is directional towards the same geopolitical interest of making the state resurge. Nevertheless, this decision will have multiple implications for the region's maritime security. Permanent military presence of Russia on the Tartus port, close to the Mediterranean and black sea makes it a geopolitical hotspot for the major powers great game. Not only this, the region has become home to numerous non-traditional security threats in the maritime domain including drug trafficking, piracy, illicit trade, marine terrorism, etc. Therefore, this research paper aims to highlight how Russia's presence in the Syrian Tartus port will shift the regional dynamics. It endeavors to analyze the amassed maritime security challenges in the region by reconnoitering the tug of war between the US and Russia and the non-traditional threats that have made it a point of contention between states across the region.*

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## 1. Introduction

Russia and Syria enjoy warm relations with each other that were developed back in 1946 with the signing of an agreement, whereby Russia recognized Syrian independence after the French troops left. From here, the relations started gaining strength with each passing year. During World War 2 both states were on the Allied side against the Axis powers. Not only is this, but throughout the cold war era, the Soviets' relations with Syria became firm concerning the military support it provided and the defense agreements both states signed with each other. According to statistics, a total of \$2.3 billion worth of arms support was provided by Russia to Syria during the cold war years.<sup>1</sup>

Furthermore, in Yom Kippur War, when Syria along with Egypt was on the front line against Israel, the Soviet Union stepped in for Syrian support with approximately 3750 tons of aid. In 2011 and 2012, Russia (a permanent member of the UNSC) used its veto power to halt any sanctions or intervention in Syria. Moreover, it intervened in the Syrian civil war upon the request of president Bashar-ul-Assad's military assistance in a letter in 2015.<sup>2</sup> Together with this, both call each other the strongest Strategic Partner in the Middle East and for Russia, Syria is at the heart of all its designed strategy in the region.

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<sup>1</sup> Eman Ragab, "An Alternative Approach to Regional Security in the Middle East," *The Cairo Review of Global Affairs*, February 1, 2020, <https://www.thecairoreview.com/essays/an-alternative-approach-to-regional-security-in-the-middle-east/>.

<sup>2</sup> "The Veto: UN Security Council Working Methods," *Security Council*, December 16, 2020, <https://www.securitycouncilreport.org/un-security-council-working-methods/the-veto.php>.

Nevertheless, this relationship is not just looked from the historical perspective but the hard geopolitics is at play as well. Since Russia's footholds in Syria would mean its grip in the wider Middle Eastern region. For President Vladimir Putin, who sees the Soviet collapse as an epic tragedy, this decision would mean restoring its status as a world player as it will allow Russia to alter the current balance of power in the region. Apart from this, it will be a source of increasing military confrontation between the US and Russia. Since presence in the Tartus port, close to the Mediterranean and the Black Sea, where the US had long maintained its presence, will increase rivalry in the maritime domain. Russia's decision to maintain a permanent military presence will not only intensify the security dilemma but will result in increasing maritime security challenges, traditional and non-traditional.

Therefore, this paper attempts to analyze the underlying implications of the leasing agreement between Russia and Syria. Section one of the paper provides an in-depth study of this decision of Russia to lease the Syrian Tartus port while practically applying the major contours of the system level of analysis to clasp the intentions Russia has in leasing the port for 49 years. Along with the domestic factors that are at play. It elucidates how Russia's presence in the Middle East poses major challenges to the regional interest of the US, and what policies did Biden administration undertake to counter them.

Alongside, section two of the paper will pinpoint some of the key non-traditional maritime challenges faced by the region, especially after Russia's presence in the Tartus. How the increasing instances of marine terrorism, illegal trafficking, piracy, etc. have led to new tension among the states. Clamping it all, it illustrates how the decision is going to be a game changer for Russia considering the shifting regional balance of power. Also, how Russia's presence in the Tartus port will help President Vladimir Putin accomplish his goal of making Russia resurge.

Russia's leasing of the Syrian Tartus port for the coming 49 years will shift the balance of power in the Middle Eastern region along with increasing the maritime security challenges.

- i. What are the Geo-economic and Geo-strategic interests of Russia in leasing the Tartus port located in Syria?
- ii. How is it going to shift the balance of power in the region and help Russia in regaining its status as the major world power?
- iii. How Russia's presence in the Syrian Tartus port will upsurge both the traditional and non-traditional maritime security challenges in the region?
- iv. What is the US strategy under the Biden Administration to curtail Russia's increasing influence in the region?

The topic is of vital significance because increasing Russia's influence in the Middle East holds multifaceted aspects which need to be analyzed. As the current government of Vladimir is highly motivated to work toward Russia's resurgence and to make it an influential power in the region. Therefore, this makes it an important area of study. Moreover, the growing rhetoric in the west about the emergence of Russia as a key player provided the ground for scholars to study what steps Putin will take to follow his vision. Likewise, President Joe Biden who has yet to put forward his Middle East plan is highly motivated towards increasing the US influence in the region. At this time, Russia's resurgence and its increasing foothold in the region using Syria against the US interest turn the region to be a major geopolitical hotspot.

Apart from this, the increasing maritime security challenges with the two major powers coming one-to-one in the region is an indication of a tense future. Russia's deployment of nuclear-armed vessels on the Tartus port near the Mediterranean poses a major threat



to US security and its presence in the region. Likewise, the emerging cases of non-traditional threats had also made the region a major point of concern for the states. Consequently, these important aspects are vital to be analyzed in the context of changing geopolitics of the world.

## **2. Russia's leasing of Syrian Tartus port for the coming 49 years: A System Level Analysis**

In 2017, an agreement was concluded between Syria and Russia whereby it was agreed that Russia will maintain its military presence at the Syrian Tartus Port for the coming 49 years. This agreement while on one hand will open the windows of opportunity for both states and will at the same time increase regional tensions. Largely because under the agreement, Russia can deploy up to 11 warships, including nuclear-powered combat vessels, at the Tartus naval facility. It has been granted the right to carry out the seaborne and airborne protection of the base. Also, temporary mobile outposts can also be set up. With this agreement, Russia will regulate legal issues along with security.

Therefore, Russia's decision of leasing the port can be analyzed by using the System level of analysis since it focuses on the factors that are present within the sovereign territorial jurisdiction of a state and impacts its foreign policy. Similarly, a state's leading role conception, public opinion, and interests of the elites in society are equally significant to comprehend the state's action and decision-making. This section of paper will therefore incorporate all these factors to explain Russia's decision of leasing the Tartus port and its underlying objectives that are at play.

To begin with, Russia and Syria, both share friendly relations that were developed back in 1946. Both states call each other strategic partners. In 2006, President Vladimir Putin announced Syria and

Russia as “*Important strategic partners of each other in the Middle East.*”<sup>3</sup> Not only is this, but during an interview to Syria TV, Syrian transport minister, Ali Hammoud stated, “*Tartus will remain Syrian, as it is managed by a country that is a friend of Syria.*”<sup>4</sup> Hence, this depicts the perception two states have regarding each other which is shaping their decision-making based identity as friends of each other.

Apart from this, state is not always a unitary actor but there are different interest and pressure groups involved that influence the decision-making process of a state. Analyzing the agreement of leasing Syrian Tartus port many business elites have a strong influence. According to the deal, Russia plans to invest around \$ 500 million in the port<sup>5</sup> for the coming 4 years, primarily economical in its nature with plans to build the country’s infrastructure including motorways, airports, and a railway connecting Tartus port to Gulf for goods transfers. To look at how the business companies have their influence, we can simply look to whom the port construction contract was handed over. It is a Russian industrial group Stroytranzgas, headed by Gennady Timchenko, who is a childhood very friend of President Putin

Under the Tartus port agreement, Stroytranzgas is exempted from paying taxes for about six years. Alongside, public opinion which represents the core values and moods of states also tends to play a critical role in states foreign policy actions. Importantly, Vladimir Putin holding power for the 4<sup>th</sup> time as President with popular voting is

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<sup>3</sup> Amir Asmar, "Why Would Arab Leaders Pursue Strategic Partnerships with Russia?" *Council on Foreign Relations*, November 5, 2019, <https://www.cfr.org/blog/why-would-arab-leaders-pursue-strategic-partnerships-russia>.

<sup>4</sup> “Transport Minister: Russian Investment in Tartus Port Comes With High Economic Benefits,” *The Syrian Observer*, April 30, 2019, <https://syrianobserver.com/news/50098/transport-minister-russian-investment-in-tartous-port-comes-with-high-economic-benefits.html>

<sup>5</sup> “UPDATE 1-Russia to invest \$500 mln in Syrian port, build grain hub –Interfax,” *Reuters*, December 17, 2019, <https://www.reuters.com/article/syria-security-russia-grains-idUSL8N28R32J>

an indication of the popular support he enjoys in the state. During the recent constitution amendment, around 77.9% voted in his favor making him president till the year 2036.<sup>6</sup>

Furthermore, the job opportunities this agreement will bring for the people is another factor leading to strong support for the decision. Deputy Prime Minister, Yuri Borisov stated in Dec 2019, *“The port has provided employment opportunities for 3700 people in Tartus, and the Russian side plans to modernize the port to a modern level, restore its activity, in addition to allocating and establishing a new railway through Syria and Iraq to create a corridor to the Mediterranean linking it with the Gulf via Iraq, which It will increase the shipping capacity and commercial traffic in the Syrian port.”*<sup>7</sup> Lastly, the role of political parties is also important. In Russia, the federal assembly of both houses, the upper Federation council, and the lower Duma has a United Russia (Putin’s political party) majority which is why both parties have ratified the agreement to leasing the Tartus port.

In this regard, the Russian Lawmaker, Franz Klintsevich announced that Duma ratified the agreement on December 21. Henceforth, this decision has got a lot of economic and strategic benefits for Russia, keeping in view the changing geopolitical demands of the system. Through this Vladimir Putin can easily make his dream of Russia’s resurgence a reality. Yet, the maritime security challenges have to be addressed at the earliest. Thus, the section down below will provide an insight into the key geo-strategic and geo-economic interests of Russia in leasing the Tartus port and the likely challenges in the maritime domain that will emerge as a result.

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<sup>6</sup> Andrew Osborn and Vladimir Soldatkin, “Russians Grant Putin Right to Extend His Rule until 2036 in Landslide Vote,” *Reuters*, July 1, 2020, <https://www.reuters.com/article/us-russia-putin-vote/russians-grant-putin-right-to-extend-his-rule-until-2036-in-landslide-vote-partial-results-idUSKBN24254A>.

<sup>7</sup> “Russia allocates \$ 500 million to modernize the Syrian port of Tartus,” *Syrializm*, October 9, 2022, <https://syrializm.net/?p=10874>

Alongside this, the role conception of President Vladimir Putin will be discussed in detail to comprehend his view of the state and its status in the power trajectory.

### 3. Geo-strategic and Geo-economic interests of Russia

Russia's decision of leasing the Tartus port for 49 years has multiple underlying objectives and interests. On December 13, 2017, Russian President Vladimir Putin on December 28, 2017, announced that, "*More than 48,000 Russian military personnel have served in the operation in Syria, and that the facilities at Khmeimim and Tartus would continue to operate "on a permanent basis."*"<sup>8</sup> As per the agreement, Russia has planned to invest \$500 million along with building grain hubs on the port. Deputy Prime Minister Yuri Borisov stated, "*Russia will invest \$500 million in Tartus, and will build a grain hub for increase presence in Middle East markets.*"<sup>9</sup> From this statement, we can easily infer Russia's interest in having Tartus port. Through the port Russia would easily gain access to Middle Eastern markets, which accounts for 18% of Russia's total arms export.<sup>10</sup> This is the reason Middle Eastern region is significant as a market for sales of arms and nuclear technology, which ultimately contribute to its GDP growth.

Also, in Vladimir Putin's major military reform of August 2008, the MENA region remained a core of attention. From 2000 to 2016, MENA got 5<sup>th</sup> largest arms exports of Russia.<sup>11</sup> In 2009 a total

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<sup>8</sup> "Putin Signs Law Allowing Expansion Of Russian Naval Facility In Syria," *RadioFreeEurope*, December 29, 2017, <https://www.rferl.org/a/putin-signs-law-syria-Tartus-naval-facility/28946167.html>

<sup>9</sup> "Russia to invest \$500m in Syria's Tartus," *The National*, December 18, 2019, <https://www.thenationalnews.com/world/mena/russia-to-invest-500m-in-syria-s-Tartus-1.953157>

<sup>10</sup> Robert Mason, "Russia in Syria: An Unequivocal Return to the Middle East?" *Middle East Policy* 25, no. 4 (2018): P., 101-115. <https://onlinelibrary.wiley.com/doi/abs/10.1111/mepo.12381>

<sup>11</sup> Ibid.

of \$9 billion, and \$21.4 billion in 2016<sup>12</sup> worth of arms were sold to this region. Particularly in Syria, Russia's arms exports reached almost \$4.7 billion from 2007-2010.<sup>13</sup> Thus, the Middle Eastern market is the largest export target for Russia. Moreover, the agreement would be crucial for trade with Syria as both states agreed to undertake different infrastructure projects.

Syrian head of planning and international commission, Imad Sabuni, said to the media "*A project to build an airport in Tartus at the site of an agricultural airfield within the framework of the Build-operate-transfer cooperation.*"<sup>14</sup> Moreover, Yuri Borisov stated that the Russian side intends to improve the operations of the old port and build a new commercial port. Therefore this agreement between Russia and Syria will be economically very prosperous for the two. Likewise, these exports will contribute to the economy of Russia yet, liberal's idea of using soft means to dominate is quite visible, as Russia through Tartus port would gain access to the Middle Eastern market and from where it can exert its influence on the whole region.

Nevertheless, nothing is without states' military interest since changing geopolitical settings demands states to increase their military muscles to counter any present or future threat. Therefore, the leasing of the port can be further analyzed using the realist lens which believes that more power is the ultimate indicator of a state's security and survival. Henceforth, for a geographically locked or restrained country like Russia whose access to the Mediterranean is controlled by Turkey and other littoral Black Sea states<sup>15</sup>, presence in Tartus port would

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<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> "Russia Plans to Construct Vaccine Plant, Airport in Syria's Tartus – Official," *Sputnik*, December 26, 2018, <https://sputniknews.com/20181226/russia-plant-airport-Tartus-1071019009.html>

<sup>15</sup> Tanvi Chauhan, "Why Are Warm-Water Ports Important to Russian Security? The Cases of Sevastopol and Tartus Compared," *European, Middle Eastern, and*

mean access to Mediterranean to further its geopolitical and economic interests.

#### 4. Importance for Syria

This agreement is not only going to benefit Russia or would be a means to achieve its goals but would be ideal for Syria. From the liberal perspective, this agreement is going to economically benefit both states as Borisov stated “*It will be a hope for mutual trade and a centerpiece to rebuild the Syrian economy.*”<sup>16</sup> Thus, it is not only serving Russian interests but will also be ideal for a war-torn country like Syria. As per the agreement, Russia has exported 100,000 metric tons of grain<sup>17</sup> and wheat to the port of Tartus to help Syria in having a constant supply of food. Moreover, the idea of how much it would be beneficial for Syria can be gauged by Syrian Transport Minister Ali Hammoud interview with Syrian TV where he stated, “*The Port generates annual revenue of 24 million dollars, yet with Russian investment, it will receive 84 million dollars annually.*”<sup>18</sup> In January 2020, President Bashar al-Assad approved contracts with three Qatari brothers that will build two oil refineries and will expand the oil terminal in Tartus port. So this is all how Syria is going to benefit by cooperating with Russia.

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*Africa Affairs* 20, no.2 (2020): P., 66, [https://www.airuniversity.af.edu/Portals/10/JEMEEA/Journals/Volume-02\\_Issue-1/Chauhan.pdf](https://www.airuniversity.af.edu/Portals/10/JEMEEA/Journals/Volume-02_Issue-1/Chauhan.pdf).

<sup>16</sup> Dorian Archus, “Russia to invest for the modernization of Tartus port,” *Naval Post*, December 18, 2019, <https://navalpost.com/russia-to-invest-for-the-modernization-of-Tartus-port/>

<sup>17</sup> Ibid.

<sup>18</sup> “Transport Minister: Russian Investment in Tartous Port Comes With High Economic Benefits,” *The Syrian Observer*, April 30, 2019, <https://syrianobserver.com/news/50098/transport-minister-russian-investment-in-tartous-port-comes-with-high-economic-benefits.html>

## 5. Emerging Maritime security threats in the region

The presence of two major powers in any region makes it a geopolitical hotspot for a power struggle. It gives space for new challenges to fill the stage and bring key stakeholders into the rivalry. Consequently, Russia's permanent military presence in the region through Tartus port will result in a major maritime security confrontation between the US and Russia. Since the Russian presence in Tartus port is not new, instead, it has had its presence here since the Soviet era (1970, Hafez-ul-Assad time), but at that time it was used only for food supplies and refueling. However, with 2015 Russia's involvement in Syria, Tartus port acts as a strategic logistical hub. Therefore, Russia's interest in the extension of the leasing port for the next 49 years was to protect its only Mediterranean naval base-Black Sea Fleet which is located in the port of Syria. Also, Mediterranean holds a key position in any state's policy as Nurhayat ulusoy stated, *"The struggle over the strategic control of the Mediterranean is one of the most persistent and continuous struggles in the history of humanity."*<sup>19</sup>

Along with this, another key objective of Russia is to increase its military, naval, and air deployment on the Tartus port from where it can easily eye the US activities. The reference of it can be found in the statement of Russia's defense minister, Sergei Shoigu who said, *"Russia has started establishing a permanent military presence at naval and air bases in Syria."*<sup>20</sup> This is a clear depiction of Russia's interest. Important to note here is that Russian Naval facilities at

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<sup>19</sup> Nurhayat ULUSOY, "The presence of Russia in Syria according to the BARAKAH Circle Theory: The Tartus Naval Base," *Journal of Islamic Jerusalem Studies* 21, no. 2 (2021): P., 190, <https://dergipark.org.tr/tr/download/article-file/640513>

<sup>20</sup> "Russia starts to establish permanent presence at its Syrian bases," *Middle East Eye*, December 26, 2017, <https://www.middleeasteye.net/fr/news/russia-starts-establish-permanent-presence-its-syrian-bases-590935799>

Tartus port are very close to Russia's Khmeimim airbase in Latakia with an estimated travel distance of 45 miles.

So by having a presence in the Tartus port, Russia would better ensure the security of its airbase, Khmeimim. In addition, the real interest of Russia in attaining power can be gauged by President Vladimir Putin's order on May 29, 2019, to Russia's minister of defense for signing a new deal with Syria that will increase its military rights in Syria. Again having done this, it can exercise control in the Middle East by using Syria as a core stone of all its strategy. This idea is reflected in Russian naval expert Captain Anatoly Ivanov statement *“Russia, the Mediterranean Sea is close both geographically and geopolitically. Therefore, using it as an opportunity for building closely in Syria that is there in the Middle East appears to be a reasonable measure.”*<sup>21</sup>

Moreover, according to Russia's RIA news agency, the deal will allow Russia to have its 11 warships at the port, including nuclear-armed Pyotr Veliky. Also, Russian military personnel was granted immunity and their ships are allowed to use internal waters along with the Tartus port free of charge. That is why recent development in the Tartus port are noticeable. Captain Sergei, who commands the Russian Navy said, *“In addition to two submarines moored at the harbor, Tartus now also hosts two missile corvettes, three patrol boats, and three supply vessels.”*<sup>22</sup> Hence, a clear depiction of Moscow's growing military foothold in the Eastern Mediterranean Sea will not only make it a point of contention between the US and Russia because of the

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<sup>21</sup> Eugene Rumer, "Russia in the Middle East: Jack of All Trades, Master of None," *Carnegie Endowment for International Peace*, October 31, 2019, <https://carnegieendowment.org/2019/10/31/russia-in-middle-east-jack-of-all-trades-master-of-none-pub-80233>

<sup>22</sup> YURAS KARMANAU, "Naval base in Syria cements Russia's Mediterranean foothold," *Associated Press*, September 26, 2019, <https://apnews.com/article/soviet-union-moscow-syria-international-news-mediterranean-sea-95362ddbdbab4383945900a928296dde>



emerging maritime challenges but other stakeholders will also jump in with the increasing confrontations.

## **6. Maritime Naval exercises in the Tartus port**

Amid the rising maritime tensions in the region between the US and Russia, we get to see an upsurge in the maritime Naval drills of Russia in the Tartus port which has long been causing severe tensions. On June 25, 2021, Russia launched a naval drill in the Mediterranean Sea close to Tartus as Britain did an exercise in the black sea with its destroyers. It included Russian warplanes with hypersonic missiles and two submarines along with Tu-22M combat craft.<sup>23</sup> Also, Russia together with Syrian forces conducted a joint drill at Tartus port in May 2021 which was intended to show the defense capabilities of both against the potential threat from the US. Interestingly, it included altogether 2000 personnel and a Russian mine sweeper as well. Thus, it was a great strategic move by Russia to show its military might in the region.

Not only recently, but if we look a little back in history then Russia has been involved in such maritime exercises together with other states in the region. For instance, Russia and China both did their first-ever joint naval exercise in the Mediterranean in 2015.<sup>24</sup> This exercise by the two rivals of the US posed a great threat to US security in the region since it had already the presence of the US naval fleet. Apart from this, the 2020 Ocean Shield exercise of Russia in the Mediterranean Sea was yet again significant to show its maritime muscles to the opponent side.

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<sup>23</sup> "Russia Launches Mediterranean Drills amid Rift with UK," *Al Jazeera*, June 25, 2021, <https://www.aljazeera.com/news/2021/6/25/russia-launches-mediterranean-drills-amid-rift-with-uk>.

<sup>24</sup> Franz-Stefan Gady, "China and Russia Conclude Naval Drill in Mediterranean," *The Diplomat*, May 2, 2015, <https://thediplomat.com/2015/05/china-and-russia-conclude-naval-drill-in-mediterranean>.

Furthermore, Russia together with Turkey did a live-fire naval drill in the eastern Mediterranean which lasted for a week but gave a significant message to the US whose 5<sup>th</sup> fleet is also present in the Eastern Mediterranean. Another Egypt-Russia naval exercise under the title 'Friendship Bridge-4' in the Mediterranean in December 2021 was also crucial. All these maritime exercises depict an interest of Russia to dominate the region by using Tartus port as a jump-start. Yet, this struggle to maintain dominance has at the same time added to the maritime tensions because confrontation in the future is most likely if these exercises kept ongoing. Besides, other actors could jump in as we seen in case of Egypt, Turkey, and China which have already held exercises with Russia.

## **7. Non-traditional maritime security challenges**

Presence of Russia in the Tartus port has not only raised tensions among the great powers, but has too led to numerous non-traditional maritime security threats in the region. The number of illegal immigrants crossing the Mediterranean touching the Tartus port has increased since then. On December 30, 2014, an Italian coast Guard helicopter named 'Blue Sky M' was caught with around 768 illegal immigrants.<sup>25</sup> Reports found Abu Haidar, based in Tartus, as the main culprit smuggling these migrants. Much like this, in 2015 a ship destined for the coast of Libya had nearly 800 people smuggled illegally through the Mediterranean.<sup>26</sup>

Another case was filed by the Turkish authorities when on January 13, they seized around 2.5 tons of cannabis resin that was illegally trafficked with the Syrian crew member. This ship which started its journey from Tartus port was heading towards Western

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<sup>25</sup> Hamoud Almahmoud, "Pirates of the Mediterranean Sea," *Arab Reporters for Investigative Journalism*, March 6, 2016, <https://en.arij.net/investigation/pirates-of-the-mediterranean-sea/>.

<sup>26</sup> Ibid.

Europe. Likewise, in 2020, Captagon was exported from Syria worth \$3.46 billion illegally through the seas.<sup>27</sup> Thus, drug trafficking through illegal means has posed a major threat to the security of the port and states who have their interest aligned with it.

Not only is illegal immigration but the incidents of pirates' attacks on the sea have also gain new momentum. For instance, an Iranian container ship was targeted in March 2021 from an unknown source in the Mediterranean Sea. The authorities in Iran accused Israel of the attack under the terrorism act. Yet, sources remain controversial. Nonetheless, attacks like these have raised concerns not only for the US, Russia, and Syria but also for other states in Europe and Africa since they are also dependent on the Mediterranean for their trade transports and other economic activities. Henceforth, such non-traditional maritime threats are worth the attention of the authorities concerned.

## **8. A new threat for the US**

Extending Russia's military presence at the Tartus Port is a key element of Putin's Foreign policy goal of making Russia great again. Since this is the only Naval Facility that Russia is having outside the former soviet bloc. Moreover, as part of the agreement, Russia is allowed to deploy 11 warships including nuclear-armed which ultimately makes it a stronger player in the Mediterranean as Tartus port is near the Mediterranean so by having a permanent presence here it can better eye USA actions which has 6th Fleet,<sup>28</sup> ship repair and training centers of the Navy in the Mediterranean.

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<sup>27</sup> Martin Chulov, "A Dirty Business': How One Drug is Turning Syria into a Narco-state," *The Guardian*, May 7, 2021, <https://www.theguardian.com/world/2021/may/07/drug-captagon-turning-syria-into-narco-state>

<sup>28</sup> Eugene Rumer, "Russia in the Middle East: Jack of All Trades, Master of None," *Carnegie Endowment for International Peace*, October 31, 2019,

This raises tensions for the US not only in military domain but also for its influence regionally. Largely because the US and Russia are a counter-force to each other in Syria considering their support for the opposite sides. The Central Intelligence Agency (CIA) coordinates procurement and delivery of arms and trains rebels in camps set up in Jordan<sup>29</sup> while Russia backs Assad regime. Therefore, Russia's presence and increasing footsteps in the Syrian territory would mean the US losing its strong grip in the region and particularly over the Kurds. This concern is evident in the statement of the then US top military official, General Martin Dempsey, who while criticizing Russia's shipment of advanced anti-air missiles to Syria that he believed would raise confidence of Assad regime said, "*It's at the very least an unfortunate decision that will embolden the regime and prolong the suffering.*"<sup>30</sup>

Furthermore, Putin's confrontational language toward the west in his speeches is quite evident. At Munich Conference in 2007, Putin while criticizing the US for being an irresponsible hegemon and taking unilateral action against Syria said: "*Million don't see the USA as a model of democracy but for its reliance on brute force.*"<sup>31</sup> Herewith, Putin is trying to generate a perception of the US in the world and the Middle East of an aggressor state and of Russia as a responsible great power, ultimately creating ways for Russian increasing involvement in the Middle East.

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<https://carnegieendowment.org/2019/10/31/russia-in-middle-east-jack-of-all-trades-master-of-none-pub-80233>.

<sup>29</sup> Sanu Kainikara, "*In the Bear's Shadow: Russian Intervention in Syria*," (Australia: Air Power Development Centre, 2018).

<sup>30</sup> Phil Stewart, "Russian missiles to Syria could embolden Assad: U.S. general warns," *Reuters*, May 18, 2013, <https://www.reuters.com/article/us-syria-crisis-russia-usa-idUKBRE94G0RS20130517>

<sup>31</sup> "President Address to the Federal Assembly," Kremlin Moscow, December 12, 2012, 2022, <https://en.kremlin.ru/events/president/news/17118>.

## 9. Putin's Role Conception

State leader's role conception matters. They give direction to the state and same is the case of having this Syrian Tartus port. Vladimir Putin, who is the current president of the Russian Federation has the same role conception and ideology in his mind as he wants to make Russia great again. Throughout, he has enjoyed popular support, above 70%, a level which has barely dipped below ever since. From the time of holding office, President Vladimir has reinstated key Soviet symbols, brought back the Soviet national anthem, and acclaimed the Soviet triumph in the World War Two.

Recalling the past glory of Russia, he wants to make it great again by uplifting its status as an independent player in the world politics. The idea of this can be gauged by his 4<sup>th</sup> inauguration speech *"I understand my responsibility to Motherland. We have gained the dignity of a great nation. The world saw a revival of Russia. We are ready for future challenges, Russia has a great history and a great future ahead."*<sup>32</sup> So here the impression of Russia having regained its dignity as a great nation shows his mind's conception and where he wants to take Russia.

Importantly, reason for his decision to maintain a permanent military presence at the Tartus port can be gauged by his statement *"As head of state, I will do my best to increase Russia's prosperity. Russia will keep on expanding military competence. This "unmatched" military, will make us all proud of becoming again a superpower, which is respected, and feared around the world."*<sup>33</sup> Then as the Tartus port will serve economic interests, it would help Putin achieve

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<sup>32</sup> Ibid.

<sup>33</sup> "Russia inauguration: What did Vladimir Putin say," *Aljazeera*, May 8, 2018, <https://www.aljazeera.com/news/2018/5/8/russia-inauguration-what-did-vladimir-putin-say>

his year 2024 goal as he wants Russia to be among the top five economies globally. This idea he stated in his year 2018 goal.

So based on this, Putin has devised a new foreign policy approach towards the Middle East, whereby maintaining good relations with anti-western states like Syria, and Iran is an utmost priority. On Oct 13, 2019, Putin in an interview with Al-Arabiya TV stated, “*Russia can play a central role in the Middle East because we are having friendly ties with many Arab states like Syria and Iran.*”<sup>34</sup> Henceforth, considering Syria as a core stone of all Russia’s policies in the Middle East, we can say that Vladimir Putin's role conception of making Russia regain its glory is evident.

## **10. Response of the US under the Biden Administration**

America has always tried to maintain its dominance in the region by any means possible, largely because of the oil-rich resources and the geostrategic locations that attract attention and bring it to the top of the foreign policy agenda. In this regard, Russia increasing steps in the region poses a challenge to its wider interest. Therefore, all administrations including Biden came with a strict policy response against Russia’s move into the Middle East.

President Joe Biden showed his intentions of re-engaging in the region, repairing coalitions, and most importantly said to reassert its leadership role in the region. In Feb 2021, the US carried out an airstrike targeting Iran-backed militias in Syria so to give a message to Russia. Moreover, in May 2021 White House called on the Assad regime and its backers to stop the war against its people along with this has extended sanctions imposed on the regime for human rights violations for another year. Thus, it shows how much is the US

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<sup>34</sup> Interview of President Putin with Al-Arabiya News-Transcript,” *Al-Arabiya News*, October 13, 2019, <https://english.alarabiya.net/News/world/2019/10/13/Full-transcript-of-Russian-president-Vladimir-Putin-interview-with-Al-Arabiya>

concerned about Russia grounding boots in the region and Syria against the US interest.

## **11. Conclusion**

Conclusively, having seen all the state-level factors that influence the foreign policy decision-making of Russia towards Syria, the research hypothesis through empirical data proves that this decision of leasing the Syrian Tartus port by Russia is ultimately (once completed) going to shift the balance of power in the Middle Eastern region, and will be a counter force to USA supremacy in the region. Besides, Russia's increased military presence at Tartus naval base, its control over Eastern Mediterranean; through the Syrian Tartus port to the gulf by constructing infrastructural projects will result in Russia becoming a key player in the region and during all this, Syria as always and will continually be at the core stone of Russia Middle Eastern strategy. Moreover, the traditional, as well as the non-traditional maritime security challenges, will keep bulging up and continue to pose a challenge to both the US and Russia while creating grounds for increasing tensions in the region. To conclude, this agreement is ideal for Russia to regain its lost legacy and tighten its foothold in the Middle Eastern region.

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## **Maritime Tourism Potential of Lasbela District (Pakistan): The Course of Sustainability**

Sajid Mehmood Shahzad<sup>a</sup>

### **Abstract**

*For a coastal state, the domain of Maritime Tourism is crucial for enhancing the capacity of maritime affairs. An integrated approach is required to address issues that link marine tourism with the country's inland tourism and policies. With the growing population burst, coastal cities are immensely under pressure as they host more individuals than inland cities. Moreover, coastal cities possess significantly smaller land areas than non-coastal ones. As a coastal state, Pakistan has considerable resources to become an emerging blue economy. This study emphasizes Pakistan's Balochistan province, specifically the area occupied by the Lasbela district. It reveals a domestic sketch of the tourist attractions of Lasbela and provides a way for policymakers to take a deep insight into current needs, future challenges, and opportunities for sustainable development. This study underlines descriptive research and uses a longitudinal design to increase the clarity of the subject.*

**Keywords:** *Maritime, tourism, Pakistan, Balochistan, Lasbela*

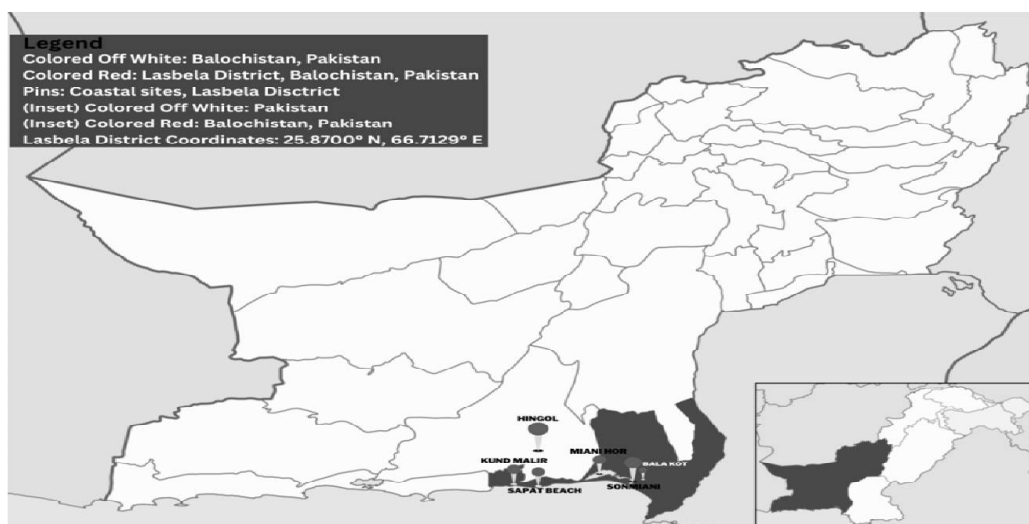
### **1. Introduction**

Pakistan's tourism industry adds only a fraction to the national exchequer, contrary to regional countries. Exploit the true potential of the Pakistan tourism industry requires striving, determination, and

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coherence. Incoherent planning and muddled procedures will only create hurdles and impede the sector in the long term. Randomness in growth and expansion must be replaced by systematic and purpose-built designs which give rise to sustainable development. All development phases and scenarios must carry the characteristics of compatibility to address the demands of the time in the long term. Pakistan was ranked the top tourist destination for 2020<sup>1</sup>, the leading travel destination for 2018<sup>2</sup>, and among the ten most remarkable places in 2019<sup>3</sup>, which shows glimpses of Pakistan's true potential as a tourist destination. However, the element of Pakistan's maritime tourism remained unnoticed owing to negligible facilities and promotion. With proper planning, Pakistan's domestic tourism can become the basis for flourishing inbound tourism.



**Figure 1: Maritime tourist sites of Lasbela District, Balochistan, Pakistan, basic image retrieved from Wikimedia Commons, further edited to insert pin locations**

<sup>1</sup> CN Traveler. 2020. Top Tourists Destinations for 2020. Accessed August 03, 2021. <https://www.cntraveler.com/gallery/top-tourists-destinations-2020>.

<sup>2</sup> Jamal, Sana. British adventurers back to explore Pakistan's mountains. November 30, 2018. <https://gulfnnews.com/world/asia/pakistan/british-adventurers-back-to-explore-pakistans-mountains-1.60605937>

<sup>3</sup> Abel, Ann. The 10 Coolest Places to Go in 2019. December 12, 2018. <https://www.forbes.com/sites/annabel/2018/12/12/the-10-coolest-places-to-go-in-2019/?sh=7e4ce97f1fdc>.

Pakistan's rank was 125<sup>th</sup> among 142 maritime countries, in 2017, in the coastal tourism domain<sup>4</sup>, although the country's overall rank among maritime nations with the longest coastlines is 74<sup>th</sup> <sup>5</sup>. Pakistan requires a strategy based on community development along the coast to explore the maximum potential of marine tourism in Pakistan and harness its total capacity. The more sustainable policy will also include poverty reduction plans through coastal area growth. First, policymakers need to identify what roles maritime tourism can play in lifting the current economy and promoting the country's priced tourist attractions to develop community and environment-friendly policies. Taking onboard all local, national, and regional players would be the key to understanding the implications and consequences of improvement in coastal tourism, which will also increase the likelihood of improving this domain.

All relevant stakeholders must focus on specific maritime tourism strategies, such as marketing, branding, certification, and standardization while improving and restructuring the maritime tourism infrastructure in coastal areas of Pakistan. At the same time, government policies must cooperate with potential projects for marine tourism development. All local communities linked to Pakistan's maritime domain deserve their norms, customs, and domestic needs to be fully protected and honored. More so, development must preserve these virtues at all costs. This study is concerned with policy perspectives, both specific to coastal area projects and generic to Pakistan's maritime tourism. I hope policymakers and other readers find this study unique, extensive, informative, and valuable.

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<sup>4</sup> Siddiqui, Tariq Moin. 2019. Pakistan's potential for maritime tourism. April 23. <https://www.geo.tv/latest/235036-pakistans-potential-for-maritime-tourism>.

<sup>5</sup> Askari, Muhammad Usman, Muhammad Tahir, and Nafisa Shaheen. 2020. "Blue Economy of Pakistan: Challenges and Prospects." *Journal of the Punjab University Historical Society* 33 (2). [http://pu.edu.pk/images/journal/HistoryPStudies/PDF\\_Files/4\\_v33\\_2\\_2020.pdf](http://pu.edu.pk/images/journal/HistoryPStudies/PDF_Files/4_v33_2_2020.pdf).

Tourism shares an 11percent of the global GDP. It employs over two hundred million skilled and semi-skilled individuals while projecting opportunities to over seven hundred million international tourists. In Asia, countries with rigorous development in the tourism sector, such as China, Japan, Malaysia, and even the Philippines and India, are catching more travelers yearly, and this number is constantly growing. For Pakistan's tourism, these countries have set examples to follow. This study encompasses the necessary aspects to gain people's attention towards the promotion of coastal tourism, and the Lasbela district is presented as one potential area that can catch tourists as much as any foreign beach site. However, much sustainable development is required. This study also paves the way for further research and development in the Lasbela district.

In this regard, the work of national and international scholars helped a lot in this study. According to Belcher (2018), food, like other forms of "material culture," carries information about the values of the people who consume it. We may learn more about the significance of food in many cultural contexts, such as ritual, social status, and even basic survival, by looking at the ethnographic and historical symbolism of individual meals. Symbolic information about a society's socioeconomic and ethnic composition, religious beliefs, and interpersonal networks may be encoded in the preparation and consumption of food. When thinking about South Asian culture, it is important to remember that fish have always been a big deal. Research on Sustainable Tourism has been analyzed by Zolfani et al. (2015) to chart its development and highlight its core fields of study, periodicals, papers, and authors. They conducted a comprehensive, methodical review of the existing academic literature to do this. In the last several decades, sustainable tourism has emerged as a significant field of study and professional practice. The work of Zolfani et al. (2015) presented a categorization system and a thorough literature analysis to explain, classify, and analyze their study's findings on sustainable

tourism definitions and applications. UNDP is the United Nations' worldwide development network, working to improve people's lives by promoting reform and linking nations to helpful information and resources. The group has been actively studying local populations, ecosystems, and capabilities in Pakistan's marine area. According to Jamil and Hashmi (2009), Pakistan has considerable difficulties promoting environmental conservation as an element of sustainable development. Loss of biodiversity, declining forest cover, and degraded wetlands exacerbate the consequences of climate change in Pakistan, as they have in many other nations across the globe. Global poverty and irresponsible growth pose the biggest dangers to Pakistan's delicate ecosystems and indigenous peoples. Their work shows how Pakistan's communities have made good, long-lasting changes to their lives by coming up with creative ways to deal with the many problems they face. This analysis also used literature from writers who focused on regions other than Pakistan's coast. Egberts and Hundstad's (2019) work is relevant in this respect. According to the writers, the history of a location is crucial to the tourism industry in coastal areas. Their research examined the significance of history in Surlandet (Norway) and the Dutch Wadden Sea region. Even though their cultural records are linked, how the two places try to attract tourists is very different in how much emphasis they put on cultural and other kinds of heritage.

## **2. Methodology**

A more logical strategy is required to comprehend the means required for this research. So, to back up the stated goals, the current study relies heavily on mixed methods, which include a more sizable number of qualitative elements. This research is primarily descriptive and does so to provide essential background. The author of this article drew on studies that examined the topic from various angles, including geographical, chronological, thematic, sociological, and ideological. The purpose of this analysis, which is based on previous research, is to

learn more about how the government of Pakistan and its supporting institutions have dealt with the marine tourism industry. Because of the worldwide nature of the tourism industry, research from international writers has also been considered. The new longitudinal study spans many points in time and includes time stamps from the past to further interpret its findings. Primary sources, such as official records and reports written by groups with a direct stake in the nautical sphere, are mined for information on these past events and problems. The qualitative studies scholars and social scientists conducted can be primary sources. The use of secondary sources, such as research papers, comments, brief stories, reports, and journalistic op-eds, is also encouraged.

### **3. The Balochistan Coast**

The coastline of Pakistan is over 1000 km. Spectacular locations along the coast are just as good as western beaches. The economic significance of these sites must be developed to deal with the influx of tourists. The researchers must assess these sites on a case-to-case basis, examine their potential as tourist destinations, and harness their fiscal and cultural capacity.

The coastline of Pakistan is divided into two parts, i.e., Makran Coast and Sindh Coast. Despite maintaining remarkable beauty, the Makran coast is not a preferred tourist-stopping place. In contrariety to the Sindh Coast, where most beaches are either urbanized or close to the city center and are comfortably approachable to ripen into preferred tourist destinations, the Makran Coast is remote, natural, and undeveloped. Therefore, the Makran Coast has not gained its rightful share though it carries incredible cultural, economic, and ecological capacity.

**Table 1.** Prominent locations across the Balochistan coast carry extraordinary potential for maritime tourism. Most of these sites are designated Ramsar Wetlands of international importance.

<b>Prominent Coastal Sites of Balochistan</b>		
<i>Gwadar Bay</i>	<i>Gwadar district</i>	
<i>Jiwani</i>	<i>Gwadar district</i>	Wetland
<i>Khor Kalmat Lagoon</i>	<i>Ras Malan-Gwadar Complex</i>	
<i>Astola Island</i>	<i>Ras Malan-Gwadar Complex</i>	
<i>Ormara (Turtle Beaches)</i>	<i>Ras Malan-Gwadar Complex</i>	
<i>Hingol National Park</i>	<i>Lasbela district</i>	Wetland
<i>Kund Malir Beach</i>	<i>Lasbela district</i>	Wetland
<i>Sapat Beach</i>	<i>Lasbela district</i>	
<i>Miani Hor Lagoon</i>	<i>Lasbela district</i>	Wetland
<i>Balakot (ancient archeological coastal village linked to the Harappan civilization)</i>	<i>Lasbela district</i>	

Source 1: Derived from (M. M. Khan 2015)

### **3.1. Hingol National Park**

Located in the Lasbela district on the Makran Coast of Baluchistan, the national park covers 1650 square km. It is less than 200 km from the city center. The national park area was reserved in 1988. Vegetation, an arid climate, and muddy regions can be found in the general area of the park. It can also be referred to as semi-desert in some places. A variety of birds and fish species can be found in the estuary of the Hingol River. The cliffs on the valley's side reflect the river's crystal-clear water in the blue sky.

The valley supports many unique bird species. Crocodiles, Oliver Ridley, Green Marine Turtles, and a variety of fish such as Mahseer and Dolphins can be found in the river. Ibex, Urial, and Chinkara are some of the wild creatures that can be found at the recreation center. Many warm-blooded animals are in the recreation



center, including the Indian Fox, Jungle Cat, Jackals, and Blandford's Urial. They talked about the flying creatures, Houbara Bustard, Dalmatian, Spot-charged pelican, Logger falcon, Red-headed Merlin, Kestrel, Gray Partridge, See-see Partridge, Eagle-owl, and Sind pied woodpecker. There are three types of vultures: The Egyptian vulture, the Cinereous vulture, and the Eurasian Griffon vulture. Stone-Curlew, Indian, and Close-Barred Sand grouse are some Sand grouse varieties.

### ***3.1.1. Hinglaj Mata Mandir***

The Hinglaj Mata Mandir is in the Lasbela district of Balochistan, along the Makran coast, and is also known as the Mandir of Hingol Devi. It is one of the fifty-one "powerful centers" of Shaktism, a sect in Hinduism, where pilgrims come for the Teerth Yatra and stay for four days. It is the biggest Hindu festival in Pakistan. "According to Hindu mythology, Lord Vishnu cut up the dead body of Sati into fifty pieces, which fell to the earth. It is believed that her head fell at Hinglaj, and it has since been the site for pilgrimage"<sup>6</sup>. To visit Mata Mandir, thousands of Hindu pilgrims come to Hingol every year, which exceeds 250,000, especially during the days of the Yatra.

### ***3.1.2. Princess of Hope***

The Princess of Hope resembles a beautiful lady looking into the infinite depths of the sky. The name was given by the famous Hollywood star, and UN goodwill ambassador Angelina Julie, upon her visit to Hingol National Park in 2002. The name reflected the characteristics of a princess and was immediately accepted for the statue. "Earlier, the statue, standing silently near the shores of the

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<sup>6</sup> Khan, Naimat. 2019. Thousands of pilgrims throng Hinglaj for Pakistan's largest Hindu festival. May 2. <https://www.arabnews.pk/node/1491321/pakistan>.

Arabian Sea, would have been hit by strong winds and dust storms, but it would have remained the same without its identity”<sup>7</sup>.

#### 4. Kund Malir

The Kund Malir seashore is close to the Hingol River, and it is “a small town of Baloch fishermen, situated on a hill while the sea flows in its footsteps. Bluewater and waves over the white sand attract the passers-by”<sup>8</sup>. This seashore is 240 km from Karachi, the capital of Sindh, on the Makran Coastal Highway. “The Sindh and Balochistan coast experience almost the same range of temperature and rainfall, having long, warm summer (21° to 39° C) and a short, mild winter (10° to 20° C), and rainfall is low”; less than 250 mm/annum<sup>9</sup>.

Kund Malir seashore is an all-weather tourist attraction and is a quiet and relaxing spot. It is one of the best seashores in the region. There are no tourism offices that try to get people to come. Local visitors can only visit the area on their own. To appreciate travel and enjoy natural excellence, one must take vital things, such as food, a camera, and other items. There may be a food shortage along the way and few places to sell it on the road. Mobile phone signals may also disappear in certain areas, and “due to a lack of electricity, night tourists bring in generators or charged lights”<sup>10</sup>, especially those who come for extended hours or camping. People are drawn to the beauty of nature because they can see what nature has kept for them. This

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<sup>7</sup> Kanwal, Raana. 2020. The Story Of The “Princess Of Hope” Standing In The Desert Of Balochistan! October 22. <http://blogs.dunyanews.tv/27611/>.

<sup>8</sup> Kanwal, Raana. 2019. Kund Malir — for the love of seas, mountains and deserts. August 5. <https://dailytimes.com.pk/443289/kund-malir-for-the-love-of-seas-mountains-and-deserts/>.

<sup>9</sup> Zafar, Fatima Hayat Shaheen, Zarrien Ayub, Aasia Karim, and Muhammad Zahid. 2018. "Seasonal variations in physico-chemical parameters of Buleji and Paradise Point rocky shores at Karachi coast." 5 (2): 154-168. doi:10.30897/ijegeo.

<sup>10</sup> Kanwal, Raana. 2019. Kund Malir — for the love of seas, mountains and deserts. August 5. <https://dailytimes.com.pk/443289/kund-malir-for-the-love-of-seas-mountains-and-deserts/>.

coast is more beautiful and touching because of the desert. It is incredible, with crystal clear water, palm trees, and golden sand. In 2019, Kund Malir beach was included among the top 50 most beautiful Asian beaches, and the “list was prepared by collecting the insider knowledge of over 600 journalists, editors, bloggers, and agencies, who have made travel their life<sup>11</sup>”.

## **5. Sapat Beach**

Sapat beach is in the Lasbela district of Balochistan province, along the Makran Coastal Highway. The water glows like diamonds at night as the moon plays with the waves. At Sapat, water along the beach has bioluminescent properties. There are a few beaches in the world with such a mesmerizing quality of water that glow sparkling blue at night. “Emitted from algae or small crustaceans, bioluminescence is an unforgettable experience you should witness at least once in your life. Bioluminescence is best seen when there is no moon or a cloudy night, so keep this in mind if you are hoping to catch it”<sup>12</sup>. Bioluminescent beaches around the world include Tausan beach (Malaysia), Toyama Bay (Japan), Vaadhoo Island (the Maldives), Krabi beach (Thailand), Tasmania beach (Australia), Sam Mun Tsai beach (Hong Kong), Koh Rong (Cambodia), Mosquito Bay (Puerto Rico), Sapat beach (Pakistan) and Bhit Khori beach (Pakistan). Sapat beach is in Balochistan, and the other, Bhit Khori beach, is in Sindh province.

The golden sand and the beach give a perfect return for time and money. It is a fantastic place for both sand-sun-sea and full-moon-at-a-cool- beach lovers. Many unexplored caves in the cliff system known as Buji Koh give tourists a look at the area’s natural beauty. The shelters offer tourists an opportunity to explore and discover.

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<sup>11</sup> Ibid.

<sup>12</sup> Traveloka. 2018. 8 Bioluminescent Bays And Beaches That’ll Leave You Spellbound. Junes 2. <https://zafigo.com/stories/>.

Tourists are advised to take extra food, gas, and maps with them, as mobile signals here can go down for longer.

## 6. Miani Hor Lagoon

Among the top tourist destinations in the world, the Wetlands of Miani Hor can be found. Miani Hor, located in the Lasbela district of Balochistan province, is “a large shallow sea bay and estuarine system with several low-lying islands and extensive mangrove swamps and intertidal mudflats separated from the adjacent Sonmiani Bay by a broad peninsula of dunes. The Hor receives freshwater input from several seasonal streams rising in the hills of eastern Balochistan to the north and empties into Sonmiani Bay through a broad channel at its eastern end”<sup>13</sup>.



**Figure 2. Miani Hor Lagoon, Balochistan Province (Ramsar Convention Bureau 2001)**

<sup>13</sup> Ramsar Convention Bureau. 2001. "Information Sheet on Ramsar Wetlands: Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties." ramsar.org. April 24. <https://rsis.ramsar.org/RISapp/files/RISrep/PK1068RIS.pdf>.

“Pakistan’s warm waters have long been a refuge for millions of birds that migrate from Siberia to avoid the stinging winter every year”<sup>14</sup>. “The Miani Hor area is important on account of having large concentrations of water birds during the season”<sup>15</sup>. It “has a surface area of 363 km<sup>2</sup> with a single inlet connecting the lagoon with the Arabian Sea”<sup>16</sup>. Water birds love this place, and this Ramsar-protected area of Miani Hor is a significant “staging and wintering area for migratory shorebirds, flamingos, and pelicans. In addition, large flocks of little ringed plovers, sanderlings, curlew sandpipers, Caspian terns, herring gulls, lesser black-backed gulls, and slender-billed gulls”<sup>17</sup>, osprey and turnstone are frequent and common. Besides this, cetaceans (large aquatic mammals) have also been found there. It is home to an Indigenous population of Indo-Pacific humpback dolphins.

“Miani Hor supports an average of 22,700 water birds regularly”<sup>18</sup>, and around 60,000 water birds have been counted (in 2000). The lagoon’s inlet is about 2 km wide. Miani Hor lagoon’s coast is linked to Sonmiani, Damb, and Bheera villages. In 2005, the provincial government of Balochistan initiated modernization and

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<sup>14</sup> Latif, Aamir. 2019. Pakistan: Migratory birds find new destination. August 2. <https://www.aa.com.tr/en/asia-pacific/pakistan-migratory-birds-find-new-destination/1386876>.

<sup>15</sup> Ibid.

<sup>16</sup> Ahmed, Naeem, Dilawar Abdul Razzaq, Naimatullah Sohoo, and Syed Ghayyour Ahmed. 2014. "A Study of the Dynamics of Miani Hor Coastal Lagoon, Pakistan and Failure of Damb Fish Harbour." *International Journal of Science and Technology* 3 (8): 501–510. [https://www.researchgate.net/publication/292138672\\_A\\_Study\\_of\\_the\\_Dynamics\\_of\\_Miani\\_Hor\\_Coastal\\_Lagoon\\_Pakistan\\_and\\_Failure\\_of\\_Damb\\_Fish\\_Harbour](https://www.researchgate.net/publication/292138672_A_Study_of_the_Dynamics_of_Miani_Hor_Coastal_Lagoon_Pakistan_and_Failure_of_Damb_Fish_Harbour).

<sup>17</sup> Ramsar Convention Bureau. 2001. "Information Sheet on Ramsar Wetlands: Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties." [ramsar.org](https://rsis Ramsar.org/RISapp/files/RISrep/PK1068RIS.pdf). April 24. <https://rsis Ramsar.org/RISapp/files/RISrep/PK1068RIS.pdf>.

<sup>18</sup> Khan, Muhammad Moazzam. 2015. Template for Submission of Scientific Information to Describe Areas Meeting Scientific Criteria for Ecologically or Biologically Significant Marine Areas. Marine Fisheries Department, Government of Pakistan. <https://www.cbd.int/doc/meetings/mar/ebsaws-2015-02/other/ebsaws-2015-02-template-pakistan-04-en.pdf>.

development of the vicinity with the construction of fish landing facilities and a fish harbor, but this project was not materialized. As Pakistan needs an uplift regarding maritime trade and tourism, the sanctuary must be prioritized and completed shortly, which will undoubtedly help increase and value the addition of fish and fishery products. The harbor will also be a place of interest for tourists coming to the vicinity. "The site contains one of the most robust and productive stands of mangrove forests"<sup>19</sup>. The mangroves found here are of three types, i.e., *Avicenna marina*, *Rhizophora mucronata*, and *Ceriops tagal*<sup>20</sup>. Winder and Porali rivers drain into the lagoon.

"Although the (local) communities exploit the resources of the Miani Horecause of traditional management practices, the resources are still not over-exploited"<sup>21</sup>. Shrimp, crabs, and small fish are abundant in these shallow waters, especially shrimp is of exceedingly high quality. According to Ramsar Convention Bureau, the vicinity of Miani Hor is owned by the state's revenue department, whereas a small northern portion of the mangrove forest is the property of the provincial government's Forest Department.

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<sup>19</sup> Ramsar Convention Bureau. 2001. "Information Sheet on Ramsar Wetlands: Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties." ramsar.org. April 24. <https://rsis.ramsar.org/RISapp/files/RISrep/PK1068RIS.pdf>.

<sup>20</sup> Ahmed, Naeem, Dilawar Abdul Razzaq, Naimatullah Soho, and Syed Ghayour Ahmed. 2014. "A Study of the Dynamics of Miani Hor Coastal Lagoon, Pakistan and Failure of Damb Fish Harbour." *International Journal of Science and Technology* 3 (8): 501–510. [https://www.researchgate.net/publication/292138672\\_A\\_Study\\_of\\_the\\_Dynamics\\_of\\_Miani\\_Hor\\_Coastal\\_Lagoon\\_Pakistan\\_and\\_Failure\\_of\\_Damb\\_Fish\\_Harbour](https://www.researchgate.net/publication/292138672_A_Study_of_the_Dynamics_of_Miani_Hor_Coastal_Lagoon_Pakistan_and_Failure_of_Damb_Fish_Harbour).

<sup>21</sup> Khan, Muhammad Moazzam. 2015. *Template for Submission of Scientific Information to Describe Areas Meeting Scientific Criteria for Ecologically or Biologically Significant Marine Areas*. Marine Fisheries Department, Government of Pakistan. <https://www.cbd.int/doc/meetings/mar/ebsaws-2015-02/other/ebsaws-2015-02-template-pakistan-04-en.pdf>.

## 7. Balakot

The area around Sonmiani Village has a lot of historical and archaeological significance. This area, locally known as Balakot, is linked to the ancient civilization of Harappa and is one of the four ancient sites along Pakistan's coast. The other three sites include Bhambore, Rato Kot, and Juna Shah Forts<sup>22</sup>. Balakot dates "to the period of South Asia's earliest civilization ...that flourished in the centuries just before and after 2000 B.C."<sup>23</sup>. It "lies in the Las Bela District of Balochistan, about 90 km north-northwest of Karachi ...is approximately 180 x 150m in size and encompasses an area of 2.7 ha"<sup>24</sup>. It was discovered in the 1920s and has since astonished and captured the aesthetics of scientists, travelers, and history lovers. "Its geographic range, from the Arabian Sea to the foothills of the Himalayas, far exceeds that of the coeval Sumero-Babylonian or Egyptian cultures of the Near East"<sup>25</sup>. "Based on the hiatus of approximately 200 years between the Balakot and Harappan Phase occupations, it is thought that this site was 'recolonized' during the Harappan Phase to procure, process, and produce dried fish for inland or perhaps extra-regional trade in the Arabian Gulf area"<sup>26</sup>.

Thousands of years old history and the record of the people that impacted regional trade and politics for centuries can be seen at Balakot. The Miani Hor lagoon, a Ramsar site, is only ten miles away

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<sup>22</sup> MFF Pakistan. 2016. A Handbook on Pakistan's Coastal and Marine Resources. IUCN. [https://www.iucn.org/sites/dev/files/pk\\_coastal\\_resources\\_handbook.pdf](https://www.iucn.org/sites/dev/files/pk_coastal_resources_handbook.pdf).

<sup>23</sup> Harappa. n.d. Balakot . <https://www.harappa.com/category/place/balakot>.

<sup>24</sup> Belcher, William R. 2018. "Fish Symbolism and Fish Remains in Ancient South Asia." In *Walking with the Unicorn: Social Organization and Material Culture in Ancient South Asia*, edited by J. M. Kenoyer, 33–47. Archaeopress Publishing Ltd. <http://www.archaeopress.com>.

<sup>25</sup> Harappa. n.d. Balakot . <https://www.harappa.com/category/place/balakot>.

<sup>26</sup> Belcher, William R. 2018. "Fish Symbolism and Fish Remains in Ancient South Asia." In *Walking with the Unicorn: Social Organization and Material Culture in Ancient South Asia*, edited by J. M. Kenoyer, 33–47. Archaeopress Publishing Ltd. <http://www.archaeopress.com>.

from the Sonmiani Bay area. The area is best for ancient history lovers, beach finders, and lagoon travelers. The footprints of one of the world's most prominent and influential civilizations, the Indus Valley civilization, can be found in Balakot.

## **8. Recommendations**

### ***8.1. Infrastructure Development at Hingol National Park***

International and local tourists can be attracted to Hingol National Park in several ways with the addition of little infrastructure development like road-rail facilities, a conducive secure environment, and modern night stay facilities.

- ***Construction of a Railway Line.*** A railway line within the Hingol National Park is highly recommended. It will carry tourists from place to place and work as a guide for travelers to enjoy the ride. The railway will turn the raw potential of Hingol as a tourist attraction into a well-managed Safari Park.
- ***Protection of Hingol River and Development of River/Water Sport.*** The Hingol River is a lifeline for this national park. Hence, a strategy is required to secure and protect the river and keep it flowing. It is further recommended that a small dam is constructed to stop a substantial portion of water from draining into the sea and being wasted. This way, the biodiversity which relies on this river becomes sustainable. The Hingol River is also a terrific opportunity to promote tourism for Hingol National Park. This river would be perfect for rowing sports competitions, training, and fun rowing if water storage facilities are constructed. Moreover, the crocodiles' sanctuary at the Hingol River can also be demarcated and protected.
- ***Preservation and Development of Nani Mandir.*** Hinglaj Mata Mandar, a sacred place for Hindus, needs to be preserved and



renovated, and the area around it needs to be developed in the pattern of Kartarpur Gurdwara. Hindus spread around the globe, India, and even from within Pakistan need to be brought in an organized and secure manner for their ritual performance at this specific holy site. Before the subject venture, the Sind tourism department needs to create a modern facility for boarding and lodging, making it a unique religious tourist attraction.

- ***Securing the Princess of Hope.*** The area around Princess of Hope needs to be preserved, and existing rock formations need to be converted into an aesthetical panorama by inviting skilled sculptors from all over the world to transform the many similar pieces of rocks into sculptures like Princess of Hope. The area's grandeur will reflect the Terracotta warrior site at Xian, China. Infrastructure specific to tourism needs to be established at the site to handle the influx of local and foreign tourists.
- ***Promotion of Hingol for Filmmaking.*** Hingol National Park is a superb vicinity for filmmaking. An international level of marketing and advertising of the park targeted toward Hollywood, the UK Film Industry, European Cinematographers, and the Iranian Film Industry is required. The government can arrange regular visits from famous film producers, such as James Cameron, Ridley Scott, Walter Hill, etc., as Angelina Jolie visited the park in 2002. These visits will make headlines in entertainment dailies and attract other videographers to see the vicinity, particularly for documentary and science fiction film productions. Moreover, it is the perfect place for National Geographic and the Discovery Channel to produce documentaries that include breathtaking imagery. Also, it will allow the local industry to facilitate the professionals for film/visual production and earn extra bucks.

### ***8.2. Kund Malir can be the Top Tourist Destination***

Kund Malir beach quickly finds its way to the list of top golden beaches of Pakistan and needs the immediate attention of the government's tourism department. This beach can become the best with little effort and modernization. The vicinity around Kund Malir beach is perfect for desert safari. The idea could be an adapted form of the Dubai Desert Safari. Hotels and motels must be constructed to accommodate tourist inflow. Restaurants that sell Balochi food and seafood may also be a value addition. Kund Malir can become a fabulous place for regular watersport activities. It is a well-suited beach for watersport competitions to encourage the media and tourists to visit the site and acclaim the gifted beauty. As this beach is yet clean, natural, and pure, there is a need to adopt prior practices of sanitation and cleanliness to preserve the beauty of the beach and keep it pollution-free as it is now.

### ***8.3. Sapat is a Beach for Newly Married Couples***

Sapat Beach can be designated as the "beach for newly married couples," as it is a fabulous place for spending honeymoon nights. The hill along the beach can be transformed to construct huts and restaurants. Also, measures for its preservation will keep the beauty of the beach intact. It must not meet the same fate as Paradise Point's natural sandstone rock formation, which has lost its famous semi-circular shape. Sapat has the same rock formation that needs the governmental department's attention for preservation. The government must declare Sapat beach and Buji Koh as protected tourist sites to preserve their natural environment from degradation and encroachment.

### ***8.4. The Center for the Promotion of Coastal Tourism***

Miani Hor is an exquisite tourist site where a center for promoting coastal tourism, especially concerning fishery, is strongly

advised. A yearly awareness campaign for the protection and safety of Miani Hor would be vital for preserving its natural capacity.

- ***Shallow Waters ferry service.*** A one-day ferry service is recommended for tourists who want a nice ride from the shallow waters of Miani Hor up to the deep blue Arabian Sea and back.
- ***Monitoring of Indigenous and Migratory Birds.*** Miani Hor supports an average of 23,000 water birds regularly. This data was collected a couple of decades ago. Hence, the establishment of a Bird Monitoring Center is recommended. The data collected from the center would be immediately available online for tourists and researchers through a dedicated portal.
- ***Enforcing Laws on Hunting.*** Although home and visiting birds are not yet endangered, growing hunting activities are becoming a matter of concern locally. So, to stop irregular hunting, a law should be vigorously enforced.
- ***Safety of Indigenous Mammals.*** At Miani Hor, there is an Indigenous population of Indo-Pacific humpback dolphins. This dolphin may be used as a marketing symbol to protect this mammal and promote tourist activities. Figuratively, an aerial view of Miani Hor also resembles a dolphin.
- ***Enhancing Jellyfish Production.*** Jellyfish is also a unique factor for Miani Hor. There is a need to enhance the jellyfish population. It can be done by protecting the natural environment necessary for the growth of jellyfish and establishing facilities for the artificial increase of jellyfish species. Jellyfish here have the potential to become a tourist attraction.

### ***8.5. Promoting Balakot through Conferences***

Annual conferences, scholarly and tourist gatherings, and history and media seminars in Balakot will market this essential ancient place, and ordinary people will know about it. Conference halls for regular and archeological conferences may be constructed here. The step will become a promotional aspect of this ancient archeological site. Moreover, a medium-sized Expo Center may be valuable to the site. It is recommended for the provincial government of Balochistan conduct an annual "Balakot International Conference," not only to attract tourists but also to motivate archaeologists and historians from around the world to come and work on this historically valued civilization that shaped this region of the world.

- ***Establishment of the School of Archeology.*** It is recommended to encourage scholarly work that an institution solely to teach archeology may be close to the vicinity, i.e., Balakot School of Archeology. The annual fund may be allocated to motivate and encourage domestic and international scholars, primarily to support archeological, scholarly, and historical work regarding Balakot and associated areas.
- ***Establishment of a bus terminal for Tourists.*** A tourist dual-decker bus service is strongly recommended at a meager cost for all tourists. It may be launched to travel between Balakot, the Sonmiani bay area, and the lagoon of Miani Hor. Tourists can have fun while visiting and traveling all three sites by bus during a day-long trip.

### ***8.6. Protection from Encroachment***

The areas of maritime significance should be protected by law, and further real estate construction and economic or other activities may not be permitted.

### ***8.7. Building Huts and Hotels***

Along most of Pakistan, there are no huts, which can be constructed with the help of private leisure companies. There are few hotels close to the tourist spots for visitors, especially those who intend to enjoy exquisite nights along Pakistan's charismatic shiny seashores. Domestic and international food chains have this excellent opportunity to come forth. Until now, visitors and tourists are compelled to carry food with them and leave before the food runs out.

### ***8.8. Tax-Free Food Chains***

Restaurants for local and international food should be opened with a public-private partnership. Occasionally, investors face low turnouts of visitors. It is advised that all restaurants, private guest houses, and other provisions may be exempted from tax for the next thirty years. Subsequently, tax exemption will help the investors to facilitate tourists for their necessities at a low price. The district administration must ensure price control in the coastal area.

### ***8.9. Provision of Allied Tourist Facilities***

Modern infrastructure that includes high-speed internet, communication, transport systems, lodging, and food availability is required. It will help tourists stay for longer hours and spend more nights here, generating extra revenue.

### ***8.10. Facilitation of Tourists with Literate Guides***

Secure facilities for tourists for sightseeing must be provided. Moreover, properly registered and literate guides must also be made available. It can be done by encouraging locals to join the guiding profession through courses offered by the tourism department.

### ***8.11. Protection and Assessment of the Ecosystem***

Most areas of Pakistan's coastline contain a diverse ecosystem, natural habitats, and high genetic diversity in the form of animal and bird species. Environmental assessment, control, and regular study of environmental degradation, especially at the Ramsar sites, are highly recommended. The concerning wildlife and tourism departments need an in-depth study of wildlife, biodiversity, and environmental capacity assessment. Non-governmental organizations that contribute to wildlife safety, growth, and security, must also join hands with the government to save precious animal and bird species along Pakistan's coastline.

## **9. Conclusion**

Due to dwindling land resources, coastal countries have focused more on the blue economy. Because of this, Pakistan must investigate aspects of the blue economy, such as marine tourism, to fortify its shaky economy. Economically speaking, nautical tourism is a cornerstone for every nation that has access to the sea. Although conditions are favorable, more infrastructure must be built to accommodate the growing number of visitors. The sea has been people's primary means of entertainment for generations, and the options available seem to expand. For its part, Pakistan will follow these similar guidelines if it hopes to attract domestic and international visitors to its coastal areas. Maritime tourism is a growing sector of the travel industry with the potential to contribute to the development of any country's economy significantly. For a developing nation like Pakistan, this economic sector is crucial. Since Pakistan's founding, marine concerns have been ignored, and sea blindness has prevailed. Pakistan must now recognize the value of this cornerstone of the ocean economy. Economic growth and job creation are only two of the many areas that benefit from the tourist industry's massive global financial outlay. It is a crucial tool for bolstering Pakistan's international

standing by highlighting its nautical heritage and opening the door to the many beautiful destinations dotted around the country's coastline. It's also crucial for promoting a country's "soft power" abroad. Therefore, a country like Pakistan must adopt it as soon as possible to help differentiate between fiction and truth about the world community's perception of the country's image. Once marine tourism in Pakistan picks up steam, visitors from other countries will experience firsthand the country's diverse social, cultural, religious, and ethnic atmosphere, elevating the country's standing among the international community.

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## **State of Microplastics in the Marine Environment, Existing Trends, and Future Perspectives.**

Hassan Shafiq<sup>a</sup>, Mariam Ali<sup>a</sup>, and Hira Amjad<sup>b</sup>

### **1. Plastic pollution**

The first evidence of tiny plastic fragments in the open ocean was found in the 1970s. The global toll of plastic pollution has reached up to 367 million metric tons. Plastic and its debris have accumulated in marine and coastal environments as a result of the persistent and intense release of these pollutants into the environment by anthropogenic activities. There is no question that improper disposal, rising production, and ineffective management of waste pose a threat to many potential impacts on these environments. High quantities of these plastic particles are infiltrating our food chain as more microplastics pollute our marine environment and are consumed by the marine species that thrive in our waters.

### **2. Pakistan's Scenario**

In Pakistan, the coastal residents and the Indus River have discharged about 0.2 million tonnes of plastic debris into the Arabian Sea. One of the most heavily plastic-polluted waterways in the world is the Indus Waterway. In Pakistan, 6,000 industrial producers contribute to the production of 0.6 million tonnes of plastic. Regrettably, plastic products make up 65% of rubbish in Pakistan, and an increase of 15% per year is anticipated. It is challenging to predict

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how much plastic will eventually be poured into the ocean in a developing nation. Owing to Karachi's trash, Pakistan has had severe problems managing its urban waste. In any scenario, by 2050, more plastic is anticipated to be deposited into the ocean, Indus stream is as of now dumping 100000 tons of plastic squander into the Arabian Sea each year.

### **3. Types and characteristics of Plastics**

Despite the fact that defined size of these microparticles has changed from study to study over the past ten years. The term "**microplastic**" refers to fragments with a diameter of less than 5 mm. According to their source, microplastics (MP) can be classified as secondary or primary. Small-sized synthetic polymers are the main type of microplastics. In numerous processes, such as chemical formulations, sandblasting media, product maintenance, and the manufacture of synthetic clothing, they serve as fibrous microplastics. Another primary plastic material that was utilized in cosmetic and healthcare products is microbeads. They are less than 2 millimeters in size and are made of polyethylene (PE), polypropylene (PP), and polystyrene (PS) beads. Primary producers of secondary microplastics include environmental processes like hydrolysis, photodegradation, thermo-oxidative degradation, and biodegradation. Secondary microplastics are the fragmented product of macro or meso plastics.

On the surfaces of water bodies, near-shore beaches, and water bottom sediments, microplastics are unevenly distributed. The significant microplastic pollution of coastal waters is generally attributed to the intensity of anthropogenic activities. Depending on the type of plastic, the microplastics that studies generally report come in a variety of sizes, shapes, colors, and densities.

Microplastics are produced under a variety of environmental conditions, which causes them to have an uneven surface, an irregular

shape, and numerous variations like aged microplastics. Microplastics are frequently associated with crude oil, iron oxides, organic contaminants, and even viruses as polluter substances.

#### **4. Current threats to marine life by microplastics**

Loss of aesthetic appeal, disruption of tourism and marine-related economies (e.g., aquaculture, power generation, fishing, shipping), and casualties of marine life are all well-known effects of large-scale plastic debris. Microplastics can significantly affect marine life because they can float away during shipment and enter the ocean via boats and ships. These tiny plastic particles can travel through the ocean floor and wind up marine life. In contrast, although both macroplastics and microplastics can transport pathogens and release plasticizers or additives, microplastics are even more toxic due to their large surface area-to-volume ratio. It can adsorb and desorb toxic contaminants and quantitatively bioaccumulate more toxic contaminants.

Marine microplastics effects numerous aspects of marine fish and food chain. The toxic effects of the microplastics on fishes and other aquatic organisms may include a reduction in food intake, a delay in growth, oxidative damage, abnormal behavior, reduction of growth and development, an effect on feeding and behavioral ability, toxicity to the reproductive system, toxicity to the immune system and genetic damage.

Because of their size, these tiny pieces of plastic remain in marine ecosystems and are mistaken for food by a wide variety of marine organisms, including corals, phytoplankton, sea urchins, lobsters, and fish. Plankton, the most important building block, are also affected by microplastics. Cholesterol levels in marine organisms change with the consumption of micro and nano plastics.

The threat posed by microplastic to an organism will be determined by the likelihood that it will overlap with or come into contact with MPs in its natural environment. It is anticipated that there will be the greatest overlap between microplastics and marine life in the shelf sea zones as there are high levels of biological production and significant concentrations of microplastics due to its close proximity to terrestrial pollution sources.

Many studies have been done in past five years on the effects of MPs on crustaceans like daphnia magna, artemia salina etc. these studies showed that MPs intake resulted in bioaccumulation of microplastics in gut in crustaceans. There have been reports of detrimental effects on feeding behavior, reproduction, growth, development, and lifespan. Concentration, shape, size, and age are a few variables that have been observed to affect the bioavailability of microplastics to zooplankton.

Various organisms in the aquatic environment would not only ingest microplastics, either intentionally or unintentionally but they would also be transferred indirectly from low to high trophic levels via aquatic food chains and ultimately end up in humans. Although seafood is recognized as a source of microplastics contamination in the human diet, a number of researches confirm the presence of microplastics in seafood. Consumption of this contaminated food by humans causes the bioaccumulation of MPs in their bodies and poses different health effects.

## **5. Future Perspectives**

The stability of microplastics, when combined with contaminants such as heavy metals shall be considered for future studies. This data will also help to investigate the combined effects of microplastics with other contaminants on the organisms especially

zooplankton as there is very less data available on combined exposure till now.

Further studies can also be done to examine whether the adsorbed chemicals or heavy metal on MPs are desorbed into organisms/s body or they remain adsorbed. The transformation of microplastics in the presence of different contaminants shall also be kept under consideration as it can lead to change in toxicity

More research should be carried out on the accumulation of microplastics and the relation of their toxicity with the physical characteristics of marine organisms. Moreover, the transfer of microplastics in the food chain and ultimately to humans shall be studied in detail.

The removal of microplastics is one of the leading issues nowadays. As there is a lot of data that confirms the microplastics and their negative impacts on the environment but there is very scarce data on the removal of microplastics, therefore more research should be carried out in this domain.

Furthermore, future initiatives to limit plastic pollution should concentrate on ending it at the source in order to decrease the number of microplastics entering the marine environment. This could involve activities like making people knowledgeable about the negative effects of plastic pollution, encouraging the use of reusable and biodegradable materials, and putting laws and policies in place to cut down on plastic waste and encourage recycling. Research is also required to create more efficient management strategies to lessen the effects of microplastics on the marine environment and to better understand the concerns of microplastics on marine life.

## PROTECTING MANGROVES

By

Capt. Anwar Shah<sup>a</sup>

Whilst on a recent trip to the Port Qasim channel, I happened to recall that according to the data gathered by the Government of Pakistan, between 1999-2021, the vulnerable mangrove area along Pakistan's 1,050-kilometer coastline had increased from 46,000 hectares (over a 113,000 acres) to over 200,000 hectares (over 494,000 acres). The term mangrove is said to have come to English from the Portuguese *mangue* or the Spanish *mangle*.

The International Day for the Conservation of the Mangrove Ecosystem is celebrated on 26<sup>th</sup> July annually and the World Wide Fund for Nature (WWF) Pakistan has observed that Pakistan is the only country where mangrove cover has increased dramatically over the last two decades. This is indeed one of many success stories of Pakistan that deserve to be highlighted.

Approximately 110 species of mangroves are found around the world. They occur worldwide in the tropics, subtropics, and even some temperate coastal areas, mainly between latitudes 30°N and 30°S, with the greatest mangrove area within 5° of the equator. The preferred environment for mangroves includes saline/brackish water usually near the edge of the river or swamp water and low-oxygen soil. Only four species of mangroves found in Pakistan, of which 90% of all the mangroves are composed of the *Avicennia marina* species. These four types are:

1. *Avicennia marina* – Grey Mangrove – White Mangrove
2. *Rhizophora macronata* – Loot Roop Mangrove – Red Mangrove

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3. *Ceriops tagal* – Spurred Mangrove
4. *Aegiceras corniculatum* – Black Mangrove

Mangroves are significantly important for marine ecosystems and are considered the first line of defense against cyclones, strong surges, tsunamis, and other natural calamities.

Over the past several decades, the coastal area of Sindh, particularly the port city of Karachi, has been reeling from a relentless process of morphological changes mainly due to anthropogenic activities including industrial pollution, soil erosion, deforestation, rapid industrialization, urbanization, and land degradation in addition to natural processes.

God has gifted us mangroves at Port Qasim and I can somewhat benchmark what I saw at the Sundarbans forest at Mangla Bangladesh, where some local inhabitant animals were spotted whereas we mostly have sea birds inhabiting our mangroves. Port Qasim lies in or Indus river delta, thus brackish water helps in mangrove growth and sustainability. Pakistan did make a record of planting mangroves near Ketibandar but their growth has been very slow as the area lacks brackish water due to low discharge at the Indus Delta.

I admire an environmentalist lady journalist on Geo TV and architect cum environmentalist who had documented how to protect and recognize mangroves by airing concerns on electronic media. There is also a sizable mangrove forest at Bundal Island and some on way to Sandspit from Keamari.

Port Qasim is blessed by God to have the best mangrove forest in Pakistan. When we speak of the Blue Economy, we may also consider building resorts for tourists at Port Qasim Mangrove Forest in a controlled manner so as not to harm the environment. Yet, also make

the area accessible and available to the public who can be educated about the importance of mangroves. Thus making them stakeholders in the efforts towards protecting these forests.

Port Qasim gets silting to keep water brackish thus it is imperative to dredge about 5 million cubic meters annually to maintain the depth of the channel at 12.5 meters. The soil excavated from such dredging could be used to rejuvenate those areas of the forest where erosion has occurred the most. It is well known that Khalifa Point was the most suitable site for a second port but for reasons best known to the government of the time, Port Qasim was selected as Pakistan's second port. This was a decision that is now proven to have been a bad one.

I recently attended a meeting of the Senate Standing Committee on Maritime Affairs where the topic of discussion was mainly business related. I would suggest that the committees and forums at national level also regularly take up matters of environmental significance that have an impact on our environmental integrity. During the said meeting of the Senate Standing Committee on Maritime Affairs, I suggested that PNSC may embark upon feeder service by acquiring four to five hundred TEU ships that may call at Port Qasim and also cabotage to Karachi, thus reducing road and terminal congestion and reducing emissions causing pollution and availing logistic benefit cutting the cost.

On the business side of things, it may not be denied that Pakistan's logistic cost is the highest in the region while we continue to fail to use available inland waterways and sea mode being the cheapest mode of transportation. This cost is not limited to monetary costs but also includes environmental costs. We use rickety old trucks which are road diggers and cause pollution. This was conveyed to the Senate Standing Committee and the Chairperson was very gracious to listen to the recommendation.



It is hoped that in addition to planting more mangroves, we may also consider other means by which to contribute towards arresting the perineal degradation of our environment. If not done so, then we remain guilty of leaving Pakistan susceptible to the adverse effects of global warming. I strongly recommend that Pakistan increase the use of cargo transportation by sea instead of by land wherever possible. PNSC Feeder container services will give a kickstart to learning box trade by PNSC which is vital to our economy.



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