



Perspectives on India's Coastal Security

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Abstract- Coastal Security includes security of the seaside water zone against any danger or challenge that begins from the ocean. Because of India's geo-strategic location and maritime character, secure coastal strips become domains of much importance for the overall safety and security of the mainland. In this perspective, the present paper- which is mainly based on auxiliary wellsprings of information- has made an attempt to look into the concept, importance and evolutionary aspects of coastal security in India. In addition to it, it has also tried to make an assessment of the reasons of India's vulnerability to the maritime dangers as well as the loopholes and strategies to overcome those gaps prevalent in the coastal security architecture in India.

Keywords: Coasts, Security, Vulnerability, Loopholes, Strategies

I. INTRODUCTION

India's typical maritime character and crucial geo-strategic location are twin factors that have characterized her development as a nation and advancement as a cosmopolitan civilization. However, this consistent nature of the oceanic space likewise empowers prepared progression of dangers and difficulties. As of late, the ascent in non-conventional dangers, particularly maritime intrusion (which incorporates the notorious 26/11 terrorist attack), has required expanded spotlight on seaside and seaward security. Indeed, even before the 26/11, security weaknesses used to torment India from oceanic spaces.

Consequently, the seaside and seaward security contraption has advanced to changes in the nature and sort of dangers, with expanded association of the Indian Navy and Coast Guard (CG) on the side of the state police and security organizations. Ongoing endeavors toward this path encompass changes in the Coast Guard Act, 1978 to give more teeth to CG and the proposition to set up a Maritime Theater Command (MTC) by 2022 to upgrade coordination between the defense forces. Nonetheless, regardless of some achievement in key regions, the littoral apparatus stays filled with escape clauses and relentless blemishes in the current architecture that take steps to unwind the gains made in recent years.

In this specific situation, it is basic to comprehend the importance of beach front security. For what reason is waterfront security thought about fundamental to India's inward security? Why Indian Coasts stay defenseless against seaborne dangers? How India's Coastal security design has advanced throughout the long term? What provisos actually exist in India's Coastal Security design and how India could fill these loopholes to adequately go up against the diverse difficulties it faces in the complex maritime environment of the 21st century?

II. AIMS AND OBJECTIVES

The present paper is based on secondary sources of data. The main aims and objectives of this paper are as:

1. To comprehend the concept of coastal security and realize its importance for India
2. To assess the causes of vulnerability of Indian coasts to seaborne threats and dangers
3. To look into the evolution of India's coastal security architecture
4. To access the existing loopholes as well as the strategies to fill these gaps in coastal security mechanism of India

III. DISCUSSION

A. What do we mean by Coastal security?

Coastal Security is perceived as a subset of sea security. It includes the security of the seaside water zone against any danger or challenge that begins from the ocean. Coastal water zone alludes to the water region seawards of the Indian coast up to the furthest reaches of India's coterminous zone, or the International Maritime Boundary Line (IMBL) whichever is less. Seaside security has a wide implication incorporating maritime border management, island security, support of harmony, solidness and great order in waterfront

territories and requirement of laws in that, security of ports, beach front establishments and different designs including Vital Areas and Vital Points (VAs/VPs) and vessels and staff working in beach front zones. A powerful association for seaside security likewise encourages coastal defense. The beach front security is guaranteed through composed endeavors among various partners at the Center and States. Every one of these partners are associated with giving complete protection from both conventional and non-customary dangers.



Figure 1: Exclusive Economic Zone

B. Why coastal security is regarded as Indispensable for India?

India's advancement is firmly connected to maritime environment and thus it is basic to guarantee security and ocean administration of seaside zones. Secure coasts assume a critical part in the accompanying perspectives as:

Public safety: The intricate security courses of action ashore constrained the psychological oppressors and illicit transients to look towards the ocean where safety efforts are similarly careless, empowering them to 'move, stow away and strike' without any difficulty. Stopping this proviso is basic to empower a comprehensive public safety design.

Securing vital resources: the Indian coasts additionally have various vital establishments like maritime bases, nuclear energy stations, satellite and rocket dispatching ranges and ports. These essential establishments are crucial for the security, advancement and success of the nation, making them high worth focuses for the infiltrators.

Financial turn of events: Coastal area has a significant impact in India's monetary turn of events. Security of the locale will have an immediate bearing on following areas:

Trade: India's ocean reliance for oil is about 93% which incorporates India's seaward oil creation and oil exports. Further, 95% of India's exchange by volume and 68% of trade by value comes by means of the Indian Ocean.

Fish Production: India is the second biggest fish producer on the planet with an absolute production of 13.7 million metric tons in 2018-19 of which 35% was from the oceanic area. In similar period India had exported Rs 46,589.37 crore worth of marine items. The locale additionally serves as a significant wellspring of livelihood for the fishing community. The enormous scope of fish production likewise assumes a critical role in guaranteeing food and nutritional security.

Vital minerals: India has probably the largest and most abundant shoreline placers. The sea shore and sand dunes in India contain heavy minerals (HMs) like ilmenite, rutile, garnet, zircon, monazite and sillimanite.

Geostrategic interests: The Indian Ocean Region (IOR) has become a vital zone of worldwide strategic rivalry. Security and strength of India's coast is in this manner fundamental for:

Countering Chinese Influence: China is overwhelmingly seeking after the 'Pearl necklace principle for example monetary or potentially military commitment with nations in the Indian Ocean littorals with an essential viewpoint of enclosing the Indian landmass. It has additionally earned extensive impact among littoral nations in the IOR by utilizing its veto power in the UN Security Council (UNSC).

India's yearning of turning into a 'net security supplier' in the IOR: India is viewed as a lynchpin for the Indo-Pacific strategy by the UK, US, Australia, Japan, France among others to counter China. We could fence on their help just in the event that we upgrade our own capacity by fortifying our seaside as well as sea security.

India's Humanitarian and Disaster Relief Operations (HADAR): It has assisted India with situating itself as the specialist on call for helpful emergencies in the IOR for quite a long time. For instance in 2014, when Maldives principle water treatment plant got damaged, India was the main nation to supply new water to it. Improving beach front security would furnish India with assets (like airplane, helicopters, and backing vessels and so forth) to manage catastrophic events and related clashes emerging in future in a more productive and exhaustive way.

Managing environment incited emergencies: Coastal zones are now under danger from ecological debasement through ballasting and presentation of obtrusive species, mechanical contamination, groundwater overdraft, sand mining, development exercises and waterway contribution of dirtied dregs. Simultaneously, sinking of islands because of rising sea level in Indian Ocean may bring about the ascent of environmental refuges. Supportable administration of coastal assets, decreasing their illicit abuse, beach front observation and gathering intelligence may prove effective in managing these issues.

C. Why Indian Coasts are susceptible to seaborne dangers?

Strategic Location: India is encircled by water on three sides and has island arcs. It has to safeguard 7516.6 km long coastline. The actual closeness of Indian coasts to politically unstable (Gulf nations) and financially backward (Eastern African Countries) makes it powerless against sea warfare, sneaking and trafficking. On the other hand the eastern Indian seaboard has progressively seen a consistent expansion in unlawful movement from Bangladesh. Different 'push and pull' factors like neediness, segment pressure, strict oppression in Bangladesh and Myanmar, and the guarantee of better open doors in India have added to this movement.

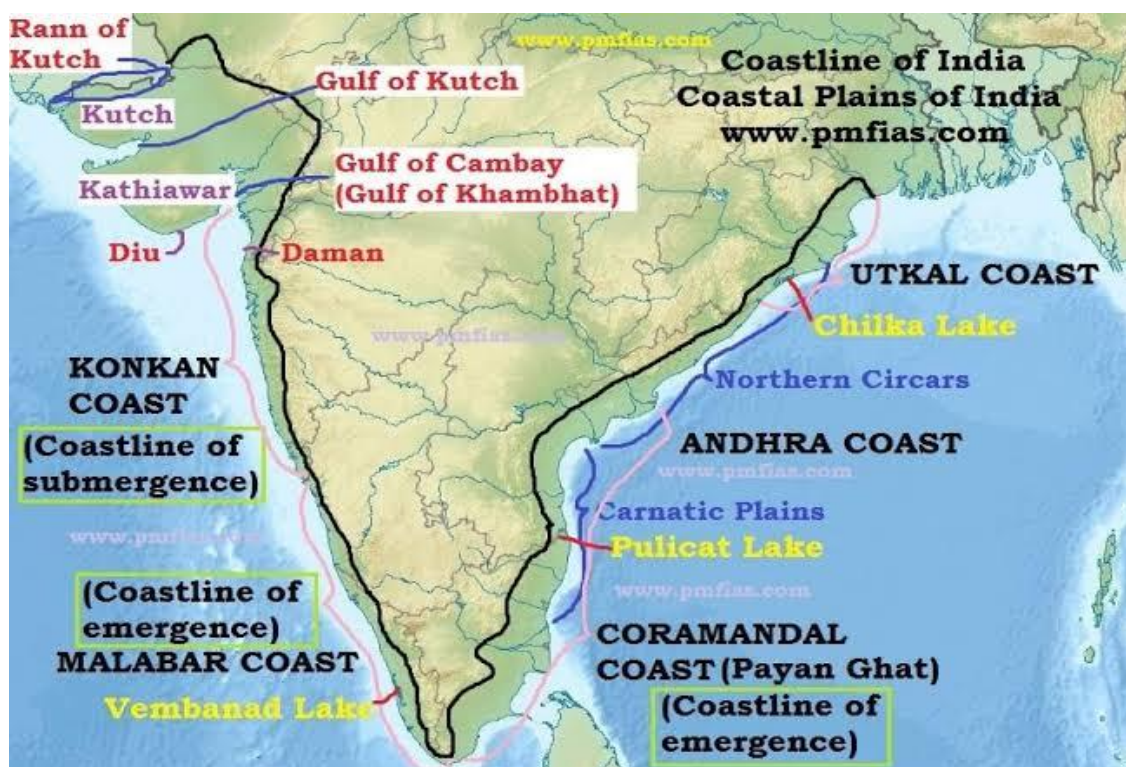


Figure 2: Map of Indian Peninsula showing Coastal Areas

Troublesome Topography: India's coasts are described by an assorted range of undulating features like creeks, back waters, streams, estuaries, mudflats, slopes and so forth. The water bodies and stream channels run deep inside the coasts, making the shoreline exceptionally indented. Because of their distance these seaside ways to deal with the territory frequently stay unguarded, or inadequately protected, consequently giving ideal spots to the secret arrivals of arms, explosives and other stash by smugglers just as penetration by fear mongers. For example, in Gujarat, a channel nicknamed the Harami-Nala, which starts from India, enters Pakistan, and reenters India, has become a favored course for infiltrators and dealers.

Sea Traffic: The Indian coast has been seeing a consistent ascent in the reach and number of vessels (because of ascend in exchange by means of ocean course) that ply in its beach front waters. Further, IOR is additionally the busiest oceanic shipping lane, with 11,000 to 12,000 boats present in it at some random time. Checking these vessels and managing their development offer a serious test for the security agencies.

Disputed Maritime Boundary: Unsettled sea limits act as genuine security challenges as well as obstruct seaward turn of events. India's sea limits with Pakistan and Bangladesh are not delineated properly in light of overlapping claims.

Wandering of Fishermen past the International Maritime Boundary Line (IMBL): Many a period anglers cross the IMBL to investigate new fishing grounds and enter the regional water of Pakistan, Sri Lanka. The captures of enormous Indian anglers as well as the seizure of their fishing vessels/boats has, notwithstanding, raised security concerns. Numerous security investigators dread that Pakistan could misuse the space information on the bosses of these boats by separating data about different landing points in India or the seized fishing vessel could be utilized to sneak in intruders.

D. How India's Coastal security architecture has evolved throughout the long term?

Customs Marine Organization (CMO) 1974: Created on the suggestion of Nag Chaudhari Committee, it was commanded to direct on enemy sneaking activities. Notwithstanding, since the CMO was ad-hoc in nature, very little consideration was paid to fortifying this association. In 1982, it was merged with the ICG to evade the duplication of endeavors.

Indian Coast Guard (ICG) 1977: With the authorization of the Indian Coast Guard Act, 1978, the association officially appeared as the fourth equipped power of India. Its orders incorporate upsetting pirating exercises, shielding and securing artificial islands, seaward terminals, establishments, and different gadgets in the oceanic zone, ensuring and helping anglers in trouble and safeguarding and strengthening maritime environment, including controlling marine contamination.

Seaside Security Scheme (CSS) 2005: Instituted initially in 2005 and executed by the Department of Border Management, Ministry of Home Affairs. The point of the CSS was to reinforce foundation for watching and the observation of the waterfront regions, especially the shallow zones near the coast. The marine police force was needed to work intimately with the ICG under the 'hub and spoke' idea. The plan gives 3 layered security framework which incorporates organization of Marine police (of the particular coastal state) from the shore up to 12 nautical miles, ICG from 12nm to 200nm and Indian Navy past 200 nm.

Waterfront Security Architecture Post 26/11: The 26/11 assault was the primary occasion that drove the arrangement creators to consider mainstreaming the seaside angles in India's security architecture. From that point forward, the actual resources were developed and human asset ability was likewise upgraded to fortify the seaside security. These endeavors include: Strengthening the Multilayered Surveillance System: Before 2008, the current complex observation framework under the CSS was working just along the Gujarat and Maharashtra coasts. Post the 26/11 Mumbai assaults, significant changes occurred as:

Indian Navy (IN): It was designed as the authority liable for in-general oceanic security which incorporates beach front as well as seaward security. It was likewise made answerable for the seaside defense of the country helped by the ICG, the marine police, and other central and state organizations.

ICG: It was allocated the extra duty regarding waterfront security in the territorial waters, including regions to be watched by the marine police. The Director General rank officer has been assigned the Commander of Coastal Guard, and is liable for the general coordination among central and state offices taking all things together in matters related to waterfront security.

Border Security Force (BSF): The water wing of the BSF has been deployed alongside eight skimming line stations for the security and observation of the rivers in Gujarat and the Sunderbans. Central Industrial Security Force (CISF): It was endowed with the obligation of the actual security of India's significant ports. Vessel Traffic Management Systems are likewise being installed taking all things together in the major and a couple of minor ports to screen and direct oceanic traffic just as to recognize conceivably dangerous vessels.

Sagar Suraksha Dal: A casual layer of observation, including the anglers local community developed after the 1993 Mumbai sequential bomb blasts- has likewise been formalized and actuated on the whole seaside states. Fishermen groups, made out of trained volunteers, monitor the oceans and waterfront waters, share data about any dubious exercises or vessels adrift with security and law authorization offices, and furthermore partake in beach front security practices directed by the ICG.

National Maritime Domain Awareness (NMDA) Project: It incorporates a coordinated insight matrix to distinguish and handle dangers exuding from the ocean continuously. Post 26/11, it has been fortified by building up NC3I organization and IMAC that produce a typical operational image of exercises adrift through a regulated component.

IMAC in Gurugram, Haryana is the nodal focus of the NC3I Network. IMAC is the single point place connecting all the waterfront radar chains to produce a consistent real time image of the almost 7,500-km coast line. It is jointly overseen by the IN and ICG.

Information Fusion Center for the Indian Ocean Region (IFC-IOR): It was initiated in 2018 inside the premises of IMAC in Gurugram, and has begun working as a data sharing center of sea information and "prompting episode reactions" to sea security circumstances through a collective methodology.

Maritime Theater Command (MTC): MTC structure is proposed to incorporate the resources of Indian Navy, Army, IAF and Coast Guard to accomplish the objectives point by point out in the Joint Forces Doctrine (JFD), 2017. It will empower the security forces to frame a 'Net-driven' Warfare model in order to acquire a benefit over the foe utilizing an adaptable power design to coordinate with the changed geographic spaces. The JFD, 2017 fills in as a foundation archive for use of military force in a synergistic way prompting upgraded effectiveness, ideal use of assets and monetary reserve funds.

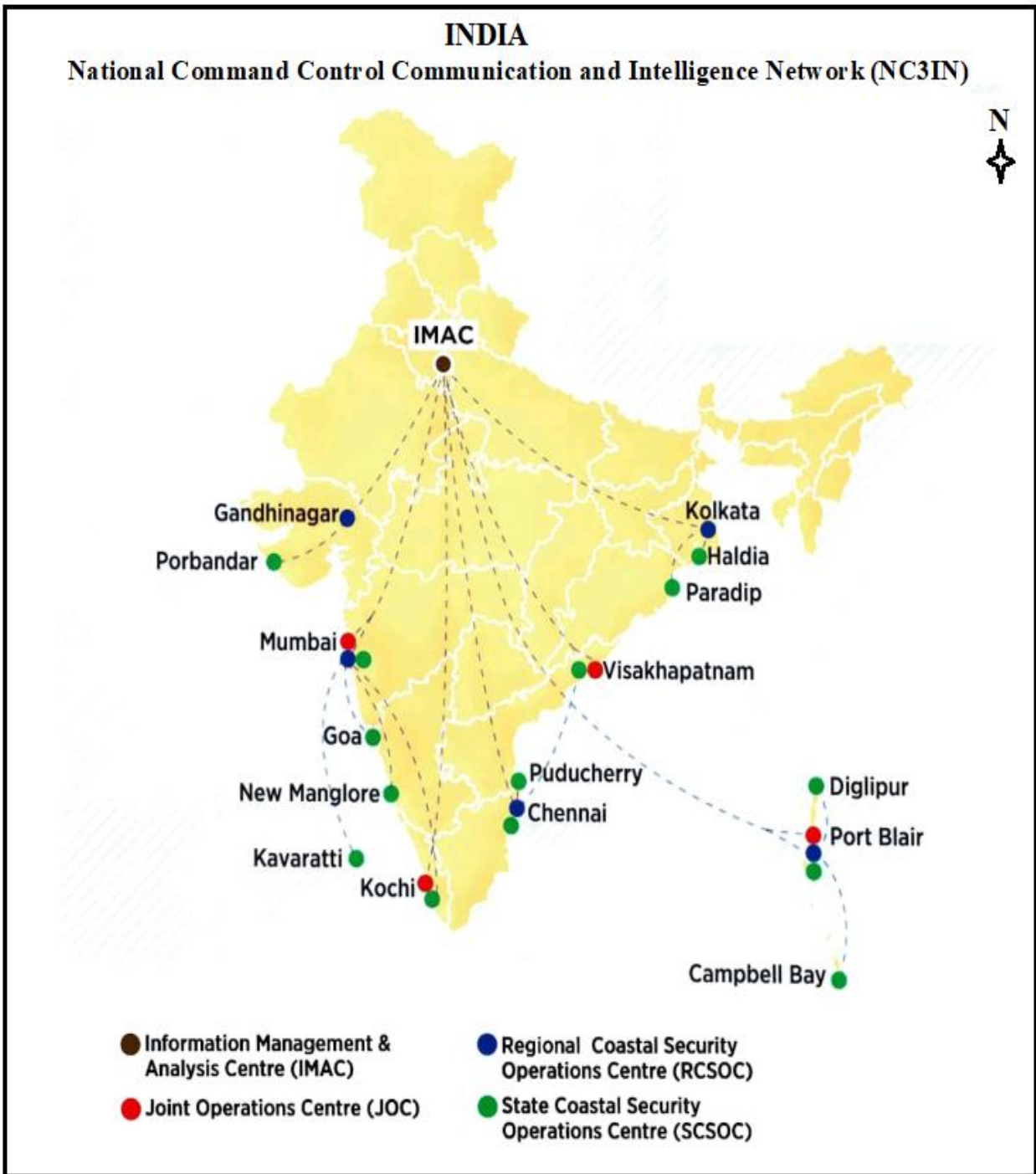


Figure 3: National Command Control Communication and Intelligence Network (NC3IN)

Inter-Agency Maritime Activities: Such activities help fabricate the inter service synergy, interoperability and jointness. These include 'Sagar Kavach' which is directed by Indian Navy and ICG alongside different partners associated with Coastal Security, 'Ocean Vigil' which is a biennial Pan-India seaside protection practice coordinated by the Indian Navy and TROPEX (Theater-level Readiness Operational Exercise) is also directed by the Indian Navy to test the expert abilities of administrators and the doctrinal discernment of commanders of the Indian Navy.

Expanded participation with littoral Nations: India associates all the more effectively with littoral conditions of the Indian Ocean Region and utilizes sea security commitment as a foundation of her regional international strategy activities. Indian Navy additionally directs multilateral activities like MILAN (initially started in 1995 and in 2020 around 40 nations were welcome to partake) and CORPAT (Coordinated Patrol) with Indonesia, Thailand and Bangladesh.

E. What loopholes still exist in India's Coastal Security Architecture?

Over 10 years after the 26/11 Mumbai assault, waterfront readiness is superior to prior, however the general picture actually stays not exactly palatable. Different reasons that represent this are:

Lackadaisical approach of the State governments: Under the Coastal Security Scheme, the seaside States and Union Territories are needed to set up beach front police headquarters, raise marine police and acquire boats to watch the shallow waterfront waters. Notwithstanding, moderate speed of development of seaside police headquarters and restricted faculty distribution by the majority of the states has come about in imperfect turn of events and usage of the beach front security engineering. For instance, as per a CAG report of 2015, labor deficiency end up being a significant block in working of the 18 marine police headquarters on Odisha's 480 km-long coastline.

Variety of organizations: There are around 15 organizations associated with different aspects of waterfront security, this results in poor coordination among these offices prompting issues like inadequate usage of assets, duplication of endeavors and inconsistent execution of seaside security activities. The National Committee for Strengthening Maritime and Coastal Security (NCSMCS), which as of now organizes joint exercises, actually stays as a temporary arrangement. Variety of offices likewise brings about uncertainty of jurisdictions of different bodies. For example, in the event of the security of oil framework. Legitimately, the ICG is ordered to ensure the artificial islands and seaward terminals, yet the assignment of securing Single Point Moorings (SPMs) (where the unrefined petroleum is imported), 15 nautical miles from the shoreline, should be performed by the CISF. CISF then again asserts that they need required resources and prepared staff to perform their function.

Lopsided spotlight on infiltrations: Indian security organizations in general dominantly center around the illegal intimidation danger. This has set less accentuation on non-customary difficulties, for example, illegal exploitation, IUU fishing, environment instigated emergencies, danger of piracy and oceanic contamination.

Absence of professionalism in police forces: The police forces experience the ill effects of political impedance and in this way need demonstrable skill, which reflects as far as helpless public security needs. Subsequently, waterfront security can never figure extremely high on police needs and demonstrates a frail connection in the public safety network.

Marine Police remains the most vulnerable connection in India's waterfront security framework: Marine police obligations require exceptional abilities, for example, nautical and ocean battle, capacity to deal with boats, and so forth. By and by, the marine police power is monitored by staff derived from the focal pool of the state police. Along these lines, the power reliably misses the mark on human asset abilities. Likewise, fishermen pool could give reasonable possibility to the marine police profile yet no coordinated exertion has been made by the states to select them. Essentially, a lack of specialized staff for running and keeping up the boats is another issue which the marine police need to wrestle with.

Role of Technology: The most recent review showed uniquely around 1,000 vessels were really outfitted with the facilities like Coastal radar frameworks, sensors and electronic surveillance systems. Just boats more than 20 m long are qualified for the Automatic Identification Systems (AIS). AIS are intended to be prepared to do consequently communicating all essential information like position, speed, course, load and Maritime Mobile Service Identity (MMSI) to different boats and waterfront specialists.

Port security: Port security has arisen as quite possibly the most dismissed aspects in littoral security scenario. A new IB review noticed that by far most of minor ports in India have practically no security cover, and numerous actions taken to safeguard the coastline have been ineffective.

F. How could India fill the gaps in its Coastal Security mechanism?

Coastal Security Bill: Statutory obligations of government offices, Port trusts, state maritime boards, minor ports and private terminal administrators and other partners should be plainly illustrated, as likewise least principles of port security requiring legal consistence. The proposed bill will give a complete administrative system to the beach front security covering both the shipping and port areas. The Bill accommodates making of a National Maritime Authority (NMA) which would conceivably address the coordination and jurisdiction issues because of multiplicity of organizations working in the waterfront locale.

Reinforce the surveillance framework: For better space mindfulness, India needs better observation inclusion. As of now, specialists are centered around assisting the establishment of beach front radar chains

and AIS stations and guaranteeing wide admittance to data. These endeavors should be supplemented with obligatory fitment of AIS on power-driven vessels with a length more than 10m.

Strengthen ICG: This should be done by giving advanced surveillance and security devices and imperative legitimate powers. Likewise, ICG could be given an effective reinforcement by the Central Armed Police Forces (CAPF) sent in the seaside territories, like the CISF and BSF. Ambiguities from the Coast Guard Act, 1978 should be eliminated. For instance, the ICG could be treated as a border guarding force and brought under the Ministry of Home Affairs (MHA). This will guarantee administrative union and income streams for it to develop as an autonomous entity.

Central Marine Police Force (CMPF): It could be made as an option in contrast to the current State Marine Police. CMPF would just be responsible for Coastal Security for regional water and accordingly could be given unique training or recruited for explicit reason. The formation of CMPF would likewise soothe the police forces of an extra responsibility for seaside security.

Promulgate the National Commercial sea security strategy report: This record should express its strategic vision for oceanic security. This could likewise be supplemented with a public methodology for Commercial Maritime Security for proficient, composed, and successful activity for insurance of the port and delivery foundation.

Coastal Community Participation: Effective inclusion of the fishing community and the bigger waterfront local area can possibly essentially supplement endeavors of the security organizations and to compliment as the 'eyes and ears' of safety organizations.

Build up Coastal Regulation Zone (CRZ) guidelines: There is a dread among naturalists that CRZ laws are being weakened for the travel industry, shrimp cultivating and industry lobby group, without mulling over the perspectives on specialists or people in general. This ought to be addressed to by directing public discussion.

Recalibrate Defense expenditure: Due to a pitiful allotment of 15% of India's military budget, the Indian Navy has restricted limit and assets to strengthen its security endeavors in the IOR. Likewise, salaries and pensions represent around 59% of India's defense budget (in comparison, US and UK spend just 38% and 30.6% respectively). The heavy outgo on staff costs brings about India having the most reduced rate spent on equipment modernization.

Learning from International Practices: Countries like Israel, Australia and USA have better coastal security mechanism than our country. For example, Israel has assigned the responsibility of shoreline defense to its navy and has raised a virtual barrier along its maritime boundaries by implanting sensors in the buoys to delineate its borders. Australia's maritime tactics includes placing Australian Custom and Border Protection Services (ACBPS) officers overseas to communicate with offshore associates as well as the conduct of pre-arrival screening of travelers for identifying high risk shipments and people. Similarly, USA receives advance notification for containers arriving in US ports for the better evaluation of intruders, risk ships and passengers. India should learn from these nations.

IV. CONCLUSION

Coastal security assumes a significant part in the economic development and prosperity of the country and is likewise significant for meeting our geostrategic objectives. Survey of beach front security mechanism in India is a persistent process. Government has started a few measures to fortify Coastal Security from improving surveillance system to expanding worldwide collaboration. Nonetheless, the difficulties to India's waterfront security are plenty. While illegal infiltration has demonstrated the strongest danger throughout the most recent couple of years, an entire scope of issues going from migration to smuggling have tormented Indian coasts. The tussle between the states and the center alongside nonappearance of an incorporated way to deal with seaside security has aggravated the circumstance further. Therefore, it is of utmost significance that restorative measures are direly executed to deliver these insufficiencies and to understand the capability of the maritime sector.

WORKS CITED

1. Bateman, Sam, and Anthony, Bergin. "New Challenges for Maritime Security in the Indian Ocean-An Australian Perspective." *Journal of the Indian Ocean Region*, vol. 7, no.2, 2011, pp. 117-125
2. "Coastal Security Scheme." June 2019, www.mha.gov.in/sites/default/files/BM-II-Coastal-security-18062019.pdf
3. Das, Himadri. "Coastal Security in India: Twelve years after 26/11." *National Maritime Foundation*, 1 Dec. 2020, www.maritimeindia.org/coastal-security-in-india-twelve-years-after-26-11/
4. Das, Pushpita. "Coastal Security Arrangement: A Case Study of Gujarat and Maharashtra Coasts." *Institute of Defense Studies and Analyses*, New Delhi, Nov. 2009, idsa.in/system/files/OP_coastalSecurityArrangement.pdf
5. Das, Pushpita. *Coastal Security: The Indian Experience*. Institute of Defense Studies and Analyses, Sept. 2013, www.researchgate.net/publication/275027984
6. "Ensuring Secure Seas: Indian Maritime Security Strategy." Indian Navy, *Naval Strategic Publication (NSP) 1.2*, Oct. 2015, www.indiannavy.nic.in/sites/default/files/indian_Maritime_Security_Strategy_Document_25Jan16.pdf
7. "India's Coastal Security." Drishtiiias.com/printpdf/indias-coastal-security.pdf
8. "Initiatives to Strengthen Coastal Security." *The Indian Navy*, www.indiannavy.nic.in/content/initiatives-strengthen-coastal-security
9. "Integrated Marine and Coastal Area Management: Approaches for Implementing the Convention on Biological Diversity." CBD Technical Series no 14. AID Environment, *National Institute for Coastal and Marine Management/RIKZ Coastal Zone Management Centre*, The Netherlands. www.cbd.int/doc/publication/cbd-ts-14.pdf
10. James R. Holmes. "Tackling Somali Piracy Ashore: Maritime Security and Geopolitics in the Indian Ocean." *Strategy Analysis*, vol.34,no.5, 2010, pp. 717-727
11. Johnson, Phil. "Security of Maritime Trade: A Cooperative and Coordinated approach for the Indo-Pacific Region." *Australian Journal of maritime and Ocean Affairs*, vol.4,no.1, pp.1-10
12. Kapur, Lalit, and Hemant K. Singh. "Shaping a Security Architecture for the Indian Ocean." DPG Policy Paper, vol.5, issue 6, 12 Feb. 2020, www.delhipolicygroup.org/publication/policy-papers/shaping-a-security-architecture-for-the-indian-ocean.html
13. Khurana, Gurpreet. "Maritime Security in the Indian Ocean: From Tentative Collaboration to Effective Architecture." *Journal of Indian Ocean Rim Studies*, vol. 1, issue 2, Oct. 2018
14. Lutz, Feldt, et al. "Maritime Security- Perspectives for a Comprehensive Approach." *ISPSW Strategy Series: Focus on Defense and International Security*, issue 222, Apr. 2013, www.files.ethz.ch/isn/162756/222_feldt_roell_thiele.pdf
15. "Navigating Challenges and Perspectives in the Indian Ocean: Towards a Shared Understanding." *The Indian Ocean: Defining Our Future*, Colombo, 11-12 Oct. 2018
16. "Patrolling and Security Issues- Chapter 5." Cag.gov.in/uploads/download_audit_report/2011/Union_performance_Defense_services_role_and_functioning_indian_coast_guard_7_2011_chapter_5.pdf
17. "Port Security: A national Planning Guide." US Dept. of Transportation, 1997. www.hsdl.org/%3Fview%26did%3D437492
18. "Protecting the Ability to Trade in the Indian Ocean Maritime Economy." Proceedings of the Indian Ocean Naval Symposium Seminar, 2014. editor Andrew Forbes, *Sea Power Centre, Australia*. www.navy.gov.au/sites/default/files/documents/SPS3_protecting_Trade_indianOcean.pdf
19. Rishi, Ruchika. "Indian Ocean Rim Association Perspectives on Maritime Safety and security." *Journal of Indian Ocean Rim Studies*, vol.1, issue 2, Oct. 2018
20. Rumley, D, et al. *The Security of Sea Lines of Communication in the Indian Ocean Region*. Maritime Institute of Malaysia, Kuala Lumpur, 2007
21. "Sagar Kavach Archives Synergy for Coastal Security." *Times of India*, 7 Oct. 2017, timesofindia.indiatimes.com/city/Rajkot/sagar-kavach-archives-synergy-for-coastal-security/articleshow/60977584.cms
22. Singh, Abhijit. "After 26/11, A Half Transformation: Why India's Coastal Security Project Remains Work in Progress." *The Economic Times*, 26 Nov. 2018, m.economictimes.com/news/defense/after-26/11-a-half-transformation-why-coastal-security-project-remains-work-in-progress/amp_articleshow/66805214.cms
23. Singh, Abhijit. "India's Coastal Security Paradox." *ORF Special Report*, Dec.2017
24. "Smart Border Management: Indian Coastal and Maritime Security." Sept. 2017, www.pwc.in
25. Suresh, R. "India's National security: A Maritime Security Perspective." Mar. 2020, eprints.cmfri.org.in

26. "The emerging Global Maritime Order- India's Strategy." TERI-KAS Resource Dialogue-V in association with Madras Management Association (MMA), 7-9 March, 2019, www.teriin.org/sites/default/files/2019-08/maritime-strategy.pdf
27. "The Indian Coast guard Act, 1978." www.indiancoastguard.gov.in/WriteReadData/userfiles/file/CG%29Act%20as%20per%20gazette.pdf