

Indian Coastal Zone Management: Security Challenges and Policy Options

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Introduction

When we think of coastal zone management the basic definition that comes to mind is of managing coastal areas to balance environmental, economic and human activities including health of the coastal population or in other words to balance between developmental needs and protection of natural resources. Thus, coastal zone management may be considered to be the protection of environment, assets and infrastructure along the coast that allow a nation to pursue sustainable economic growth. This paper focuses on the security challenges in management of coastal zone and ways to overcome them.

Historically from the time nation states came into being national security and means to achieve it has always been of concern to every nation. In the earlier era this essentially meant safeguarding the nation from military threats of other nations or a coalition of nations. However, from the middle of the 20th century, a large number of nontraditional threats began to emanate and often from non-state actors. Further with the advent of globalization and enhanced international trade, importance of oceans and maritime security gained prominence. It also emerged that maritime security went beyond the perceived military threats on the high seas, to challenges both conventional and non-conventional in the littoral region. Littoral or coastal zone security and management therefore emerged as a vital dimension of maritime security.

It is also for consideration that maritime borders are vastly different from land borders. Land boundaries are identifiable by geographical features or boundary pillars where placed after due delineation on large scale maps. Even disputed and unsettled land borders, termed as LAC/LOC have identifiable features. On the other hand, maritime boundaries even when settled between

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the countries concerned on a chart are unidentifiable in the open seas. Similarly, while land borders are physically guarded by the Army or a specified security force, securing a coastline, the territorial waters or the Exclusive Economic Zone (EEZ) is not feasible in a similar manner. Multiple stake holders such as shipping, fisheries, customs, off shore exploration / production agencies, tourism, scientific community and port authorities are all involved and not merely the coastal state.

Coastal zone security challenges would thus call for the protection of assets and infrastructure along the coast and in EEZ, seaborne trade, prevention of illegal exploitation of the marine and mineral resources within the EEZ and freedom of navigation along the Sea Lanes of Communications (SLOC) in coastal zone for merchant fleets. Thus, it goes beyond the prism of military presence and geo-political influence into humanistic considerations, as for littoral nations, oceans are a major source of economic sustenance for a number of coastal communities. However, excessive exploitation of the seas has also created problems, including shortfall of sea-fish and as a consequence migration of fishermen into illicit/ criminal activities. The rise of 21st century sea piracy originating from Somalia is traceable to the severe depletion of sea-food resources, brought about by unscrupulous exploitation of fish stock by foreign trawlers. There are also serious environmental problems, including the degradation of coastal mangroves, erosion of coral reefs, and the disappearance of ocean biomass that have increased the threat to survival of many marine species.

India and geo-strategic importance of coastal zones

The Geo strategic significance of the seas is well known. 70% the earth is covered by sea and two third of its population lives within 100 nautical miles of the coast. 80% of the cities and nearly all major trade and financial centers are along the coast or within 200 km of it. Most major economic and industrial activities also happen within this zone. It is also pertinent that 150 of the 192 member states of United Nations are coastal States. Maritime trade is 80% by volume and 70% by value of the total global trade generating close to 14 million jobs. Therefore, maritime and in turn coastal security assumes great significance for any nation.

As far as India is concerned, her quintessential maritime character and geo strategic location at the base of continental Asia, close to the choke points of the Indian Ocean, are factors that have governed her strategic perspectives and growth as a nation over the centuries, thereby linking her national security with the oceans. Sardar KM Panikkar, a perceptive historian, had in 1945

foreseen importance of affairs Maritime in the nation's destiny. He had said “So far as India is concerned, it should be remembered that the peninsular character of the country and the essential dependence of its trade on maritime traffic give the sea a preponderant influence on its destiny.” He had further concluded that India “must create (in the public) a sustained interest in oceanic problems and a conviction that India's future greatness lies on the sea.” His words are even more relevant today, with the growing importance of seas for trade and commerce and economic growth.

It is also relevant that India is both a Continental and as well as a Maritime nation, with a territory of over 3 million square km, with a land frontier of 15,000 km. India's coastline on the other hand is over 7500 km, with nine Coastal States, four Union territories and close to 1200 Islands, with an EEZ of 2.2 million square km with another 0.5 million sq. km to added in the continental shelf. It is also important to note that the Indian Ocean Region (IOR) is home to 33% of the world's population and 50% of the world's Maritime trade flows through its waters, which includes nearly 50% of the container traffic and almost 70% of the global trade in oil and natural gas.

An overview of India’s maritime nature and size of her coastal zone, encompassing coastline and the adjacent EEZ, would clearly indicate that managing and guarding it is, unlike protecting land borders. It is a complex phenomenon involving multiple stake holders or in other words, it’s not only about protecting our coastal terrain and territorial waters from direct military or militant attacks, but also safeguarding the interests of all stake holders. What then are the challenges or threats in the coastal zone and how are they to be neutralised?

Conventional and Non-Conventional Threats

Looking at conventional military maritime challenges, Pakistan continues to encourage terrorist elements that are inimical to India and remains the greatest single threat to peace and stability in this region. It is also worth remembering that critical energy needs of India flow from the Persian Gulf and the normal shipping lanes pass close to Pakistan. It is therefore susceptible to interdiction in times of conflict, while unconventional threats posed by terrorist elements are a reality at all times. While in any conventional conflict, Pakistani Maritime forces would need to be comprehensively marginalised, regular patrolling and monitoring of the sea lanes through which Indian cargo moves is a major peace time maritime challenge. China, has

her economic interests at stake in the Indian Ocean region and has been actively engaging India's neighbours by economic offers and developing their maritime infrastructure. Trying to establish bases all along the IOR from Africa to West and South Asia and in the Island Nations in the region are all ways to enhance her presence in the region. While skirmishes along land borders at periodic intervals has been an ongoing feature in the relations between both nations, a major confrontation arose recently. China has also been expanding her maritime forces and PLA Naval units are a regular presence in IOR for over a decade now.

While it would be in the overall interest of India to look at diplomatic solutions to overcome conventional threats and avoid direct confrontation, we need to develop maritime forces that are capable of tackling threats from any nation that is inimical to Indian interests and to prevent any adventurism in our littoral by any power. Specifying the kind of force levels needed by the bean count methodology is beyond the scope of this paper, but suffice to say that we need combat ready forces which are capable of countering threats in the littoral area. Further the forces should be capable for mission-based deployment well away from our waters and by their very presence in such areas, should deter development of threats in our areas of interest.

Non-conventional maritime challenges, often termed as Low Intensity Maritime Operations (LIMO), would include maritime terrorism, piracy, drug and human trafficking, gun running, poaching and could include illegal gathering of sensitive seismic and economic data. A major problem that India faces against such threats is that many of her outlying islands off both the coasts as well as some sections of the coastline are uninhabited and therefore susceptible to use as hideouts or havens for illegal activities. It is also pertinent that there are merchantmen of various types engaged in dubious activities plying regular shipping routes close to our waters. Registered under Flags of Convenience they are difficult to track, as they routinely change names and registry.

While there have been a number of terrorist attacks on ships at sea over the years, it is estimated that maritime terror incidents constitute only about 2% of all international terror attacks in the last three to four decades, possibly due to the complexities associated with the marine environment. However, the attack by terrorists at Mumbai on the night of 26 Nov 2008 saw professional exploitation of the maritime environment and therefore terrorist activities emanating from the coastal zone is a realistic proposition. Drug trafficking and gun running are often taken as adjuncts to terrorism. Drug trafficking is considered a lucrative way to finance

terrorism. Indian coastline with innumerable landing places is susceptible to both these activities as observed post the 1993 blasts in Mumbai. While regular patrolling by maritime forces can reduce the threat, it would still exist. Piracy is another major challenge in coastal zone which calls for regular patrolling, exchange of intelligence and cooperative efforts between nations. While Indian maritime forces have been part of combined worldwide efforts to tackle piracy, no major impact of this menace has been felt off Indian coast. Human trafficking or illegal immigration is another challenge in coastal zone but has been negligible off Indian waters.

A crucial economic activity in the coastal zone is development and maintenance of ports and harbours and associated infrastructure, as they are intrinsically linked to smooth flow of trade and energy supplies, which in turn holds the key to economic well-being of any state. It is not only embarkation or disembarkation of goods, but even their transportation is linked to coastal zones. Since 80% of the world's trade by volume, which in our case is 90%, is transported over the oceans, the security of sea lanes of communications is a major maritime challenge. Many international shipping lanes in the IOR pass through or close to Indian EEZ and therefore India has a stake and regional responsibility in ensuring that the SLOC in the area remain open at all times and there is no disruption of maritime traffic especially at choke points that are close to our waters. While in times of conflict a host of military and procedural measures would be put into place to ensure safety of mercantile trade, it needs to be ensured even in peace time. In case of energy supplies apart from protection of ships and harbours, it would include safety and management of coastal and offshore energy infrastructure, such as refineries, offshore platforms, pipelines and single buoy moorings.

No discussion on coastal zones would be complete without mention of the 2.2 million square km of EEZ of our nation, which as indicated would increase with continental shelf delineation. Apart from marine life and oil and natural gas, oceans are also abounded with poly metallic nodules. While current technologies may not make it commercially viable to extract such nodules, with progress of technology we could undertake such activities. This could include extraction of even more oil from fields now considered dead. While we develop economically viable technologies singly or together with like-minded nations to harness the ocean wealth, we need to prevent unauthorised extraction/exploitation of these resources in the coastal zone. This would include surreptitious gathering of seismic data in our EEZ. Safeguarding of our coastal zone assets is therefore a major challenge.

Illegal, Unreported and Unregulated (IUU) fishing constitutes one of the most common and widespread challenges in EEZ. It is also one of the most economically damaging. Essentially it is illegal fishing conducted in waters under the jurisdiction of a state, without its permission, or in contravention of its laws and regulations. Globally, IUU fishing is estimated to be between 20 and 25 million tons of fish annually i.e. about 20 to 30% of total fisheries production. Global demand for seafood is rising. According to the Food and Agriculture Organization (FAO), fish production increased from approximately 38 million tons in 1960 to 179 million tons by 2018. It is estimated that annual losses due to illegal fishing is between \$ 10 to 23 bn. Fishing is a major economic activity in India with 2.5 lakh fishing vessels, generating employment for 15 million people and fetching income of \$6 bn. Hence any IUU in our waters directly affects our economy. While on fishing, another security challenge is that our own fishing activities consisting of thousands of fishing boats that go out to sea and return each day from multiple points of the long coastline are largely unregulated. This is a potential threat as it could be utilised for infiltration by those engaged in illegal/terrorist activities and something that happened on 26/11.

Environmental security is another issue that needs to be looked at in coastal zones. Over 60 thousand ships transit through Indian Ocean and oil or other affluent chemical spills due to collisions or damage to ships including onboard fires are a realistic possibility. Any such spills close to our shores would be disastrous to the environment and to the livelihood of those who depend on coastal zone for their sustenance. There have also been instances of dumping of toxic waste by passing ships and discharge of toxic material from ships that come to ship breaking yards. This again calls for enhanced patrolling and closer monitoring of coastal zones.

Emerging Trends in Coastal Security Management

Having looked at the overall security challenges in our coastal waters, it would be clear that major threats today are mainly nonconventional in nature. Terrorist attacks on cities or vital installations located along the coast such as oil platforms and refineries, power plants including atomic ones, naval/military bases and industrial hubs is a possibility that cannot be ignored. Looking back, the phenomenon of Coastal Security as we discuss now, emerged only after 26/11. Poaching activities in Indian waters were the most visible threat facing us in the seventies and eighties. Fishermen from countries like Taiwan, Thailand, Indonesia and Myanmar, were poaching extensively in our waters, thereby depleting our precious marine

wealth. To compound matters, our economy was threatened by smuggling syndicates using sea route for trafficking gold, silver and drugs. Coastal security and any related debate on the subject had remained the exclusive preserve of the Navy and the Coast Guard. The serial bomb blasts in Mumbai in March 1993, where non-state actors used the sea route to smuggle in explosives and land them at various sites along the Gujarat and the Maharashtra coasts, changed the scenario.

In reaction to this major terror attack, seaward security was spruced up and a number of additional measures were initiated. Apart from Navy and Coast Guard involvement of State Police and Customs in coastal security was activated for the first time. While close to coast patrolling was undertaken, overall there were shortcomings such as shore based surveillance, lack of actionable intelligence and coordination amongst intelligence agencies. While there were no major incidents along the coast for a while, post Kargil, the Review Committee of Group of Ministers recommended a number of measures to enhance coastal security. Marine Police Stations to work in Hub and Spoke concept with Coast Guard stations were set up to strengthen the infrastructure for patrolling and surveillance in coastal waters. Other measures included enhancing capabilities of Coast Guard, setting up of coastal radar chain, improvements to intelligence mechanism and enhancing the security at sea ports. Even as implementation of these plans were in progress, 26/11 happened. The use of sea route by terrorists for attack on Mumbai on 26/11 once again highlighted the vulnerability of our coastline and the lacunae in our coastal security mechanisms.

Post 26/11, a new Coastal Security mechanism was evolved primarily based on coordination of efforts between all security agencies. Major players in the mechanism are the Navy, the Coast Guard and Marine Police, with the Ports, Customs and BSF Marine Wing forming part of the construct with their roles clearly defined in the directives issued by the Government. All agencies, under the new arrangement, are to function in a coordinated manner with emphasis on judicious exploitation of resources for effective implementation of desired security measures. The Indian Navy is to be the authority responsible for overall maritime security, which includes coastal security and offshore security. The Indian Navy is assisted by the Coast Guard, State Marine Police and other Central and State agencies for coastal defence of the nation. The Indian Coast Guard is the authority responsible for Coastal Security in territorial waters, including areas to be patrolled by Coastal Police and has been made responsible for overall coordination between Central and State agencies in all matters relating to coastal

security. Greater emphasis has been laid on strengthening infrastructure for patrolling and surveillance of coastal areas. The role of other stake holders such as Ports, Customs and BSF have also been specified. A number of other initiatives to enhance surveillance, coordination of intelligence, regulation and monitoring of vessel movement in coastal zones, security of ports and associated infrastructure have been put in place to ensure greater coastal security. Setting up of State Maritime Boards to coordinate all maritime activities within the State and regular Coastal Security Exercises involving all stake holders to examine viability of measures in place are also part of the steps to strengthen Coastal Zone Management.

It would be clearly evident that Coastal Zone Management and the security challenges it poses has become vastly complex and demand innovative approaches. The seamless nature of maritime domain enables a steady flow of threats and challenges from one area to another and very quickly from the high seas to coastal zones. Threats as would be obvious, do not recognize political boundaries and there is obviously a limit to what an individual state can do to counter such threats. With globalised economy enhancing interdependence of nations, cooperation between all stake holder nations is necessary to safeguard common maritime interests. Enhancing trust and confidence between nations could begin in the form of bilateral and multilateral dialogues which could be followed up with exercises between their maritime forces.

Conclusion

From an Indian perspective it is obvious that Coastal Zone Management and Challenges must be addressed on a multi-layered basis. While those predominantly located around the Indian coast could be tackled by our forces by regular surveillance and patrolling, many other challenges would require bilateral or even multilateral approach. In order to safeguard its maritime interests, India would need to endeavor to build favorable and positive maritime environment and enhance net maritime security all along the Indian Ocean region in cooperation with friendly nations. While substantial steps have been taken since the 26/11 attacks on Mumbai, we cannot afford to rest on our oars. These measures would need to be strengthened so as to prevent, repulse and eliminate threats to India's security in coastal and offshore areas. A collaborative and coordinated approach by the Indian Maritime forces ie the Navy, the Coast Guard, the Coastal Police and other stakeholders including the coastal community is therefore the need of the hour to face such challenges.