Securing India's Littorals in the Twenty-first Century:
Issues and Challenges

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The twenty-first century marked paradigm shifts in the changing world order. The end of the Cold War, end of the global bipolar power rivalry; onset of globalization with resultant change in economic development, commerce and trade, advancement in information and communications technologies, transportation, etc. obliterated the geo-political boundaries of the nation state. Unfortunately, the spread of Asymmetric Conflict have emerged as the defining paradigm in the changing contour of politics, economics, military strategy and technology.

As far as Maritime Security Strategy is concerned, it has witnessed a significant change with the end of the Cold War[1]. The Cold War saw the deployment of navies at Sea. In the traditional naval confrontation it was force on force with high stakes at sea along with surface combat, maritime air power of fixed and rotary aviation, submarines attack, guided missile and fleet ballistic variants having lethal punch from submerged stations. The high stakes of confrontation between the navies of the bipolar alliances came to an end with the collapse of the erstwhile Soviet Union. The United States Navy and its allies emerged "triumphant" but soon were rendered obsolescent in missions and strategy because of the absence of a strategic competitor.

The Cold War maritime strategy was premised on the diversification of naval platforms that was both in quality and quantity. But the post-Cold War era navies have no defined naval threat on high seas but had to revert to the "littoral" that was increasingly endangered with a host of non-traditional maritime security challenges that emanated "*from the land to the sea*". With the spate of non-traditional threats and challenges emanating from the littoral to the sea, the US Navy and the western navies had to contemplate new roles on securing the littoral from the sea.

The US Marine Corps enunciated the Operational Maneuver from the Sea (OMFTS) with a focused operational objective to secure the littoral and project power *From the Sea to the Littoral*. The littorals in the Asia-African and the Asia-Pacific regions have emerged to be the hubs of a host of non-traditional maritime security challenges and threats like piracy, maritime terrorism, proliferation and smuggling of light and small arms by sea, involuntary trafficking of humans at sea, illegal fishing, pollution, acts of terrorism to maritime insurgency operations, mercenary activities, hijacking, sabotage etc.[2] It is a fact that all these illegal operations at Sea have a littoral or land interface. Without the littoral base the non-traditional challenges and threats cannot be realized at sea. Littoral thus refers to the "area from the open sea to the shore" and constitutes the primary basing of all asymmetric actors both violent and non-violent whose contention is for space and domination in the congested land corridor; with an absolute domain over the brown waters of the shore and the quest for domination of the air corridors leading to the hinterland.

> The littorals in the Asia-African and the Asia-Pacific regions have emerged to be the hubs of a host of non-traditional maritime security challenges and threats

The littoral has thus emerged as the most contentious and chaotic perimeter that catalyzes the escalation of asymmetric violence and con-

flict at sea. The littoral in the Asian-African; Asia-Pacific region has been bereft of all means of good order and governance and has come to be known as the "Chaos of the Littorals."[3]

The asymmetric domination of the littoral is indeed the greatest challenge to the globalized state that depends on the sea and air for its lanes of communication, transport, trade and movement of people. Littoral security has, therefore, emerged as a vital dimension of Maritime security of the state. Littoral security raises several issues and challenges to the state that hitherto was viewing the threats to the state from a continental and hinterland perspective. The littoral interface presents three types of challenges to the state.

The first challenge in littoral security is the *porous nature* of coastal borders that defies any systematic attempt to monitor the variety of friendly and hostile interventions from the sea to the land. The porous nature of littoral and maritime borders does not define and distinguish between the friendly and hostile interventions and thence the possibilities of threats and attacks from asymmetric sources emerge The second challenge in littoral security has been due to the increasing demographic density in the coastal littoral areas. A global demographic estimate shows that approximately 60 per cent of the world's population lives in about 100 KM from the coast and about 70 per cent of the population are in the radius of 350 KM. Cities of populations in excess of 1 million are all located in the littorals and an estimated 40 per cent of cities and urban centers with more than 500,000 persons reside in the coastal areas[4].

The littoral corridor is thus featured by dense shipping activity in shallow waters, heavy civilian air traffic and overpopulated spaces. Human and social factors complicate the littoral

situation that is already under the stress of overpopulation. It has been characterized by the rapid demographic movement to the coastal cities and towns for economic opportunities. This has been compounded by the inability of civic authorities to meet the challenges of public infrastructure and amenities to the growing population along the coast. With fragile governance process in these areas, the dominance of mafias and militias as alternate governing structures have emerged to control the littoral corridor that interfaces the urban centers with the sea.

The third challenge in littoral security has been the daunting task of exercise monitoring and operational maneuvers. The challenges of littoral monitoring are complicated as it is extremely difficult to ensure round the clock monitoring system, vital for a joint operational response capability. Given the huge demographic presence and the fragile civic governance, process there has been a lack of initiative for littoral monitoring and response.

The challenge of the littorals has its serious implications for maritime trade and commerce that is critically dependent for port access and transfer. Littorals present both promises and challenges. While the burgeoning globalized maritime trade has its port access to the littorals, there is also the increasing virulence of asymmetric threats of piracy, maritime terrorism, narcotics trade, illegal clandestine transfer of weapons of mass destruction by sea, small arms and light weapons proliferation and trafficking by sea from the littorals. The fact is that the asymmetric threats at sea are sourced from the littorals. If the asymmetric threats are tackled efficiently in the littorals, then the prevalence and the persistence of the threats *at sea* could be minimized. As these threats are sourced from the littorals the significance of the littorals as the bastion of maritime asym-

metric threats needs critical analysis.

India is one the largest subcontinents with a peninsular littoral that has immense significance in terms of its long coast line, island territories and the resource rich exclusive economic zone. India as an emerging power of the twenty first century has predicated its power on its economic engines of growth that are largely based on maritime trade and commerce. Its sinews of military power are based on an expanding naval and aerospace capability that has immense significance to its strategic power.

The imperative of India's strategic defence and its geo-economic resilience stems from its secure borders and littorals. Littoral security thus emerges as a significant dimension of India's maritime security and its national security strategy.

The nature and dynamics of threats to India's littoral security emerge from two sources: One from the sea to the littoral, the other from the littoral to the sea

Issues and Challenges in India's littoral space

India has a littoral coastline of 7516 KM and an Exclusive Economic Zone of 2.01 million square Km under the award of the UNCLOS III 1982 (United Nations Conference of the Law of the Sea 1982). It has nine maritime states abounding the peninsular seas and four Union territories. India features 12 major ports, 185 minor ports, more than 250 fishing harbours and more than 100 offshore platforms.[5]

India's littoral and port access has about 50,000 merchant marine ships visiting annually and another 50,000 on freedom of navigation through its territorial waters. Securing of the vast littoral-maritime territory is a monumental task given the host of varied non-conventional and

asymmetric threats that have emerged over the years.

The nature and dynamics of threats to India's littoral security emerge from two sources: One from the sea to the littoral, the other from the littoral to the sea. The threat matrices are cumulatively known to be maritime low intensity conflicts.

The scope of maritime low intensity conflicts that India contends in its littorals could in the following matrix[6]: Firstly, the exploitation of national resources by unauthorized persons has assumed threatening proportion. Illegal fishery is the most commonly prevalent threat in the littoral-maritime waters of India. Secondly, the advertent/inadvertent human induced environmental disasters results in the marine ecological damage that pollutes the sea in the region. The third factor is the threat to safety of life and property on board the ship or on oil rig platforms and structures in the continental shelf or near the shore. Criminal acts of this type are equated with piracy. Fourthly, the illegal traffic of small arms, hostage taking, narcotic, contraband smuggling and the involuntary traffic of humans pose a larger threat to national peace and security. These events are precursors to the littoral-based terrorism and insurgency. India, the Maldives, Myanmar and Sri Lanka are all affected by these maritime asymmetric threats. These operations have an apparent criminal cover but do have deep political motivations to subversion, which are essentially criminal in nature, a political cover to provide them some legitimacy.[7]

The second issue and challenge in the security

of India's littorals has been the security of Sea Lanes of Communication (SLOCs) that abounds the Indian peninsula. The intense shipping and poaching of foreign trawlers and shipping in India's littorals and the EEZ have its impact on the delicate environmental balance of the diversified and rich marine life and resources. India's littorals straddle in the hub of the Arabian Sea-Indian Ocean-Bay of Bengal maritime-littoral contiguous space that features heavy maritime traffic[8]. The security of SLOCs in the region is an important issue that has its implications for India's maritime security. Increased incidents of piracy in the Arabian Sea-African Coast and the vulnerability of Indian shipping emanating from the Persian-Gulf South West Asian region has its impact on the western littoral of India. Similarly, maritime terrorism threats in the northern province of Sri Lanka and the Straits of Malacca has its perceptible impact on the south eastern littoral of India.

The third scope of challenges and threats to India's littorals emerge from the nexus of organized crime in the hinterland with terror groups in the proximity of India's borders and boundaries with Sri Lanka, Myanmar, Bangladesh and of course, from Pakistan. The crime syndicates have used the external linkages in the sea-smuggling of narcotics, small arms, explosives to be used in the various criminal and insurgent activities in the littorals and the hinterland.[9] The littorals are the staging points for the long chain of links in the smuggling process.

The fourth scope of challenges and threats to India's littorals have emerged from the movement and the visitation of hazardous maritime cargo on board ships that are either on port

The illegal traffic of small arms, hostage taking, narcotic, contraband smuggling and the involuntary traffic of humans pose a larger threat to national peace and security

calls or being dispensed to ship-breaking at Alang in Gujarat. Ships that visit Alang are usually platforms of hazardous cargo infested with mercury, asbestos and other hazardous chemicals[10]. The breaking process of these ships poses disastrous environmental consequences to India's littoral environment. They also discharge toxic effluents and ballast discharges that irrevocably corrode the marine and coastal environment with serious public health consequences.

The fifth scope of challenges and threats emerges from the weakness and deficiencies in the maritime monitoring and surveillance of India's sprawling littoral coast. Maritime boundaries and littorals are usually porous. They cannot be physically and comprehensively monitored on a 24/7 basis to provide foolproof security against illegal infiltration or illegal migration. India's littorals are bordering with states that have intense internal conflicts and the spillover of the conflicts have always brought in influx of refugees, stowaways and possible terrorists, smugglers who have managed to sneak in the cover of being refugees. The influx of refugees from the Sindh coast or the Northern provinces of Sri Lanka or from south- west Bangladesh Myanmar has become frequent in recent times. The ability of the Indian Coast Guard to mount a 24/7 surveillance at sea has not been feasible, given the limitations in the surveillance of the maritime aviation assets and the necessary sea-based platforms. This is a reality both in the Sindh coast as well as in the Palk Straits in the Gulf of Mannar. These challenges and threats have serious consequences for India's littoral security and the contingent and strategic response to these challenges and threats by India has been mixed in performance.

India's littoral security has been premised on a variety of policy and operational issues that are based on effective inter-agency coordination, focused missions based on enhanced monitoring and surveillance and interoperable missions with other navies and coast guards. The technological responses to the challenges and threats to India's littoral security have come from the effective harness of satellite based navigation coordinates, deployment of naval manned fixed and rotary aviation assets along with unmanned aerial vehicles for reconnaissance, surveillance and monitoring. The technological templates of naval transformation in the Indian Navy and the Coast Guard have added immense capabilities to a comprehensive Maritime Domain Awareness that offsets the vast littoral coastline.[11]

Indian maritime proaction has been by means of enhanced constabulary and maritime policing roles unilaterally and in bilateral and multilateral operations

time sensors operations.

There are other limitations in the operational and the technological capabilities of the platforms and the sensors that emerge in the form of the maritime demarcation of the International Maritime Boundary Line. Hence, the process of identification of maritime asymmetric threats that could justify the response of hot pursuit is sometimes hindered by the limitations of the maritime demarcation of the inter-state boundary of India with the other littoral states.

There are also limitations in bilateral maritime cooperation even though political relations could be cordial in the case of the India- Sri Lanka relations. However, the ability to sustain constant surveillance and interdiction of threats could emerge with the growing interoperability between navies and coast guards and also with the support of maritime intelligence sharing efforts.

Securing the Littoral: India's Responses
Indian maritime proaction has been by means of enhanced constabulary and maritime policing roles unilaterally and in bilateral and multilateral operations. These have come from the enhanced maritime surveillance and interoperable roles at sea with other navies and coast guards.

The operational dynamics have been based on the principle of intelligence that overrides investigation. It is based on a strict investigation regime that is also passive based on mandatory surveillance and targeted investigation. The technologies of Maritime Domain Awareness has provided for specialist platforms that are in seamless operations on a 24/7 basis with focused identification capabilities. The ability to maintain and sustain a 24/7 operations are dictated by the dense littoral activity and the vagaries of the weather conditions in the littoral and the sea having its impact on the mari-

The post 9/11 maritime security initiatives of the Proliferation Security Initiative (PSI), Container Security Initiative (CSI) and the International Ship and Port Security Code (ISPS) have generated substantial inter-agency, inter-state and inter-service lateral cooperation that have been based on seamless cooperation and timeliness of response. It has integrated the civil-regulatory authorities to the maritime law enforcement agencies and the naval coast-guard forces have been tasked to perform coordinated missions. It has integrated the roles and operations of the various departments in the ministries of fisheries, coastal marine environment to perform integrated regulatory and safety operations derived from the monitoring and surveillance operations of the Coast Guard and the Navy.

The technological response has been with the overarching satellite oceanic surveillance and automatic tracking and communication capabilities that provide for the links to multi-layer sensors of the Navy and Coast Guard that are able to provide real time maritime domain awareness of the marine and coastal environment. These are complimented by ship based EEZ monitoring and surveillance tasked with aerial reconnaissance. In the littoral are the new agencies of coastal policing and monitoring that is integrated into the multi-layer, multi-agency interoperable roles and missions. It provides for quick uplink of intelligence from coastal policing to civil and naval agencies for quick responses. It also provides for the possibilities of VBSS (Visit, Board, Search and Seize) operations of suspected craft in the sea and also facilitates the speedy prosecution of offenders.

Littoral Security has thus emerged as the defining paradigm of Maritime security of India in the twenty-first century. The massive littoral coastline, the vast EEZ necessitates that the Indian Navy and the Indian Coast Guard are geared for the focused and rapid operational capabilities that ensures the efficacy of India's Maritime Domain Awareness.

It is imperative that littoral security and the securing of the maritime landscape in the littoral-maritime contiguity of India is essential for India's maritime security objectives and the maritime safety of its platforms and merchant marine assets that are exposed to a multiple non-conventional and asymmetric threat environment.

Notes

1. The post-cold war period has spawned immense literature in Maritime security. It has generated new concepts, theories and operational issues for navies that are now increasingly focused on asymmetric and transnational threats and challenges. Geoffrey Till , *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004; Colin S.Gray, *The Navy in the Post-Cold War World: The Uses and Value of Strategic Sea Power* , Pennsylvania State University Press, University Park ,PA, 1994; Peter T.Haydon, "Navies in the Post-Cold War Era, " Maritime Security Occasional Papers No. 5, Centre for Foreign Policy Studies, Halifax, Nova Scotia, 1998.

2. Rohan Kumar Gunaratna, "The Asymmetric Threat From Maritime Terrorism," *Jane's Navy International*, October 2001, p. 28. Vice Admiral Timothy P.McClement, "The Nature of Asymmetric Threat in the Maritime Environment: The Military Dimension," http://www.marina.difesa.it/symposium/pagine/programma/interventi/14_mcclementobe.pdf.

3. The phrase 'Chaos in the Littorals' was first introduced by Major General Mike Myatt, Former Director of Expeditionary Warfare, US Marine Corps.

4. For more details see, 'The Landscape: Chaos in the Littorals', Chapter 1 MCDP 3: Expeditionary Warfare available at http://www.doctrine.quantico.usmc.mil. Also see Vijay Sakhuja, "Chaos in the Littorals: An Overview of South Asia Workshop on Maritime Counter Terrorism", Observer Research Foundation, New Delhi, November 2004.

5. Cited in T.S.Balasubramaniam 2005, Coastal Surveillance Strategy and Policy: An Indian Perspective (Paper Presented at the International Workshop Coastal Surveillance 2005 International Quality and Productivity Centre, Singapore, December 2005.

6. K.R.Singh, "Regional Cooperation in the Bay of Bengal: Non-Conventional Threats-Maritime Dimension," *Strategic Analysis*, Vol. 24 (12), March 2001.

7   Rupert Herbert-Burns and Lauren Zucker, "Drawing the line between piracy and maritime terrorism" *Janes Intelligence Review*, August 19, 2004, URL< http.www://.jir.janes.com>.

8   Lawrence Prabhakar W., "Regional Maritime Dynamics in Southern Asia in the 21st Century, " in Joshua Ho & C.Z.Raymond , *The Best of Times, The Worst of Times: Maritime Security in the Asia-Pacific*, World Scientific, Singapore, 2005.

9   Cdr.P.K.Ghosh, "Maritime Security Challenges in South Asia and Indian Ocean: Response Strategies" (Paper prepared for the Centre for Strategic and International Studies American-Pacific Sea lanes Security Institute Conference on Maritime Security in Asia, Honolulu, Hawaii, January 18-20, 2004.

10 K. Paul, "Ship breaking in South Asia and the International Trade in Hazardous Waste," *Environmental Policy and Law*, 34 (2), 2004, pp. 73-8.

11 "Maritime Domain Awareness (MDA) is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy or environment of a state. For a detail discussion on MDA, visit URL<http://www.globalsecurity.org/intell/systems/mda.htm>. Also see, Geoffrey Till, "Naval Transformation and the Asia-Pacific 2005?" URL< www.caenz.com/ocean/downloads/1.1_handouts.pdf>.