PREPAREDNESS RISKS MITIGATION – PRIORITIES FOR THE INDIAN MARITIME FORCES

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Abstract

India enjoys a unique geographical position in the Indian Ocean Region (IOR). As the Country seeks to leverage this spatial advantage as a regional power to secure its maritime environment for economic betterment; it faces specific challenges from two of its 'not so friendly neighbours. While the first challenge arises out of Pakistan's 'concept of maritime operations' deriving out of its ambitious maritime doctrine; the other concerns the Chinese aspirations to maintain permanent presence in the IOR. When the stated tasks of PLA Navy to "safeguard development of national economy and overseas interests" intersect with national security imperatives of the Indian Navy, the potential for conflict along with attendant risks would naturally arise. India must therefore continue with focused maritime 'Force preparedness' to mitigate risks associated with traditional conflict scenarios in its immediate maritime domain.

Introduction

India holds a predominant position in the Indian Ocean region (IOR), which itself has been progressively taking center stage on the global maritime map since the dawn of the 21st Century. This Ocean connects many States with different systems of governance, myriad cultures, vibrant democracies, fragile or isolationist regimes, underdeveloped nations of coastal Africa and oil rich Arab nations. India's inseparable

linkage to the Indian Ocean could not have been explained better, than in the words of noted Indian maritime historian, KM Panikkar:-

"The vital feature which differentiates the Indian Ocean from Atlantic or Pacific is the sub-continent of India, which juts far out into the sea for a thousand miles. It is the geographical position of India that changes the character of the Indian Ocean."[1]

Even though India paid a heavy price for its proverbial 'sea-blindness'[2] in the past despite this locational uniqueness, it has now recognised its rightful place in the geo-political affairs of the region. It thus, acknowledges the emerging security challenges posed by contemporary geopolitical dynamics, in addition to the non-traditional threats brought about by natural calamities and man-made causes; and is ready to play its legitimate part as a credible 'net security provider' in the region.

In this context, this article seeks to explore traditional risks that India faces in the maritime domain due to its enforced geographical co-existence with two of its neighbours – one decidedly hostile and the other blowing hot and cold. The geostrategic dynamics arising out of this spatial reality could play out in two possible scenarios – each with its associated type and quantum of risks. Thereafter, certain 'Force Preparedness' initiatives, measures and pathways to mitigate such risks – by way of their acceptance, avoidance, control, reduction and monitoring– are proposed.

Probable Scenarios in the Indian Ocean Region and Associated Security Risks

Majority of the Global community believes in exploiting the seas –

1 KM Panikkar, 'India and the Indian Ocean' (George Allen & Unwin Ltd, London 1945), P. 19.

2 The term 'sea-blindness' has been used as recently as in June 2021 to indicate compulsive and systemic politico-bureaucratic neglect of the maritime spaces surrounding India, to the detriment of its national security and economic progress. See Admiral Arun Prakash, 'China has become a maritime power: It's time India caught up,' Indian Express, 21 June 2021, https://indianexpress.com/article/opinion/columns/india-china-rivalry-maritime-power-navy-7367947/ (accessed 10 July 2021)

including the IOR – for peaceful purposes in accordance with the rules-based order. However, proactively dubious agenda of two States – Pakistan and China – and related activities of their maritime entities in northern IOR in particular, are a cause of acute concern for the Indian economic and security establishment. In this backdrop, two security scenarios could probably emerge in India's proximate seascape. The first would be on account of Pakistan's 'concept of operations' in the Arabian Sea, duly supported – actively or tacitly – by Chinese high technology enabled facilitators. The second scenario could play out when the Chinese naval force and other maritime assets equipped with or incorporating such high technologies, adopt unambiguously coercive stance in the northern IOR – and in fact, in entire IOR – with a potential to adversely impact India's economic and security interests. Broad contours of these scenarios which would increase the quantum of traditional risks for Indian maritime security forces, are laid down in subsequent paragraphs.

Scenario 1 – Pakistan's 'Concept of Operations' in the Arabian Sea Facilitated by Chinese Support

Pakistan, in accordance with its first ever Maritime Doctrine titled 'Preserving Freedom of Seas' – released in December 2018 – considers the north Arabian Sea as its primary area of interest; and the broader Western Indian Ocean as extended area of interest.[3] In the words of a Pakistani analyst, this Doctrine assesses that "nuclearisation of Indian Ocean by the adversary [Read India][4] has raised stakes in the region …" and that the adversary intends to "keep the conventional theater alive under cover of nuclear umbrella."[5] The Pakistan Navy (PN), in order to

3 Cdr (Retd.) Azam Khan, 'Pakistan launches first formal Maritime doctrine,' Pakistan Defence Forum, 12 February 2019, https://defence.pk/pdf/threads/pakistan-launches-first-formal-maritime-doctrine.608697/ (accessed 12 July 2021).

4 Words in parenthesis have been added by the Author for imparting better clarity to the statement.

5 Hamzah Taoqeer, 'Maintaining Command of the Sea: Maritime Doctrines of Pakistan and India,' Modern Diplomacy, 07 August 2019, https://moderndiplomacy.eu/2020/08/07/maintaining-command-of-the-sea-maritime-doctrines-of-pakistan-and-india/ (accessed 12 July 2021).

seize 'maritime command and control,' and to ensure suitable deterrence against this supposed intent, advocates an "approach of provocative and flexible mobility using sea space…" PN approach also includes "hit first with maximum effects and minimum application of force." [6]

It is however, posited that the PN with current level of capabilities would not be able to undertake the overarching tasks envisioned in Pakistani maritime doctrine. Thus, the only way to meet its doctrinal guidance of "hitting first with maximum effects and minimum application of force," is by allying with China – as a Pakistani Scholar suggests.[7] This will enable the PN also to benefit operationally from Chinese high-technology-enabled support infrastructure. This scenario is thus, built on the premise that Pakistan will execute this 'concept of operations' in its area of maritime interest on its own, with covert – and indirect – support being provided by China.

Pakistan's maritime doctrine also advocates the use of submarines to cause "high-intensity diversion and disruption of enemy's sea lanes of communications (SLOCs)… to dominate the war theater".[8] Towards this, the Yuan class submarines fitted with air independent propulsion (AIP) system – eight being imported from China[9] – could be equipped with the artificial intelligence enabled fire control and decision making systems to assist the submarine's captain in quick and accurate appreciation of situation and select appropriate response strategy. Yaogan series of satellites associated with space-based ISR chain of Chinese ASBM architecture, would assist in detection of adversary's force well away from Pakistani coastline. With access to 'restricted' positioning signals from Beidou satellite navigation system being made available to Pakistan,[10]

6 Hamzah Taoqeer, 'Maintaining Command of the Sea: Maritime Doctrines of Pakistan and India,' ibid.

7 Hamzah Taoqeer, ibid.

8 Hamzah Taoqeer, ibid.

9 The News, 'China building eight submarines for Pakistan,' 17 July 2018, https://www.thenews.com.pk /print/342558-china-building-eight-submarines-for-pakistan (accessed 12 July 2021).

10 Global Times, 'Pakistan 1st foreign nation to fully benefit from China's BeiDou system,' 17 May 2017, http://www.globaltimes.cn/content/1047421.shtml (accessed 12 July 2021).

PN ships and submarines would be able to carry out precision targeting of enemy assets. Medium Altitude Long Endurance (MALE) UAVs like Wing Loong-2 and UCAVs like the CH-4 imported from China could be used by Pakistan to track and target the adversary's naval forces and interdict its SLOCs in Pakistan's near-coast areas.

Certain types of Chinese special purpose ships of overtly non-military classification – like Mobile landing platforms, research ships and intelligence collection ships – could assist the PN in raising domain awareness, enable data and communication relay, and facilitate targeting. Chinese civilian oil tankers 'built to military specifications' could provide logistics support to PN ships and submarines at sea, thus increasing their endurance and reach.

Scenario 2 – Coercive Presence of Chinese Maritime Assets in IOR

Chinese Navy's envisioned role of 'conducting international cooperation in distant waters' as first articulated in its Defence White Paper of 2008; progressively expanded to 'protecting its strategic SLOCs and overseas interests' by 2015.[11] China acknowledges that accomplishment of its military tasks – including that of the PLA Navy – would face technology-enabled challenges from its adversaries.[12] It has therefore, been prioritising the incorporation of high technologies-driven development of its military hardware and operational plans. Accelerated pace of contemporary warship shipbuilding[13] continues to provided numerical superiority and capability accretion to the PLA Navy. Chinese shipyards have been constructing between 17-20 ships/submarines annually since

11 Chinese Defense White Paper of 2015, 'China's Military Strategy', section IV.

12 Chinese Defense White Paper of 2019, 'China's National Defense in the New Era', July 2019, section I.

13 Over last two decades, China has commissioned 2 aircraft carriers, 13 nuclear-powered submarines, 24 destroyers, 30 large frigates and 60 missile corvettes. See Liu Xiaobo, 'Sino-U.S. naval warfare capabilities amid great power competition,' CSIS Update, 26 May 2020, https://amti.csis.org/sino-u-s-naval-warfare-capabilities-amid-great-power-competition/ (accessed 12 July 2021).

2013.[14] It has gone on to launch 28 warships – 10 destroyers, 1 LHD, 1 LPD and 16 missile corvettes – in 2019.[15] Assuming that this trend continues – and China has not given any indications to the contrary – then the PLA Navy with about 270 blue water capable ships, could become the World's largest Navy by 2035[16].

Not with standing what happens in 2035, the current PLA Navy force level of 70 submarines – 4 SSBNs, 9 SSNs, and 57 conventional boats – 63 surface combatants over 3,000 tons, 12 ocean going replenishment ships, 60 odd missile corvettes, 46 large amphibious ships (LHA/LPDs/LSTs)[17] supported by ancillary and special purpose vessels; is itself quite sizeable. This whole Force Level can obviously not be deployed in the Indian Ocean. In fact, contemporary geo-political compulsions resulting in myriad maritime security challenges in the Pacific Ocean, will per-force necessitate majority of PLA naval force being deployed closer home. Thus, if China decides to allocate even 10 percent of its blue water forces for the Indian Ocean, it would empirically translate into eight surface units – six destroyers/frigates, one replenishment ship and one LPD.[18] As for submarines, One SSN may be deployed in addition, after excluding the SSBNs for strategic role from home waters, and conventional submarines required for tactical employment in the western Pacific itself.

14 China Military Online, 'Opinion: Intensive commissioning of PLAN warships in line with China's goal to safeguard its maritime rights and interests', 09 January 2014, http://eng.chinamil. com.cn/news-channels/china-military-news/2014-01/09/ content_5727866.htm (accessed 12 July 2021).

15 For full list of warships launched in China in 2019, see https://twitter.com/Loongnaval/status/ 1211646745815343104 (accessed 12 July 2021).

16 Michael A. McDevitt, 'China's Navy Will Be the World's Largest in 2035,' USNI Proceedings, February 2020, https://www.usni.org/magazines/proceedings/2020/february/chinas-navy-will-be-worlds-largest-2035 (accessed 12 July 2021).

17 Liu Xiaobo, 'Sino-U.S. naval warfare capabilities amid great power competition,' CSIS Update, ibid.

18 This estimate has been arrived at by the Author, purely as a conservative prudent assumption, considering the critical requirement for naval forces in the Western Pacific Ocean, as also taking into account, operational availability of ships, their endurance/sustainability at extended ranges, and mission profile at distant seas.

This pattern of PLA Navy deployment has in fact, become quite evident, since China commenced its anti-piracy escort duties in the Gulf of Aden in 2008. Starting with three ships, it progressively scaled up to 7-8 warships; mostly on account of prolonged 'post anti-piracy escort duty' commitments, bilateral/multilateral exercises, global/regional search and rescue (SAR) or HADR missions, 'Showing Flag' etc. One PLA Navy submarine also started getting deployed along with a support ship for 3-6 months in the IOR – and particularly in the Arabian Sea – since 2013. A mix of conventional and nuclear boats was deployed, of which the SSNs were observed in 2014, 2016 and 2018.

The total number of Chinese warship, submarines, deep-water research ships, support ships, intelligence collection and survey vessels present in IOR has exceeded 15, at times.[19] Considering the fast-paced shipbuilding programme – including aircraft carrier construction – and establishment of operating bases in IOR like Djibouti, Gwadar – and some more under negotiation; The PLA Navy would be able to deploy many more units to the IOR in future, while being able to manage its existent challenges in its immediate maritime neighbourhood.

It can thus, be reasonably assumed that the PLA Navy force level in IOR would easily double – to 16 as compared to current 8 – in 2025-2027 timeframe. Further, these ships would surely be more capable than those currently deployed; and would most probably include an aircraft carrier strike group (CSG) too. Combined with other types of support and special purpose vessels which are also being rapidly inducted in large numbers, the 'PLA Navy+' force level could aggregate to 26-28 vessels. The threats primarily associated with such a large Force, and consequently the risks arising therefrom are mentioned below:-

- A Chinese CSG strategically positioned in the Southern Indian Ocean to consolidate MDA picture from its own and space-based assets; and also ready to surge in either the Arabian Sea or Bay of Bengal, when required.

19 The PLA Navy and associated support ships – referred to as 'PLA Navy+' – in fact, created a record of sorts, when 19 ships were present in IOR between June-August 2017. This information was compiled by the Author from various Chinese news sites.

- The CSG could also detach one or two surface action groups (SAGs) to accomplish anti-ship, ASW or escort missions, on demand.
- SSN, attached to the CSG, may be used to selectively target Indian warships or interdict Indian SLOCs proceeding towards/ from the Malacca Strait.
- Independent SAG, being logistically supported from its base in Djibouti, could be off Somalia for interdicting Indian shipping passing Suez Canal and Persian Gulf.
- An independently tasked SSN could be anywhere along the western Indian coast, to disrupt India's critical energy supply routes and target enemy warships.
- An Amphibious Ready Group (ARG) could be in the Andaman Sea for posturing, strategic signaling and quick insertion into a targeted island; with its air safety cover being ensured either by Chinese carrier based aircraft, or PLA Air Force assets overflying Myanmar – well within the realm of possibility.
- Intelligence collection ships, interspersed in the Arabian Sea and Bay of Bengal, for monitoring operational activities of Indian naval ships, and relaying them.

Indian Maritime Force Preparedness towards Risks Mitigation

Force Preparedness Assessments – as the Concept Note explains – relate to what the Forces can do to mitigate risks associated with future conflict scenarios, rather than what they have at present. Towards fulfillment of this objective, the Indian security establishment has to dwell on certain risk mitigation pathways – accepting, avoiding, controlling, reducing and monitoring risks – so as to ascertain their efficacy in a given scenario. As for maritime domain, broad conflict scenarios with associated risks have been broadly explained above. Thus, while acceptance of risks in maritime warfare is axiomatic and avoidance of

the same is rarely an option; it would be prudent to try and reduce risks through comprehensive monitoring and credible control mechanism.

Maritime Force preparedness therefore, must firstly, aim at generating maritime domain awareness (MDA) – including new-found underwater domain awareness (UDA) – as an all time continuous activity; followed by best utilisation of these vital inputs to implement robust operational strategies to control traditional security risks.

Monitoring Risk – Maritime Domain Awareness (MDA)

MDA has the potential to be a game-changer in augmenting combat capabilities of the Indian Navy, not only in IOR, but also in the extended Indo-Pacific Region. It comprises the ability to effectively detect, locate, track and identify the presence of likely hostile targets in an uncertain and unpredictable maritime area interspersed with presence of neutral ships and merchantmen. Major elements of MDA include:-[20]

- Satellite-based surveillance technologies, duly supported by maritime reconnaissance and AEW aircraft, and long range UAVs, both ship-borne as well as shore-based.
- Joint and single service identification systems with an ability to discern between friend and foe.
- Sub-surface surveillance including both, mobile and static systems, deployable from ships, submarines and aircraft at critical vantage points in IOR.
- Robust networking infrastructure to provide high-speed large-bandwidth connectivity for sharing multimedia data with requisite built-in confidentiality.
- Development of effective cyber-space monitoring capability for safeguarding, and also obtaining information in cyber domain.

20 Ensuring Secure Seas: Indian Maritime Security Strategy (Integrated Headquarters Ministry of Defence (Navy), New Delhi, 2015), p. 134.

Controlling Risk – Key Force Preparedness Imperatives[21]

Anti-Submarine Warfare (ASW) Operations. Induction of modern submarines and other potent undersea hardware – including unmanned submarines, manned submersibles and UUVs – by Pakistan and China; and their potential employment for sea denial role in the Indian area of naval operations, calls for priority enhancement of Indian Navy's ASW capabilities. Thus, long-term vision and plan for enhancing Indian Navy's ASW capabilities at strategic, operational, and tactical levels for conduct of deep Ocean as well as shallow water ASW operations, is a must.

Air Defence and Anti-Air Operations. Indian Navy has made definite progress in the conduct of anti-air operations by inducting ship-borne/ airborne weapon systems and matching surveillance systems. This has been further enhanced with the induction of modern carrier-based aircraft, UAVs and airborne surveillance systems. Need of the hour is for procurement of more force multipliers (AWACS) – including carrier-based Airborne Early Warning (AEW) aircraft – to increase surveillance and Fleet Air Defence envelope, thus ensuring distinct advantage in air defence and anti-air operations.

Joint Expeditionary Mission Capabilities. In recognition of the fact that influencing events on land is one of the primary roles of a Naval Force, the Indian Navy must develop additional capabilities to conduct large scale amphibious operations in the IOR littoral. This would entail creation of strategic sealift capabilities through acquisition of heavy-lift helicopters and air cushion vehicles. In addition, more role specific land force formations would require to be allocated and closely integrated with amphibious, marine, and Special Forces of the three services. Creation of a Joint Rapid Deployment Force (RDF) would considerably enhance the Indian military's capability to conduct multi-domain expeditionary missions.

21 See 'Freedom to use the Seas: India's Maritime Military Strategy' Document (Integrated Headquarters Ministry of Defence (Navy), New Delhi, 2007), Chapter-8, 'Strategies for Force Build-up.' pp. 117-121.

Mine Counter-Measure (MCM) Warfare. Mining is one of the most economical ways of threatening powerful fleets while they are leaving their secure bases, and disrupting ship traffic in choke points or harbours. Thus Indian Navy's ability to keep designated channels open for safe departure of warships during a conflict would have a direct bearing on the conduct of further maritime operations. Critical deficiency in MCM hardware – mine-sweeping and mine-hunting ships and equipment – in contemporary times may cost the nation dearly in either of the above discussed scenarios; and must be made good at highest priority, by double -quick acquisition.

Special Operations. The ability to deploy Special Forces through multi-dimensional platforms to ensure their effectiveness against State/ non-State threats is well understood. Therefore, development of Naval Special Forces (MARCOS) as potent force multipliers must be a priority area for this decade.

Joint Operations. Future wars – including expeditionary operations – will invariably be undertaken by joint forces. Coordination and cooperation amongst the three Services and other associated forces like the Indian Coast Guard, including promulgation of common doctrines, coordination of strategies, commonality in equipment and standard operating procedures, are essential to the success of joint missions.

Conclusion

India does recognise very well, that evolving risk bearing scenarios in IOR and contemporary concepts of force employment require a maritime Force which should be optimally equipped to perform full spectrum of missions at sea. However, it is posited that 'Force preparedness' is not a one-time discrete activity, but a constant effort to sustain and progressively build on previously achieved levels. Since navies are built over several decades in a cost intensive manner, their 'preparedness' per-force, would depend on long-term financial commitment from the Government. Further, maintenance of 'Core Competencies' over long term would entail specific focus on niche areas related to warship and

submarine building, aircraft production and development of a future-ready defence industrial base. Towards this, recent reorganisation and corporatisation initiative of the Indian Government is a step in the right direction.

Finally, investment in future technology should be progressed as a national level project. This will not only catalyse naval 'preparedness' enhancement over next 10 years, but also ensure that risks associated with asymmetric advantage that China seeks vis-à-vis India in maritime domain, are balanced out. Thus, there is a need to seriously invest in military applications in Information Technologies, nano-materials, unmanned systems, quantum computing and Communications, artificial intelligence and other evolutionary technologies. Though it is easier said than done, but no effort is too much, and no price is too great to pay for ensuring national security – particularly in the maritime domain. As Raja Menon, a noted Indian maritime thinker, ruminates:- [22]

India, post-Galwan and Pangong Tso experience, must develop some punitive capability options in the Indian Ocean, lest it be consigned to look at future India-China security matrix from a position of tactical inferiority.

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22 K. Raja Menon, 'Our larger China picture: A new strategy, combining diplomatic and military means, is needed to counter Beijing,' The Indian Express, 17 September 2020, https://indianexpress.com/article/opinion/ columns/india-china-border-dispute-galwan-valley-ladakh-6598913/(accessed 14 July 2021)