



# INDIAN NAVAL DESPATCH

Summer 2021

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## **Indian Naval Despatch**

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Goa, India

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The Naval War College was established at Mumbai in 1998 and relocated to Goa in 2011. It is the premier higher education institution of the Indian Navy, promoting operational and strategic thinking.

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नौसेना युद्ध महाविद्यालय  
भा नौ पो मॉडवी  
वेरेम, गोवा - ४०३१०९  
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## **FOREWORD**

The *Indian Naval Despatch* is a manifestation of the vision of the Indian Navy's apex leadership for institution of a flagship journal, with the aim of becoming a vehicle of scholarly thought on 'matters strategy and maritime.' This vision has become a reality with the launch of the first edition of the journal in Dec 2020, setting the *High Water Mark* of its expected standards. As we publish its second edition along the journal's maiden voyage, it gives me great pleasure to pen down a few musings; my first, as Commandant of this prestigious institution.

For those who have perused the inaugural edition and for our new readers as well, the journal's broad canvas includes topics on education and awareness of strategy; naval, defence and maritime thoughts; jointmanship; their significance on India's overall national security as well as acknowledging the need to develop and leverage our 'Comprehensive Maritime Power.' India is not unfamiliar with the domain of the seas and the oceans, as is evident from our rich maritime heritage and blessings of our geography. And therefore, while the journal focusses on research and readership in our armed forces and those involved in our national security edifice, one of its envisaged aims is also to bring awareness and understanding of the maritime domain to our citizenry, our immediate neighbourhood and beyond.

Our esteemed readers may also recall that the *Indian Naval Despatch* in its new *avataar*, amalgamates the erstwhile *Naval Despatch* and the *Naval War College Journal*. While the first edition was a completely 'in-house'



effort of the College, it gives me great pleasure to share with you, that RAdm Sudarshan Shrikhande (Retd), who is among the Indian Navy's most eminent scholar veterans, has consented to become the first 'Editor-in-Chief,' of the *Indian Naval Despatch*. The Admiral's onerous tasks include steering the journal along its passage towards being recognised amongst the leading and most well-acclaimed journalistic endeavours in the maritime domain, not only in India but also in our region. In consonance with this line of effort, it would also be our endeavour in the coming months to put in place a new organisational structure for the journal, with an Editorial Team comprising a mix of veterans and serving officers.

*Thiruvalluvar*, one of India's greatest strategist and philosopher wrote, somewhere in 300 - 500 BC, - "***Think lofty thoughts always; even if they fail to materialise, it is still as good as having materialised***" - (*Kural* 596). *Thiruvalluvar* is being invoked to exhort our readers, within the *IN* and without, to use the *Indian Naval Despatch* as a platform to exchange free and forthright thoughts on matters maritime. I especially urge our young 'sea warriors' to indulge more in reading, thinking and writing. My suggestion to them - 'Reading and writing are like sport; the more one practises, the better one gets at them.'

Coming back to this edition, the overwhelming number of contributions to the call for articles and papers, alludes to the acceptance and burgeoning reputation of this platform. I do hope that the intellectual content and professional subjects dealt with, would enthuse our readers and spur them to become 'authors' from 'readers.'

Śaṃ No Varuṇaḥ.







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## **FROM THE EDITOR'S 'DECK'**

### ***On many a distant shore and in many a professional wardroom?***

This is the first editorial that I am writing in the second issue of the *Indian Naval Despatch (INDES)*. The inaugural issue was published in Winter 2020. The Indian Navy asked me to helm the journal as 'Editor-in-Chief' a few weeks back and how could I not have accepted this great opportunity and the challenges that keep it company? The objectives that the Navy has set for itself have been mentioned by the Commandant in his Foreword.

Personally for me, the need for a journal that flies the Indian Navy's ensign, in a manner of speaking, was sowed decades back. As a very young officer I became an avid reader of the USNI's *Proceedings* magazine. A few decades later, I wrote a lament within a Review Essay written for *Maritime Affairs* (Summer 2013) published by the National Maritime Foundation. It was also carried by the British *Naval Review (NR)* in Feb 2014, with the NMF's permission. In the book *Dreadnought to Daring: 100 Years of Comment, Controversy, and Debate in The Naval Review*, there is a range of thoughtful essays that delve into how the *NR* might have contributed to the Royal Navy and beyond from 1913-2012. The extract below from that essay reflects what today's naval leadership has ordered the NWC and our editorial team to "make it so!"

"In our own Service we have many publications - some feel perhaps too many - of erratic frequency, varying quality of contents and yet with much that could be useful. Perhaps there is a case for some consolidation, stress on self-censorship but more candour. This writer feels that unlike some other navies, we still lack something that we ourselves and the world could recognise as the *IN*'s 'flagship magazine.' The *Naval Despatch* could, but does not as yet, meet that aspiration, especially of a Service that is respected, admired and tracked on many a distant shore and in many a professional wardroom."

The task we set for ourselves with confidence and with humility is to slowly have the *INDES* read with satisfaction on many a distant shore and with contributions not limited to many a professional wardroom. We will look forward to articles from senior sailors' messes as well.

How is that to be achieved? I am not entirely certain, but I am convinced

that the quality of articles shall matter the most. For one, these could span reiteration or renewed examination of nearly unchanging principles as well as evolving dimensions and contexts of the application of seapower. Secondly, the lessons of history, sometimes others' but even more so in the Indian context, could yield benefits that might profitably inform a better understanding of the present and improved readiness for the future. We are going to celebrate the 50<sup>th</sup> anniversary of the 1971 war with Pakistan; sometimes called a "coming out party" for our Navy. That may be a compliment perhaps, but could we use it to analyse the deeper issues that resulted in the marginal role the IN played in the 1965 war; the gaps in jointness, or some examples of poor tactical planning and execution in 1971? Or, look into the role seapower played in the rise as well as fall of the Chola empire? The larger point being suggested here is that much of Indian military history output, especially since 1947, has been celebratory. This, of course, has its place and merit, but it need not be the overwhelming strain. Other avenues are available for describing tactical valour, but *INDES* could dig deeper into operational and strategic level shortcomings even as brilliance at this level was also evident, especially in 1971. Hopefully, the *INDES* will provide a platform to examine and analyse history that is not dominated by the more preferred 'mentioned-in-despatches' genre. Let me add a remarkable point made by a sailor-historian, Rear Admiral James Goldrick, RAN (Retd), that the Chinese - as did Mahan himself - seem to be examining anew some of Mahan's works as much to understand why the French failed as the British succeeded.

Thirdly, observations and critical reflection that span tactical, operational and strategic levels of warfare, as well as matériel and training aspects of seapower ought to occupy our thinking and writing. The USNI *Proceedings* sums it up well in its byline, "Dare to read, think, speak and write." The spirit is reflected in the foreword by the CNS in the inaugural edition of this journal.

Fourthly, candour is not only important, it is vital even within the bounds of prudence, self-censorship and the general tenets of "good order and naval discipline." These bounds are not at the expense of the benefits that come from rocking the boat about things that *do* matter or *could* matter. There are different ways of addressing some of these needs. The *Naval Review* gives the option of writing under a *nom de plume*; the names are known only to the editor. The USNI encouraged self-censorship and editorial determination of what may best not be published due to potential security issues. At the same time, I must juxtapose this with a Soviet



example. As a Lieutenant, undergoing a weapon and sonar engineering and ASW tactics PG course in the Soviet Naval War College (Academy, in European parlance) from 1985-88, I regularly read their *Morskoi Sbornik* (Naval Digest). These were the days of the USSR; the handful of *IN* officers on diverse courses were an oddity because we were the only ones from an actual, liberal, democracy. The *Sbornik* had excellent essays on what was happening in the “West,” but internal Soviet naval and military matters required careful adherence to party lines and several articles began with stock paeans to decisions of the preceding Communist Party of the Soviet Union (CPSU) Session! The *Sbornik*'s value was somewhat diminished by the constraints of the Soviet environment. Fortunately, “rigorous discussions” (as underlined by the CNS), contrasting views, and we hope the very best of contributions not only from us ‘argumentative Indians’ but from distant shores as well, will populate our peer-reviewed journal. The endeavour of the NWC and the editorial team shall be to translate that into reality.

In that spirit, it is fitting that the lead essay is by a former diplomat, *Mackinder, Eurasia, and China's One-Belt-One-Road: Mackinder and the Twenty-first Century*. It is a very nuanced and unusual examination of Mackinder's work and contemporary utility. It draws us to the geo-strategist's works as points of reference as well as of departure. Not only in India but across the world, we sometimes make rather simplistic inferences that put several strategists in neat and separate continental/ maritime/ air and at times even “indispensable/ useless bookshelves.” This essay helps us understand the pitfalls of convenient simplifications that occur if there is over-reliance on secondary sources without sufficiently delving into original works. The lead article provides a good transition to the next essay *Maritime Strategy and Terrestrial Influence*. The author is a recent graduate of the Naval Higher Command Course at this College. That it is based on the work he did recently is testimony to the education, opportunity for reading and reflection that can be leveraged here. One hopes that the original works of ancient masters of strategic thought such as Kautilya, Thucydides, Sun Tsu, the later trio of Clausewitz, Mahan and Corbett and more recent individuals like Panikkar, Mao, K Subrahmanyam, Jasjit Singh, Colin Gray... to name a few, shall find authors willing to take up their pens. A caution, that I would like to share, has developed over some years of teaching and exposure to original works. Adjectives like *Mahanian*, *Clauswitzian*, or *Kautilyan* are not really helpful and rarely correct. None of them - again to name just these three - were prescriptive, or commended

their thoughts as dogma. Yet, they might remain useful for millennia not completely perhaps, but substantially. So, we hope to receive essays by those who write as analysts, not as acolytes. *INDES* will have space for these and other masters always. As a platform for thought, I am tempted to quote one such master:

“No definite formulation of the revolution in thought is known to exist, but in the change that came over the organisation of the fleet it is very clearly expressed. It is impossible to examine these changes without feeling ourselves in contact with a new and more scientific conception of naval warfare... Whether or not it was done as the conscious expression of a scientific conception of naval warfare is unknown, but it is none the less interesting, if it was due to the silent pressure of strategical law acting through the hard experience upon a creative mind, and forcing the fleet into the shape demanded.”

This extract from Julian Corbett brilliantly captures the need and benefits of Professional Military Education (PME); the importance of a professional mind to be “the home of thought;” the value of hard experience of officers and commanders; the importance of strategic principles for improved future readiness. (Corbett, in the final chapter, “Lessons of the War,” from *England and the Seven Years War: A Study in Combined Strategy, Vol II*, Longmans, 1907, 366-368.)

Other articles in this volume span nuclear deterrence, Chinese joint theatre organisation, the Indo-Pacific, India-UK relations, tethered drones in surface ships, concerns and maritime responses about Mozambique, suggestions about the upcoming Indian Joint Maritime Theatre Command, etc. Towards the final pages is one navy veteran’s personal reflection on the training missile boat crews received on the Soviet Union’s Pacific coast, two years before the 1971 war. There is also some space for book reviews. Here younger officers have reviewed somewhat older books; since older books of course, provide value, we have carried them and reading is itself important. However, the urging is to review books published more recently.

So, may I commend this journal to you, and ask you to consider translating your thoughts, concerns, experience, and hopes into essays and shorter articles for the *INDES*? (There is a brief guide at the end to help a reader. We will soon have comprehensive writing guidelines on the Naval War College, Goa web page on [www.indiannavy.nic.in](http://www.indiannavy.nic.in), which will be accessible across the board for all.

Assuredly, the next editorial will be shorter! But, I end with a thought

*From the Editor's 'Deck'*

long on hope. The *Naval Review* observed its 100<sup>th</sup> year in 2012-13; and the *Proceedings* will complete 150 years of contributing to seapower and more in 2023; the US *Naval War College Review* will be 75 in 2022. What might well be said about the *Indian Naval Despatch* in the year 2071 and 2121? That depends upon the current and future teams at Goa and readers and contributors on many a distant shore and in many a professional wardroom and more!

Finally, it bears reiteration that the views expressed in this journal are solely of individual authors and do not represent or reflect the official policy or position of the Naval War College or the Indian Navy.

Fair winds and full sails,

Sudarshan Shrikhande, *IN* (Retd)



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## MACKINDER, EURASIA AND CHINA'S ONE-BELT-ONE-ROAD: MACKINDER FOR THE TWENTY-FIRST CENTURY

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*Ambassador Prabhat P Shukla (Retd)*

**Editorial Note:** With regard to some specific issues about the China-US relationship, it may be mentioned that the essay was written during the final months of the Trump administration. Nonetheless, the core analysis of Mackinder as a point of reference and departure, especially when seen in the context of the One-Belt-One-Road (OBOR), remains very valid in any case. However, the author's addendum adds further value to our understanding. He has very kindly added references as well to the post-scriptum.

*Who rules East Europe commands the Heartland: Who rules the Heartland commands the World-Island: Who rules the World-Island commands the World.*<sup>1</sup>

- Halford Mackinder, *Democratic Ideals and Reality*, 1919

The lines quoted above reflect Mackinder's own summary of his world view, developed since his first seminal essay in 1904, *The Geographical Pivot of History*. The relevance of his thinking and framework to the situation in the twenty-first century arises from the last paragraph of the 1904 essay. In it, he argues that, under Japanese guidance, China could also one day seek to dominate the pivot area, the term he used to describe what became, in his later writings, the Heartland.

But Mackinder did not himself elaborate on this possibility. He confined himself to what he called the 'Slav-Teuton' confrontation as the cause of the First World War, a subject to be explored later in this essay. It is also remarkable that, though he was among the earliest to factor in the strategic significance of the Railways as the driver in reviving the Heartland, he pays scant attention to the Berlin-Baghdad Railway. The Railway contract was awarded by the Ottoman rulers to the Germans in

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<sup>1</sup> All references, including page numbers, are taken from the online version of Mackinder's works published by the National Defense University Press, Washington DC, 1942.

1903, and Mackinder wrote his first article in 1904. Yet he did not refer to it in that article. And even when he wrote the book *Democratic Ideals and Reality* in 1919, after the First World War was over, he still did not mention it, except in a throw-away fashion.

Accordingly, it would be in order to first study the principal thoughts laid out by Mackinder in his three main works - the first being the 1904 *The*

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***Mackinder argued: the heart of Eurasia - the Heartland - is the driver of much of modern history***

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*Geographical Pivot of History*, the second being the 1919 book *Democratic Ideals and Reality*, and the third being *The Round World and the Winning of the Peace*, published in the magazine *Foreign Affairs*

in July 1943. Thereafter, the three directions he picks up can be examined in detail, with a detailed look at the Chinese OBOR strategy at uniting Eurasia under its dominion.

In brief, Mackinder's position is that the heart of Eurasia - he called it pivot area or the Heartland in the different works - is the driver of much of modern history. From antiquity, forces arose in this region and spread westwards, essentially through the use of force. And with each wave of such invasions, western history got a new impulse, and moved forward. It is noteworthy that he even asserts that the sea-faring empires of olden times like the Roman, were dependent on control of the land areas around the Mediterranean.

This process of invasions by land was interrupted by the rise of the maritime powers starting from the late 15<sup>th</sup> Century. Mackinder calls this the Columban period, after Christopher Columbus; Toynbee calls it the Da-Gaman Age, after Vasco da Gama, who opened the sea route to India at about the same time, going around the Cape of Good Hope.<sup>2</sup> This period of maritime dominance, according to Mackinder, would be ended by the advent of the Railways. Whereas in olden times, the horse and camel were enough to move armies, they could not compete against the steamship; but the Railways could, and would cover the bulk of Eurasia before long - "the century will not be old," in his descriptive phrase, before the network would be up and ready.

In the process of elaboration, Mackinder offers three lines of inquiry. The first is to describe the First World War (then called the Great War) as a

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2 Arnold Toynbee, "The Unification of the World and the Change in Historical Perspective," *History* vol. 33, no. 117/118 (1948, February and June).

clash between ‘the Slav’ and ‘the Teuton’. This presumably is based on the fact that the Germans and the Austrians were on one side against the Serbs and their benefactor, the Russians. That is not wrong in terms of origin. But it fails to explain why the War dragged on for another year after the Russian Revolution in November 1917. In fact, Lenin’s triumph was seen by contemporaries as a master stroke by the Germans. This proved itself to be true after the Russians pulled out of the War in early 1918, with the Treaty of Brest-Litovsk.

The second line of inquiry he opens, but does not pursue, is represented by the Berlin-Baghdad Railway. As mentioned already, it is hard to understand why this does not figure explicitly either in his original essay of 1904, or his book, written after the end of the First World War. The issue certainly occupied much time and effort not only on the part of the British and Germans, but as much of the French and Imperial Russia. Nonetheless, he does offer this intriguing thought: -

“Berlin-Bagdad, Berlin-Herat, Berlin-Peking-not heard as mere words, but visualized on the mental relief map-involve for most Anglo-Saxons a new mode of thought, lately and imperfectly introduced among us by the rough maps of the newspapers. But your Prussian, and his father, and his grandfather have debated such concepts all their lives, pencil in hand.”

*- Democratic Ideals and Reality, 1919 [p 16]*

Even if Mackinder did not elaborate on this, others have; a persuasive case can be made that this was the real cause of the First World War, rather than the Slav-Teuton confrontation. Definitely, the way the British handled the aftermath of the War, gives clear indication that they understood the deleterious effects of the Railway on their trading and security interests, if it were to come to fruition. In point of fact, some kind of unstable agreement was reached between the Germans and the British by the eve of the War itself; but that reflected the realities of the power balance of the day. As soon as the War ended and Germany was defeated, the British restructured the Balkans and the Ottoman Empire - the building blocks of the Railway - with the aim of ensuring that a similar threat would never arise again. And it held good for the best part of the 20<sup>th</sup> Century, and gave way only in the 1990s, with the destruction of Serb power in the Balkans.

The third line of thinking left behind by Mackinder concerns China. In the 1904 article, almost as a closing thought, aimed at covering all



contingencies, he adds a final paragraph: -

“Were the Chinese, for instance, organized by the Japanese, to overthrow the Russian Empire and conquer its territory, they might constitute the yellow peril to the world's freedom just because they would add an oceanic frontage to the resources of the great continent, an advantage as yet denied to the Russian tenant of the pivot region.”

- *The Geographical Pivot of History*, 1904 [p 193]

Setting aside the unfortunate reference to the “yellow peril,” the notion that China could also control the Pivot Area was far-sighted, and is certainly worth elaborating on, especially in light of the OBOR being promoted vigorously by China in the 21<sup>st</sup> Century. There is another obvious error in the argument, and few would fail to catch it; China does not need Japan to organise itself or the strategy. With all these amendments, there can be little doubt that this is the principal geo-strategic threat to the democracies of Asia and Europe today.

Here, though, the world is in uncharted territory. Whereas the other two patterns have been tackled and blunted in the past, China has never made such a bold bid for global dominance any time in the history of Eurasia. The Silk Routes, whose heritage is frequently, and incorrectly, invoked by the Chinese leaders and their supporters around the world, were never the dominant reality, either economic or military, in ancient times.

This, then, is the substance of the strategic bequest left behind by Mackinder. Straightaway, it must be said that his principal advisement has not been proven by time. Imperial Russia and later, the Soviet Union, did control East Europe and the Heartland, but failed to dominate the world. It is worth pondering over the reasons for this, because they will provide lessons for the future in challenging the attempted domination by China.

The reason is that Geography isn't all: it needs to be coupled with technology and with patterns of trade, either by design or by inadvertence, usually the former.<sup>3</sup> The Soviet Union failed on both these aspects, and it may be worth considering whether the internal system of countries also

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3 By design – the restructuring of the oil trade under Marshall Aid 1948-52 to link Middle East oil supplies to Europe, or the UK joining the EEC, breaking its links with South Asia for textiles, and with Australia and New Zealand for dairy; inadvertence happened, for illustration, when the Ottomans captured Constantinople in 1453, and broke the overland trade links between Asia and the Italian City-states.

plays some role. The fact that the USSR frowned on the profit motive made it an unattractive economic partner, since it offered neither investible capital, nor a lucrative market. And while it was among the leaders in military and space technology, almost none of it fed into the civilian sectors. Thus, it maintained its hold on the Heartland purely by military means, and once that was weakened by the defeat in the Afghan War of the 1980s, its hold on the region also weakened. The internal system has another very important role to play: it confers legitimacy and therefore, coherence on the country's external stance and acceptability abroad. This aspect is growing in significance both, in China and USA.

### **The First Direction: East Europe**

To study the first of the three directions that flow from Mackinder's world view: the issue of an alternative territorial arrangement in Central and Eastern Europe was contemplated by Napoleon early in the 19<sup>th</sup> Century.<sup>4</sup> He did not see it through, but his memory is respected in Poland even today for making the attempt. But the logic of having a string of middle powers between the German and Russian worlds was well understood by the time the First World War ended. Mackinder, not surprisingly, was among the proponents of the strategy. He argued for the creation of a string of middle powers separating Russia and Germany in the 1919 book: -

“Between the Baltic and the Mediterranean you have these seven non-German peoples, each on the scale of a European state of the second rank - the Poles, the Bohemians (Czechs and Slovaks), the Hungarians (Magyars), the South Slavs (Serbians, Croatians, and Slovenes) ... the nations are locked into a single world system, rightly see in the League of Nations the only alternative to hell on earth, concentrate their attention on the adequate subdivision of East Europe. With a Middle Tier of really independent states between Germany and Russia they will achieve their end, and without it they will not.”

- *Democratic Ideals and Reality*, 1919 [p 112]

Going over the history of these nations makes it clear that not all of them are on the same footing as far as delivering on the aims of this strategy is

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4 Viktor Sautin, “The Polish Question: an Apple of Discord between Napoleon Bonaparte and Alexander I,” <https://otik.uk.zcu.cz/bitstream/11025/11368/1/Sautin.pdf>, accessed 25 October 2020.

concerned. Some have sided with the Germans in times of war and strategic choice; others have proved unable to play the role envisioned in this strategy. The one country that has shown both the will and the capacity to fulfil that role is Poland. Poland has the history of independent existence and of conquest in its own right. And it has an almost equal distrust of the Russians and the Germans. It also has the population base, being the most

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***Poland has the history of independent existence and of conquest in its own right***

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populous among the middle powers, apart from Ukraine, which is a divided society and still unstable. No wonder Molotov, in seeking the approval of the Supreme Soviet

for the Non-Aggression Treaty with the Germans (the Molotov-Ribbentrop Pact), described Poland as the “illegitimate child of Versailles.”

It is also worth recalling that Napoleon had wanted to re-establish the Polish state in 1807 after he defeated the Prussians, but was dissuaded by Tsar Alexander I, whose own Empire contained Polish lands. The compromise was the Duchy of Warsaw, which was itself once more absorbed into Prussia at the Congress of Vienna in 1815.<sup>5</sup> Perhaps even more significant in highlighting the strategic significance of Poland was the guarantee given to Polish independence by Britain in 1939 - the proximate cause of the Second World War. This was the first time that Britain had given such a guarantee to an East European country, and even Churchill, then still in opposition, expressed his astonishment at this development. The guarantee was given by the Chamberlain government after Hitler violated the Munich agreement of the previous September, and occupied Prague. Appeasement was at an end.

This brief account of the growing significance of Poland and these very features of Poland, coupled with a close relationship with the USA today, make it relevant to the 21<sup>st</sup> Century too. It is among the few countries that have an internal consensus on the USA, and have none of the supercilious disdain that many of the older NATO members have for the way the USA has been conducting policy in this century. It remains sensitive to the Russian threat, but in a quiet way, also wary of German power, frequently exercised through the European Union and its institutions in Brussels.

It therefore, occasions no surprise that USA has added to its military presence in Poland (along with the Baltics) and has supplied front-line military equipment to them. There is talk of reviving the V Corps, which

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5 *Ibid*

was one of the major military components deployed in Germany during the Cold War.<sup>6</sup> If that does happen, the likely host this time will be Poland.

This is where the modern rendition of Mackinder is with regard to the Eastern Europe division between the Russians and the Germans. There is a power play to be worked out in Ukraine and more recently, in Belarus. But it is extremely unlikely that Russia will let a united Ukraine pass under NATO-EU influence or control. It has already detached Crimea and the eastern portions lying east of the River Dnieper may also be lost in that kind of power play. Unless Russia goes through another of its convulsions - not to be ruled out - it is safe to say that a united Ukraine will not be part of the western alliance system. More on this below.

### **The Second Direction: The Balkans**

The second direction to be examined is the Balkans and thence, to Asia. Reference has already been made to the Berlin-Baghdad Railway, the strategy of Wilhelmine Germany to link up with the Ottoman Empire and thus, to Baghdad, outflanking the British-controlled sea routes to India and the Persian Gulf. The Railway was not complete by the time the War broke out, and thus, could not play the military or commercial role it was intended for.

And once the War was over, and Germany and Turkey defeated, the British (along with the French), ensured that the region was broken up into mutually suspicious sovereignties, so that the link-up would not be easy to establish again, even though the Railway was completed just before the outbreak of the Second World War (further discussed below). In the Balkans, this meant a strong Serbian presence under the umbrella of a Yugoslav state. The Serbs had shown their fighting mettle in the War by holding off the Austrian forces for over a year from August 1914 to October 1915. It finally took a combined offensive led by the Germans, along with their Balkan allies to subdue the Serbs.

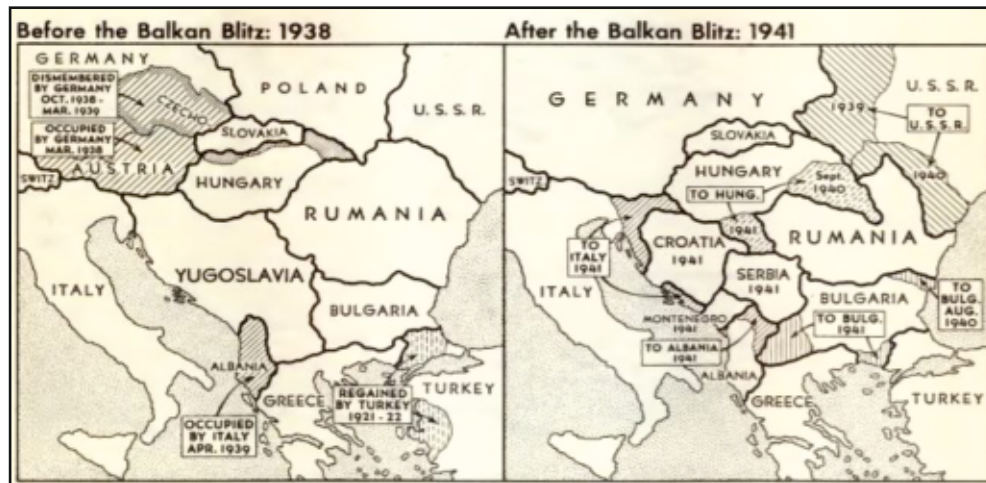
This was why the British invested in the creation of Yugoslavia after the First World War, initially as the Kingdom of Serbs, Croats and Slovenes. With Serbia at the centre and other Slavs - of all confessional identities - it was hoped that they would remain a powerful block to future German

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6 Mateusz Kucharczyk, "US Army 5<sup>th</sup> Corps Officially Established in Poland," *Euractiv*, 23 November 2020. [https://www.euractiv.com/section/politics/short\\_news/us-army-5th-corps-officially-established-in-poland/](https://www.euractiv.com/section/politics/short_news/us-army-5th-corps-officially-established-in-poland/), accessed 24 December 2020.



aspirations in the Balkans.<sup>7</sup> And sure enough, the system was tested against Nazi Germany early in the Second World War.



Map 1: The Balkan Boundary Changes<sup>8</sup>

The maps above show how Germany reconfigured Yugoslavia after they defeated the Serbs in 1941. At the same time, the Germans were active in Turkey, Iraq and Iran as well. Syria had already come under their control after the occupation of France in 1940, through the Vichy Government. Thus it was, that by 1941, the Germans had created some semblance of the geographic situation of the First World War - a fragmented Balkan region, a sympathetic Turkey (though officially neutral), and Syria under their control.

Also by this time, the Berlin-Baghdad Railway was complete, though it was fragmented under Turkish, Syrian and Iraqi rule. Of these, as described above, only Iraq was not under German influence. It was under British influence, though the formal League of Nations mandate had ended in 1932. The last stretches of the Railway were completed by July 1940.<sup>9</sup> All the

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7 R. Craig Nation, *War in the Balkans 1991-2002* (Pennsylvania: Strategic Studies Institute, 2003). [https://www.files.ethz.ch/isn/101059/War\\_Balkans.pdf](https://www.files.ethz.ch/isn/101059/War_Balkans.pdf), accessed 11 December 2020.

8 US Army, "Map showing Balkan nation boundaries before and after German blitz, 1938 in 1941," *Wikipedia*. [https://en.wikipedia.org/wiki/File:Balkan\\_boundary\\_changes\\_1938\\_to\\_1941.jpg](https://en.wikipedia.org/wiki/File:Balkan_boundary_changes_1938_to_1941.jpg), accessed 30 December 2020.

9 Berlin-Baghdad Railway, *Wikipedia*. [https://en.wikipedia.org/wiki/Berlin%E2%80%93Baghdad\\_railway](https://en.wikipedia.org/wiki/Berlin%E2%80%93Baghdad_railway), accessed 20 November 2020.

ingredients were in place for a German move into the heart of West Asia: by this time, Iraq and Iran were also major oil suppliers to the world, including Germany.

In both, Baghdad and further East in Tehran, pro-German sentiment was astir. In Baghdad, it took the form of a coup against Prime Minister Nuri al-Said (slated to meet a terrible end in the revolution of 1958), who fled from Baghdad. Power was taken over by the so-called Golden Square, four pro-German Iraqi Generals, with Rashid Ali as nominal Prime Minister. Rashid Ali, who had been Prime Minister until January 1941, had been consorting with Italy and Germany from his earlier tenure as Prime Minister. Several other

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***The Balkans today strikingly resemble the map after the 1941 German occupation***

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Arab anti-British leaders flocked to Baghdad at this time, including Haj Amin al-Husseini, the Palestinian Arab leader. Rashid Ali and the Golden Square were disposed of after a short war which deposed them in May 1941, ending yet one more effort by the Germans to break through to Iraq.

But the present situation again is redolent of the past power play. Serb power has been broken again, this time by the USA playing the demolition role, along with European diplomatic support. The Balkans today bear a striking resemblance to the map of the region (Map 1) after the German occupation in 1941. The odd thing here is that, while the diplomatic initiative in breaking up Yugoslavia came from Germany, backed up by its EU partners, it was the USA that provided the military muscle to make it happen.<sup>10</sup>

Turkey is now again pushing its influence into the Arab world, so far with limited success. In Syria, it faces the combined half-hearted and uncoordinated Russians, and the Americans, who may be regarded as the successors of the British in the strategic sense. In Syria, the Russians are today the principal backers of President Assad, and the opponent of Erdogan's ambitions in Syria. The Americans retain some loose control over the Kurdish areas, and have sanctioned Turkey for, *inter alia*, hostile activities in North-East Syria, the Kurdish-dominated province they call Rojava. In Iraq, the confrontation is more like a three-way contest, between the USA, Iran and a growing assertiveness on the part of Turkey.

A powerful drive for Kurdish autonomy for the Kurds would address

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<sup>10</sup> Nation, *Op Cit.*, n.7.

these multiple concerns, and obviate the dangers of any kind of territorial recidivism. In a way, it would be the logical extension of the policies put in place after the First World War, primarily through the Treaty of Sevres. At some stage, it may also be advisable to revisit the Balkan settlement of the 1990s, and work out a new arrangement, less unfair to the Serbs.

Once again, the Trump Administration is addressing this issue too. Recently, the White House hosted a meeting of the Serbian President, Alexander Vucic, and the Kosovo Prime Minister Avdullah Hoti. They signed an economic cooperation agreement, and Trump expressed the thought that the two would draw closer. In his words, "I think they're going to have a tremendous relationship. And the economy is going to bring them together. It's going to unify the two countries."<sup>11</sup> For his part, Vucic happily pointed out that he had opened the doors to Washington that have been shut for thirty years.

Predictably, the Europeans and their American supporters have been critical of Trump, for injecting himself into the issue, instead of leaving it to the Europeans. The apprehension is that the USA may be changing its position towards greater understanding of Serbian sentiment. This is probably true of the approach of the Trump Administration, and fits in with the narrative described in the foregoing paragraphs.

Also worth emphasising is that the Railway connectivity is no longer the nub of the matter; it is now pipelines. This is what places Turkey at the centre of the strategies, because if they can become the focus of the various pipelines carrying natural gas from Qatar and Iran, as well as from Turkmenistan and the Caspian region more generally, that would constitute a twenty-first century iteration of the old thrust into West Asia from Europe.<sup>12</sup> Both Russia and the USA seem to understand this, though the domestic consensus on these policies is shaky in the USA and overly dependent on one man in Russia.

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11 "Remarks by President Trump, President Vucic Serbia Prime Minister Hoti-Kosovo Trilateral Meeting," *The White House*, 04 September 2020.

<https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-president-vucic-serbia-prime-minister-hoti-kosovo-trilateral-meeting/>, accessed 11 December 2020.

12 Prabhat P. Shukla, "Syria and the Wider Region: The Hydrocarbon Dimension," December 2018. [circumspice.net/Documents/20181031\\_PPS\\_Syria\\_and\\_the\\_Wider\\_Region.htm](http://circumspice.net/Documents/20181031_PPS_Syria_and_the_Wider_Region.htm), accessed 10 November 2020.

### The Third Direction: China and Eurasia

The final aspect is the most significant of the current issues flowing from Mackinder's vision as written in his 1904 essay discussed earlier. Leaving aside, without ignoring or condoning, the overtly racist reference to the Chinese, and focus on the substance, because the Chinese Belt-and-Road Initiative (BRI) aims at something like what Mackinder imagined could one day come to pass. It sounds highly implausible in the nuclear age, especially if one thinks in terms of overthrowing the Russian state. But that does not rule out the possibility that a 21<sup>st</sup> Century version of control, especially economic control, over the Central Asian and East European region. More or less, that is what is happening. The Chinese have made it clear that the principal axis of interest to them is Asia-Europe, as may be seen from the following excerpt from the first BRI Forum, held in May 2017: -

“Noting that the Silk Road Economic Belt and the 21<sup>st</sup> Century Maritime Silk Road (the Belt and Road Initiative) can create opportunities amidst challenges and changes, we welcome and support the Belt and Road Initiative **to enhance connectivity between Asia and Europe, which is also open to other regions** such as Africa and South America.”<sup>13</sup>  
[Emphasis added]

In pursuit of this strategy, China has also developed rail connections between its cities and a number of European cities, numbering over forty. The rise of rail traffic is quite pronounced; between 2015 and 2018, there has been an increase of about 11000 trains to and fro between Chinese and European cities. In 2018 itself, there were some 6000 freight trains between these destinations, an increase of 72% over the previous year.<sup>14</sup> There are several arguments in favour of rail freight, but there are also several drawbacks. And if the proof of the pudding is in the eating, the fact remains that shipping leaves rail freight far behind. Ships are slower, but the Malacca Max ships can carry 20,000 TEU's, as against a freight train that can carry a maximum of 200. And in terms of price, shipping has an

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13 Yamei, ed., “Joint Communiqué of Leaders Roundtable of Belt and Road Forum,” *Xinhuanet News*, 15 May 2017. [http://www.xinhuanet.com/english/2017-05/15/c\\_136286378.htm](http://www.xinhuanet.com/english/2017-05/15/c_136286378.htm), accessed 10 November 2020.

14 “Belt and Road Initiative (BRI) and One Way Moves?,” *Xchange*, 26 June 2020. <https://container-xchange.com/blog/belt-and-road-initiative/>, accessed 21 November 2020.



advantage of 50% over rail charges. Hence, it is that shipping accounts for between 75% and 90% (estimates vary) of the goods exchanged between the two destinations.

However, China's strategy is to increase the role of the overland routes, away from the vulnerabilities and potential challenges it faces along the sea routes, and which it cannot overcome in the short or medium term. The very evocation of the silk routes is an indication of the desire for overland connectivity, for there never was a maritime silk route: a spice route, yes, going back to trade between the Chola and other Empires in India and the Roman Empire.<sup>15</sup>

Apart from the cost and time issue, there are some other challenges to the Chinese strategy too. The most important relates to the "choke points" that the landward strategy also faces, just as does the maritime. First among these is Xinjiang: China has no access to the heartland without crossing that area. And it should occasion no surprise that, ever since President Xi advanced his proposals, Xinjiang has been on the boil. Equally telling has been the response from the Beijing authorities, unprecedented in its harshness, even for the People's Republic. The resort to concentration camps and similar cruel and degrading methods reflect behaviour of a time that was thought to have been put away forever.

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***Russia is working with China, but has reservations regarding Chinese policies***

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The second choke point is Russia. It is of lesser importance than Xinjiang, but as a fall-back, it has its own significance. Among the six principal corridors identified by China, one is the China-Mongolia-Russia corridor. This is the other land connection to Europe for China. At present, Russia is working closely with China, but it has well-known reservations regarding the Chinese initiative, and Chinese policies more generally, including in the western Pacific. For its part, China also wants to develop alternatives to Russia, for reasons that are the obverse of the ones on the Russian side.

The third choke point is Kazakhstan; although China has borders with Tajikistan and Kyrgyzstan too. These are mountainous areas, and difficult of access to railways; they are also socially and politically unstable.

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<sup>15</sup> "Roman Trade with India," *New World Encyclopedia*.  
[https://www.newworldencyclopedia.org/entry/Roman\\_trade\\_with\\_India](https://www.newworldencyclopedia.org/entry/Roman_trade_with_India), accessed 23 December 2020.

Kazakhstan has maintained close ties with Russia, even after President Nazarbaev has stepped aside. But the new President, Kassem-Jomart Tokaev, is a former Soviet-era diplomat, a Mandarin speaker, with several years' experience of serving in the Soviet Embassy in Beijing. While he has made the right moves diplomatically with Moscow, he has also slowed down the pace of integration under the Moscow-led Eurasian Economic Union. At the same time, he has left the running of the BRI to Nazarbaev, and has not attended past summits.<sup>16</sup> This triangle, Russia-Kazakhstan-China will bear watching in the coming time.

The Chinese have, in light of these issues, developed a safer alternative, bypassing Russia altogether, after the rail link enters Kazakhstan; the rail route bends towards the Caspian Sea, crosses into Azerbaijan and marches through Georgia into Turkey as depicted in the route, which has been developed essentially in 2020 (Map 2).



Map 2: Rail Route from Xian to Prague<sup>17</sup>

There is also the issue of returning empty containers: given the imbalance in trade between the two regions, something like half the TEU's have to go back empty. Alternatively, some other use has to be found for

16 Li Qingqing, "Concrete benefits to landlocked Kazakhstan," *Globe Times*, 27 April 2019. <https://www.globaltimes.cn/content/1147727.shtml>, accessed 23 October 2020.

17 "Turkish State Railways," *TCDD*. <https://www.tcdd.gov.tr/en/>, accessed 23 October 2020.

them, and the cycle maintained. Sending back empty containers is a waste of money. Buying new ones and leaving the old ones in Europe is expensive for Chinese exporters and not even possible in many cases because the containers are often leased. This problem is not as acute for shipping because they can deliver containers to other destinations along the way.

A final problem worth noting in the overland strategy is the infrastructure issue, hard and soft. The rail gauges are different between China and Europe on the one hand, and the former Soviet space on the other. The required trans-shipment adds to delays along this route. Customs arrangements are also lagging for the smooth transit of goods between Europe and China. The latter can be fixed over time, but the former does not offer any solution - this time wastage will have to be built into the system.

It is hard not to see that the land option is not going to succeed against the established maritime trade routes, not on economic terms and fair competition alone. And yet, the strategic benefits are tempting for any Chinese leader. If they can shut out the Americans from their trade links, they will have scored a historic victory, and the schema hinted at by Mackinder will become a reality. Accordingly, an assessment of the likelihood of success of the Chinese strategy would be in order here.

For the Chinese strategy to succeed, two requirements need to be met. The first is the more obvious one of economic and technological advancement by China. The second is some means of shutting down the maritime routes, which will probably involve some violent confrontation.

As for the first, the evidence regarding economy and technology is less positive than it seemed in the aftermath of the financial crisis of 2008. Since then, in order to maintain its growth targets, China has run up large monetary debts, with the result that its debt-to-GDP ratio today is 300%, and still rising.<sup>18</sup> Worse, there is evidence of a liquidity trap, since further rounds of monetary stimulus produce weaker results. Equally important, trade flows are declining, as global trade itself slows. This was happening even before the Trump Administration applied the squeeze on China's exports - with limited results. However, there is clear evidence that trade - and the attendant current account surpluses - are both declining, and set to decline further as drivers of Chinese growth. Domestic demand is stagnant

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18 Amanda Lee, "China's debt: How Big is it and who owns it?," *South China Morning Post*, 19 May 2020. <https://www.scmp.com/economy/china-economy/article/3084979/china-debt-how-big-it-who-owns-it-and-what-next>, accessed 11 October 2020.

at best, so the recourse has been to pump up investment. But the limitations of this are now showing up in an unprecedented level of bond defaults by corporates, including State Owned Enterprises (SOEs). Even semiconductor manufacturers are facing difficulties, and some are defaulting.

This leads to the other aspect, technology. It is true that China has made impressive progress in this sector. But there is a weakness at the heart of the industry: semiconductors. All the leading Chinese companies depend on technology and software developed in the USA, and then most of it is manufactured in North Asia; Taiwan in the main, but also in South Korea and Japan. China's efforts

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***Most social media giants are banned in China, despite being sympathetic to China***

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have so far not delivered results. In fact, in recent weeks, the state-backed Tsinghua Unigroup has defaulted on a \$200 million bond payment - this was one of the leading companies seeking to produce cutting edge semiconductors.<sup>19</sup> But while it is making heavy weather of progress in the sector, it needs to be borne in mind that China has one advantage; it controls some 80% of the world's rare earths, many of them vital for hi-tech industries.

In fact, it would be advisable to weigh the countervailing forces arrayed against the de-coupling of the US-China relationship. Hi-tech industry has several connections with China both, as market and as supplier. Not all of this information is even in the public domain. Some, like Apple and Amazon, are clearly tied to China as a major supplier. Others, such as the social media giants are also sympathetic to China, even though most are banned in that country. Some have invested in rival companies operating in China, as Google has done. There are finally, unseen financial investments that also bind the Asset Management behemoths such as BlackRock and Silicon Valley to China. This would explain their overt hostility to the Trump Administration policies on China.

And yet, the economic data show a definite decoupling since 2018, both in trade and investment. This pre-dates the pandemic of 2020, but that has had its own negative effect on the relationship as well. Obviously, the situation is fluid and changeable; the outcome will be known only once the

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<sup>19</sup> "China's Tsinghua Unigroup defaults on \$198 million bond," *Reuters*, 17 November 2020. <https://www.reuters.com/article/us-china-unigroup-default-idUSKBN27X0CO>, accessed 11 January 2021.

dust settles - in medical and political terms.

As far as the second issue is concerned, to wit, the possibility of some violent event that could disrupt the sea lanes, the picture here is of greater concern. History says that the medieval land routes were disrupted for the

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***Russian hydrocarbon companies have felt the pressure of unfounded Chinese territorial claims***

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last time (they only worked intermittently) by political upheavals, book-ended by the collapse of the Mongol dynasty in China in 1369 and the fall of Constantinople in 1453 to the Ottoman Turks, who blocked the land-

based trade exchanges between east and west. This, in turn, led to the search for sea routes to India, which culminated in the arrival of the first European ships - Portuguese ships under the command of Vasco da Gama - in India in 1498.

Could something similar happen to disrupt the maritime routes at some point of time in the future? After all, the Chinese are building up their naval capabilities at a rapid pace. They have also established their first avowed military base in Djibouti, where other Powers also have their presence. Djibouti is well located to disrupt traffic from Asia to Europe through the Suez Canal, as it dominates the Bab-el-Mandab, a major choke-point along the maritime route. There is frequent talk of the Chinese "Malacca Dilemma", and the power of the West to pressure China through this choke-point. But in such an event, Djibouti would then allow China to put counter pressure on its adversaries.

### **Responding to the Chinese Eurasian Strategy**

The conclusion must be that the world faces a serious challenge from the Chinese attempt to control Eurasia. This control is far from complete, and faces many challenges; economic, technological and military too. But evidence indicates that the effort is under way.

That brings in another angle worth mentioning: Russia. For China to control the pivot area, it must at least control Central Asia. And for the broader strategy to succeed, Russia must, at least, acquiesce in China's domination of the supercontinent. At the moment, both conditions are being met - Russia is not opposing China's economic penetration of Central Asia, but is certainly keeping watch on developments. Kazakhstan, especially after Nazarbaev's departure from active politics, would be a cause for special concern. Russia is also watching China's assertiveness in the South



China Sea, where even Russian hydrocarbon companies, like Rosneft, have felt the pressure of unfounded Chinese territorial claims.<sup>20</sup>

But for now, Russia is going along with Chinese strategies; it has tried some rearguard salvaging through linking the OBOR with its own project, the Eurasian Economic Union, but it is little more than an idea at present. A large part of the reason that Russia is accepting this state of affairs is the diplomatic pressure and economic sanctions placed on Russia by the West. Some policy planners in Russia have begun proposing a policy of non-alignment between the West and China. But this is not a viable option at this point of time. President Trump did try and ameliorate the situation, but was blocked by the establishment throughout his tenure. It makes sense to bring Russia into the calculus from the point of view of the strategic interests of India and the West - and several of the East and South-East Asian countries. Japan's former Prime Minister, Shinzo Abe was among the most active in trying to patch things up with Russia.

The hurdle is Crimea. Just as the Kuriles proved to be a structural block to Russia-Japan ties and thwarted Abe's efforts, Crimea has now become a similar block in ties between the West and Russia. The latter is not going to compromise on this issue; however, it could be persuaded to do so on the rest of Ukraine, under a more federal arrangement. Probably, in return, there could be some agreement on closer ties between Ukraine and the Western institutions, but the details would have to be worked out in tough negotiations. That seems to be as far as Russia under President Putin will go.

It would appear that things will need to get a lot worse before minds will be sufficiently focused in order to make the compromises. This has happened in the past, of course. Britain signed an agreement in 1907 with the Russian Empire, settling its differences over Afghanistan, Iran and Tibet, in order to prepare for the looming confrontation with Germany. The same happened in 1941, after Germany attacked the Soviet Union. In both cases, the bigger danger eclipsed the relatively minor ones. Hopefully, it will not take an outbreak of hostilities for an appropriate coalition to take form. An observation from Mackinder is relevant here: -

“Democracy refuses to think strategically unless and until compelled to do so for purposes of defense. That, of course, does not prevent

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20 “Another Conflict Between Rosneft and China,” *Warsaw Institute*, 21 May 2018. <https://warsawinstitute.org/rosneft-china-another-conflict/>, accessed 20 November 2020.

democracy from declaring war for an ideal, as was seen during the French Revolution.”

- *Democratic Ideals and Reality*, 1919 [p 17]

Not a very encouraging thought - that democracies do not think strategically unless compelled by imminent danger, but there is evidence aplenty for this. Actually, one could argue that the 1907 Anglo-Russian Convention was an exception to this observation. But it is true that since then, this has been the rule, probably something to do with the horrors of the First World War.

As mentioned earlier, one other territory is key here - Xinjiang. Geography dictates that this is the real choke-point of the land routes, and hence, no Chinese - Eurasian strategy can work without that region. This explains why it is so much in focus today. It also is the reason for the extremely harsh Chinese response to the challenge it represents. It would not be an exaggeration to compare Chinese actions to those of Nazi Germany, a metaphor that is frequently over-used, but is apt here. The pressure needs to be kept up on China, even though the trends are not very encouraging. Muslim-majority countries are also increasingly reluctant to raise this issue. Nonetheless, the fact is that Chinese strategy will succeed or fail in the extent to which it can keep this area under its control.

The bigger question, however, is that of identifying the country that will take the lead in forming the coalition that can prevent China from taking over the Eurasian space. The obvious choice would be the USA. But that country is more divided today than at any time since the Civil War, and China is one of the issues that underlie that cleavage, notwithstanding formal claims of bipartisanship on this issue. And there does not seem to be any prospect of an early end to that division. Also, there is a very powerful set of forces in the USA that favours some kind of *modus vivendi* with China. This covers business in the first place, but also the corporate media and political forces. Kissinger has recently advised Biden not to allow a confrontation with China, as it could lead to consequences as catastrophic as the First World War.<sup>21</sup> And at the same time, the idea of withdrawing from

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21 Tyler Burden, “Kissinger Warns Biden Anti China Coalition Could Cause Catastrophe Comparable -World War I,” *ZeroHedge*, 16 November 2020.  
<https://www.zerohedge.com/geopolitical/kissinger-warns-biden-anti-china-coalition-could-cause-catastrophe-comparable-world>, accessed 20 December 2020.

the world's problems retains its appeal for many.

Ideally, a coalition of USA, India, Japan, France and Russia would be the core group to stabilise the potential global confrontation. But should the USA be unwilling to lead - relevant here to remember Obama's concept of "leading from behind" - or unable to lead for domestic reasons, it would still be possible to form an effective core around the remaining countries. Three of them - India, France and Russia - have good relations among themselves, and have a common interest in preventing the domination of Eurasia by any single power. But this is the real quadrilateral grouping - or trilateral if it comes to that - that can deliver on a strategy to contain the Eurasia challenge. Ideally, Japan would also be part of such a core grouping; what complicates the calculation is that its territorial problems with Russia are proving intractable. But it is vital to keep Japan in the mix, as no maritime strategy is workable without Japan. If India and China can work together in bodies like the Russia-India-China group, or the Shanghai Cooperation Organisation or in BRICS, there is no reason that prevents Russia and Japan from doing the same.

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***France is also moving  
into closer strategic  
partnership with India***

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France is worth focusing on because it is an anchor at the western end of Eurasia, and stable. President Macron has made clear his hesitations regarding OBOR: during his visit to Beijing in 2018, he spoke to an audience of scholars and policy-makers and declared that, "These roads cannot be those of a new hegemony, which would transform those that they cross into vassals." For good measure, he added an important corrective to the dominant narrative on OBOR - the ancient Silk Routes were never exclusively Chinese.<sup>22</sup>

France is also moving into closer strategic partnership - a much abused term, but fitting here - with India. A compelling example was provided by the speech of the French Defence Minister, Florence Parly, at the wind-swept ceremony of the handing over of the first batch of Rafale fighters to the Indian Air Force. After indicating that France fully understood the Indian search for strategic autonomy, and emphasising the shared values of democracy and a rules-based order, she added that the supply of the Rafales

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22 Michael Rose, "China's New 'Silk Road' Cannot be One Way France's Macron Says," *Reuters*, 08 January 2018. <https://www.reuters.com/article/us-china-france-idUSKBN1EX0FU>, accessed 22 November 2020.

meant more: "In strategic terms, it means India will have an edge over the entire region to defend itself..."<sup>23</sup> No Defence Minister has spoken in this vein since the days of Marshal Dmitry Ustinov of the Soviet Union.

As to the substance of the policies to be followed, no more can usefully be said than two broad lines of approach. The first is the economy. China's

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***The Chinese economy is running out of surpluses for its vaulting ambitions***

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economy has been built on the basis of large amounts of foreign investment, and market access in the main consumption centres - the USA, the EU and on a smaller scale, but growing rapidly, India. In a time of deficient demand world-wide, this is a potentially effective policy option for these countries. The second is the lack of legitimacy of the Communist Party in the country. This is another effective pressure point that will pay dividends over time, with sustained application.

**To Sum Up:**

Mackinder opened a very productive line of inquiry with his 1904 essay, and subsequent works; the notion that the advent of railways brought the Heartland into play in a way that had not been the case for some four centuries, since the sea voyages of discovery. However, he overestimated the importance of geography. To argue, as he did, that whoever controlled East Europe controlled the Heartland, and thus, world power, was conclusively disproved by the erstwhile USSR. It did control these regions for five decades, but never controlled the world.

The missing element in the Mackinder schema was the role of economics and technology. The USSR never acquired these two aspects of power. Germany did in the opening decades of the 20<sup>th</sup> Century, and posed a serious threat to the dominant sea-power of the day, Britain. It took the First World War, and the extensive territorial rearrangement that followed, in order to defeat this challenge.

Mackinder's almost throw-away lines in the 1904 essay about China becoming the global power by commanding the Heartland, was an inspired insight. The fact that he felt it would be led by Japan was a little puzzling, because Japan is a classic maritime power, and would have scant interest in

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23 "French Defence Minister Florence Parly Speaks at Rafale Induction Ceremony," *DD News*, 10 September 2020. <https://www.youtube.com/watch?v=wUsb6TYOMck>, accessed 20 November 2020.

consolidating a land power like China.

China has the additional attributes needed for the success of the strategy. It has a fast-growing economy (even if not as fast as it claims), it is well-placed in technological terms, it has built up a powerful military - and is heading for dominance in the pivot area. This last is happening in economic terms, without a formal assertion of primacy out of deference to Russian sensitivities. A word of caution on the Chinese economy would be worth repeating; it is running out of the surpluses needed for its vaulting ambitions. Not only have there been unprecedented bond defaults, the squeeze is showing in the drop in its outbound investments. These have halved from the 2017 peak, and are likely to remain stagnant at best, going forward.<sup>24</sup>

In purely economic terms, the overland connectivity - rail, road and pipelines - cannot compete with maritime trade routes. Even the claim that rail links are faster turns out to be incorrect on closer inspection; a container ship does take twice as long, but the new Malacca Max ships deliver over 20,000 TEU's in one sailing; the maximum load a freight train carries is 200 TEU's. Thus, one shipload requires a hundred to-and-fro journeys by rail to deliver the same amount of cargo.

But, just as war and political upheavals upset the last land routes in the mid-15<sup>th</sup> Century, war could also now disrupt the Sea Lines of Communication. This is why the much-talked about Malacca threat to Chinese shipping does not offer quite the answer to the challenge. That answer, instead, is to be found in the choke-points of the land connection. There are three principal choke-points - Xinjiang, Kazakhstan, and Russia. All three are vital links in the land routes to Europe, especially the first two. Russia is important because not just of strategic consideration (important as they are), but also because of geography; the links to East Europe and beyond to the West run through Russian territory.

All three bear watching closely, with Kazakhstan being the most uncertain link at this time. As the country transits into the post-Nazarbaev era, it is possible that complications could arise. The current leader, President Tokaev, knows China well, having spent many years in Beijing. He has also made some moves to weaken the hold of Nazarbaev in the

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24 Thilo Hanemann and Daniel H. Rosen, "Buying the Dip? China's Outbound Investment in 2020," *Rhodium Group*, 30 March 2020. <https://rhg.com/research/chinas-outbound-investment-in-2020/>, accessed 22 October 2020.



system, by removing his daughter from the post of Chair of the Upper House, a little over a year after appointing her to the post. In the Kazakh system, the Chair of the Senate is the first in the line of succession should the President be removed from office for any reason.

Kazakhstan was the venue for the launch of the land-based Silk Road Economic Belt by President Xi in 2013, emphasising its importance as one of the key links in the land route. But it is noteworthy that President Tokaev did not attend the Second Belt and Road Forum; instead, it was Nazarbaev again, who was also awarded the Medal of Freedom by President Xi. It would appear that President Tokaev is walking a fine line on relations with China. He, along with all the other Central Asian leaders, has also held back from signing letters at the UN supporting China's policies in Xinjiang.<sup>25</sup>

In closing, one should also take note of the overall volatility in global affairs. It would not be an exaggeration to suggest that these are pre-revolutionary times. Governing consensus in many of the major countries is under strain, and this applies as much to China as to the more visible bitterness in the USA. It also applies as much to the major economies as to their socio-political structures. In turn, this induces a degree of unpredictability in international affairs, which bears close monitoring.

**Post Scriptum:** Since the paper was written, the Biden team has made some important policy decisions that bear on the issues discussed above. Before considering the details, there is one factor that needs to be kept in mind: that is the internal divisions within the USA, which are at their most aggravated, since probably the Civil War.

This affects foreign policy as much as any other issue, and could affect the ability of the government to implement policies that are in the national and larger interest. The recent letter,<sup>[1]</sup> by over a hundred retired senior military officers all but declares that they have no faith in the President. It also shows the strength of the internal divisions, as well as the issues that divide them.

The early holding of a Quad summit - the first ever - was a positive development, but the direction given to the group suggested a desire to move away from security issues. Thus, the priority areas identified are the

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25 Catherine Putz, "2020 Edition: Which Countries are for or Against China's Xinjiang Policies?," *The Diplomat*, 09 October 2020. <https://thediplomat.com/2020/10/2020-edition-which-countries-are-for-or-against-chinas-xinjiang-policies/>, accessed 11 November 2020.

Covid-19 pandemic, reliable supply chains, and climate change.<sup>[2]</sup> They are undoubtedly important, but the Quad has so far been focused exclusively on security issues relating to the Indo-Pacific region. There are other forums more suited to the non-military matters, like the G20, the expanded G7 on supply chains (or even an expanded Trans-Pacific Partnership), the COP's on climate, the WHO on the pandemic, and the UN for all of these.

It is also noteworthy that the new foreign policy officials in USA only refer to China as a competitor, and not as a challenge or threat as was the case earlier. Even the Defense Department has shifted its priorities to fighting the pandemic, and also focusing on domestic ills like racism - though General Austin did include the China "challenge" as the third priority in his confirmation.<sup>[3]</sup>

There have been more negative comments on China, of course, such as calling out the genocide in Xinjiang, and the repeated statements on Taiwan and Hong Kong (Tibet is a notable and regrettable absence in all of these statements, although Candidate Biden had said that he would appoint a Special Coordinator on Tibet if he were elected).<sup>[4]</sup> And there was the public airing of differences at Alaska meeting of the top officials on the USA and Chinese foreign policy structure. But the new team has announced a review of the policy on these and on economic matters.<sup>[5]</sup>

The Chinese appear to have picked up these mixed signals, and the US media have commented on the internal differences in the US on how to deal with China.<sup>[6]</sup> For the present then, there is no clarity, and the review under way should provide some greater clarity.

There have been some other important initiatives, and these are wholly positive. The importance of India in US approaches was underlined by the early visit of Defense Secretary Austin. His meetings with the Prime Minister and all the main officials dealing with security matters, was an indication of the importance that India attaches to the relationship. The USA has in recent years become India's main supplier of military equipment, though there are some wrinkles that still need to be ironed out.

And there is also to be a US-Russia summit meeting in the near future. Biden is better placed to move forward with Russia, if he is so inclined, than was Trump; the US establishment had decided, against all the evidence, that the latter was not to be trusted to deal with Russia because he was beholden to them. Biden is free of this constraint.

All said and done, then, there is reason for guarded optimism on the

developments discussed in the main essay, that the USA will, in the end, make the right choices. But all participants need to be vigilant regarding Chinese moves, especially on Xinjiang; and on the need to nurture and strengthen the common understanding of the strategic play in the Eurasian region.



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#### **Post Scriptum**

- 1 Tyler Durden, "120 Retired Generals, Military Officers Sign Letter Warning of Conflict Between Marxism and Constitutional Freedom," *Zero Hedge*, 12 May 2021. <https://www.zerohedge.com/markets/120-retired-generals-military-officers-sign-letter-warning-conflict-between-marxism-and>, accessed 15 May 2021.
- 2 "Quad Leaders' Joint Statement: The Spirit of the Quad," *The White House*, 12 March 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/12/quad-leaders-joint-statement-the-spirit-of-the-quad/>, accessed 23 March 2021.
- 3 <https://www.youtube.com/watch?v=MgOcMePVIU8>, accessed 23 March 2021.
- 4 "Biden Toughs China Gambit: Will Meet Dalai Lama, Will Sanction Chinese Abusers," *The Week*, 04 September 2020. <https://www.theweek.in/news/world/2020/09/04/biden-turns-tough-on-china-threatens-sanctions-for-abuses-tibet.html>, accessed 23 March 2021.
- 5 James Steinberg, "Brace Yourself for the Outcome of Biden's China Policy Review" *The National Interest*, 10 May 2021. <https://nationalinterest.org/feature/brace-yourself-outcome-biden%E2%80%99s-china-policy-review-184822>, accessed 15 May 2021.
- 6 "Biden Admin Admits They Won't Contain China," *American Center for Law and Justice*, 07 May 2021. <https://www.youtube.com/watch?v=pAltK4jFRSs>, accessed 15 May 2021.

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## MARITIME STRATEGY AND TERRESTRIAL INFLUENCE

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*Captain Himadri Bose*

*“The supreme test of the naval strategist is the depth of comprehension of the intimate relation between sea power and land power, and of the truth that basically all effort should be directed at an effect ashore.”*

*Dudey W Knox, The Naval Genius of George Washington (1932)<sup>1</sup>*

### Introduction

**O**n the evening of 04 December 1971, IN Ships *Veer*, *Nirghat* and *Nipat* of the 25 Missile Squadron, led by Commander Babru Yadav, attacked Pakistani ships, and shore installations off Karachi harbour; sinking Pakistan Naval Ships *Khyber*, *Muhafiz*, a merchant vessel *Venus Challenger* and setting ablaze the Kiamari oil refineries.<sup>2</sup> Every year, the Indian Navy celebrates this day as Navy Day, as an ode to the navy’s ability to influence the battle ashore. Historically, wars have been fought for objectives on land. Correspondingly, the ultimate focus of the war effort has been terrestrial with the other arms rallying in support. The navy’s inventory, its tactics and its ability to harness combat power with the effective use of seas are predominantly to gain “strategic leverage in a conflict.”<sup>3</sup> Accordingly, the naval fight for command of the sea must facilitate effects on land. Notwithstanding, the challenges posed by improved Intelligence, Surveillance and Reconnaissance (ISR), increased battlespace transparency, extended seaward defences, accurate shore-based long-range vectors and potent air cover; the inherent advantage of manoeuvre conferred by the use of the seas can significantly shape the land battle. During Operation Desert Storm, the US Army’s operational manoeuvre “left hook,” swept across Kuwait into Iraq covering about 80 miles in four days. However, naval expeditionary forces can be expected to manoeuvre thrice that distance in a day. Navies can outpace manoeuvre operations of terrestrial forces by a substantial margin.<sup>4</sup> The naval ability to shape the battlespace through maritime manoeuvre is complemented by the advent of long-range standoff weapons enabling maritime forces to attack

shore targets while staying outside the arc of a counterblow. The operational constants of maritime warfare such as manoeuvre and flexibility are timeless, whereas warfare trends are shaped by the technology of the age. They in turn coalesce to form the most suitable application of maritime power.<sup>5</sup> The mutually supportive nature of sea power and land power in a successful maritime strategy has been echoed by theorists such as Julian Corbett and Charles Calwell.<sup>6</sup> The effect of maritime power projection can be tactical, operational or even strategic. The success of the Normandy landings strategically altered the Allied position during the Second World War, while the amphibious feint during the Gulf War had tactical effects.

Navies have waged battles, enforced blockades and carried out amphibious attacks primarily to influence the attainment of military objectives on land. This central premise of employing maritime power is as relevant today as it was in the days of sail. However, its applicability due to the more likely limited wars that may be fought in the near or mid-term and the emergent technological trends in naval warfare make it worthy of continual examination. Furthermore, the probable triggers for a multi-dimensional conflict in our neighbourhood are likely to be terrestrial. If the scope and duration of such a conflict were limited, swift naval action would be necessary, with a complementary impact on the overall conflict. Rapid advancements in naval technology may alter the dynamics of employment of maritime power ashore. However, the constants of seapower, coupled with adequate naval capacity, and an appropriate maritime strategy can still enable effective employment of naval power for tactical, operational and strategic effects on land.

### **What the Masters Say**

Mahan undertook a limited examination of the employment of navies for attacks on enemy coasts and transportation of troops for the land battle. On the other hand, he highlighted the importance of commerce protection and interdiction asserting that, the very existence of navies was justified primarily by their ability to defend their own commerce and to attack that of their opponents.<sup>7</sup> Mahan undertook a limited examination of the question of fleet employability in predominantly continental wars. He further asserted that “applications of maritime force must extend over a period of time before they can have an effect on land wars.”<sup>8</sup>

Perhaps, Corbett was the first strategist to more coherently articulate the



confluence of maritime and continental strategies. He argued that maritime strategy was shaped by “mutual relations” of the army and the naval war. Therefore, the formulation of fleet objectives was contingent on considerations supporting land objectives.<sup>9</sup> Corbett astutely captured the import of amphibious operations, and presciently articulated its tactics, much of which has since been replicated in the U.S Navy’s *Manual for the Conduct of Amphops*.<sup>10</sup>

French Admiral, Raoul Castex wrote eloquently capturing the difficulty of shaping a maritime strategy for continental wars. He outlined his thoughts on a continental war between two adjacent maritime powers and prescribed that bold action and harnessing the power of manoeuvre from the seas could effectively shape the land

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***Raoul Castex was the first maritime strategist to identify “speed of battle” as a critical factor in naval warfare***

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battle. He was probably the first maritime strategist to identify “speed of battle” as a critical factor that would separate naval warfare of one era from another.<sup>11</sup> Castex was an ardent supporter of amphibious operations and suggested that it was the final goal of navies in continental wars.<sup>12</sup>

One of the lesser-known proponents of maritime power in support of land objectives was the British army officer, Col Charles E. Callwell. He examined the benefits of “maritime command” against an enemy stronger on land and extolled its benefits on military lines of operations in coastal areas.<sup>13</sup> Russian Admiral Gorshkov examined the employability of the Soviet navy in support of Russian continental defence. He espoused a twin-pronged maritime strategy of utilising fleet assets for coordinated strikes and harnessing positional warfare by acting in concert with minefield positioning, shore batteries and naval aviation.<sup>14</sup>

Maritime theorists have consistently stressed the ability of navies to cause tactical, operational or even strategic effects on land by means such as the movement of troops, landing of armies, blockade, maritime strikes and struggle for supremacy of local seas. Capturing this tenet, Colin Gray emphatically pronounced that, “at the highest level, sea power is about influencing events on land in a time of crisis and war.”<sup>15</sup>

### **The Maritime Toolbox for Effects on Land**

In his seminal work, *Fleet Tactics and Coastal Command*, Hughes enunciates six cornerstones of fleet operations. “The seat of purpose is on

land” and “a ship’s a fool to fight a fort”, are two of his cornerstones germane to this discussion.<sup>16</sup> While highlighting the centrality of the affairs on land in great fleet battles, he goes onto enumerate the means in the 21<sup>st</sup> century to direct naval influence on land. Navies can influence the battle on land by undertaking direct attack with ordnance such as guns, bombs, missiles and naval airstrikes; isolating the enemy with a naval blockade; attacks on shipping; via offensive mining; supporting the land offensive with amphibious assault; and, providing logistical support for landed

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***Land-based vectors  
supported by space-based  
sensors limit the scope of  
approaching enemy coast***

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forces.<sup>17</sup> Jackie Fisher established the currency of the cornerstone “a ship’s a fool to fight a fort” and attributed it to Nelson. Hughes argues that the forts of today are far more potent than those of the 18<sup>th</sup> century.

Land-based missiles and aircraft supported by space-based sensors and seamless data networks have a wide arc of influence, limiting the chances of an unmolested approach of the enemy coast. Also, ships are equally capable of attacking at distant stand-off ranges with long-ranged vectors, complemented by the power of manoeuvre from the sea.<sup>18</sup> The geostrategic predisposition of nations leads to prioritising of elements of seapower, which in turn aids or constraints the terrestrial effects of their maritime strategies.

The Indian Maritime Doctrine (IMD) makes a distinction in the ability of naval forces to influence events on land by the manner of its application. Indirect influence pertains to the shaping of the maritime environment while the direct influence pertains to the application of maritime power on land by delivery of ordnance using integral weapon systems or ship-borne aerial platforms, and the transportation of troops to contribute to the land offensive.<sup>19</sup> The doctrine alludes to the use of the seas as a medium for power projection, but does not offer a more detailed examination of the concept of power projection.<sup>20</sup> It highlights maritime strike, amphibious operations and expeditionary operations as examples of power projection and brackets power projection as a mission, with force projection its subset.<sup>21</sup> Interestingly, power projection has been replaced with force projection, as a component of “Strategy for Conflict” and “Strategy for Deterrence” in the Indian Maritime and Security Strategy (IMSS). The IMSS further defines the scope of force projection in terms of “projecting combat force in and from the maritime domain” as a tool for battle-space dominance, with

maritime manoeuvre, maritime strike, Sea Line of Communication (SLOC) interdiction and amphibious operations as its key elements.<sup>22</sup> However, academically, power projection is considered the most acceptable terminology and may be qualified by prefixing “maritime.”

Power projection is the ability to channel seaborne military capability to influence matters on land with potential strategic, operational or tactical effects depending on the circumstances. Power projection has also been defined as the exploitation of sea control for strikes ashore or amphibious landings.<sup>23</sup> Interestingly, in an American context, maritime power projection in conflict captures all forms of its application across the spectrum, ranging from nuclear strike to “preventive presence.”<sup>24</sup> The US Navy’s guiding document on “Naval Operations Concepts” defines power projection during peacetime in rather broad terms, ranging from responding to crises to deterrence and regional stability.<sup>25</sup> However, the discussion in the paper has been restricted to power projection in combat with the use of appropriate maritime instruments.

### **Sea Control and Terrestrial Influence**

The employment of navies in a conflict has revolved around the attainment of “command of the sea”, as a stepping stone to maritime dominance. Its attainment bestows the custodian with the ability to prosecute enemy naval power at will while preserving its combat capability. Mahan, much like Corbett, argued in favour of the transient nature of its accomplishment. However, it was Corbett who delineated it further by using the phrase “working command”. Meanwhile, Castex captured the temporary nature of “command of the sea” by arguing that it is “not absolute, but relative and imperfect”. The limitations on “command of the sea” may be in terms of time and space.<sup>26</sup> Over time, the absolute connotation of “command of the sea” has yielded to the phrase “Sea Control,” which suggests a more transient nature. The Indian Maritime Doctrine (IMD) defines sea control as a “condition where one is able to use a defined sea area, for a defined period of time, for one’s purposes, and at the same time deny its use to the adversary.” It further amplifies the concept by advancing that the Indian Navy is “centrally structured” around sea control. However, it is a means and not an end.<sup>27</sup>

Is sea control mandated to influence affairs on land? The IMD states that sea control is “very often a pre-requisite” for operations such as power

projection, SLOC protection, SLOC interdiction and amphibious operations.<sup>28</sup> The doctrine further enlists “maritime manoeuvre,” as an enabler for sea control and amphibious operations, as it can “incapacitate the enemy’s resistance and decision-making cycle through shock and disruption.”<sup>29</sup>

Sea control can be exercised in varying degrees depending on the proximity to the enemy’s coast or the relative strength of navies in open seas. Sea control in its absolute form may be attainable for greater durations in regions far removed from the enemy’s land-based airstrike, and seaward long-range strike capability. However, closing the enemy’s coast for coastal or even inland action would mean yielding to a more local and contested sea control. The topographical conditions and operational conditions in littoral waters might lead to a form of sea control that may at best be fleetingly achievable. Furthermore, the incessant pursuit of sea control in disputed conditions could lead to dilution of effort for other means of power projection such as maritime trade warfare, maritime strike and amphibious operations. Till describes “sea control in dispute” as a condition, when each side operates with considerable risk.<sup>30</sup> Sea control in oceanic spaces outside the enemy’s reach would be easier to achieve, but may not address operational priorities on land. Therefore, acceptance of the risks of operating in contested seas and abandoning the all-pervasive quest for sea control is inexorably linked to wielding influence ashore.

### **Trade Warfare**

Trade warfare has been conducted through the ages to choke the war-waging capability of the adversary. Notably, the thirty-year Peloponnesian war has been described as a maritime trade war by Thucydides.<sup>31</sup> Maritime trade warfare as a tool of coercion can be waged by enforcing a blockade or carrying out SLOC interdiction.<sup>32</sup> Historically, commerce warfare or *guerre de course* has been practised by weaker navies, some even resorting to the use of privateers armed with “letters of marque” to overcome their naval capacity deficit.<sup>33</sup> A pre-industrial example of *guerre de course* exercised by a weaker navy was the French effort, after the defeat at Trafalgar in 1805. The French seized close to 11,000 British ships during the Revolutionary and Napoleonic wars, sending insurance rates skyrocketing.<sup>34</sup> However, Britain successfully countered the French strategy of *guerre de course* by executing a system of convoying based on the Convoying Act of 1793-

1803.<sup>35</sup> Subsequently, the Declaration of Paris in 1856, ended the role of privateers in *guerre de course*.<sup>36</sup> Technological advancements in naval warfare during the 20<sup>th</sup> century, particularly the advent of the submarine further altered the traditional notion of commerce raiding.

During World War I, Britain enforced a blockade of Germany. Consequently, Germany responded by conducting an unrestricted U-boat attack campaign. The sinking of American vessels, *Lusitania* and *Arabic* in May and August 1915, led to a pause in unrestricted submarine warfare. However, the recommencement of unrestricted trade warfare by Germany in January 1917, eventually drew the United States into the war.<sup>37</sup> The British blockade of Germany was successful albeit over a prolonged duration, however, the German counter blockade strategy of unrestricted submarine war, even with the sinking of 12.5 million tons of allied, and neutral shipping was a strategic failure, as it drew the United States into the war.<sup>38</sup>

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***German unrestricted submarine warfare was a strategic failure as it drew the US into the war***

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During World War II, the United States employed submarines, surface ships, aircraft and mines to conduct a successful maritime trade warfare campaign against Japan. The campaign led to the destruction of 8.1 million tons of merchant shipping eventually crippling Japan's industrial base and leading to starvation.<sup>39</sup> On the other hand, the British blockade of Germany had mixed results due to Germany maintaining large stockpiles and developing substitutes for materials such as oil and rubber. The German counter blockade strategy was further augmented by resources obtained from conquered territories.<sup>40</sup>

During the Falklands War, the British government, on 12 April 1982, announced that it would enforce a Maritime Exclusion Zone (MEZ) around Falklands Island, and thereafter, on 30 April 82, enforced a Total Exclusion Zone (TEZ). On 02 May 82, British nuclear-powered submarine *Conqueror* sank *General Belgrano* outside the 200 nautical miles TEZ. The sinking met much condemnation, but relegated the Argentine Fleet to harbour.<sup>41</sup> The successful British blockade was enforced in a short time from 12 April to 22 July. The limited time to board ships, inspect cargos, or provide warnings was circumvented by employing a TEZ with the threat of punitive response to any violation. The British efforts were enabled by exceptional intelligence, and the use of Ascension Island as a 'gateway' to regulate the



flow of maritime traffic off Falklands.<sup>42</sup> The British success was founded on the geographic isolation of the Falklands Islands, further cementing the notion that island nations or insular objectives are more apposite to a blockade.

The strategy of SLOC interdiction is appreciably influenced by the global nature of trade and the use of shipping registered in Flags-of-convenience. More than 50% of the world's trade is transported on ships registered in flag-of-convenience countries. Adding to this predicament is the challenge that cargo is often bought and sold at sea. Therefore, a vessel interdicted or sunk might have part-cargo destined for another country further complicating the identification matrix.<sup>43</sup> Furthermore, most nations maintain a stockpile of critical resources, extending the timeline in which the effects of maritime trade warfare may be experienced. Rationing of resources, utilisation of substitutions, and exploration of alternate sources of resources are possible options to overcome the ill effects of trade warfare.<sup>44</sup> Additionally, implementing a maritime trade warfare strategy of a blockade or an interdiction in the vicinity of chokepoints is not legally tenable, and execution of the strategy at distances further away adds to the already significant challenges of identification of merchant vessels for examination or targeting.<sup>45</sup>

Historically, blockades and trade interdiction have not served as quick-fix solutions in conflict, but have paid dividends over an extended period. However, these strategies do not function in isolation and have to be supported by complementary efforts in the theatre. Island nations are more susceptible to blockades while countries with land-based trade routes tend to circumvent the cessation or constriction of maritime trade by developing or strengthening alternate terrestrial lines of communication. In the 21<sup>st</sup> Century, blockades have transitioned from being enforced close to the adversary's coast to distant enforcement. The failure of blockades has been linked to the nature of the theatre, skewed political objectives, limited diplomatic heft of the blockader and the ability of the enemy to develop counter-blockade strategies. Adding to these factors is the complexity of the international maritime trading system.

The enforcement of a blockade or a trade interdiction strategy is contingent upon using all forms of enforcements. These include mines, aerial, surface and sub-surface means, and effective ISR systems. It benefits from the formulation of distant blockade methods, countering the

adversary's counter-blockade strategies, identification of adversary's critical sea-dependency for resources and favourable shaping of the diplomatic environment. There could be newer forms of maritime trade warfare such as cyber-attacks and port infrastructure degradation. Older measures like blockades are now termed zones of exclusion to favourably shape the maritime geography. In all this, adequacy of resource allocation and developing enforcement capacity and execution capability for trade warfare remain critical always. However, it can be surmised that the enemy would likewise target or aim to constrict one's maritime trade. Therefore, maritime strategies have to cater for both offensive and defensive trade warfare.

### **Amphibious Operations**

The earliest historical evidence of amphibious operations dates back to 1200 BC, when the Egyptian empire was attacked by seaborne raiders from the Mediterranean Islands and southern Europe.<sup>46</sup> The conduct of amphibious operations peaked during WW II, which witnessed 600 predominantly successful landings at a frequency of nearly one every three days.<sup>47</sup> Post WW II, amphibious operations have been notably conducted in various conflicts, and crises such as the Korean War (1950), the Suez Crisis (1956), Lebanon (1958), Vietnam (1964-1975), the Falklands Islands (1982), Grenada (1983), the Gulf War (1990-91) and the invasion of Iraq (2003).<sup>48</sup> The IMD features amphibious operations as a subset of maritime power projection. It further amplifies that, "it may be conducted in order to prosecute further combat operations ashore, capture or recapture territories, obtain a site for an advance naval or airbase, deny the use of an area or facilities like a port to the enemy, or to show presence." The IMD outlines four types of amphibious operations; assault, raid, demonstration, and withdrawal.<sup>49</sup>

The arguments put forward for the non-viability of amphibious operations have ebbed and flowed over time. Historically however, challenges to amphibious operations have been obviated by reshaping existing techniques and inducting appropriate equipment, as was witnessed through the World Wars.<sup>50</sup> Nevertheless, over time the conditions for amphibious operations have become increasingly contested. The preconditions of the successful Pacific War landings, such as isolation of the amphibious objective area, control of the sea, and the airspaces will indeed

be challenging to replicate. The traditional slow methodical build-up of amphibious operations may not be feasible anymore.<sup>51</sup> Besides these factors, the other apprehensions on amphibious operations are, the presence of formidable enemy coastal surveillance and strike capability foreclosing the critical element of surprise; transformation in the speed of battle versus the slow and procedural nature of amphibious operations; the increased likelihood of loss of life and materiel; insufficiency in the weight of attack as a component of the land battle; and, lastly, formidable expenses in materiel and tactical risks for little tactical or strategic advantage.<sup>52</sup>

The image of a frontal assault with large scale devastation is an oft-repeated, but a misleading impression of an amphibious operation. Contrary to this prevalent perception, most amphibious operations have been carried out in the peripheral areas of the battle. For instance, the D-Day landing during WW II was far removed from the area of concentration of the German forces.<sup>53</sup> These peripheral areas have to be linked with appropriate operational and strategic goals. The selection of beaches has traditionally been constrained by their suitability in terms of gradient, wind, current and surf height. However, the advent of air-cushion landing craft has largely addressed these constraints and brought 70% of the world's beaches into the reckoning.<sup>54</sup> Besides, other prerequisites, information superiority founded on in-depth intelligence collection and competent analysis is critical to the conduct of successful amphibious operations.<sup>55</sup>

The traditional linear approach to amphibious operations has reached its "sell-by" date and needs to be replaced with the uninterrupted union of the movement of forces to the area, assault and onward consolidation. Air mobility and modern technology for beaching coupled with the maritime constant of manoeuvre from the sea, afford the ability to land at a multitude of landing points, instead of presenting a "static and predictable" frontage.<sup>56</sup> The US concepts of Operational Manoeuvre from the Sea (OMFTS) and Ship to Objective Manoeuvre (STOM) harness the operational strength of manoeuvre from the sea while precluding the vulnerability of a defended logistics node on the beachhead.<sup>57</sup> Furthermore, the treatment of the littoral as one dimension with movement to the objective, uninterrupted by "topography or hydrography," can counter both conventional and unconventional threats with an increased operational tempo.<sup>58</sup>

The position of amphibious operations in the hierarchy of naval strategies should be based on its inherent potencies of manoeuvre and

surprise and not on the perceived difficulty of its execution. The elusive element of surprise, crucial to amphibious operations, can be shaped by achieving supremacy in the aerial, space and cyber domains, impairing spatial surveillance, and defanging coastal defences with long-range strikes. Harnessing advancements in the technology of landing vessels along with the increased flexibility of insertion by aerial means would facilitate in the speed of execution of amphibious operations to surpass the speed of amassment of defences. This shall also diminish conventional vulnerabilities of massing on the beachhead. Furthermore, the supposedly severe human and materiel costs of amphibious operations also need to be weighed in terms of the influence of amphibious operations on the terrestrial battle. The traditional outlook of viewing amphibious operations as a discrete and separate activity needs to be replaced with an integrated approach that amalgamates it, along with the rest of the implements, in the maritime toolbox.

### **Maritime Strike**

In the days of sail, fleets did not fight forts, as forts could do irreparable damage to the ships while remaining unscathed even after being bludgeoned by copious amounts of ordnance. In the 21<sup>st</sup> Century, these impregnable forts or terrestrial objectives are now protected by land-based aircraft and missiles, coastal batteries, long-range Anti-Ship Cruise Missiles (ASCM), smaller but lethal vessels such as corvettes and torpedo boats, diesel-electric submarines, mines, UAVs and a robust ISR system. However, naval platforms have also acquired the capability to hit the shore from stand-off ranges with long-range ordnance. Nonetheless, using naval power to wield terrestrial influence could translate to leaving the safe distant seas to operate in littoral waters, well within the arc of action of an adversary.<sup>59</sup>

The first combat use of Tomahawk Land-Attack Missiles (TLAM) during Operation Desert Storm in 1991, involved 288 TLAMs fired from the sea on targets in Iraq, with an 85% success rate.<sup>60</sup> After the 1998 US embassy blasts in Tanzania and Kenya were linked to Al Qaeda, the USA targeted their training camps with 70 TLAMs.<sup>61</sup> During Operation *Enduring Freedom* in 2001, 68 TLAMs were fired by US naval ships and submarines targeting shore objectives in Afghanistan.<sup>62</sup> The use of weapons such as long-range TLAMs to wield terrestrial influence is contingent on either

developing such weapons indigenously or collaborating covertly to circumvent the Missile Technology Control Regime. However, their effectiveness would depend on the weight of attack in relation to the objective, development of appropriate targeting and BDA systems, and possession of varied means of delivery. The capacity of ships and submarines to deliver operational effects with land-attack missiles creates the dilemma of designing assets that can house these weapons in sufficient numbers while also carrying a mix of weapons to address the wide range of traditional counter-force naval roles. Navies would have to balance the “great divide” of the surface fleet in terms of those possessing sufficient land-attack capability versus specialised escorts.<sup>63</sup>

The ability to hit targets deep within the adversary’s territory while manoeuvring from the sea for a favourable line of attack that bypasses the main war effort can be used to shape the battlespace in favour of land forces. Command and control facilities, logistics nodes, coastal support facilities, port infrastructure, cyber support facilities and troop build-up areas can be targeted through “on-call” strikes from naval assets.<sup>64</sup> Naval forces can also be used to insert special forces to target specific operational objectives. Meanwhile, sea-based nuclear deterrence remains a vital leg of the nuclear triad.

Naval airpower can have significant operational effects ashore, if deployed with an adequate weight of attack. Historically, naval airpower has been employed for targeting enemy maritime assets, protecting SLOCs and projecting power ashore.<sup>65</sup> During Operation *Desert Storm*, 32% of the 90,000 airstrike missions were flown from US carriers.<sup>66</sup> This figure went up to 70% during Operation *Enduring Freedom*.<sup>67</sup> These operations were largely joint, with a substantial weight of attack. However, smaller carrier air wings will continue to face the “small-deck dilemma” wherein sparable air assets for missions on land will be constrained by the competing requirement to provide defensive air cover to the aircraft carrier.<sup>68</sup>

Operating aircraft carriers close to a hostile coast would also be contingent on obviating the increased threat from shore-based aircraft, land-based anti-ship missiles and submarines. Navies operating aircraft carriers may conclude that the risks of such a deployment far outweigh the operational benefits of the application of naval airpower ashore.



Nevertheless, the solution lies in scaling up the capacity of the naval arm, and the synergetic use of land-based air support. Despite the disadvantages highlighted for navies facing the “small-deck dilemma,” there may be operational circumstances during a conflict that enables the utilisation of naval airpower ashore, especially in areas predisposed to a manoeuvre attack from the seas.

Navies would have to be prepared to operate in littoral waters to pursue objectives on land. Littoral warfare poses the challenge of countering attacks from small and fast combatants operating within islands, narrow seas and concealed positions. Poor detection ranges due to proximity to land and hydrological conditions will lead to sharply reduced reaction time to attacks in the littorals. Furthermore, battlespace transparency in littoral waters is likely to weigh in the favour of the coastal state. Large capital ships operating in the littorals would be severely constrained by the hydrological and topographical conditions, and the risks of operating such ships in a zone of high-intensity warfare may outweigh their benefits. Optimal surface combatants capable of operating in the littorals should preferably be small, fast, manoeuvrable, with shallow draught and have a moderate range with a low signature.<sup>69</sup> Success in littoral waters could be achieved by developing appropriate capacity and capability founded on sound doctrine, and a joint approach to war-fighting.

## **Conclusion**

The seat of purpose on land can be influenced by applying direct and indirect levers of seapower. However, these levers should be established on sound doctrine and guaranteed by adequate capacity. Irrespective of the limitations in the ends of trade warfare, navies need to develop tools to identify the adversary’s seaborne trade vulnerabilities and develop both capacity and capability to limit freedom of the seas for trade by coercive and regulatory means. However, in tandem, the legal and diplomatic implications of trade warfare need to be recognised by the political leadership and naval planners. Lessons learnt from maritime trade warfare campaigns of the past must be applied to develop doctrine, plan and exercise scenarios of maritime trade warfare, both from a defensive and an offensive standpoint.

It’s time to rethink the age-old axiom, “ships don’t fight forts”; ships can fight “forts,” by first blinding them and then charging at them from unseen

pathways. Amphibious operations continue to be relevant in favourably shaping the battlespace by opening a second front, targeting the enemy's critical facilities and infrastructure, command and control nodes and diverting the enemy's effort. However, the choice of the type of amphibious operation would be conditional on the strategic and operational objectives. While sea control will continue to be contested, especially closer to the enemy's coast; unplugging the adversary's command and control structures and targeting its seaward defences can reduce the degree of contestation. The success of amphibious operations in the face of the enemy's augmented ISR capability and improved seaward defences will hinge on using manoeuvre from the sea, rethinking the traditional approach to amphibious operations of using a wide beachfront along with large-scale massing of troops, and embracing technological advancements as well as adopting appropriate contemporary operational concepts.

While sea control is the *raison d'être* of most navies, a greater examination of what thereafter, warrants deeper scrutiny. Are there roles for navies that yield terrestrial influence, but require sea control of a fleeting nature? Under what circumstances would navies surrender safety of waters beyond the arc of the enemy's influence to enter contested seas? Are traditional notions of large formations and utilisation of large capital ships suitable to such forays? During such forays, the perceived boundary, when risks to the fleet outweigh its benefits, is when "blue water" transitions to "green water."<sup>70</sup> Continental influence is contingent on navies operating in such green waters by challenging traditional counter-force roles, accepting attendant losses and equipping and training appropriately to fight and win. Furthermore, wading into the littorals would be conditional on possessing assets suited to operating in those conditions, and the adoption of a joint approach to littoral warfare. Long-range maritime strike capability affords navies the ability to hit deep within enemy territory. The development of such capability needs to be accorded the highest priority. Missile-centric forces, at the same time, can be dispersed to complicate the ISR efforts of the enemy while harnessing the inherent strength of manoeuvre from the sea.

Historically, technological trends have moulded naval warfare, while the constants of seapower, such as manoeuvre and mobility have remained steadfast. The challenge of augmenting the terrestrial influence of maritime strategy is achievable by marrying the two and retooling traditional

approaches to the application of maritime power on land.



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## NUCLEAR DETERRENCE IN THE CONTEXT OF THE SINO-INDIAN BORDER STANDOFF

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*Commodore AM Sabnis*

### Introduction

Attempts to reduce the ongoing tension on the Line of Actual Control (LAC) between India and China, which started in May of 2020, have not yet yielded the desired result. Even after the 11<sup>th</sup> round of talks at the level of the military commanders, the restoration of *status quo ante* in places like Hot Springs, Gogra and Depsang has not taken place. Besides, there has not been any apparent reduction in the troop levels since the height of the stand-off.<sup>1</sup> The tension on the LAC is likely to impact the overall relationship between India and China.<sup>2</sup> While the events on the LAC have received adequate attention at the international level, the global community does not seem as perturbed with the increase in force levels at the border between two nuclear-armed neighbours. There is little doubt that a similar standoff between India and her other nuclear armed neighbour viz. Pakistan, would have seen hectic efforts by the global community to urge an early resolution.

China and India are the two most populous nations on the earth. With both countries possessing nuclear weapons, a nuclear exchange between the two will undoubtedly have catastrophic consequences. China's current action of opening up several fronts simultaneously, especially at a time when the world at large is dealing with the Covid-19 pandemic (which itself allegedly originated in China), has lowered its international standing. On the other hand, India currently enjoys sufficient goodwill within the global community. Yet, the current global discourse on the border tension between India and China seems to point to a degree of assurance that the crisis will not lead to a nuclear exchange. This of course may be seen in a positive light, and no nuclear threat has been issued by either side.

This restraint on nuclear signalling between the two countries is in stark contrast to the behaviour of India's western neighbour who has made it a habit of frequently threatening India with nuclear war.<sup>3</sup> Pakistan reinforces the global perception that South Asia is one of the most dangerous nuclear

flashpoints. The perception relies on two factors. First, the lack of trust between the competitive political leadership and the extremely high suspicions prevalent among the military leadership. Second, given the proximal geographic distance between India and Pakistan, the escalatory potential of a war could be very high in view of the short flight distances of missiles and greater exposure of counter-value targets i.e., the civilian population, who are critically held hostage to the aggressive and acrimonious political rhetoric. These two factors have inevitably given India and Pakistan the perennial tag of being 'unstable' - although in operational experience, both sides have exercised caution and restraint.

### India's Nuclear Neighbourhood

Four of the current nuclear powers - USA, UK, France, and Israel - do not share a land border with any other nuclear power. While Russia shares a large border with China, her border with North Korea is very small. Therefore, India, Pakistan and China are currently the only three nuclear armed countries in the world, which have more than one nuclear armed country as a neighbour. A comparison of the size of landmass, coastline, and their armed forces, as obtained from the *CIA World Factbook* is tabulated below.

Comparison Factor	China	India	Pakistan
Land area (sq km)	93,26,410	29,73,193	7,70,875
Water area (sq km)	2,70,550	3,17,070	25,220
Total area (sq km)	95,96,960	32,87,236	7,96,095
Land boundary	22,457	13,888	7,257
Coastline	14,500	7,600	1,046
Ground Forces	10,00,000	12,50,000	5,60,000
Navy/Marines	2,50,000	65,000	30,000
Air Force	3,50,000	1,40,000	60,000
Rocket Force	1,20,000	-	-
Strategic Support Force	1,50,000	-	-
People's Armed Police	6,00,000	-	-
Total Military	24,70,000	14,60,000	6,50,000

Table 1: Comparison between China, India and Pakistan<sup>4</sup>

It is interesting to note that the ratio between the size of India to Pakistan is 3.9:1, and 1:3.1 between India and China. There is near parity between the size of the ground forces of China and India, while the naval / marine forces of China are about 3.8 times larger and the Chinese Air Force enjoys a numerical superiority of 2.5 times. On the other hand, the Indian ground,

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***Conventional superiority of China over India is greater than that of India over Pakistan***

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naval, and air forces are about 2.2 times that of Pakistan.<sup>5</sup> An analysis of the conventional balance between India and Pakistan from a quantitative standpoint for the period 1972 - 2002 by Kapur concluded that India's advantage varied from 2.79:1 for the 70s, 2.53:1 for the 80s, 2.17:1 for 90s, and 2.7:1 for the period from 2000 to 2002.<sup>6</sup> Thus, the overall conventional superiority of China over India is greater in magnitude than that of India over Pakistan.

The nuclear postures adopted by countries have, to a large extent, been influenced by the superiority or otherwise of their conventional forces. It is clear from the above comparison that the equation of conventional military power is not in India's favour, in the Sino-Indian context. Yet, India has steadfastly refused to raise nuclear threats during the ongoing tensions between the two countries. As mentioned earlier, such a level of restraint has never been exhibited by Pakistan when tensions rise with India. Let us therefore, examine the nuclear doctrines of the three countries in brief. Before doing that, a quick recap of the Theory of Deterrence may be useful.

### **Deterrence Theory**

The horrific effect of the bombs dropped on Hiroshima and Nagasaki in 1945 spawned research in the realm of International Relations to find, *inter-alia*, ways of avoiding a nuclear conflict. Bernard Brodie, in his book *The Absolute Weapon* published in 1946, said that henceforth, the chief purpose of the military establishment will be to avert wars.<sup>7</sup> Nuclear weapons, it is largely agreed, enable deterrence in a way that conventional weapons cannot match.

Nuclear weapons, if and when used, are very likely to result in a 'total war' due to their immense destructive power. Interestingly, Clausewitz, the 19<sup>th</sup> Century scholar-warrior remains relevant even in the nuclear age. In his seminal work, 'On War,' he had written that war is merely an extension of state policy by other means. He had identified war to be made up of a

‘fascinating trinity’ comprising violence, hatred and enmity as one element, ‘chance’ and ‘probability’ as the second element, and being based on ‘reason,’ as the third element. Thus, rationality dictates that a war, which cannot have any possible rational end, is best avoided. This can be achieved by pursuing a strategy of deterrence.

Over the years, a range of theories of deterrence have been propounded. These range from existential deterrence, rational deterrence, to perfect deterrence. Delving into these theories is beyond the scope of this article. Based on these theories, many countries practise a strategy of nuclear deterrence. To put it in a nutshell, nuclear deterrence is a strategy that ‘deters’ an adversary from indulging in an action by making him believe that the cost of his action would invite appropriate, if not excessive, response of a kind that would cause far more damage than any gain that he would make. It is aimed at highlighting a cost benefit analysis of a nuclear exchange, and is essentially a mind game. Quite obviously, this belief has also led to nuclear proliferation, as a number of countries, including Pakistan, believe that the possession of nuclear weapons provides them leverage to counter nuclear threats.

However, the possession of nuclear weapons, *ipso facto*, is not adequate to ensure nuclear deterrence. For deterrence to work, the threat to use nuclear weapons must be ‘credible.’ This credibility is determined by the nuclear capabilities of the nation, including its ‘willingness’ to use it, if required.<sup>8</sup> Therefore, countries in possession of nuclear weapons draw up and follow their own nuclear doctrines, which dictate the types and number of nuclear weapons they aim to possess, and their use for warfighting, or deterrence. Let us now examine the nuclear doctrines of India and her nuclear neighbours.

### **China’s Nuclear Doctrine**

The People's Republic of China came into existence in 1949, and was in the Soviet camp during the initial stages of the Cold War. During the Korean War, USA issued nuclear threats to China. This underscored the importance of nuclear weapons to the Chinese leaders, who then sought nuclear cooperation with the Soviet Union, resulting in the agreement signed between the two countries in 1955.<sup>9</sup> Subsequent events, such as threats by USA such as during the Taiwan Strait crisis in 1958, and the halting of nuclear cooperation by the Soviet Union in 1959, apparently strengthened

the Chinese resolve to develop nuclear weapons. Finally, they developed their own nuclear weapons and conducted 46 tests, including thermonuclear tests between 1964 and 1996.<sup>10</sup>

During the Cold War, the Soviet Union, with its conventional superiority, adopted a posture of 'No First Use,' (NFU) but after the end of the Cold War, rescinded it in its *avatar* as Russia. China, however, was an early exception when it declared a policy of NFU soon after conducting its first nuclear test in 1964. At that time, the rift between the Soviet Union and

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***Chinese statements continue to ascribe to a NFU policy, but leave some confusion***

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China was increasing, while the eventual rapprochement with the USA occurred almost a decade later. Without speculating about the reason for China's adoption of

this policy, it is important to note that official Chinese statements continue to ascribe to a NFU policy, but leave some confusion about the scope of the policy and its conditions. A 2005 Chinese Foreign Ministry White Paper reiterated the pledge of NFU by stating that, "the Chinese government has solemnly declared that it would not be the first to use such weapons at any time and in any circumstance," and that this policy "will remain unchanged in the future." In addition, the paper reiterated that "China has committed unconditionally not to use or threaten to use nuclear weapons against non-nuclear-weapon states or nuclear-weapon-free zones."<sup>11</sup>

Although China does not use the word 'deterrence,' preferring to use 'self-defence' as the rationale for developing nuclear weapons, the primary purpose of China's nuclear weapons may indeed be surmised to be deterrence.<sup>12</sup> China is believed to maintain a posture of minimum nuclear deterrence against the USA, and an offensive-oriented approach of limited nuclear deterrence towards India. It is also believed to be in possession of Tactical Nuclear Weapons, which does appear at odds with its policy of not using nuclear weapons for warfighting.<sup>13</sup>

China does not consider India to be a legitimate nuclear weapon state. Moreover, the NFU pledge is believed to be conditional. Therefore, there can be a question whether the NFU policy would be applicable against India. Besides, the unconfirmed inclusion of Tactical Nuclear Weapons in China's arsenal and their strong belief in the principle of 'deception,' provide adequate reason for India to be cautious.



### **Pakistan's Nuclear Doctrine**

Since partition, Pakistan has always looked at India as an adversary. While the liberation of Bangladesh, in 1971, with India's help provided Pakistan the impetus to develop its nuclear programme, it apparently started considering the acquisition of nuclear weapons soon after China conducted her first nuclear test in 1964. It was believed that China's test would result in India developing its own nuclear weapons, and therefore, it was necessary for Pakistan to follow suit for its own security.<sup>14</sup>

Pakistan strives to maintain military parity with India. However, unable to match India conventionally, Pakistan has leveraged nuclear weapons as a deterrent against conventional war. The political objectives of Pakistan in pursuing a nuclear weapons programme have been identified as a security guarantor in the absence of alliance support for military adventurism; as a tool for nation building and prestige; an instrument to legitimise military power, and as leverage for gaining leadership of the Islamic World.<sup>15</sup>

While Pakistan has not formally declared its nuclear doctrine, there is little doubt that the doctrine is India-centric, and includes credible minimum deterrence and First Use of nuclear weapons as its tenets. In 2002, Lt Gen Khalid Kidwai, the then head of the Strategic Plans Division of Pakistan, mentioned four red lines, which if crossed, would make Pakistan launch its nuclear weapons. These were its space threshold, military threshold, economic threshold, and domestic destabilisation threshold.<sup>16</sup> The use of nuclear weapons being construed as a means of war fighting is reinforced by its development of Tactical Nuclear Weapons. In its efforts to deter India, Pakistan also rationally resorts to exploitation of its 'irrationality' through the frequent declaration of threats by various Pakistani leaders to use these weapons. Thus, Pakistan attempts to leverage its possession of nuclear weapons to deter India by holding out the threat to neutralise India's conventional superiority through the use of nuclear weapons, while continuing a proxy war at the sub-conventional level.<sup>17</sup>

### **India's Nuclear Doctrine**

The Atomic Energy Commission of India was established in 1948. The reasons ascribed for India's decision to start a nuclear programme include, "combination of traditional defensive security concerns, ideology, domestic political calculations, and a desire for prestige or great power status."<sup>18</sup> The use of nuclear energy for peaceful purpose to aid in the

development of the nation is also an important factor which appears to have been considered.<sup>19</sup>

However, there is little doubt that subsequently, India's nuclear programme has been influenced by the China-factor. China's size, proximity, and India's experience at the hands of Chinese in 1962, have made her wary of China's military might. In fact, about one week prior to the nuclear tests of 1998, India's then Defence Minister, George Fernandes, called China "enemy number one" in a television interview.<sup>20</sup>

Despite, Pakistan conducting its own nuclear tests as an immediate response to India's in May 1998, India has adopted a mature nuclear

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***India unequivocally adopts  
a posture of 'No First Use'  
of nuclear weapons***

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doctrine which includes building and maintain a credible minimum deterrent. It unequivocally adopts a posture of 'No First Use' of nuclear weapons, stating that nuclear weapons will only be used in retaliation against a nuclear attack on Indian soil, or on Indian troops anywhere, or a strike with any other weapons of mass destruction. Such retaliation will be massive and designed to inflict unacceptable damage. It rules out the use of nuclear weapons against non-nuclear states. The principle of civilian control over the nuclear weapons is also included in the doctrine, as is the aim of universal nuclear disarmament.<sup>21</sup> It is also necessary to highlight that India's policy of No First Use has remained unchanged even though the current NDA (National Democratic Alliance) government's main constituent party had promised to review the nuclear doctrine in the run up to the Lok Sabha elections in 2014.<sup>22</sup>

## **Conclusion**

A comparison of the doctrines of the three countries reveals that there are significant differences between Pakistan's doctrine on the one hand, and that of China and India on the other. While Pakistan sees its nuclear weapons primarily as 'weapons,' India tends to emphasise the 'nuclear' characteristic of such weapons.<sup>23</sup>

China projects an approach similar to that of India and both countries believe in 'credible minimum deterrence,' and in keeping their nuclear weapons in a de-mated condition. With both countries committed to the 'No First Use' principle, it is not surprising that the nuclear aspect has been kept out of the discourse between the two nations, even during the ongoing

crisis. A recent study of relevant Chinese literature and interviews with Chinese experts, conducted by the Carnegie Endowment for International Peace, has concluded that, “Chinese analysts maintain a dismissive attitude about the relevance of nuclear weapons in China-India relations.”<sup>24</sup>

With Pakistan’s perpetual animosity against India, and the presence of an increasingly hegemonic China on its border, India has a complex deterrence problem. While deterrence between India and Pakistan may be said to be in place, and working, the deterrence relationship between India and China is yet to be defined formally.

The China-factor has been one of the important reasons for India to start its nuclear weapons programme. Nonetheless, India has, in keeping with its behaviour as a responsible nuclear power, adopted a more mature approach. Further, we may keep in mind key factors such as the present standoff being limited to the border areas, the overall relationship with China and India’s hope for an early and peaceful resolution of the crisis. Therefore, raising the nuclear card, especially at the time of heightened tensions last year, would have signalled a higher step in the escalation matrix. This has correctly been averted in this crisis.

The question is whether India is likely to continue with this approach even if the situation escalates into a limited conflict, perhaps on a scale similar to that in Kargil in 1999. Taking various factors into account, it may be safe to conclude that despite China’s conventional superiority, India is unlikely to discard its NFU policy against China. Further, notwithstanding the ongoing tension on the border, the restraint shown by India in this matter is likely to continue. However, it is necessary to recall that in the recent past, two defence ministers of India including the incumbent, have expressed their view that the NFU policy could be reviewed in the future.<sup>25</sup> Thus, it would be reasonable to conclude that if India is involved in an intense war on two-fronts due to collusion between China and Pakistan, it may not be feasible for India to dogmatically adhere to the ‘No First Use’ policy.



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## ELEVATING INDIA-UK NAVAL AND MARITIME SECURITY TIES POST-BREXIT AND POST-COVID

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*Rahul Roy-Chaudhury*

India looms large in the United Kingdom's (UK) world view as it emerges after four years of political wrangling over its exit from the European Union (Brexit) and recovers from the shocking impact of Covid-19 on lives and livelihood. Three prime ministerial visits between India and the UK are scheduled for this calendar year. British prime minister Boris Johnson and Indian prime minister Narendra Modi are seeking a "quantum leap" in their bilateral relations.<sup>1</sup> A ten-year official 'road map' to 2030 has been finalised; five key 'pillars' of cooperation have been identified - trade and investment; defence, security and multilateral collaboration; climate; health; and migration and mobility. The UK has also announced a new foreign and security policy tilt towards the Indo-Pacific region in its post-Brexit world view, with a greater focus on India.

Within this context, 'why' is this the right time for bolstering the India-UK defence and security partnership; 'what' will be a key priority; and 'how' best to elevate their naval and maritime security ties?

### Why?

Prime ministers Modi and Johnson's rhetoric to "realise the potential" of the bilateral relationship is an acknowledgement of the unfulfilled potential their formal 'strategic partnership' has had for the past 17 years (since September 2004). There has been, for example, no visit of India's *Raksha Mantri* (Defence Minister) to the UK during this period. Modi's attempt to "re-invigorate" ties during his UK visit in November 2015 came to nought, as the UK referendum on Brexit took place seven months later.<sup>2</sup>

More importantly, their rhetoric signals the beginning of a sustained effort at a new and elevated bilateral strategic partnership amidst the changing political landscape and geo-strategic environment. For the UK, Brexit means that it can now begin to chart its ambition of a 'Global Britain' without any European Union constraints. This will now focus on building new and strong partnerships in the Indo-Pacific region for both prosperity

and security reasons. India is a key partner in this endeavour.

The UK's Integrated Review (IR) is its first comprehensive review of defence, security, development and foreign policy since the Cold War titled *Global Britain in a Competitive Age* - 16 March 2021. It recognised India as one of the three most important powers in the Indo-Pacific region (along with China and Japan), "the largest democracy in the world" and as an "international actor of growing importance." It stated that the UK's objective is to "transform bilateral cooperation over the next ten years across the full range of bilateral shared interests;" no other country is accorded such an ambitious agenda. The subsequent 69-page UK Defence Command Paper (DCP), titled *Defence in a Competitive Age* (22 March 2021), went further by describing India as "a key pillar" of its regional approach.<sup>3</sup> This new perception of India within the broader geographical construct of the Indo-Pacific, rather than the traditional confines of South Asia, will be welcomed by New Delhi.

In a significant development, PM Johnson has invited PM Modi as a 'guest' to the meeting of an exclusive group of powerful countries, the G (Government)-7 Summit in mid-June 2021, in the UK. India will be one of only four guest countries, along with Australia, South Korea and South Africa. This is in marked contrast to India's participation in the previous G-7 summit in 2019 chaired by France, when it was one of nine 'guest' countries. India's G-7 participation takes place alongside its non-permanent membership of the UN Security Council for the two-year 2021-22 period.

And then there is the 'Boris factor.' PM Johnson's reputation as a 'colourful,' 'bold' and 'unconventional' politician, with boisterous optimism on issues he takes a liking to (often in opposition to his bureaucracy). This reputation preceded him for the planned - but subsequently cancelled (due to the second wave of Covid in India) - first visit to India as Prime Minister by the middle of 2021. This would have been Johnson's first substantive meeting with PM Modi, even though they had met earlier on the sidelines of international summits. PM Johnson is no stranger to India; his former wife had part-Sikh heritage and he has visited her relatives in India in the past. There is a widely-held view in India that PM Johnson's premiership will be 'more accommodating' towards India than Cameron's. In an early sign of this, the UK's recently re-organised Foreign Commonwealth & Development Office (FCDO), raised its India

profile by appointing, for the first time, a Director-level (an Indian Additional Secretary equivalent) official for ‘India and the Indian Ocean;’ this takes place in a newly-created Indo-Pacific Directorate (deliberately ‘de-hyphenated’ from the Pakistan, Afghanistan and Iran Directorate).

The UK’s outreach to India is also related to its changed relationship with China. The rhetoric of the ‘golden decade’ of UK-China relations of British Prime Minister David Cameron’s government has disappeared. The

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***In June 2020, the UK government placed Huawei in the bracket of potentially hostile state vendors***

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first significant shift was British Prime Minister Theresa May’s government’s security concerns over partial control of the Hinkley Point nuclear power plant by a Chinese state-owned company. This was followed by growing concerns over the role of Chinese technology giant Huawei. In June 2020, PM Johnson’s government placed it in the bracket of “potentially hostile state vendors.”<sup>4</sup> In November 2020, the government banned the installation of new Huawei equipment in the UK’s 5G networks from September 2021, with all Huawei equipment to be removed from its 5G network by the end of 2027, on the basis that it posed a threat to the UK’s national security. China’s enactment and imposition of the National Security Law in June 2020 led to strong UK criticism of violation of Hong Kong’s high degree of autonomy and the freedoms and rights protected by the 1984 UK-China Joint Declaration. British Ministers also publicly expressed concern over the Chinese government’s persecution of China’s Uyghur minority in Xinjiang province.

Meanwhile, the Indian government’s ‘wait and watch’ attitude towards the UK’s domestic political challenges has ended with Brexit taking place on 31 December 2020. Bilateral cooperation during the Covid-19 pandemic has been enhanced with the development of the UK (Oxford University)/Swedish AstraZeneca Covid-19 vaccine and its manufacture in India as Covishield. Both countries are partners in GAVI, the vaccine alliance. Prime Minister Modi has also made several references to India playing an important role in a new post-Covid ‘World Order.’<sup>5</sup>

And, India’s renewed tensions with China will also be an important factor in its new and elevated bilateral strategic partnership with the UK. Its border clash with China on the Line of Actual Control (LAC) in the Galwan Valley in Ladakh in mid-June 2020 has changed its perception of China from being a ‘strategic challenge’ in the ‘long term,’ to becoming an

‘immediate threat’ in relation to their disputed land borders. For the first time in 45 years, 20 Indian soldiers were killed on the Sino-Indian border. Notwithstanding the subsequent partial de-escalation of troops that had taken place by early March 2021, China remains at the top of India’s list of neighbourhood threats.

Indeed, the UK’s concerns over China have brought about a convergence of perspectives on China’s assertive policy towards India that had not existed earlier. In June 2020, British Members of Parliament raised concerns over China’s “bullying behaviour” on the border dispute with India.<sup>6</sup> In July 2020, the new British High Commissioner to India Sir Philip Barton (currently the Permanent Secretary in the FCDO in London), discussed China with India’s Foreign Secretary Harsh Shringla.<sup>7</sup> And, in July 2020, the UK government expressed strong concern over Chinese actions against India in the Galwan valley.<sup>8</sup> However, even though the IR recognised China as an “authoritarian state” that posed the “biggest state-based threat” to the UK’s economic security, it also sought to engage China at multiple levels, including on economic and climate change issues.<sup>9</sup>

## **What?**

Defence and security ties have sensibly been ‘upgraded’ as one of five ‘pillars’ of the new ten-year elevated bilateral strategic partnership ‘road map’ till 2030. Maritime cooperation is at its centre.

The IR’s vision for this is “enhanced defence cooperation that brings a more secure Indian Ocean Region;” the DCP states that the UK “will establish a maritime partnership with India in support of mutual security objectives in the Indian Ocean.”<sup>10</sup> While the UK is expected to focus on the western Indian Ocean, where it holds long-standing historical and strategic leverages, India will concentrate on the entire Indian Ocean, which forms part of its ‘extended neighbourhood.’

For the UK, the level of engagement with the western Indian Ocean/ Gulf region, where it has retained an active area of interest, is increasing. The Royal Navy has been operating bilateral/ multinational frameworks such as the Combined Maritime Forces (CMF) coalition (where it holds the permanent deputy command post) in Bahrain and, till recently, the EU Naval Force (EU NAVFOR) task mission countering piracy off Somalia.<sup>11</sup> In April 2018, the UK opened its Naval Support Facility in Bahrain, its first permanent base in the Western Indian Ocean, since UK armed forces

withdrew from East of Suez in the 1970s.

The UK today has seven ‘permanent points of presence’ in the Indian Ocean (Bahrain, Oman, Kenya, Brunei, Singapore, Diego Garcia and Qatar) to protect sea lanes around the Western Indian Ocean region.<sup>12</sup> And, it seeks a permanent naval force presence in the area. But, there is scepticism over UK’s capacity for a permanent naval presence in the Indian Ocean, with the UK’s Chief of Defence Staff recently referring to “regular episodic activity” in the area.<sup>13</sup> Nonetheless, in a substantive funding boost for the armed forces, in November 2020, PM Johnson set out a \$23 billion increase in defence funding over four years, making this the largest programme of investment in British defence since the end of the Cold War.

Meanwhile, the Modi government has instilled a new policy priority towards the Indian Ocean, seeking to become a ‘leading’ power by taking on greater roles and responsibilities, alongside the development of naval power projection capabilities. In March 2015, Prime Minister Modi became the first Indian prime minister in decades to unveil a vision for the future of the Indian Ocean, titled ‘Security and Growth for All in the Region’ (SAGAR). This five-pronged approach included: deepening economic and security cooperation with India’s maritime neighbours and island states; strengthening their maritime security capacities and economic strength; envisaging collective action and cooperation to advance peace and security and respond to emergencies. Three years later at the IISS Shangri-La dialogue in June 2018 in Singapore, Prime Minister Modi stated that the Indian Ocean had not only shaped much of India’s history but held the key to India’s future. And, in November 2019, at the East Asia Summit in Bangkok, he launched the Indo-Pacific Oceans Initiative to ensure the safety, security, and stability of the maritime domain.

Consequently, the Indian Navy sought to become a ‘net security provider’ in the Indian Ocean through its activities to enhance maritime security. These include anti-piracy operations in the Gulf of Aden; coordinated and joint patrols with Bangladesh, Indonesia, Myanmar and Thailand; and joint surveillance, patrols and hydrographic surveys of the Exclusive Economic Zones (EEZs) of Mauritius, the Seychelles and the Maldives. A maritime security dialogue has recently been resuscitated among India, Sri Lanka and the Maldives, with the participation of Bangladesh, Mauritius and Seychelles as observers.

Building collaborative relations with Indian Ocean littoral and island



states on Maritime Domain Awareness (MDA) remains key to this effort. In December 2018, the Indian Navy inaugurated the Information Fusion Centre (IFC) for the Indian Ocean Region (IFC-IOR). Within two years, seven Indian Ocean littoral and island states had agreed to post Liaison Officers at the Fusion Centre. India has supplied coastal radar surveillance systems to Mauritius, Seychelles, Sri Lanka, Maldives, Myanmar and Bangladesh. The Indian Navy has also undertaken several Humanitarian and Disaster Relief (HADR) operations, as well as the rescue of Indian and other citizens from littoral states.

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***India's ties with Mauritius remain key to its access to the south-western Indian Ocean***

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India's maritime security ties with Mauritius remain key to its presence and access to the south-western Indian Ocean. Following its 2015 agreement, India is actively constructing a new airport (capable of hosting the Indian Navy's new Boeing P-8I maritime patrol aircraft), new port and logistics and communication facilities on the remote North Agalega island.<sup>14</sup> In February 2020, India provided its third defence-related Line of Credit (LoC) to Mauritius; and has provided Mauritius and Seychelles with Dornier maritime patrol aircraft, coast-guard ships and helicopters. But, a 2015 agreement with the Seychelles to similarly access one of its islands has stalled due to opposition by the new Seychelles president.

But, after five years, India has begun 'pulling back' from its unilateral approach of becoming a 'net security provider' to being a 'preferred security partner,' in cooperation with others, in the Indian Ocean. This is due largely to the lack of requisite capacity and funding, and realisation that mutual collaboration with partner countries is likely to be more impactful.

India's border clash with China in June 2020 also served to exacerbate its concerns over China's naval presence, influence and impact in the Indian Ocean. In 2017, China established its first overseas military base in Djibouti, off the Horn of Africa; which has increased the number and deployment of warships and research and fishing vessels; and expanded its influence through the supply of submarines and warships to India's neighbours.

This resulted in a reversal of India's policy. In marked contrast to the 1970s and 1980s, when India was opposed to extra-regional naval presence in the Indian Ocean, India today seeks to encourage cooperation with select foreign naval forces, including those of the UK, as a potential 'counter-

weight' to China in the Indian Ocean. But, in terms of the IR, the UK could remain circumspect in this respect.<sup>15</sup>

### **How?**

In view of the changing security policies of India and the UK towards the Indian Ocean, how best to elevate their maritime and security partnership? This can be done in seven ways, with some already being undertaken.

### **Strengthening Navy-to-Navy Ties**

First, the Indian and Royal navies interact on a host of issues including training, doctrinal concepts and Maritime Domain Awareness (MDA). A UK armed forces officer is likely to be deployed to India's IFC-IOR shortly.<sup>16</sup> Both navies are also progressing 'capability partnerships' in several areas of mutual interest; the recent induction of two Deep Submergence Rescue Vessels from the UK bolstered India's submarine rescue capabilities.<sup>17</sup>

The 14<sup>th</sup> edition of the annual bilateral *Konkan* naval exercise took place in the English Channel in August 2019; this exercise is held alternately off the coasts of India and UK. But, it was limited to one warship on each side. These exercises need to be expanded, combined and made more complex. Greater sea-time together is required and port calls should increase.

With the UK's new Queen Elizabeth, aircraft carriers and its strike group beginning its first operational deployment from May 2021, including through the Indian Ocean, a larger joint naval exercise will take place. Unfortunately, this will not be carrier-led from the Indian side. There will also need to be greater effort on joint MDA, information sharing and joint counter-piracy operations off the Gulf of Aden.

But, 'imaginative' thinking is also required to maximise these interactions. These could include trilateral naval exercises among India, UK and USA/ Australia/ Japan, at a time when the UK is notable for its absence in any of India's multiple trilateral naval exercises.

### **Seeking Bilateral/ Multi-lateral Cooperation in the Western Indian Ocean/ Gulf Region**

Second, the UK and India have longstanding and historical ties to the Gulf region. Recently, India's diplomatic relations in the Gulf have

dramatically expanded into defence and strategic partnerships with the UAE, Saudi Arabia and Oman. As India and the UK unilaterally build their ‘non-competitive’ presence and influence in the Gulf region, unique opportunities for cooperation arise.

This is particularly the case in relation to Oman’s strategic port of Duqm, where the UK has since 2018 hosted a logistics support base, and both navies, along with the US Navy, have been given much-valued privileged port access.<sup>18</sup> Both the Indian and Royal navies could jointly use this facility to host joint bilateral naval exercises (or a trilateral naval exercise with the US Navy). Coordinated or joint patrols; joint programmes for capacity-building and training for Omani/ Gulf naval forces could be part of the steps. The UK’s naval support facility in Bahrain could also provide unique opportunities to enhance bilateral naval cooperation. Both navies could work together from Oman and Bahrain to improve the safety and security of shipping, including against piracy.

#### **Agreement on Defence Logistics**

Third, in relation to port access, an India-UK Defence Logistics Memorandum of Understanding (MoU) has recently been finalised.<sup>19</sup> This is expected to provide access to one another’s port facilities. This will be an important bilateral defence MoU serving to extend India’s strategic and naval operational reach in the Indian Ocean and beyond. In this respect, India has signed multiple logistics support agreements with the USA, Australia, Japan, France, South Korea and Singapore; and is reportedly working on two additional logistics agreements with Russia and Vietnam.

#### **Requirement of a ‘Security-First’ Approach to Diego Garcia/ British Indian Ocean Territory (BIOT) in the Central Indian Ocean**

Fourth, there continues to be considerable political controversy over the UK’s continued sovereignty over BIOT, with Diego Garcia leased to the US for the joint UK-US military base. This base supports regional counter-narcotics and counter-terrorism operations, and provides unique opportunities for MDA.<sup>20</sup>

In view of its long-standing support for de-colonisation, India firmly supports Mauritius in its quest for the restoration of sovereignty over Diego Garcia. As a result, India has consistently voted against the UK on this issue in the United Nations. But, at the same time, India’s concerns over the

expansion of Chinese naval presence and influence in the Indian Ocean have intensified. In effect, both India and the UK need to ‘leverage’ the advantages that the strategic location of Diego Garcia/ BIOT provides from a ‘security-first’ perspective in order to jointly ensure the safety and security of shipping in the area. Indian naval access to Diego Garcia will be key in this endeavour.

### **Building Cooperation on Maritime Security Issues in the IORA and the IONS**

Fifth, despite the political controversy surrounding Diego Garcia, it has provided the UK with full membership of the Indian Navy-initiated Indian Ocean Naval Symposium (IONS). The UK is also a dialogue partner of the Indian Ocean Rim Association (IORA), the single ‘permanent’ inter-governmental ocean-wide organisation for cooperation, with headquarters in Mauritius. India is a member of both the IONS and the IORA. This provides opportunities for diplomacy and cooperation on Indian Ocean matters.

Both India and the UK should seek enhanced institutional connectivity and convergences between the IORA and the IONS in relation to maritime safety and security, which is lacking. Maritime safety and security is one of six priority areas of the IORA, while the IONS has a maritime security/ HADR working group. MDA is another key issue for prospective cooperation, alongside maritime counter-terrorism cooperation and coordination. They could also encourage a rules-based framework on which all Members and Observers of IORA and the IONS could mobilise their collaboration; including respect for international rules and an international rules-based system, including the law of the sea, freedom of navigation and overflight.

### **Developing a New ‘Quad’ or ‘Quad-plus’ Framework for the Indian Ocean**

Sixth, despite some initial hesitancy, the new Biden administration appears keen to strengthen the ‘Quad’ framework (Quadrilateral Security Dialogue) for cooperation in the Indo-Pacific region among the USA, India, Australia and Japan. The first ‘Quad’ naval exercise took place with the inclusion of the Royal Australian Navy in November 2020, after a gap of 13 years. President Biden is reportedly keen to raise the ongoing Foreign

Ministers-level meeting with a summit of the Heads of Government/ State of the ‘Quad’ countries.

The Johnson government is reportedly keen to join this ‘Quad’ grouping as a ‘Quad-plus’ country.<sup>21</sup> But, even if this is unlikely at the present time, the UK is expected to seek deeper engagement with ‘Quad’ countries.<sup>22</sup> This could be expanded through a ‘Quad-plus’ naval exercise with the UK, as has already taken place with the Royal Canadian Navy in January 2021 and the French Navy in April 2021. A new ‘Quad’ framework for the Indian Ocean could also be

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***UK is expected to seek deeper engagement with ‘Quad’ countries***

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encouraged, with the UK and France as partners of India and the USA, thereby including three of five permanent members of the UN Security Council. The reason for this is that neither Japan nor Australia have the ‘reach’ for the western and central parts of the Indian Ocean component of the Indo-Pacific region. In contrast, both the UK and France possess naval/ military bases and permanent/ ‘near-permanent’ naval force presence in these areas.

### **Mutual Consultation on Indian Ocean Matters**

Seventh, the UK and India currently lack an effective mechanism for mutual consultation on the Indian Ocean; a 2015 proposal for a “new annual senior official dialogue on South Asia, including maritime issues” has not taken place. Such consultation could result in joint HADR operations towards island states such as the Maldives (where the UK opened its diplomatic mission in early 2020), thereby providing ‘value-add’ as a ‘preferred security partner’ in cooperation with the UK. Such consultation can now be led by the FCDO’s India and the Indian Ocean Directorate and the recently amalgamated and expanded Indian Ocean region division (along with the Gulf division) of India’s Ministry of External Affairs (MEA). The National Security Council Secretariat (NSCS) in the Indian Prime Minister’s Office, whose mandate includes maritime security, should also be involved. To ensure impact, such discussions should be underpinned by a ‘Track-1.5’ dialogue by think-tanks of both countries on maritime security cooperation, which currently does not exist (the last one was co-hosted by the IISS in New Delhi, in October 2019).



## **Way Forward**

The last four-plus years of political wrangling over Brexit has meant the UK has arrived late in its tilt towards the Indo-Pacific and in seeking an elevation of its strategic partnership with India. Like other European countries, such as France, Germany and the Netherlands, the UK needs to expand its Indo-Pacific ‘framework’ into a full-fledged policy while competition with India’s other strategic partners intensifies. This will have to take place amidst the UK’s other foreign policy priorities and overcoming domestic health and economic challenges. Continuing irritants in the bilateral UK-India relationship may complicate matters.

Therefore, the UK urgently needs to implement, with high visibility, key parts of the defence and security components of its 2030 road map. This needs to take place within the next 12-18 months, after which the political momentum in India will be lost in preparations for its next general elections in the summer of 2024. An important benchmark will be the visit of India’s Defence Minister Rajnath Singh to the UK within the next 12 months; which would mark the first such visit in 20 years.



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## *Elevating India-UK Naval and Maritime Security Ties*

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## INDIA AND THE INDO-PACIFIC: REALITIES OF A GREAT GAME?

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**T**he pursuit of security, stability and prosperity has always shaped the geostrategy of great powers. Lesser ones remain bound by the reality “...right, as the world goes, is only in question between equal powers; while the strong do what they can and the weak suffer as they must.”<sup>1</sup> With a new ‘Great Game’ gathering momentum in Asia and India declaring its intention to be a significant player, the Indian Ocean (IO) and the needs of securing this vital frontier must be assessed from a ‘great power’ perspective. Failure to do so when European powers used control of the maritime commons to establish themselves in Asia, resulted in colonial darkness. Failure to do so with authoritarian China on the rise risks a similar fate.

This article delves into: -

- Why the Indo-Pacific has emerged as the primary theatre of global geopolitical contestation and where the Indian Ocean fits in it.
- The implications of the current Indo-Pacific ‘Great Game’ for India’s rise.

It does so under the following heads: -

- The Indo-Pacific and the Indian Ocean
- China’s thrust
- America’s dilemma
- India’s conundrum
- Conclusion

### **The Indo-Pacific and the Indian Ocean**

Oceans have two geopolitical attractions. The first is resources. UNCLOS 1982 and the advance of technology gave nations vast resource areas. Disputes about ownership of resources were inevitable, and it was only a matter of time before they spread to the high seas. In the absence of binding and enforceable dispute settlement, might has increasingly become the arbiter of the outcome, as in the South China Sea.

The other is as a ‘Global Common’ connecting nations. Though

traditionally free to use, they need ‘maintenance’ to ensure they remain a *mare liberum* (open seas) and are not transformed into a *mare clausum* (closed seas).<sup>2,3</sup> This maintenance encompasses three broad purposes. The first (benign purpose) is providing succour to users in distress, as well as aid to victims of natural/ political disasters. The second (constabulary purpose) comprises enforcing compliance with international law relating to sanctions, non-proliferation, illicit traffic (in arms, ammunition, drugs and people), piracy, terrorism, environmental pollution, illegal fishing etc. The third (military purpose) is projection of military power to ‘hot spots,’ enabling intervention to deter escalation of regional disputes to a level that jeopardises the international transportation system, as well as for stabilisation of an area. This last purpose necessitates Freedom of Navigation.<sup>4</sup>

Only a few nations possess the capacity to provide such maintenance. Those who can do so regionally become regional powers. Those who can do so on a global scale become great powers. Geography determines the areas they are prepared to contest to maintain sea lanes on their terms. During the colonial period, the most economically productive sea lanes ran across the Atlantic and Indian Oceans, so it was natural that these were contested. Following WW II, Europe and North America between them accounted for 66% of the world GDP till 1990.<sup>5</sup> Great power contestation thus, focused on the Atlantic, while the Indian Ocean became a strategic backwater.

Asia, which accounted for just 20.7% of world GDP (nominal) in 1980, will generate 37.78% in 2021 and 40.06% by 2025.<sup>6</sup> North America’s share shrank to 27.3% in 2021 and will reduce to 25.9% by 2025.<sup>7</sup> The share of Europe too declined to 25.32% in 2021, and is projected to dip to 24.19% by 2025.<sup>8</sup> In PPP terms, Asia already accounts for a greater share of world GDP (45.3%) than Europe and North America combined (40.71%).<sup>9</sup> It is thus, natural that the oceans that bound Asia (the Indian and the Pacific, hence, the Indo-Pacific) should become the key focus for great power contestation. Political understanding of this reality led the USA to proclaim America’s Pacific Century and to ‘pivot’ to Asia.<sup>10,11</sup>

Within Asia, the economic boom has returned the IO and the South China Sea (SCS) to the heart of the global trading system. Energy from the world’s largest source of exportable hydrocarbons flows through it to power the economies of India, China, Japan and others, who constitute the Asian economic miracle. The IO connects industries of South, East and Southeast



Asia with markets in Europe and the Atlantic coast of the Americas. Trade flows through the IO now exceed those through the Atlantic or Pacific. In 2018, the IO connected 12 of the 16 members of the trillion-dollar club.<sup>12</sup> By 2033, 21 of the 25 members of the trillion-dollar club of that time will rely on it for trade connectivity. In comparison, only 12 such nations will depend on the Atlantic and 13 on the Pacific.

From the connectivity perspective, the Pacific (and Atlantic) will remain far more important than the IO for the USA. For Asia Pacific nations including China, the IO and Western Pacific constitute their energy highway and connection to markets, but the Pacific enables USA access for stability. Both are thus, vital. For India and its freedom, however, the IO is economically central and strategically existential, while the Pacific and Mediterranean are less so. This reality must govern India's strategic thought.

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***For India, the IO is economically central and strategically existential***

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### **China's Thrust**

Geopolitical concerns about China's emergence on the world stage were expressed by Sir HJ Mackinder and Samuel Huntington, among others.<sup>13,14</sup> The statements, "China is using economic inducements and penalties, influence operations, and implied military threats to persuade other states to heed its political and security agenda," and "China has mounted a rapid military modernisation campaign designed to limit USA's access to the region and provide China a freer hand there" vindicate the strategic foresight of both.<sup>15</sup>

China, which had for long hidden its strength and bided its time, is now "obsessed with expanding Chinese rights to whatever extent possible, even at the cost of roiling regional tensions."<sup>16</sup> Xi Jinping's vision of global supremacy encompasses a three phase strategy.<sup>17</sup> The first is catching up to USA and playing a key role in global affairs. The second is leading the world as an equal partner (with USA). The third is assuming the leadership role.<sup>18</sup> An equal partnership - the present stage - necessitates China becoming Asia's unquestioned leader. This requires subduing potential Asian competitors and establishing unquestioned dominance over Asia's two maritime connectors: the Western Pacific and Indian Ocean.

Politically, China's seizure and militarisation of the SCS islands and the imposition of its domestic law over exploitation of SCS resources gives it a

secure springboard into the Indian Ocean and “the ability to control the South China Sea and cut off the flow of trade, finance, and communications in South East Asia.”<sup>19</sup> It is now pushing ASEAN states into granting it *de facto* veto authority over who they can partner with for security and resource exploitation. Its lack of respect for treaty law is visible in its flouting a binding award by the Permanent Court of Arbitration,<sup>20</sup> disregard of treaty commitments under various articles of UNCLOS, as well as of Article 3 of the Sino-British Joint Declaration on Hong Kong.<sup>21</sup> It is now ramping up pressure over the Senkaku Islands, using ‘Grey Zone’ measures including its recent Coast Guard law.<sup>22</sup> It could try to forcibly take control over Taiwan before the end of the decade.<sup>23</sup> This successful strategic approach can be expected to extend to the IO as China’s power grows.

Economically, China’s GDP (PPP) in 2019 was over \$24.1 trillion, compared to \$20.8 trillion for the USA.<sup>24</sup> It is the only major world economy to show growth in 2020.<sup>25</sup> Some project that it’s nominal GDP will overtake that of the USA in 2026, two years earlier than anticipated.<sup>26</sup> It is the world’s top trading nation, displacing the USA, and does not hesitate to deny its market to coerce others. Australia provides the most recent example.

China imported 506 million tonnes of crude and 96.56 million tonnes of natural gas in 2019.<sup>27,28</sup> About 80% of this transited through the Indian Ocean.<sup>29</sup> Its resource interests in Africa have been extensively documented; these too must pass through the IO en route to China. So must its exports destined for Africa, Western Europe, the Middle East, South Asia and the USA. The IO is the focus of the Maritime Silk Road. The attendant investment (and the returns this provides), the markets it develops for China’s exports and the employment it provides to Chinese populace are all critical interests. It is thus, only a matter of time before a strategically insecure Beijing focuses on establishing its unchallenged writ in the IO, where strong constituencies in its favour have already been created.

Militarily, it possesses the world’s largest navy, coast guard, maritime militia, merchant fleet and fishing fleet, all of which are increasingly visible in the IO. It has abandoned “the traditional mentality that land outweighs the sea” and visibly attaches great importance “to managing the seas and oceans and protecting maritime rights and interests.”<sup>30</sup> China is conscious that it needs to secure its Sea Line of Communication (SLOCs) from source to destination and cannot free-ride on provision of these public goods by others, particularly in the IO. So it has effectively brought military-ruled

Pakistan into its strategic orbit, established its first overseas base in Djibouti and created a network of dual use facilities that will provide logistic and maintenance support for forward deployed maritime forces throughout the IO. A marine expeditionary force of 100,000 personnel, backed by extensive high volume sea and air lift capability, will help secure its expanding interests in the IO.<sup>31</sup>

These realities directly impact the power balance in the IO. Lee Kuan Yew had observed, “the size of China’s displacement of the world balance is such that the world must find a new balance. It is not possible to pretend that this is just another big player. This is the biggest player in the history of the world.”<sup>32</sup> China’s growing displacement also impacts the IO, where India’s dominant geographic position, social and cultural linkages with the peoples of the IO rim, reasonably well-developed maritime capability and aspirations to be an Asian pole are all affronts to the China dream. The recent Ladakh crisis was not just a territorial grab, but also an attempt to damage India’s international credibility, as in 1962. It did not succeed, but China’s leaders have shown the ability to persevere. They will explore other areas in which to diminish India’s growing international clout, exploiting opportunities in the ‘Grey Zone,’ available in plenty in the IO. India can either act decisively to re-establish the balance, or fade back into the strategic insignificance that was its choice for at least five decades after 1962.

### **America’s Dilemma**

At the turn of the century, in what commentators now acknowledge was a mistake, the USA accorded China “permanent normal trade relations” status.<sup>33</sup> The intent was to incorporate “the biggest player in the history of world” into the US-led global order as a “responsible stakeholder.”<sup>34</sup> The decision, however, opened the floodgates for investment into China and launched the economic boom that turned its economy into the industrial powerhouse it is today.

That a rising China could eventually challenge the US-led world order did not escape strategic thinkers. Apart from Mackinder and Huntington, Andrew Marshall foresaw that China’s military modernisation threatened US military power projection (and primacy) in the Asia-Pacific.<sup>35</sup> The April 2001 EP-3 Aries incident made clear the hard-line attitude of China’s leadership as well as its intention to bring the near seas under its authority.<sup>36</sup>

America's 2001 Defense Strategy Review conceptualised a two-pronged strategy, comprising economic incentives to lure China towards prosperity, and balancing mechanisms (spelt out in the Quadrennial Defense Review of 2001) to hedge against authoritarian tendencies.<sup>37,38</sup> Hedging included creation of the Quad, increasing "aircraft carrier battle group presence in the Western Pacific," and home-porting an additional three to four surface combatants and guided cruise missile submarines in that area."<sup>39</sup> Thus, the American pivot to Asia began during the Bush presidency, long before Obama claimed political credit for it.<sup>40</sup>

However, 9/11 and the need to enlist China's support for the ensuing 'war on terror,' as well as issues such as climate change created a distraction. Overconfident about the power disparity, successive

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***Upto 2015, the US  
Maritime Strategy  
focused on cooperation  
rather than competition***

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administrations, focused on wooing China through the economic prong, and sidelined balancing. So, Obama's 2015 National Security Strategy talked of "managing competition from a position of strength."<sup>41</sup> But, the US defense budget (in constant dollars) declined from a high of \$752.3 billion and 4.8% of GDP in 2011 to \$633.8 billion and 3.5% of GDP in 2015.<sup>42</sup> Meanwhile, China's defence spend rose from \$138 billion to \$214 billion.<sup>43</sup> The deployable strength of the US Navy declined from 289 ships in 2012 to 271 in 2015, even as the PLA (Navy) enhanced its ability to control the near seas and deny access to the USA.<sup>44,45</sup> It is noteworthy that till 2015, the US Maritime Strategy was still "A Cooperative Strategy for 21<sup>st</sup> Century Seapower," signifying focus on cooperation rather than competition. Allies (or "vassals and tributaries") in Europe and East Asia, hooked on US security, blindly followed suit.<sup>46</sup>

When Trump assumed office, he faced three realities. The first was that liberal internationalism was out of tune with the current age.<sup>47</sup> Having reinvented its authoritarian system, China had become the global engine of growth, attracting even traditional US allies like the Philippines and Thailand. Parts of Europe, Africa and South Asia, are also in its orbit, displacing the USA as the largest trading partner for much of Eurasia. The second was that rapid narrowing of the power gap had resulted in China asserting itself through economic and 'Grey Zone' coercion, while remaining below the threshold for conflict, a strategy for which the USA had no counter. The third was that China's military growth and area denial

capability had substantially eroded US ability to maintain access to allies and frontline states in East Asia, resulting in loss of influence and insecurity. This would be brought out through successive Institute of South East Asian Studies (ISEAS) State of South East Asia Survey Reports and allies repeatedly seeking assurances regarding the applicability of Article 5 commitments to disputed islands.<sup>48</sup>

These realities dictated acknowledgement that the strategic path adopted by the USA was incapable of maintaining American primacy; the necessity of an alternate strategy that could do so; and gaining buy-in for it from all stakeholders. It is to Trump's credit that he started the USA on this path, even though through questionable methods. The new strategic direction became visible in Rex Tillerson's address at the Centre for Strategic and International Studies (CSIS) in October 2017.<sup>49</sup> He called out China for undermining the international rules-based order even as "India operated under a framework that protected other nations' sovereignty."<sup>50</sup> Trump's speech at the Asia-Pacific Economic Cooperation (APEC) CEO's Summit at Da Nang a month later reiterated the change of tack.<sup>51</sup> The National Security Strategy of December 2017 stated for the first time, "a geopolitical competition between free and repressive visions of world order is taking place in the Indo-Pacific region."<sup>52</sup> A prematurely declassified US Strategic Framework for the Indo-Pacific spelled out the chosen strategic path.<sup>53</sup>

Strategy formulation is, of course, a time-consuming process. The strategy for the last US great power competitor, the Soviet Union, started with the Truman Doctrine in March 1947.<sup>54</sup> It transitioned through National Security Council Paper NSC 68 in April 1950.<sup>55</sup> It went through Project Solarium leading to NSC 162/2, which formalised the strategy of containment in October 1953.<sup>56</sup> The situation today is far more complex, particularly due to China's deep economic linkages not just with the USA, but also with its allies and partners in the Asia-Pacific.

Biden's Interim National Security Guidance follows the changed direction initiated by Trump. However, action to resource the strategy has been patchy and overly reliant on military-led confrontation without the ability to deploy overwhelming power. There is also the ever present conflict between business and security interests. Having not only allowed the Chinese dragon out of a well-constructed pen, but also enabled its growth to uncomfortable dimensions, America's dilemma lies in finding



ways to at least balance its burgeoning power, if not corral it again, while it gets its act together and shapes a coherent strategy for the future.

A yawning chasm exists between America's political vision and the means available to realise it. The gap encompasses the impact of, among others: -

- Demonstrated strategic myopia and delusions regarding the 'End of History' during the unipolar period, which prioritised populism and liberalism above the needs of strategic balancing, allowing China to narrow the capability gap.
- The continued retention of unipolar dogma and habits in a world visibly trending towards multi-polarity.
- Vested interests including those of a military-industrial complex that generate excessive dependence on military measures to deal with a great power competitor and downplay numerous other US capabilities, notwithstanding the Cold War lesson that military conflict with a peer great power in a nuclear era is unthinkable.
- China's A2AD and growing military might that generates acute discomfort about a conflict amongst countries.
- The continued inability to find a way to effectively deter 'Grey Zone' coercion without risking a war that many in the USA itself acknowledge is unwinnable.
- The credibility gap created by the US disregard for international law (as for example in non-ratification of UNCLOS) and penchant for regime change through coercion or subterfuge, or unilateral sanctions based on the use of domestic law to override international commitments and agreements. Examples of the former range from Egypt (1952), Iran (1953), Guatemala (1954), Libya (2011) and Syria (2012), while examples of the latter include threats and actions under CAATSA and the Nordstream II pipeline.

As is evident from the Anchorage meeting between Blinken, Sullivan, Yang Jiechi and Wang Yi, China has no intention of submitting to US diktats. Earlier unipolar delusions and dreams of incorporating China as a responsible stakeholder lie in tatters. An effective counter-strategy, depending primarily on allies and partners in Asia will be needed. The recent Quad Summit and Lloyd Austin's visit to India are steps in the right direction. However, whether Biden possesses the sagacity and strategic clarity required to overcome past shortcomings and deliver on his Indo-

Pacific commitments remains to be seen. A long road lies ahead.

### India's Conundrum

India has long been accused of being sea-blind. PM Modi's SAGAR vision of March 2015, however, displays strategic clarity for India to: <sup>57</sup>

- Safeguard the mainland, islands and defend India's interests while ensuring a safe, secure and stable Indian Ocean Region (IOR).
- Deepen economic and security cooperation with maritime neighbours and island states and build their capacities.
- Focus on collective action, with those who live in the region assuming primary responsibility for peace, stability and prosperity.
- An integrated and cooperative future for the IOR.

Vision alone, however, is never enough to bring about prosperity or peace. It must be translated to reality in the face of ever-present challenges to both security and stability. The challenges must be assessed, suitable

Type	PLAN			IN	Remarks
	Current	Projection		Current	
		2030	2040		
SSBN	4	8	10	1	7 indigenous boats planned.
SSN	6	14	16	1	INS Chakra will be replaced by a Russian Akula class by 2025. 6 indigenous boats planned.
Modern Conventional Submarines	47	46	46	14(+4)	All Kalvari class will become available in next two years. 10 boats of Shishumar & Sindhughosh class are already over 30 years old. Successor not yet identified. P75I?
Aircraft Carriers	2	5	6	1 (+1)	INS Vikrant will be commissioned shortly.
Destroyers and Larger	41	60	80	10	4 remaining Rajput class will be replaced by 4 Visakhapatnam class by 2025.
Frigates & Corvettes	102	135	140	36	7 Nilgiri Class and 4 Talwar class to be inducted by 2026.
Total	232	268	298	68	

Table 1: Ocean-Going Warship Strength - India and China<sup>58</sup>

strategies developed, resources allocated, structures created and responsibilities assigned.

It is the challenges to stability posed by revisionist nation states within the IO that pose the existential challenge to India's regional power aspirations. These must be the first concern. Others including the revisionist challenge outside the IO are important, but not existential. The maritime power asymmetry against China is brought out in Table 1. To overcome this asymmetry, it becomes necessary to assess the extent of support that can be expected from partners, including the Quad.

The Trump administration's National Security Strategy states, "we will deepen our strategic partnership with India and support its leadership role in Indian Ocean security and throughout the broader region." A desired end state identified in the declassified US Strategic Framework for the Indo-Pacific is, "India remains preeminent in South Asia and takes the leading role in maintaining Indian Ocean security, increases engagement with Southeast Asia, and expands its economic, defense and diplomatic cooperation with other US allies and partners in the region." The Pentagon's Indo-Pacific Strategy Report of June 2019 describes the challenges faced by the IOR as including "terrorism, transnational crime, trafficking-in-persons, and illicit drugs," but does not touch upon coercive challenges. It describes the areas of maritime security collaboration with India as encompassing "domain awareness, HADR, counter-piracy, counter-terrorism, and other transnational issues."

Reading into the above words, limiting perceived challenges in the IOR to constabulary ones is significant. Moreover, conceding the lead role in any sea-space it considers vital, is something that the USA has never done or is likely to do. The conclusion is that the USA does not consider the IO as vital. Given the nuclear factor, it would be unrealistic to expect the USA to risk entanglement in potential conflict stemming from Chinese coercion in the IO. Diplomatic, intelligence, technological and even materiel support may be forthcoming, but military support must be considered unlikely.

Add to this the fact that while there is substantial writing in American think tank space about enhancing US conventional deterrence in the Asia Pacific, there is practically none about doing so in the IO. There is the occasional plea for the USA to take up a greater role in the IO, but little visible action.<sup>59</sup> Calls for restoration of the US First Fleet have yet to be acted on.<sup>60</sup> The inescapable conclusion is that the USA is comfortable outsourcing concerns about IO stability and security to India.

The situation with other Quad partners is no different. Japan, constrained by Article 9 of its constitution and dependent on the USA for its own security, is hardly likely to countenance involvement of its own volition in a military adventure, in the faraway IO. The India-Japan Vision 2025 statement talks loftily of principles underlying the partnership, strengthening the bilateral defence relationship and SLOCs in the SCS, but stops short of making any commitment towards security of India's interests in the IO.<sup>61</sup> The India-Australia vision for maritime cooperation speaks of challenges such as "terrorism, piracy, drugs and arms smuggling, irregular migration, people smuggling, trafficking in human beings, poaching in maritime species, narcotics trafficking and IUU fishing," but is silent on coercive challenges from nation states.<sup>62</sup> Exercise *Malabar* indicates that there may be a possibility of future growth in the security relationship with the three partners, but this would be contingent upon India becoming an ally and surrendering its vaunted strategic autonomy.

***India will have to  
defend its own  
interests in the IO***

India must, therefore, accept that the primary responsibility to defend its interests in the IO will have to be borne by itself. Help from other partners is welcome, but cannot be depended upon. The conundrum India faces is deterring the game of 'chicken' China uses to attain its ends while remaining below the threshold of conflict, in multiple domains. This will impact not just India's territory, but also that of IO nations, and is crucial to India's regional interests. It must be played in a highly trafficked international highway, passing through a global no-man's-land, where smaller nations would find it easier to submit than to risk their nation being turned into a battleground. It must be played without allowing escalation to a level where China's asymmetric military power advantage, industrial capacity (including shipbuilding) and economic might would prove decisive.

Significantly, India's existing maritime security strategy, although aware of the prospect of grey zone coercion, does not provide guidance on deterring it.<sup>63</sup> The mission-based deployment pattern of the Indian Navy and its "first responder" approach to frequent humanitarian crises in the IO indicate that the leadership is alive to the needs. However, presence alone will not suffice. There is need to also develop the ability to scale it up sufficiently to prevent a *fait accompli*, which would be well-nigh impossible to overturn. Eastern Ladakh was only a precursor of what will happen with a more assertive China.

India must, therefore, build two distinct IO security architectures. The first, intended to enhance its regional influence, involves mechanisms to tackle non-traditional challenges to security (challenges from nature/accident and sub/ non-state actors), as well as from regional disputes not involving great powers. This will necessarily be multilateral and can be based on structures such as Indian Ocean Rim Association (IORA) and Indian Ocean Naval Symposium (IONS), which are already in existence. The second is to dissuade/ deter coercive action by a revisionist great power. Unless India is willing to compromise its strategic autonomy and enter into an alliance, it must depend primarily on its own capability for this purpose. While the help of other nations must be welcomed, allowing it to become a crutch in India's security calculations could be as dangerous as the 'forward policy' of 1962 and risk the same strategic surprise and diminution in India's influence.

Visible progress has been made in the articulation of a holistic vision, establishment of domain awareness structures, mechanisms for extended reach and maintenance of an ocean-wide presence. However, as brought out by this author separately, there is a large gulf between stated IO policy and provision of the resources required for its execution.<sup>64</sup> The causes are well-known. The outcome is that visible gaps remain in India's maritime capability that an adversary can and will exploit. Having withstood China's coercion in Ladakh without allowing the situation to drift into a catastrophic conflict, it would be a folly to continue leaving these gaps.

## **Conclusion**

The rise of Asia has turned the Indo-Pacific into the primary theatre of geopolitical contestation. For Eurasia, it has returned the IO to its former position in the 'Maritime Silk Road' that brought prosperity to all its users. So long as Asia remains dependent on hydrocarbons for energy, this status will not change. For the USA, however, the IO is mainly a transit corridor between INDO-PACOM and CENTCOM.

China, confident of its ability to deter and prevent US intervention on its Pacific front, will necessarily turn to establish its dominance over the IO. The foundations to turn this space into an eventual Chinese lake, by way of a secure South China Sea springboard, strengthened relationships throughout the IO littoral, a long-term maritime presence and a string of dual use ports, have been laid. The USA's focus will remain on countering China's advances across the Pacific (Asian allies constitute the strategic beachhead to keep the fight confined to Asia), but that of India must be balancing



China's strategic gains in the IO. Continuing to treat it as a strategic backwater, risks incurring the same consequences as when British power established itself in this space. Focused on its territorial security and not yet alive to the brewing challenge to the security of its future prosperity, India has a lot of catching up to do.

It needed a maverick like Trump to realise that China could not be socialised and turned into a responsible stakeholder. He started the process of adoption of a balancing strategy that would constrain its vaulting ambition. Given the unprecedented expansion of China's maritime power and its 'Grey Zone' strategy, the USA will be stretched to counter it even in the Western Pacific. Even another maverick would find it difficult to divert resources to defending the IO. This is probably why India may continue to have the lead role in this space. The most India can reasonably expect is diplomatic and intelligence support, technological assistance, and measures to extend its reach.

However, India is yet to politically grasp that while external powers have an interest in defending common (constabulary) interests in the IO, they will be of little help in the coming game of maritime "chicken." This is a game in which its own capability will matter, not the illusory promise of help. India must balance its preponderant focus on territorial security with investment in securing its future prosperity, which depends on its ability to stand up to future coercion. So like China, India too must abandon its overwhelming focus on territorial defence and strengthen its ability to do heavy lifting throughout the IO, just as it had to do in Ladakh. As in Ladakh, both presence and the ability to scale up power quickly will prove crucial.

While India's political leadership has grasped this reality, the requisite strategy has yet to be formulated and resources to enable it allocated. Vested interests, China's machinations and dogma conspire to focus India's attention on land. Strategies take time to develop and execute, as the US experience proves. Whether India continues to rise or falters in the years ahead will depend largely on whether its line Ministries - Defence, Finance and External Affairs - can be made to conceptualise and execute an integrated security strategy.



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## INDIGENOUS SUBMARINE CONSTRUCTION: CHARTING A COURSE

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*Captain Jasvinder Singh*

*“The only thing that ever frightened me during the war was the U-boat peril.”  
Winston Churchill, Prime Minister of United Kingdom, 1946*

### Introduction

Submarines have come a long way from Bushnell's *Turtle* of 1776. Their potential having been established by the destruction they caused in various wars, nations have since hastened to acquire submarines to provide the much-needed cutting edge to their respective Navies. Though spelt out in the Indian Navy's (*IN*) expansion plan of 1945, India speeded up submarine acquisition only in 1965, after the Rann of Kutch incident with Pakistan and Indonesian intrusions into Nicobar Islands in the Bay of Bengal.<sup>1</sup> Since Britain remained non-committal, India went ahead and procured submarines from Russia from 1965 onwards and later acquired more of these from Germany and Russia in the 1980s.<sup>2</sup>

The changing threats in the IOR and the pressing need to replace older submarines as well as the desire to attain self-sufficiency in submarine design and construction, brought the focus on indigenous submarine construction in the 1990s. Accordingly, approval was accorded by Cabinet Committee on Security (CCS) in 1999 for indigenous construction of twenty-four conventional submarines by 2030.<sup>3</sup>

Indigenous submarine construction is, of course, a shield against sanctions and an important capability to have. Indigenous submarine construction invigorates the private industry, creates job opportunities and prevents outgo of foreign exchange, as well as catalyses the economy in several ways.

India has been operating submarines since the 1960s and has indigenously built submarines since the early 1980s. However, the progress made thereafter, has been less than encouraging. It is worth diagnosing the reasons that have stymied Indian efforts and halted the march to attain self-sufficiency in the field of submarine construction. It is equally important to draw out a suitable way ahead to ensure this ambitious programme

succeeds.

This article examines the state of indigenous submarine construction programme, attempts to identify the problems it faces and suggests recommendations to help achieve the development and sustenance of indigenous submarine design and construction capabilities.

### **Universal Challenges of Submarine Design and Construction**

Submarine design and construction is a niche capital-intensive industry. Somewhat akin to the manufacture of advanced jet engines, this capability is currently restricted to a handful of nations; USA, Russia, South Korea, North Korea, China, UK, Germany, France, Spain and Japan.<sup>4</sup>

A submarine designer can design a ship but not *vice versa*, due to the complexities involved. Riding on parametric relation of a proven design, the design process requires repeated visits to the drawing board to achieve accurate weight assessment. The 'limited volume' design has to factor a large number of concept and technology studies, stealth features, multiple hull-forms and multi-role capabilities.<sup>5</sup> A new design, entails testing in a wind tunnel, water tunnel, towing tanks and further complemented by Computational Fluid Dynamics (CFD) for establishing submarine characteristics. This requires an insightful understanding of the submarine's intended role and interactions amongst hundreds of operational features making submarine design complex and highly challenging.<sup>6</sup> Crystallisation of submarine design conservatively takes 13-15 years and involves investment of millions of dollars.<sup>7</sup> Not surprisingly, submarine designs are not shared by shipyards, to preserve competitive advantage and to retain customer dependence for posterity.<sup>8</sup>

**Atrophy of Skills Due to Design Gaps.** As per a study undertaken by General Dynamics Electric Boat, a premier USA submarine yard, it takes approximately 5-10 years for developing 639 types of unique competencies that are considered essential for designing a submarine. Wide gaps between consecutive submarine programmes can easily damage competencies and design skills; the 'wider gaps' or 'valleys' become 'valleys of death' and kill these skills. These rare skills are inutile for any other industry and hence, atrophy quickly. Re-learning the unlearned skill imposes tremendous cost penalty by way of time overruns and re-work due to mistakes, incorrect translation of drawings into structures and system fittings. This has a debilitating, multiplier effect on a submarine

programme, as was evident in the delayed delivery of the second *Virginia*-class submarine, the USS *Texas*, due to the ten-year hiatus between two successive submarines.<sup>9</sup>

**Experienced and Trained Workforce.** A submarine construction environment indoctrinates freshers into a world of totally different work ethics. Complicated procedures and zero-margin for error make for a steep learning curve.<sup>10</sup> A candid admission by Adm John Richardson (Retd), CNO of the US Navy, sums up the problems of amateurish workforce being faced by the US Navy's latest strategic submarine programme "...greenhorn workforce issues are threatening to mar the Columbia program before it really gets off the starting blocks..."<sup>11</sup> UK's *Astute* Submarine programme almost got derailed in 2006, as the yard's trained work force fell dangerously close to the minimum required for keeping the construction activities barely afloat. The Australian *Collins* submarine follow-on programme got straddled with similar issues even before the first steel was cut.<sup>12</sup> The human element is an irreplaceable pivot around which the success of a submarine programme hinges.

**Submarine Industrial Base (SIB).** The equipment used onboard submarines needs to be fail safe. It is specially ruggedised to high shock standards, is qualified for operating under specific conditions of water ingress and needs to have exceptionally high reliability. The complexity therefore, demands unique abilities from the industry that builds and supports them. Globally, only a few equipment manufacturers can comply with such strict norms. All submarine building nations have a formidable SIB riding on a strong foundation of technology and innovation, built over years of R&D and government support. It is definitely a great challenge to create such a domestic industry that can provide comprehensive lifetime product support for any submarine construction programme.

**Over-Reliance on Software.** Excessive use of software and experimentation cannot really substitute the very important human interfaces and this can have serious ramifications. Amongst other factors, the non-bespoke software contributed to a budget overrun by several hundred million pounds and a three-year time overrun for UK's *Astute* Submarine Programme, which was retrieved later only with the assistance of design engineers and project managers from USA.<sup>13</sup>

### **Global Perspective: Constructing Submarines**

**Forging Technical Ventures.** A submarine construction programme invariably runs into billions of dollars and spreads over many decades, thus making it an expensive and risky proposition for any nation. Acutely conscious of these risks, countries like Brazil, Australia, etc. opt for partnering with established submarine builders. The host nation, gets access to advanced designs, manufacturing technologies and latest construction techniques, which can then be ploughed back to develop the country's industrial base. This model has been favourably exploited by China's ship building industry.<sup>14</sup>

**Sustaining/ Retaining Design Capabilities.** Whenever submarine skill-sets are seen to be in danger of atrophying, national governments have responded to avert the loss. The US submarine industry has thrived thus far, courtesy incisive government policies as seen in the *Seawolf* and *Virginia* Programme's split design between Electric Boat and Newport News. Likewise, the UK Government pledged unstinted support for its submarine

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*When submarine skill-sets are in danger of atrophying, governments respond to avert the loss*

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construction programme in its Defence White Paper of 2005.<sup>15</sup> Governments are pledging multi-year commitments and concluding international contracts and ramping up infrastructure for boosting up indigenous submarine industry.<sup>16</sup> Such calibrated policy actions are needed to enable this industry to survive and bring strategic value to a country that does so.

**Nurturing Not More Than One-Two Shipyards.** Large initial investment, prohibitive life cycle cost and requirement of massive logistics and support services, deter nations from acquiring submarines. The limited demand for new submarines cannot support too many submarine yards across the globe. Having understood the economics of demand supply mismatch, the USA has limited the design and construction of submarines to only two of its shipyards: General Dynamics' Electric Boat and Northrop Grumman's Newport News. Similarly, in South Korea, submarines are constructed at Hyundai and Daewoo shipyards and Japan undertakes construction of its submarines at Mitsubishi Industries and Kawasaki Heavy Industries only. Likewise, in UK, Germany, France and Spain, submarine construction is by a single yard/ group (Fig 1).

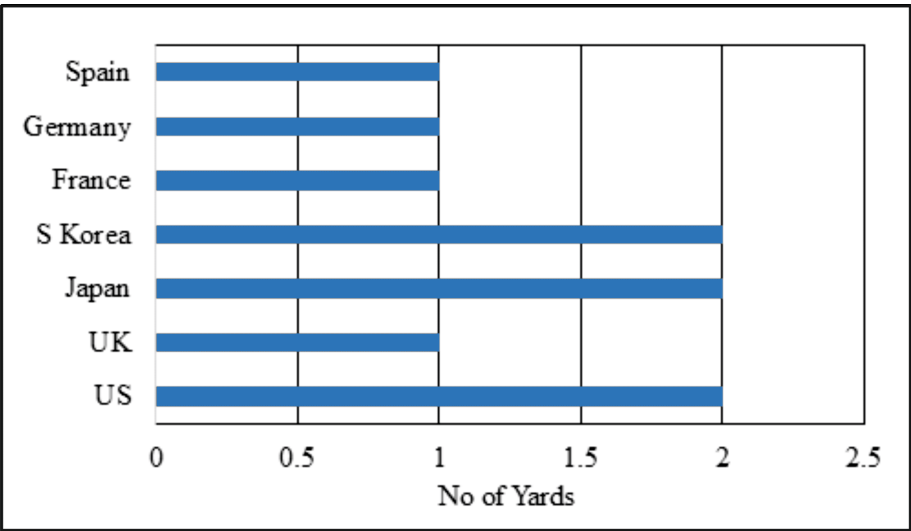


Fig. 1: No of Yards Developed for Submarine Construction in Various Countries

For a very small market, a larger number of submarine yards could become an existential threat. On the contrary, a limited number of yards imply shorter time gaps in construction orders and minimal likelihood of ‘famines’ i.e., periods of lean orders. Moreover, it is relatively easy to support or bail out 1-2 shipyards, during the ‘do nothing’ period, if the need arises.

**Consistent Loading of Submarine Yards.** We do not have the option of halting submarine construction and then expecting the industry to continue existing for years ‘doing nothing.’ Having understood these intricacies, the US follows the philosophy of overlapping submarine designs, between two consecutive design cycles, so as not to risk loss of niche skills.

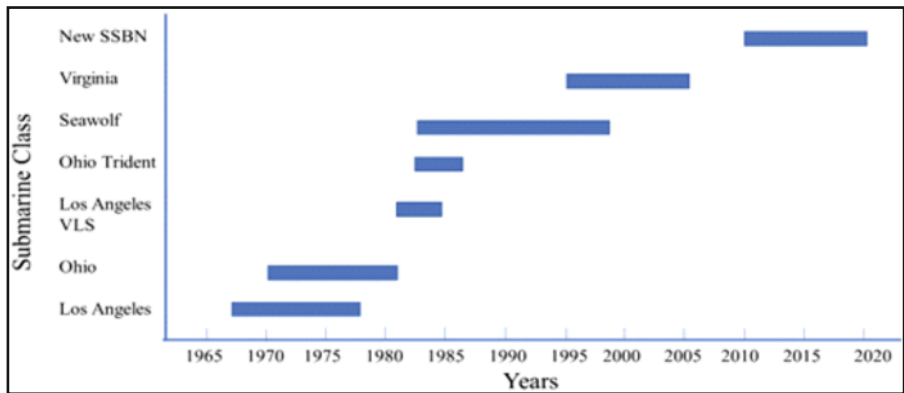


Fig. 2: Overlapping Design Cycle of US Submarine Programme Since 1967.<sup>17</sup>



UK tries to follow a construction frequency of 22 months and China constructs one submarine each year to keep its industry alive.<sup>18</sup> On the other hand, Japan, besides constructing a submarine every year, also tests a new submarine design every 10 years.<sup>19</sup> France plans alternate new submarine designs, interspersed with mid-life modernisation of older submarines and thus, avoids ‘valleys’ and ‘peaks.’<sup>20</sup> These governments therefore ensure that their submarine yards remain always loaded and the skilled workforce is always ‘doing something’ instead of ‘doing nothing,’ so that the unique skills that have been mastered over many years are not unlearned (Fig 2).

**Maintaining and Incentivising a Robust SIB.** A robust SIB is a *sine qua non* for a healthy submarine programme. This has been proven in both UK and USA, where a good SIB has played a sterling role in supporting submarine programmes. These governments have ensured the industry’s survival through lean ‘equipment-order phases’ and have not hesitated to loosen their purse strings to dole out fiscal packages.<sup>21</sup> Equal importance, if not more, is being accorded for improving efficiencies using schemes like the UK’s Submarine Enterprise Performance Programme, by awarding long-term contracts for the purpose of sustaining skill-sets.<sup>22</sup> Needless to say, national commitment by way of financial support perpetuates a sustainable culture for a robust SIB, which is vital for a healthy submarine programme.

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***A robust SIB is a sine qua non for a healthy submarine programme***

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### **Where do We Stand: A Reality Check**

India has been relying on foreign technology in the niche fields of submarine design and construction. It has been seeking partners from amongst reputed foreign shipyards to advance its indigenous submarine programme since the 1970s. The capability of a nation to successfully build submarines is governed by numerous factors: a nation’s research and design capability, prowess within private industry, design and build capability of shipyards and government commitment. India scores sub-optimally on almost all of these parameters.

**Indian Shipyards.** India’s quest for developing indigenous submarine design and construction capabilities dates back to December 1981 with the signing of a contract with HDW, Germany. Accordingly, two submarines were built at Mazagon Dockyard Limited (MDL), Mumbai, between 1984-94.<sup>23</sup> MDL has also been constructing Scorpene submarines, jointly with

Naval Group (NG), France, commencing 2005.<sup>24</sup> Though India has been involved in submarine construction since the 1980s, we have unfortunately, not had a single 100% indigenous submarine project till date.

**Submarine Design Capability of MDL.** With nil follow-on submarine construction and design orders, the limited design capabilities acquired by MDL in the 1980s, through the HDW contract, eroded quite fast. The trained manpower was lost to other projects; a few even leaving for foreign shores. Later, MDL went about looking for joint ventures for submarine design and construction in 1997 and again in 1999, with global submarine building shipyards. This vindicates the assumption that by 1997, MDL had lost the design skill-sets, so thoughtfully invested into and developed earlier in the 1980s. MDL did not benefit from its long association (2005-2020) with NG, France despite having built 04/06 contracted submarines.

**Submarine Design Capability Within IN.** In the USA, it is the Navy which is the final approval authority for submarine design and acceptance of construction drawings. Success of this model is solely credited to a strong competent team available in the US Naval technical community, which questions guides and certifies yard decisions. However, such technical authority that can adjudicate and provide objective evaluation of submarine design and also mentor shipyards, is conspicuously missing in the IN. This is corroborated by the way in which Scorpene Project P-75 had progressed earlier and P75(I) is progressing now, awaiting a suitable design partner.<sup>25</sup>

**Submarine Manufacturing Capability and Skills of Shipyard.** Submarine construction requires personnel with exceptional skill levels in various trades and workmanship that conforms to stringent 'build-norms.' Shipyards in the past have paid heavy penalties for poor workmanship. Lead boats of Seawolf and Dreadnought submarine programmes, were besieged with welding issues, despite the builders, General Dynamics Electric Boat and Vickers shipyard at Barrows, having built over 140 submarines between them.<sup>26</sup> Both MDL and L&T are currently engaged in submarine construction and hence, can be assumed to possess specialist construction and manufacturing skills and hopefully would be in a position to undertake construction activities, when required. However, augmentation of manpower would be needed, while keeping in mind that submarine manufacturing skills, culture and work ethics are difficult to imbibe and the learning period could extend over a few years.

**Infrastructure of Shipyards.** A submarine yard requires huge

infrastructure, adequate covered dry dock facility, outfitting jetties, heavy duty cranes, radiography facility, automated welding, plate bending etc. In MDL, a dedicated 'East Yard' for submarine construction activities was created in 1982-83. This has been further augmented recently, in May 2016, under the Rs 153 Crore modernisation project of MDL, which would now enable MDL to have a parallel submarine assembly line.<sup>27</sup> On the other hand, L&T has already designed, constructed and delivered over fifty OPVs and other ships at their *Kattupalli* shipyard. It can be assumed that infrastructure necessary for submarine construction is available with our shipyards and augmentation, if required, can be undertaken and is not likely to pose a hurdle.

**India's SIB.** Indian SIB was under-developed and thus, ill-prepared to support the first two submarines that were constructed at MDL in the 1980-90s. All major equipment required for constructing the submarines, electrical and engineering, were contracted from the OEM, HDW. Since then, there have been some positive developments in the capabilities of India's SIB. However, dependence still remains on foreign OEMs, spread over Russia, Germany, France etc. for some critical equipment. SIB, our achilles heel, was unable to substitute Naval Group, France for supplying equipment for Scorpene Project P-75, in 2005 either. Several entry barriers for this industry like large capital investment, specialised test facilities, uncertainty of orders, low production rates, high standards of quality assurance and a highly qualified and skilled workforce, pose a huge deterrent for new entrants.

Various Committees have been constituted in the past to study the issues afflicting the Indian industry. One such, the 'Vijay Kelkar Committee,' had in 2005, put forward major proposals aimed at developing and unleashing the potential of India's industrial base. Amongst many other proposals, the committee's recommendations were accreditation and fostering *Raksha Udyog Ratnas* (Industrial Jewels) from amongst credible public sector firms and re-organisation of ordnance factories. These were quite revolutionary and would have given the much-needed push to the Indian industry. However, not much has progressed on the recommendations, neither has the government accepted many of the other proposals.<sup>28</sup> While oft repeated pronouncements of 'Make in India' initiatives do convey the government's intent, not giving credence to studies undertaken by various committees raises a question mark on the government's seriousness at

invigorating and shaping the industry.

**Research and Development.** Defense Research and Development Organisation (DRDO), the nation's premier research agency, has often been accused of falling short of providing timely, innovative and futuristic technologies to defence services, its prime customer. There never was felt a greater need to shift from the hitherto dogmatic approach of DRDO, and allow SIB to leverage the intellectual capital, resource and well-equipped laboratories of DRDO. Recommendations of 'Kelkar Committee' and 'Shri Rama Rao Committee' for revamping DRDO and encouraging R&D amongst the private industry, once implemented, will allow parallel development of a DARPA-like model to boost R&D activities; thus, impacting development of indigenous technologically advanced submarine equipment.<sup>29</sup>

**Contract Management.** Indigenous submarine programmes have been stymied by perfunctory contract management and bureaucratic dithering. Abrupt truncation of the HDW contract in 1985 is emblematic of how our complex bureaucratic procedures have the propensity of burying an entire industry. A similar story of delays was played out with the protracted contract negotiations from 2002-2005 for P-75, even as the project cost escalated from Rs 12,609 Crore to Rs 15,447 Crore. The usual explanations for the delays were the novelty, uncertainty and complexity of the contract. The Request for Proposal (RFP) for P-75(I) is yet to be floated even twenty years after having been approved, by the CCS. The UK MoD was perceived as a "bureaucratic dinosaur having mountains of documentation, endless committees, slow decision making and ill equipped for effective management" in the 1990s by the defence suppliers.<sup>30</sup> Going by the delays in Indian defence procurements, the description aptly fits our bureaucracy as well. Lack of accountability, responsibility and insouciance is pervasive in defence contract dealings. There is a need to put an end to the bureaucratic endemic of indecision and strong risk aversion.

We need to honestly admit that we aren't good at managing defence contracts. Our ineptness at handling big ticket defence contracts was even flagged in CAG Report 4 of the 2007 *Union Government - Defence Services - Performance Audit - Army and Ordnance Factories*, which had specifically stated "a specialised cadre pool of acquisition managers should be developed by imparting suitable training in different areas of acquisition viz. project management, contract negotiations, contract management; and

exposure to professional best practices of procurement.” Small steps in this direction had been taken in 2011 when Institute for Defense Studies and Analysis (IDSA) had prepared and submitted DPR for defence acquisition training in 2012, on the recommendations of the then Defence Minister.<sup>31</sup> However, the file does not seem to have evoked any substantive action.

**Policy at the National Level for Skill Retention.** Retaining submarine design and construction capabilities requires consistency and predictability of policies and construction orders, as the industry cannot survive on a ‘start-stop-start’ model. With P-75(I) getting further delayed, MDL will be without any construction order, once the ongoing P-75 programme’s last submarine is delivered in 2022. Atleast a decade is required to develop

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*Retaining submarine  
design capabilities  
requires consistency and  
predictability of policies*

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an indigenous design and typically another 8-10 years to translate the design effort from blue print into construction. It is therefore, difficult to expect the submarine industry of any nation to survive for so many years ‘doing nothing.’<sup>32</sup> With billions of dollars at stake and with each submarine programme spread over many decades, it is essential that we put in place a structured ‘national submarine policy’ for steering these programmes.

*Ipsa facto*, the ongoing P-75 contract has not aided in creating design capabilities at MDL, possibly because the underlying MoU is based on TOT for ‘construction’ only, with no mention of ‘design’ transfer to the Indian side. This single oversight of not including the TOT of design in the project P-75 has resulted in setting our indigenous submarine programme back by almost 15-20 years. While we can keep mulling over past omissions, it is equally important that such lapses are taken note of and are avoided in future contracts.

## Conclusion

It is quite evident that a submarine programme has deep interlinkages with a nation’s intellectual reservoir, research and development capabilities, initiatives of private industry, design and build capabilities of yards and an unflinching governmental support. Globally, national governments are stepping in, incentivising and rallying behind their industry for developing, retaining and sustaining unique skills sets. Our indigenous submarine construction programme remains a distant dream as daunting bottlenecks stand in the way. There are a number of structural and



technical gaps that need to be made good. The situation is further exacerbated by the inadequacy of SIB, inept contract handling, insufficiency of R&D and irregularity of procurement policy/ orders, amongst other contributing factors. Submarine construction is totemically linked to a nation's willpower, as it demands exacting resources and long-term big-budget commitment. While a coherent response and concurrent actions would yield results, multiplier effects to boost indigenous submarine construction programme would be largely dependent on a committed central leadership.

### **Recommendations**

For India to achieve the national goal of designing and constructing submarines indigenously, coordination at multiple fronts is required. This necessitates a revamping of the existing apparatus and the way business gets conducted at various levels. A slew of conceptual, structural and procedural changes are required to be earnestly implemented. Strong decisions are required to be taken including reforms to the existing setups, restructuring organisations, facilities, policies and processes. A few recommendations for the *IN*, Shipyards and GoI have been prepared and delineated here, which if implemented, would hopefully aid in bringing indigenous submarine programmes to fruition.

### **Actions by *IN***

**Special Status for Submarine Construction Programme.** A submarine construction programme runs into billions of dollars, the success of which demands uninterrupted commitment of central and state machinery over many years. The *IN* should push for a special status for its submarine construction programme, which would signal long term commitment of the government and allow for quicker policy formulations, decision making, fund allocations, etc.

**Develop a Strong Design Directorate.** Responsibility for safety and time bound completion of a submarine programme will always remain with the *IN*. It will need to carry the risks and manage these risks in a 'hands-on' way. The *IN* will need to develop its own resident expertise so as to assume the role of design authority to approve design proposals of the builder. To manage a strong prime contractor, the Submarine Design Directorate would need to develop technical authority to be able to challenge decisions of the

builder.

**Develop a Talent Pool of Specialists.** The *IN* should identify talented candidates, seek out mentors from within the country (not likely), or from abroad (possible), and put the selected candidates through the training grind to equip them with specialised skills and create multi-disciplinary core teams, including training abroad.

**Formulate HR Policies for Skill Retention.** The success of a submarine programme is greatly dependent on availability of an experienced and qualified professional workforce. The *IN* should tweak existing HR policies so that vertically trained personnel are retained to tenet specialist billets of its submarine programmes, with career progression being protected.

**Introduce Submarine Design in University Curriculum.** Submarine design is not taught in any Indian university. The *IN* should raise this proposal with appropriate authorities to introduce this as a subject in an Indian university, at BTech and higher-level specialisation.

**Leverage Project P-75(I).** Project P-75(I) has thrown up a slew of encouraging prospects. The *IN* should align its ambitious indigenous submarine construction programme with timelines of P-75(I), the contract should include Transfer of Technology (TOT) of both, submarine design as well as construction. Thereafter, it should identify suitable officers possessing the required aptitude and prepare a long-term strategy for leveraging the knowledge gained through the TOT.

**Support to Sustain SIB.** In the absence of an innovative and technologically capable SIB, an indigenous submarine construction programme is unlikely to produce the desired results. The *IN* should leverage the government's clarion call of *Atmanirbhar Bharat Abhiyan* (self-sufficient India) and conceive targeted schemes and initiatives like the UK's 'Submarine Enterprise Performance Programme' and USA's 'National Sea Based Deterrence Fund' to provide funding, direction and assurance to our nascent SIB.

### **Actions by Shipyards**

**Forging Technical Ventures.** For a faster learning curve, the most effective option is for our shipyards to forge joint ventures with reputed global submarine construction yards.

**Hunting and Hiring.** If we cannot develop the skills, we may as well buy them, as done previously by Australia in 1994 and in 2006.<sup>33</sup> Global

economic recession has heralded a slowdown in the global submarine industry, creating a pool of jobless, albeit, highly skilled and experienced workers. Our shipyards should proactively scout from within this talent pool, *carpe diem*, employ them on their rolls and leverage their skills.

**Sustaining Minimum Critical Mass.** Shipyards should identify personnel with critical skills that would constitute the ‘minimum critical mass.’ This ‘minimum critical mass’ and their skills should be preserved and not allowed to atrophy. A mechanism should be in place to ensure that their capabilities are available whenever required. Further, suitable implementable plans and strategies should be put in place to sustain them continuously, even through lean periods

**Bring in Efficiency.** Shipyards would need to thoroughly and critically evaluate the downsizing of its work force and retooling of construction processes. They should make themselves more efficient in this era of scarce budget allocations. Bloated and inefficient shipyards would end up costing the Navy more, affecting funding for other programmes.

### **Actions by Government**

**Nurturing Not More Than 1-2 Shipyards.** Established submarine constructing nations have limited their submarine construction activities to only 1-2 shipyards. There is no justifiable reason for us to be doing things differently. The GoI has identified MDL and L&T for the submarine programme, P75(I). It is imperative that we look no further, focus on these two shipyards only, designate L&T as *Raksha Udyog Ratna* (as proposed by Kelkar committee) and develop them into resilient world class submarine yards on the lines of Electric Boat, Hyundai or Daewoo, to meet all our future indigenous submarine programmes.

**Consistent Construction Policy.** We need to emulate the model followed by nations like USA, Japan or UK, wherein submarines construction frequency of 10- 22 months is followed as a safeguard against skill loss due to ‘boom & bust’ cycles. Our government should also enunciate a 30-40 year submarine design and construction programme, as is being followed by other nations. Consistency and predictability of construction orders would help *IN*, shipyards and SIB to plan long-term skill, capability and capacity management.

**Contract Management.** With no dedicated project manager and no single-

point accountability, the importance of defence contract negotiations cannot be over-emphasised. It is necessary that a new Defence Acquisition Cadre be constituted and all defence contracts be their responsibility. Within the cadre, each defence contract be assigned, by name, to permanent project managers so as to bring in better accountability for omissions and commissions, if any, during the currency of the contract.<sup>34</sup>

**Research and Development.** SIB is severely handicapped by poor support from indigenous R&D initiatives. Revamping of DRDO and re-organisation of the ordnance factory boards proposed by the Kelkar Committee and Rama Rao Committee need urgent implementation. Equally expedient is setting up of a DARPA-like model, which would provide the much-needed trigger to design and development of technologically advanced submarine equipment.

**Creation of Special Purpose Vehicle (SPV) for Submarine Programme.** For achieving indigenous submarine construction, shipyards, SIBs, R&D, *IN* design directorates and decision makers should have coherence. An autonomous SPV, equipped with financial powers and authority, comprising experts drawn from related fields, needs to be created that would synergise the efforts of the various stake holders. The SPV would create a conducive environment and ensure access to financial, human, and research resources, provide political support and aid the inflow of foreign technologies. It would frame and implement policies, provide vision and coordinate all aspects of submarine capability development. The SPV would ensure equitable loading of shipyards to preclude ‘feast’ and ‘famine’ situations and help sustain niche skill sets. Moreover, the funding of SPV will be over and above the naval budget allocation akin to National Sea Based Deterrence Fund and Submarine Enterprise Performance Programme of US and UK respectively.



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## CHINA'S THEATRE COMMANDS: PROGNOSIS OF ROLES AND TASKING

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*Captain Sarabjeet S Parmar*

### Back to the Future

China's incentive to modernise and reorganise the Peoples' Liberation Army (PLA) can be traced to the United States' (US) "shock and awe" doctrine used in the 1991 Gulf War, wherein superior technology and overwhelming advantages of asymmetry in key capabilities of the US and coalition forces outmanoeuvred Iraq.<sup>1</sup> At the time, China's domestic political scenario, especially lack of money, delayed the advent of modernisation, which is currently ongoing at a rapid pace. Therefore, they imbibed lessons for implementation later, through the organisational theory linked methods of scanning and vicarious learning.<sup>2</sup>

Given their strict hierarchical setup and tight bureaucratic norms, militaries are often disinclined to change.<sup>3</sup> In the USA, the debate for higher defence reorganisation post World War II (WW II) started with the enactment of the National Security Act 1949 and culminated in the enactment of the Goldwater Nichols Act (GNA) in 1986, despite reservations in the Department of Defence (DoD). This reorganisation was aimed at addressing interservice rivalries observed during WW II, operational failures of the Vietnam War; subsequent operations like the failed Iran hostage rescue mission in 1979 and the invasion of Grenada in 1983.<sup>4</sup> Chinese President Xi Jinping's move to reorganise the PLA in 2015, has been seen as mirrored on the USA model. This comparison can be considered correct *vis-à-vis* intent, and up to the point of enactment. While US military reforms have followed the democratic path of debate and discussion, Chinese military reforms have followed an authoritarian methodology with the Central Military Commission (CMC) effectively assuming central control of the PLA, the Peoples' Armed Police (PAP) and the Militia, as well as the Theatre Commands. This central political control of the PLA and the Theatre Commands underscores the primary aims of the PLA, which are the survival of the Chinese Communist Party (CCP) and reunification of Taiwan. The PLA's reorganisation is also impacting the

Regional Security Architecture of the Indo-Pacific as it is the omnipotent arm being used to pursue the Chinese dream of great rejuvenation of the Chinese nation, espoused by Xi Jinping in 2013.

### **Reform Process**

The Third Plenum of 18<sup>th</sup> Party Central Committee, held on 12 November 2013, was the first plenum chaired by Xi Jinping after taking over as President. The plenum discussed Xi's report on reform, development, and stability in China.<sup>5</sup> The plenum also adopted the 'Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform' in which part XV dealt with reforms related to National Defence and the Armed Forces.<sup>6</sup> The reforms were at the organisational and operational-command levels. The former dealt with reorganising the existing four general departments into 15 departments and offices. The prefixing of CMC with each new name indicated central control and reduced the possibility of the department from acting in an autonomous manner.<sup>7</sup> The latter reorganisation converted the existing seven military regions into five new Theatre Commands.<sup>8</sup> It also raised the level of the Second Artillery Force to a full military service, renamed as the PLA Rocket Force (PLARF), at par with the PLA (Army) (PLAA), PLA (Air Force) (PLAAF) and PLA (Navy) (PLAN).<sup>9</sup> Apart from placing central control of the PLA with the CMC, this reorganisation reduces the dominance of the PLAA while increasing the role and participation of the PLAN and PLAAF. The expansion of departments to 15, also provided Xi the opportunity of appointing officers who would support him, and thereby, reduced the influence of officers who had been appointed by his predecessor Hu Jintao. This enabled Xi Jinping to model the PLA in a manner, that would aid his vision of the 'Chinese Dream,' and which is impacting the regional security architecture.

### **Theatre Commands: A Changed Spatial Geography**

The five Theatre Commands were officially established on 01 February 2016. Their creation clearly indicated the (greater) degree of control the CMC, and therefore, the CCP, would exert over the functioning and operations of the PLA. The handing over of the new flags to the Theatre Commanders, as well as the political commissars underscored the involvement of the CMC and the CCP in the chain of command. These

actions were stressed upon by Xi Jinping in his speech during the ceremony, wherein he stated: -<sup>10</sup>

- Theatre commands are to remain loyal by carrying out the orders and follow instructions issued by the CCP Central Committee and the CMC.
- Theatre commands are to focus on combat readiness, strengthen joint command and joint operations to safeguard China's national sovereignty and security interests, while the individual services would focus on development, all under the overall charge of the CMC.

The internal delineation of the new commands varied greatly from the existing Military Regions (MRs) (Fig 1), with maximum area going to the Western Theatre Command (WTC), which faces Bhutan, Nepal, India, Pakistan Occupied Kashmir (POK), Afghanistan, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, and includes a marginal border with Russia and Myanmar. The border with Myanmar is shared with the Southern Theatre Command (STC) while the Northern Theatre Command (NTC) also looks at Russia and Mongolia. The WTC has no coastline and hence, there would be no maritime element in this Command. This implies that maritime engagement with the maritime nations, which WTC faces, like India, Pakistan and Myanmar, would most probably be the responsibility of the STC, or come directly under the CMC. The likely areas of responsibility are as indicated in Table 1.

Theatre Commands	Likely Focus
Northern Theatre Command (NTC)	Korean Peninsula, Mongolia, Russia and possibly Japan
Eastern Theatre Command (ETC)	Taiwan and possibly Japan
Southern Theatre Command (STC)	South China Sea and Continental South East Asia
Western Theatre Command (WTC)	Afghanistan, Central Asia, India, and Pakistan
Central Theatre Command (CTC)	Strategic Reserve, and possibly Space and Cyber Operations

Table 1: Possible Areas of Responsibility of the Theatre Commands<sup>11</sup>

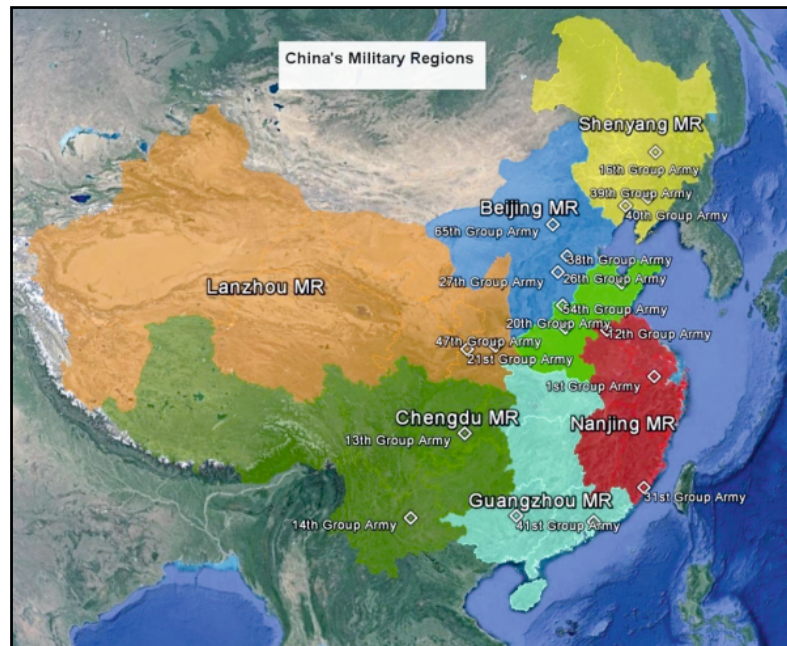


Fig 1: Comparison of Military Regions (MRs) and Theatre Commands (TCs)<sup>12</sup>



Fig 2: Theatre Commands<sup>13</sup>



The likely areas of responsibilities and actions taken by Theatre Commands within their operational jurisdiction are aimed at addressing not only China's security challenges, but its insecurities as well, in line with the political directives of the top CCP leadership and follow-on strategies and policies. Although the South China Sea is the only maritime area indicated (under STC as per Table 1), it is clear from Figure 2 that the NTC, CTC, and ETC also have maritime areas within their operational jurisdiction.

***STC, NTC, CTC, and ETC have maritime areas within their operational jurisdiction***

### **Northern Theatre Command**

The NTC looks at the Korean peninsula, an Indo-Pacific hot spot, with nuclear underpinnings. This area is a source of tension for the US and South Korea due to the actions of North Korea, specifically missile firing tests and the associated nuclear threat to South Korea, Japan, US bases in the region, as well as mainland USA. This command is divided into two areas with the CTC in between these two areas (Fig 2). The smaller southern area has a coastline with the North Sea Fleet based at Qingdao and the port of Dalian, which is an ice-free port. This would enable the NTC to focus jointly on the land, air and maritime areas of the Korean peninsula and Japan. The reduction in envisaged threat from Russia resulted in this command being placed at serial 4 in protocol after the ETC, STC and WTC, which would enable the NTC to focus more attention on the Korean peninsula, and Japan, especially its northern islands.<sup>14</sup>

Possible force allocation is given in Table 2 and it is apparent that the presence of 7 SAM Brigades at Dalian could also be to provide air defence to the Dalian Shipyard of the China Shipbuilding Industry Corporation, which has an area of 1330 acres.<sup>15</sup> This shipyard is a vital element in China's warship building programme as it undertook the refitment of the *Liaoning* and also constructed the *Shandong*, China's first indigenously designed aircraft carrier.<sup>16</sup>

PLA Component	Force Levels
Ground	Three Army Groups with all arms combination. 78 <sup>th</sup> Army Group with nine Brigades, 79 <sup>th</sup> and 80 <sup>th</sup> Army Groups with 12 Brigades each.
Navy	The Liaoning, 20 Submarines (including 4 SSNs), 1 Cruiser, 7 Destroyers, 20 Frigates, 18 Patrol Craft, 16 Mine Counter Measure Vessels (MCMV), 7 Landing Ship Tank (Medium) (LST(M)).
Naval Aviation	2 <sup>nd</sup> Naval Air Division, 2 Fighter Ground Attack Regiment/ Brigade, 1 Transport Regiment, and 6 Training Regiments.
Air	16 <sup>th</sup> Special Mission Division, 1 Search and Rescue (SAR) Brigade; 9 Fighter Brigades, 1 Attack Brigade, 7 Surface to Air Missile (SAM) Brigades at Dalian; 3 Fighter Brigades, 1 Attack Brigade, 2 SAM Brigades at Jinan; 5 Training Brigades at the Harbin Flying Academy.
Marines	2 Brigades.

Table 2: Possible Force Allocation of Northern Theatre Command<sup>17</sup>

### **Central Theatre Command**

This command, would in all probability, be the strategic reserve force of the PLA and provide support to the other commands by controlling strategic assets of the new departments placed under the CMC. A vital responsibility of the CTC could be the defence of Beijing, as well as safety of the CMC and top leadership of the CCP. As per the possible force allocation in Table 3, it can be surmised that: -<sup>18</sup>

- The task of the additional heavy mechanised infantry and two ground divisions could be the defence of Beijing and ensuring the safety of the CMC and top leadership of the CCP.
- The two transport and bomber divisions, six Airborne Brigade (AB), one bomber Brigade, as well as the Surveillance Regiment could be used as strategic reserve or deployed directly by the CMC, in support of operations being conducted by other Theatre Commands.
- The large numbers of SAM units in comparison to other theatres indicates the priority of protection accorded to this region, specifically Beijing, from attack by air including missiles.

CTC Force Components	Force Levels
Ground	Three Army Groups with all arms combination. 81 <sup>st</sup> , 82 <sup>nd</sup> and 83 <sup>rd</sup> Army Groups with 12 Brigades each. In addition, there is one 1 Heavy Mechanised Infantry Division, and 2 (Beijing) ground divisions.
Air	13 <sup>th</sup> Transport Division, 34 <sup>th</sup> VIP Transport Division, 36 <sup>th</sup> Bomber Division, 6 AB and 1 Bomber Brigade, 1 Surveillance Regiment, 1 SAR Brigade; 7 Fighter Brigades, 1 SAM Division and 4 SAM Brigades at Datong; 4 Fighter Brigades, 1 Training Brigade, and 2 SAM Brigades at Wuhan; 4 Training Brigades at the Shijiazhuang Flying Academy.

Table 3: Possible Force Allocation of the Central Theatre Command<sup>19</sup>

### **Eastern Theatre Command**

The possible force allocation at the ETC (Table 4) is indicative that its focus would be Taiwan, with an eye on the East China Sea and Japan. In the eventuality of conflict with Taiwan, the East China Sea area and Japan could be looked after by the NTC. The fact that this Theatre Command appears to have retained the geographical boundaries of the erstwhile Nanjing MR reiterates the point that China's strategy to 'reunite' Taiwan, and deter any US assistance to Taiwan, will follow a joint approach. The recent sabre-rattling and military drills by China due to the visits of Alex Azar, the US Secretary for Health and Human Services, followed by Keith Krach, the US Undersecretary of State for Economic Growth, Energy and the Environment, is indicative of this approach and resolve. In all probability, the East Sea Fleet operating under the ETC would focus on Taiwan while engaging Japan in the East China Sea. In support of its Taiwan policy, the PLA is known to have conducted more than 30 maritime drills in all four of its major sea regions since July 2020.<sup>20</sup>

ETC Force Components	Force Levels
Ground	Three Army Groups with all arms combination. 71 <sup>st</sup> , 72 <sup>nd</sup> and 73 <sup>rd</sup> Army Groups with 12 Brigades each.
Navy	17 Submarines, 11 Destroyers, 23 Frigates, 19 Corvettes, 30 Patrol Craft, 22 MCMV, 2 Landing Platform Docks (LPD), 22 LST/LST (M).
Naval Aviation	1 <sup>st</sup> Naval Aviation Division, 1 Bomber Regiment, 2 Fighter Brigades, 1 Helicopter (ASW and AEW) Regiment.
Air	10 <sup>th</sup> Bomber Division, 26 <sup>th</sup> Special Mission Division, 1 Intelligence Surveillance and Reconnaissance Brigade; 4 Fighter Brigades and 2 SAM Brigades at Fuzhou; 6 Fighter Brigades, 2 Attack Brigades, 1 Training Brigade and 2 SAM Brigades at Shanghai.
Marines	2 Brigades.

Table 4: Possible Force Allocation of the Eastern Theatre Command<sup>21</sup>

### Southern Theatre Command

The STC probably faces the most challenging tasks amongst all the Theatre Commands. These could stretch from protecting China's interests in the South China Sea; keeping China's Sea Lines of Communication (SLOCs) through the Straits of Malacca, Lombok and Sunda open; and, engaging the Association of Southeast Asian Nations (ASEAN), especially Myanmar and Vietnam, to handling the situation in Hong Kong. Given the vast maritime area, it is possible that the *Shandong*, China's second aircraft carrier and first indigenously constructed carrier, could be based with the South Sea Fleet. The wide array of the possible force allocation (Table 5), therefore, covers a wide ambit with the focus on : -<sup>22</sup>

- Hong Kong, as the assigned with 1 Composite Infantry Battalion, 1 Helicopter Squadron and 1 Air Defence (AD) Battalion, indicates the sensitivity of the city and that China could use extreme hard measures to ensure Chinese control.
- The South China Sea, where the tanker brigade could be used to extend lines of operation, especially for aircraft deployed at the reclaimed islands bases. The large marine force is considered just about

adequate to address the small size of disputed land masses in the South China Sea.

STC Force Components	Force Levels
Ground	Two Army Groups with all arms combination. 74 <sup>th</sup> and 75 <sup>th</sup> Army Groups with 12 Brigades each.
Navy	22 Submarines (including 4 SSBNs and 2 SSNS), 10 Destroyers, 16 Frigates, 15 Corvettes, 38 Patrol Craft, 16 MCMV, 4 PLD, 21 LST/LST(M).
Naval Aviation	3 <sup>rd</sup> Naval Aviation Division, 2 Fighter Brigades, 1 Bomber Regiment, 1 Transport/Helicopter Regiment and 1 SAM Brigade
Air	8 <sup>th</sup> Bomber Division, 20 <sup>th</sup> Special Mission Division, 1 Tanker Brigade, 1 SAR Brigade; 2 Fighter Brigades, 1 Training Brigade and 1 SAM Brigade at Kunming; 6 Fighter Brigades, 1 Attack Brigade, 2 Training Brigades and 1 SAM at Nanning.
Marines	2 Brigades and 1 Special Operations Brigade.

Table 5: Possible Force Allocation of the Southern Theatre Command<sup>23</sup>

### **Western Theatre Command**

The WTC is with the largest geographical area. Apart from engaging India on the Line of Actual Control (LAC) and Pakistan in POK, it could also address the challenges of controlling unrest in Tibet and the Xinjiang Regions.<sup>24</sup> While the WTC would address land and air aspects, maritime aspects within the Indian Ocean would have to be undertaken by another command, most probably the STC, unless the CMC takes direct control of 'far seas' operations. This would require a high degree of joint approach, specifically in terms of sequencing of operational plans.

Given the vast geographical area and possible force allocation (Table 6), the following aspects emerge: -<sup>25</sup>

- The number of units assigned to the Xinjiang and Xizang military districts indicates the high degree of existing unrest requiring adequate military presence.
- In order to address the LAC with India, especially in times of high



tension or conflict, the ground and air forces would have to be augmented from other commands. In all probability most of these additional forces would come from the CTC.

WTC Force Components	Force Levels
Ground	<p>Two Army Groups with all arms combination. 76<sup>th</sup> and 77<sup>th</sup> Army Groups with 12 Brigades each.</p> <p>Xinjiang Military District: 4 High Altitude Divisions, 4 Brigades (1 each of Special Operations, Artillery, AD, Helicopter) and 2 Regiments (1 each of Mechanised Infantry and Engineers)</p> <p>Xizang Military District: 7 Brigades (Special Operations, Mechanised Infantry, Infantry, Artillery, AD, Engineer and Helicopter).</p>
Air	<p>4<sup>th</sup> Transport Division, 1 SAR Regiment; 4 Fighter Brigades and 1 SAM Brigade at Lanzhou; 2 Fighter Brigades, 1 Attack Brigade, and 2 SAM Brigades at Urumqi; 1 SAM Brigade at Lhasa; and 5 Training Brigades at the Xi'an Flying Academy.</p>

Table 6: Possible Force Allocation of the Western Theatre Command<sup>26</sup>

## Conclusion

One of the most important long-term operational goals of the reforms is to improve the PLA's joint capabilities across multiple warfighting domains.<sup>27</sup> Even though the reforms are expected to be completed by 2020, the efficacy of joint operations by the PLA will only emerge with time. In 2019, Beijing acknowledged for the first time the conduct of theatre-level joint exercises, code-named North, East, South and West. An example is the July 2019 exercise involving all five Theatre Commands, the PLA's Strategic Support Force (SSF) and Joint Logistic Support Force (JLSF). However, there was no official confirmation of this.<sup>28</sup> Nonetheless, there are inherent limitations when Theatre Commands are required to focus on domestic as well as external regional areas. This divergent requirement could impact the focus of joint operations, which would need a high degree of coordination between the Commands and the CMC.

A case in point would be China's ability to exert pressure by land, air

and sea on India, in equal measure, in future stand-offs on the LAC. A test of equal measure would be the ability to exert pressure on Taiwan, as US presence and deployment would require the involvement of the STC, and possibly CTC, in support of operations of the ETC. These are two litmus tests that would provide clarity on the degree of jointness, coordination and China's ability to move forces between commands, if required, to address strategic, operational and tactical scenarios, as they change or arise, without reducing the overall effectiveness of the other Theatre Commands. As per newspaper reports, India is looking at establishing five theatre commands based on the USA and China models, which will replace the existing single service commands and single tri-service Andaman and Nicobar command.<sup>29</sup> A careful examination and analysis of the path walked by the USA and that being followed by China would enable India to achieve the requisite joint synergy across land, air and sea, while ensuring optimum utilisation of India's defence capability and capacity.



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## WARFIGHTING CAPABILITIES AND CHALLENGES FOR THE JOINT MARITIME THEATRE COMMAND

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*Captain Inderjit Talukdar*

*“Separate ground, sea, and air warfare is gone forever. If we ever again should be involved in war, we will fight with all elements, with all services, as one single concentrated effort.”*

*Gen Dwight Eisenhower*

*House of Commons Debates, Official Report - Volume 5 Page 5083*

### Introduction

The Indian Armed Forces are in the process of undergoing significant transformation with the Government of India’s landmark decision on the appointment of the Chief of Defence Staff (CDS). The CDS-headed Department of Military Affairs is mandated to facilitate a restructuring of military commands and bring jointness in operations with optimal utilisation of resources. The idea of ‘Theaterisation of Military Commands’ has been under deliberation at the political, military and academic levels at an increased pace since the PM’s address at the Combined Commanders Conference 2015, where he highlighted the need for reforms in senior defence management. On 17 February 2020, the CDS stated that the restructuring of the Indian Armed Forces would include forming a “Peninsula Command” (Joint Maritime Theatre Command) by the end of 2021, integrating the Western and Eastern Naval Commands, along with earmarked Army and IAF assets.<sup>1</sup>

In recent years, the threat of a ‘Two-Front War,’ on the Western and Northern fronts, has been acknowledged as a major concern by successive Chiefs of Army Staff. Accordingly, the Indian Navy has been preparing to undertake maritime operations against a Sino-Pak collusive threat in the Indian Ocean (IO), exercising its responses in the biennial theatre level exercise TROPEX-19.<sup>2</sup>

The 1991 First Gulf War is a good example of joint warfighting after the Goldwater-Nichols reforms of the US military in 1986. In 2016, the PLA formed five Theatre Commands to optimise forces available to affect

operations in a coherent manner, which was a continuation of the transformation initiated by the PLA after the First Gulf War.<sup>3</sup> Similarly, India's Maritime Theatre Command (MTC) is intended to enhance synergy and coordination among all services and subordinate commands to counter the Sino-Pak collusive threat in the Indian Ocean Region (IOR). However, integrated application of combat power can be challenging. MTC can achieve success only through the strengthening of its 'Unity of Effect' by developing 'Joint Maritime Theatre Strategies' for peace and war and create integrated force capabilities to counter future threats and fight a 'Two-Front War.'

The term 'Unity of Effect' taken from Edgar Allen Poe's essay on "The Importance of the Single Effect in a Prose Tale," describes a joint approach that seeks to employ forces in multiple 'Lines of Operations' so as to attain an overall effect greater than individual sums, wherein the same assets can be applied in more than one domain, delivering ordnance at the desired point. The creation of an Integrated Theatre Command would ensure 'Unity of Command' and 'Unity of Effort' due to establishment of joint command structures, centralised operational planning and direction. 'Unity of Effect' is therefore, considered appropriate for examination and for defining warfighting capabilities of the MTC.

### **The Collusive Maritime Threat**

**China's Maritime Strategy in IOR.** China has deep maritime and military interests in the IOR owing to the 'Chinese Dream of National Rejuvenation,' to be achieved by 2049. Central to this grand strategic vision are two interleaved economic interests. The first is President Xi Jinping's Belt and Road Initiative (BRI), which includes Pakistan, Myanmar, Sri Lanka, Bangladesh and the Maldives, all of whom are in India's strategic neighbourhood. The second is China's dependence on energy from the Middle East and its endeavour to overcome the 'Malacca Dilemma' by operationalising Gwadar and the China Pakistan Economic Corridor (CPEC). Xi Jinping has articulated this as "offshore water defence and open seas protection" and the transition of Peoples Liberation Army Navy (PLAN) into a "strong and modernised naval force" which strengthens China's ability to project force and protect its maritime interests beyond the West Pacific.<sup>4</sup>

**PLA Capabilities for Deployment in IOR.** The PLAN has rapidly



transformed into a 'Blue Water' Navy in the last decade. China's warship building pace will enable the PLAN to deploy in large numbers in the IOR while maintaining adequate force levels for eventualities in the Western Pacific. By 2025, China is likely to have around 400 warships.<sup>5</sup> By 2030, PLAN is likely to possess a total of 76 submarines, which will include 13

**2030 onwards**

**deployment of Chinese CTF in the IOR is likely**

SSN/ SSGNs, eight SSBNs and 55 Yuan variants with Air Independent Propulsion (AIP). There will be 200 major surface combatants, up from the present 135, including aircraft carriers and amphibious ships. China is also acquiring carriers primarily for global power projection for operations in 'far seas.'<sup>6</sup> Therefore, with four to five aircraft carriers and a large number of major surface combatants available by 2030, the deployment of a Carrier Task Force (CTF) in the IOR is likely.

**PLA Long-Range Vectors (LRVs) during Conflict in IOR.** PLA LRVs can suitably support the deployment of Chinese naval forces in IOR. The DF-21D Anti-Ship Ballistic Missile (ASBM) with a range of 1500 km has a reach up to the Bay of Bengal and the DF-26B ASBM Intermediate Range Ballistic Missile (IRBM) with a range of 4000 km can cover the Arabian Sea, the Bay of Bengal (BoB) and the North Indian Ocean. The maritime strike capable H-6J long-range bomber, equipped with six supersonic YJ-12 Anti-Ship Cruise Missiles (ASCMs), provides PLAN Aviation significant capabilities to strike into the peripheries of the East Indian Ocean and the BoB, with overflight through a neutral country's airspace or international air routes with AAR support.<sup>7</sup> Supported by a constellation of Electronic Intelligence (ELINT) and Electro Optical-Infra Red (EOIR)/ Search and Rescue (SAR) satellites for continuous surveillance, the LRVs can be employed against *IN* fleets, especially the CBGs, restricting their freedom of action in the Eastern theatre.

**PN Forces and Capabilities.** The PN has traditionally maintained a strategy of 'offensive sea denial' and 'coastal interdiction' through the deployment of submarines, missile boats, Long Range (LR) precision strike missiles and special forces. The restructuring of PN by expanding and diversifying naval bases (Karachi, stationing submarines at Ormara and rotating surface vessels to Gwadar), future acquisitions of ships and submarines, and upgradation of ships and maritime strike aircraft with LR ASCM, provides considerable offensive capabilities.<sup>8</sup>

Notwithstanding economic turmoil and severe fund crunch, the PN has been a major beneficiary of Chinese military largesse in the last decade since the signing of the 'Treaty for Friendship, Cooperation and Neighbourly Relations' in Apr 2005.<sup>9</sup> Four F-22P frigates and four FAC(M) were inducted into the PN in the following years. Further, China is building four new Type 054C/P frigates and eight Yuan AIP diesel submarines, for induction from 2021. The jointly developed JF-17 multi-role fighter aircraft (designated as J-10 in PAF) fitted with the supersonic (Mach 4+), CM400 AKG air-to-surface missiles (range: 180-250 km) provides formidable anti-ship capability. China and Pakistan are also cooperating in many other defence sectors, which include space and cyber capabilities as well.

**PLAN and PN Joint Operations.** The PLAN has maintained a permanent presence in Western IOR with its Anti-Piracy Escort Force (APEF) since 2008. This is now better facilitated by the PLA military base in Djibouti, inaugurated in 2017. In addition to Djibouti, Gwadar port can be readily used by PLAN ships, including their larger ships. A sizeable port area is available for shore facilities to support the PLAN fleet.<sup>10</sup> Further, collaboration between the two navies is being reinforced through bilateral exercises that cover a broad spectrum of naval operations.<sup>11</sup> In January 2020, PLAN and PN ships participated in Sea Guardian-2020, a nine-day exercise, with one of the objectives as 'Defence of CPEC.' The exercise took place in the North Arabian Sea and involved special forces, warships, aircraft and for the first time, submarines (including a PLAN submarine).<sup>12</sup> These exercises have progressively been upgraded to include live-firings, indicating greater interoperability and leveraging common capabilities.

**Space and Cyber Collaboration.** China could also employ its space and cyber forces to degrade and disrupt the *IN's* warfighting capabilities. PLA Strategic Support Force (PLASSF) has developed considerable offensive and defensive capabilities in space and cyber warfare to achieve a range of objectives including disruption of enemy C4ISR.<sup>13</sup> Pakistan has contracted the use of the Chinese Beidou satellite navigation system allowing China to set up a monitoring station in Pakistan, that could be used for cyber espionage. Besides, China has provided remote sensing satellites to Pakistan and is assisting it in building its cyber warfare capabilities.<sup>14</sup> Basing of such disruptive space and cyber capabilities in Pakistan may significantly degrade *IN's* warfighting capabilities in the maritime theatre. Such threats can be further aggravated by China's Anti-Satellite (ASAT)

capabilities that could disrupt *IN*'s space-based Command and Control (C2) network.

**Collusive Military Threats in the Indian Ocean.** There is a discernible confluence of military-strategic interests and interdependence in the Sino-Pak strategic partnership, and most so in the maritime domain. Sino-Pak combined naval forces, supported by LRVs, will be formidable in the IOR. The effectiveness of the PLAN in IOR can be debated on the factors of operating on 'exterior lines' and extended 'Lines of Communication.' However, PLAN forces have developed adequate capabilities to have sustained reach and mobility in the IO in the form of sea and hard basing.<sup>15</sup> In a 'Two-Front War,' Sino-Pak cooperation could manifest in all theatres – West, East and also within the Indian Ocean.

### **Challenges for the Joint Command**

**Naval Component.** The *IN* is the largest resident naval force in the IOR and has transformed into a network-enabled blue water navy. It is envisaged to be a 200 ship and submarine navy by 2050, a substantial increase from the current size of 132 ships. Compared to the expected PLAN forces that China can deploy in IOR in a likely conflict in the near-term, the *IN* enjoys a 'favourable balance.'<sup>16</sup> With the availability of one aircraft carrier, which is likely to be two by 2025, the *IN* will be capable of exercising limited sea control over larger sea areas. However, against a combined force of PLAN and PN, the future naval force may not be sufficient in terms of numbers and firepower (Type 055, Renhai Class, is an example of firepower overmatch) to simultaneously counter the threats in the multiple theatres of the IO Front. Consequently, the application of naval power simultaneously in the large Area of Operations (AO), especially in a 'Two-Front War' will remain a challenge with the current force levels.

The *IN*'s submarine force level is an area of concern, which is being addressed through Projects 75 and 75I. However, with the delayed delivery of Project 75 submarines (non-AIP) and Project 75I yet to take off, submarine numbers will remain critical in a 'Two-Front War.' The *IN* is at present operating one SSN on a lease, which will end in 2022 and is extendable by three years. While negotiations for leasing another SSN are underway, with no indigenous SSN programme firmed up as yet, the range of capabilities that submarines bring would be less than those necessary.<sup>17</sup>

The increased proliferation of nuclear and AIP submarines in the IO

Front is a major developing threat. At present, the *IN*'s P8I aircraft and towed array ships are the primary assets for anti-submarine operations. The induction of MH60R helicopters, procurement of six P8Is (in addition to the eight plus four aircraft) and shallow-water ASW ships, will provide an impetus to counter the growing underwater threat.

**Air Component.** Air dominance in the entire maritime AO is practically impossible. However, adequate airpower must be available to be employed in the theatres of operations as and when the need arises. The primary objective would be to deter enemy naval forces from operating with impunity and particularly to deny freedom of action to the enemy CTF. The IAF

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***SU-30MKI with air-launched BrahMos are a potent platform for long-range maritime strikes***

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has three maritime air squadrons and uses the SU-30MKI aircraft, along with the air-launched BrahMos Anti-Ship Missile (AShM), have become a potent platform for long-range maritime strikes, adding to the capabilities of these squadrons. During Exercise *Gagan Shakti* 2018, the IAF demonstrated the capability of undertaking maritime strikes in the Western and Eastern theatres sequentially, while operating to achieve air dominance in a continental war.<sup>18</sup>

The IAF's force levels are at a mere 30 fighter squadrons as against the ideal sanctioned strength of 42 squadrons. During a 'Two-Front War' the availability of sufficient maritime air power will be doubtful until air dominance is achieved on both frontiers. Even the latter will be a difficult objective to achieve. Simultaneously, the Western theatre in IO Front will demand a Favourable Air Situation (FAS) for the naval forces to exercise sea control as well as Sea Lines of Communication (SLOC) protection and interdiction closer to the Pakistani coast extending to the Gulf of Oman. This will require combined CTF, as well as shore-based airpower effort.

**Land Component.** The Indian Army (IA) unit with a maritime role is the re-tasked (in 2009) 91 Infantry Brigade for amphibious warfare to meet any exigencies, requiring the employment of troops from the sea.<sup>19</sup> For the defence of Andaman and Nicobar (A&N) Islands, the 108 Mountain Brigade is based near Port Blair. In a conflict or during any Out of Area Contingency (OOAC), such as India's response to the Maldives crisis in 1987, the amphibious brigade and naval/ air transport forces could be called upon to respond. However, compared to 21<sup>st</sup> Century amphibious capabilities and concepts of operating in complex environments, the Indian

amphibious forces currently lack quick mobilisation and operational capabilities.

**Integration of Joint Forces.** In joint operations employing diverse forces, success may be achieved only with deep integration, which includes common procedures and precisely coordinated actions. Operating philosophies of Indian Armed Forces, information-sharing practices, equipment and training, are presently inclined towards single-service operations. Lack of interoperability between services is what needs to be addressed. Further, continuous joint training of all forces, for effective output is a necessity. As an example, in the 1971 War, both the *IN* and *IAF* undertook missile attacks and air strikes respectively, on oil installations at Karachi, without any coordination. The planning and coordination of operations, by an integrated Theatre Command, to achieve the desired 'Unity of Effect' during operations will be difficult, but necessary.

### **Flag Posts of the Future**

In a 'Two-Front War,' the MTC will be responsible for planning and fighting the maritime war. As is evident from the foregoing, a collusive PLAN and PN, being a formidable force, will have to be countered with a combination of sea, air and land forces, with integrated support in space and cyber domains. To counter such a threat, the MTC will need a coherent strategy for deterrence and conflict, develop forces and capabilities to counter the collusive threats, and apply joint combat power to achieve 'Unity of Effect.' The MTC can achieve success and effectiveness through a continuous objective assessment of the operational environment. Further, the acquisition of capabilities needs to be planned based on the threats expected during conflicts and situations less than war.

**Joint Operations.** The types of maritime operations under the ambit of MTC should be defined after extensive deliberations. Should it be limited to undertaking only Joint Maritime Air Operations and Joint Amphibious Operations, or could it be entrusted to undertake operations with 'tailored joint forces' that may include single-service operations or OOAC, coastal security and HADR? The consideration of all types of operations in the maritime AOR with a 'unitary view of war,' at the military-strategic level, can provide a conceptual framework with which joint warfighting capabilities can be developed.<sup>20</sup> Notwithstanding the character of forces, to achieve economy of effort and cost benefits, the MTC should be



operationally responsible for undertaking missions and tasks with single-service components or joint forces drawn from the component commands whilst maintaining an overall maritime outlook. It would mean that the integrated Theatre Command will not only fight a maritime war, but would also undertake Military Operations Other Than War (MOOTW), HADR, Flood Relief Ops and other peacetime operations with tailored joint forces.

**Conceptual Framework.** *The Joint Doctrine Indian Armed Forces, 2017* states “undertaking of Integrated Theatre Battle with an operationally adaptable force, to ensure decisive victory in a networked centric environment across the entire spectrum of conflict in varied geographical domains.” To develop forces and capabilities for future conflicts, the strategies

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***Development of a ‘Joint Maritime Theatre Strategy’ will provide the required Unity of Effort***

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that will be required in the IO Front can be broadly categorised as ‘Offensive Sea Denial’ in the South and Eastern theatres against PLAN ingress into IOR and ‘Sea Control’ for freedom of action in the Western theatre. Hence, the development of a ‘Joint Maritime Theatre Strategy’ will provide the required Unity of Effort and aid in developing significant capabilities in countering maritime threats during peace and war.

**Creating Asymmetry of Forces.** The *IN*’s advantage in the IOR, against PLAN and PN individually, would continue to exist until the PLAN CTF remains in the West Pacific, wherein the USA and its allied naval forces keep the PLAN engaged. However, should the PLAN CTF start operating in the IOR, the MTC will have to create adequate presence through the deployment of asymmetric joint forces (Unmanned Vehicles, LRVs, Shore-Based Maritime Strike Aircraft). On the other hand, power projection in the South China Sea (SCS) as a countermeasure, should be included as an option in the joint operational plans. Therefore, the MTC should examine and propose the joint force elements required, to deter Chinese forces in the IOR, achieve limited sea control in the IOR and threaten Chinese interests in the SCS.

**Integrated Forces.** In future warfare, jointness at the operational and tactical levels are essential, and major militaries, including the PLA, have integrated joint forces. The ‘Unity of Effect’ in joint operations is possible with tailored force allocation, deconfliction of tactical plans, and C2 at the tactical level, aided by network-centric operations. To achieve this effect, the Joint Operations Centre of MTC should integrate the service component

forces, within a network that provides a Common Operational Picture (COP) and facilitates target information exchange between units. The current individual services' operational networks need to be modified with appropriate gateways to allow sharing of the COP. However, to achieve unit-level integration, a common datalink with joint radio protocols, such as the U.S. tactical datalink, Link-16, and compatible radio equipment, such as SDRs are essential on the platforms/ units of the MTC's component forces.

**Capabilities for a Two-Front War.** The threats in a Two-Front War and the challenges to the MTC will require a review of the planned inductions and acquisitions of the three services to cater for the changing dynamics in the IO Front. The capabilities essential for the maritime command are: -

- **Sea Power.** To achieve comprehensive 'control of the seas' in the IO Front, the MTC must have two operational CTFs to counter a Sino-Pak collusive threat. This can be realised by maintaining a minimum of three aircraft carriers.
- **Sea Denial.** India's depleted submarine force should be enhanced with the early realisation of Project 75I. Further, the development of indigenous SSNs must be given priority, which is essential to deny freedom of action to PLAN CTF thereby, deterring its deployment in the IOR.
- **ASW.** Given the proliferation of Chinese nuclear and AIP submarines (also PN) in the IOR, countering underwater threats requires an 'ASW Theatre Strategy,' complemented with Underwater Domain Awareness and adequate ASW air, surface and sub-surface platforms.
- **Air Power.** Dedicated shore-based air power for application in the maritime theatre against a collusive threat is a necessity. It will complement the strategy in the Eastern IO Front to have a combination of sea control and sea denial, and create a FAS in the Western theatre. Identification of a standard multi-role aircraft for the IN and IAF with extended reach and LR precision weapons will provide greater synergy and logistical efficiency for the effective employment of maritime air power.
- **Dedicated Amphibious Force.** Though the 91 Infantry Brigade was re-tasked for a maritime role, the formation is yet to be designated as an 'Amphibious Brigade.' While India renounces an expeditionary role for its armed forces, the changing geo-strategic environment can compel India to respond to OOACs, as well as project power in the Indo-Pacific

region, which can be better accomplished with a dedicated amphibious land force, along with heavy sealift and airlift capabilities. The heavy sealift capabilities can also be optimally utilised for MOOTW, such as the recent Operation *Samudra Sethu* in 2020.

➤ **LRVs and Ballistic Missile Defence (BMD).** A potent weapon for Anti-Access Area Denial (A2AD) strategy, the MTC should examine the feasibility of employing LRVs from the A&N Islands against PLAN forces. Upgrade of Mobile Missile Coastal Batteries (MMCB) on the west coast may also be pertinent. To counter the threat of Chinese ASBMs and regular Ballistic Missiles, in the Eastern theatre, robust land and sea-based BMD capabilities, integrated with Joint AD Command are essential.

➤ **Technological Revolutions.** Budget constraints and the *IN*'s force level disadvantage in a 'Two-Front War' can be mitigated with the incorporation of technologies such as drones and AI. Unmanned combat vehicles have demonstrated their lethality in recent conflicts. Therefore, the joint maritime forces should be augmented with such capabilities. The induction of High Altitude Long Endurance (HALE) armed drones and UUVs can significantly increase ASV and ASW capabilities.

➤ **Integration of Joint Forces.** Adoption of National Maritime Domain Awareness (MDA) and integration of the Integrated Air Command and Control System (IACCS) will be the way ahead. Creation of joint operational situational awareness applications (an amalgamation of Trigun and IACCS) riding on 'Network for Spectrum,' along with joint interoperable voice and data waveforms on SDRs and datalink must be expedited.

## **Conclusion**

In the event of a 'Two-Front War' in the Indian sub-continent, Sino-Pak collusive naval forces will be a formidable adversary in the maritime theatres over the vast expanse of the IO. A primary objective of the JMTC will be to create operational capacities and capabilities to counter and deter threats, particularly the Sino-Pak collusive threat. At the same time, the growing primacy of cyber and space domains, as well as due to the advent of disruptive technologies such as AI and drones. These when applied with integrated forces capable of cohesive fighting in all the domains may create asymmetric advantages and allow victory without fighting.

Restructuring is likely to fail if the mere integration of existing distributed resources, through an added layer of the joint command staff, is attempted. Instead, theatrisation should have a long-term impact with tangible benefits at strategic, operational and tactical levels. Considering the challenges in terms of current force capabilities and modernisation, the MTC will have to evaluate the structure and capabilities of its fighting forces. Like the transformation of modern militaries, including the PLA, into integrated multi-domain capable forces, the MTC should strive to create cohesive fighting forces capable of conducting joint network-centric operations. A 'Joint Maritime Theatre Strategy' for activities during peace and war and promoting a joint culture will provide the right perspective for jointness among the component forces. Success in a 'Two-Front War' in the maritime theatres can be guaranteed by strengthening the MTC's 'Unity of Effect' with networked and multi-domain capable forces operating within the framework of a 'Joint Maritime Theatre Strategy.'



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## INDIA'S DIPLOMACY IN SOUTH ASIA: EVOLVING A COLLABORATIVE STRATEGY IN THE BACKDROP OF COVID-19

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*Captain PSS Uday Kiran*

Nepal went into the throes of a political turmoil in December 2020. This has not been a one-off instance. India has been accused in the past of sending delegations and diplomats to resolve the turmoil to ensure her interests are not impacted. It was China that rushed a delegation to try and resolve the political spat in 2020. Diplomats based in Nepal opined that China controls Nepal's internal politics.<sup>1</sup> India, on the other hand, was in the news for altogether different reasons; discussing infrastructure projects being executed in Nepal.<sup>2</sup> It is possible that India too may have discussed issues with the Nepalese polity. However, there has been no news of the same in the public domain.

Sri Lanka's Colombo Port acts as a transshipment hub for India. India has been looking to acquire a stake in the East Container Terminal (ECT) of the Colombo Port.<sup>3</sup> India's External Affairs Minister visited Colombo to interact with the Sri Lankan Government supposedly to discuss the issue.<sup>4</sup> Sri Lanka, on 03 February 2021 cancelled the tripartite agreement between Sri Lanka, India and Japan for the development of the ETC.<sup>5</sup>

India, as part of its Neighbourhood First Policy deployed a naval survey ship to Maldives to undertake hydrographic survey.<sup>6</sup> The Maldivian Defence Forces tweeted about the Indian Navy Ship *Darshak* undertaking hydrographic survey. However, comments made on the tweet clearly highlighted that India was not making much headway in its efforts of giving due importance to its immediate neighbourhood.<sup>7</sup>

India lives in a complex neighbourhood. The last two decades have seen changing geo-strategic landscapes in South Asia. Countries in the region are busy hedging their options to ensure their national interests are accorded due primacy. India has faced challenges in its relations in South Asia with some countries more than others in the past few years. This could probably be attributed to a combination of India's focus on enhancing internal growth and quality of life as also increased presence of extra regional players

pursuing their own national interests. The Covid-19 pandemic has further increased these complexities. India needs to identify gaps in its diplomacy, which if addressed, may enable increased convergence in the region and beyond, particularly in the backdrop of the Covid-19 pandemic.

This paper aims to examine some of the factors that have led to the challenges in India's relations in its immediate neighbourhood. The paper also aims to identify principal actor(s) active in the region. The paper will focus primarily on Sri Lanka, Maldives and Nepal, which are important partners in the immediate neighbourhood.

### **India's Neighbourhood**

India has Nepal, Bhutan and China in the North, Bangladesh and Myanmar on the East, Sri Lanka on the South, Maldives in the South West, and Pakistan and Afghanistan in the North West. India has always given a very high priority to her policy towards her neighbours. This is keeping in line with the fact that a peaceful periphery would help focus on India's developmental goals.<sup>8</sup> However, as is the case in most bilateral relationships, it has not always been smooth sailing.

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***India has always given  
high priority to her policy  
towards her neighbours***

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### **India -Nepal**

India and Nepal share an 1850 km land border and have historical linkages with people-to-people connections and an open border. The 1950 India - Nepal Treaty of Peace and Friendship forms the bedrock of their bilateral relations.<sup>9</sup> India and Nepal enjoy robust relations across all domains and fields including Defence, with India being Nepal's largest trading partner.

The robustness of ties notwithstanding, India-Nepal bilateral relations have had challenges. One of the biggest causes for angst in the recent past, in the author's view, was the 2015 'purported blockade' of Nepal by India.<sup>10</sup> This was supposedly due to changes to the Nepalese Constitution brought in by the government of the Prime Minister, Mr KP Oli. This was even though India helped broker a peace deal between the elected government and Maoists' waging an armed struggle.<sup>11</sup> The blame for the 'blockade' was dependent on which news outlet/ report/ article was read; it was either Nepal's internal dynamics<sup>12</sup> or allegedly an Indian coercion tactic.<sup>13</sup> On

ground, the common Nepalese were impacted with shortages in most items, including fuel and medicines. The purported blockade led to Nepal enhancing its relations with China, probably as a counterweight to India. China capitalised on the 'chill' in India-Nepal ties. The newfound

***China capitalised  
on the 'chill' in  
India-Nepal ties***

bonhomie saw China and Nepal signing a Memorandum of Understanding (MoU) on the Belt and Road Initiative (BRI) and a Transit Transport Agreement (TTA) in 2017. The feasibility of a cross-border railway is also under examination. From \$1.81 Mn in 2003 to \$399 Mn in 2017, Chinese investments/ pledge of investment have seen a substantial jump.<sup>14</sup> However, on ground execution is limited.<sup>15</sup> Investments/ pledge of investments have obviously bought influence too. The clearest indication of this has been the Lipulekh imbroglio.<sup>16</sup> Matters reached an impasse when Nepal promulgated a new map, which was promptly rejected by India.<sup>17</sup> The main factors that may have caused subtle friction points in India - Nepal relations can primarily be summarised as: -

- India's perceived assertiveness.
- India's supposed interference in Nepal's internal politics.
- India's apparent flexing of economic muscle.
- India misusing its geographic proximity.
- India's concern with Nepal's economic and foreign policy choices.
- Nepal playing the China card, particularly post 2015, to make India review its stand on various issues.

**India - Sri Lanka**

India and Sri Lanka share relations that date back to more than 2500 years. Both countries have a history of cultural, religious, linguistic and intellectual engagements.<sup>18</sup> Further, as India's Ministry of External Affairs highlighted, India and Sri Lanka have relations that span political, economic, military, cultural and people-to-people interactions.<sup>19</sup> India helped Sri Lanka in its military action against the Liberation Tigers of Tamil Elam (LTTE). However, due to domestic compulsions, India could only acknowledge, to a limited extent, its otherwise robust military assistance to Sri Lanka.<sup>20</sup> China and Pakistan supported Sri Lanka openly and this helped both countries in the years ahead.<sup>21</sup> The deal signed in 2007 for developing the Hambantota Port with Chinese assistance and subsequent investments in terms of loans by China, further pulled Colombo into Beijing's arms. The

blocking of the United Nations High Commission for Refugees (UNHCR) resolution in May 2009 for investigations into alleged war-crimes in Sri Lanka by China gave a further fillip to Sri Lanka - China relations. India too, incidentally, supported Sri Lanka during the resolution.<sup>22</sup> Chinese loans and aid, just a few million in 2005, soared beyond \$6 Billion within a decade.<sup>23</sup> Sri Lanka today has major challenges in paying back its loans and is getting further pulled into the Chinese orbit.

India - Sri Lanka relations have a domestic dimension too, which is Tamil Nadu. For many years, most political parties in India were wary of formulating any policies, lest the Indian state of Tamil Nadu should raise objections. This did influence India's foreign policy decisions in respect of Sri Lanka.<sup>24</sup> And China's presence has not helped much along the way. The main challenges in India's relations with Sri Lanka include: -

- India's inability to match its private views with its public stand.
- India's perceived inability to deliver on promises.
- India's domestic political compulsions.
- China's alleged sway over Sri Lanka.

### **India - Maldives**

India and Maldives share ties dating to antiquity. India played an important role to repel a coup attempt against the Government of Maldives in 1988. India's timely assistance ensured both the government and country were not impacted.<sup>25</sup> The relations, however, have seen a downward trend over the years. Things came to a head in 2018, with India and Maldives putting additional measures in place to issue visas to each other's citizens.<sup>26</sup> India's Ministry of External Affairs too acknowledges this in its brief on foreign relations in respect of Maldives where it states, "...Except for a brief period between February 2012 to November 2018, relations have been close..."<sup>27</sup> This was due to the perceived closeness of the Maldives to China, from India's standpoint and India interfering in Maldives internal affairs as per the Maldivian standpoint.<sup>28</sup> The relations have improved since 2018, after President Solih came into power with emphasis on an 'India First' policy.<sup>29</sup> The main factors that have led to problems in the India - Maldives relations include: -

- India's perceived assertiveness.
- India's supposed interference in Maldives internal politics.
- India's apparent flexing of economic and military muscle.

- Maldives playing the China card.

### **India's Foreign Policy Gaps**

India's relations with Nepal, Sri Lanka and Maldives can be compared to a 'sine wave' in mathematical parlance, with 'crests & troughs.' The crests & troughs, though, unlike in a 'sine wave,' are not periodic.<sup>30</sup> There is a similarity in the likely gaps in the bilateral relations between India and these three South Asian nations, which essentially include: -

- Perceived assertiveness.
- Interference in internal politics.
- Misusing geographic proximity.
- Economic coercion.

The gaps/ friction points above have led to these countries, and others in the region, being guarded *vis-à-vis* their relations with India. They are also 'courting' extra-regional players to offset India's influence.

### **The China Factor**

The one common actor, other than India, in India's neighbourhood is China. According to some analysts, China underestimated India's stature and rise. This led to minimal friction points between both the countries.<sup>31</sup> However, this did not stop China from increasing its investments in South Asia.<sup>32</sup> Investments by China are, in most cases, not as transparent as some of the recognised lending institutes. Their investments in Sri Lanka, Maldives and Nepal have come under increased scrutiny in these countries.<sup>33,34,35</sup>

It is not that India does not provide economic or infrastructure aid. The lines of credit through India's Export Import Bank alone stand at more than \$1.2 Bn each to Nepal, Sri Lanka and Maldives.<sup>36</sup> However, the challenge with India's assistance has been its inability on some occasions to offer development assistance to its neighbours in quick time, lack of strategic engagement and willingness of smaller countries to use China as the bargaining chip for better deals.<sup>37</sup> Covid-19, in addition, has made countries in South Asia review their stand *vis-à-vis* India.

### **Covid-19**

Covid-19 has impacted more than 221 countries and territories around the world, with USA leading and Vanuatu bringing up the rear of the charts.



Most countries in South Asia too have been affected.<sup>38</sup> The challenge with Covid-19 has been its impact on life, as countries shutdown to stop the spread of the virus. The shutdown led to shutdown of economies, jobs, livelihood and for most, lives. India and its immediate neighbourhood have been severely impacted.

## India

India has been one of the worst affected. It continues to battle the challenges of the pandemic. There have been, however, some positives too. India has, during the pandemic, become the world's second largest producer of Personal Protection Equipment (PPE) kits.<sup>39</sup> It is also home to the world's largest manufacturer of vaccines, the Serum Institute of India Limited.<sup>40</sup> In the current situation when countries are resorting to 'vaccine nationalism,' India proved to be an exception to the rule by providing vaccines, based on contractual obligations as also grants, to many countries in the region and beyond under 'Vaccine Maitiri.'<sup>41,42</sup> India's initial response and efforts won it praise around the world, and in South Asia too. Nepal, Sri Lanka and Maldives expressed their gratitude to India for the Covid-19 vaccine delivery. The second wave, however, exposed the underbelly of India's healthcare system and its inherent limitations. The Covid-19 second wave, provided it can be contained, is not expected to have a substantial impact on the Indian economy.<sup>43,44,45,46</sup>

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***India's initial Covid-19 response and efforts won it praise around the world***

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## Nepal

Nepal has been seriously impacted by Covid-19. There are 455,000 total cases as on May 17, 2021.<sup>47</sup> The country is dependent on remittances, tourism and agriculture; all devastated by the pandemic.<sup>48</sup> Nepalese working as migrants in the region and beyond have been forced to return home, which will impact remittances and increase joblessness.<sup>49</sup>

## Sri Lanka

Sri Lanka depends to a major extent on Medium, Small and Micro Enterprises (MSMEs) and tourism to sustain its economy.<sup>50</sup> With 142,746 reported total cases as on May 17, 2021, Sri Lanka is facing challenges to sustain the economy and its citizens.<sup>51</sup> The debt, discussed earlier, is not

helping the situation either.

### **Maldives**

Maldives, due to its unique situation as an island nation that is dependent on partner nations for its economic sustenance is expected to have 'particular and unique impacts' as per the United Nations.<sup>52</sup> The country, as on May 17, 2021 reported a figure of 44,523 total cases.<sup>53</sup> Tourism is one of the main contributors to the Maldivian economy.<sup>54</sup> Covid-19 has had a direct impact on this.

### **Impact on South Asia**

Covid-19 has brought many challenges in its wake across the globe with health and economy being the most impacted. South Asia, with its developing economies, is no exception to the rule. The common man/woman has been at the receiving end of this pandemic with no end in sight. Lockdowns, travel restrictions and economic inactivity leading to loss of livelihood have been the norm.

### **Evolving an Enduring Strategy**

India certainly has had challenges in the neighbourhood and continues to have them. However, there are positives too. Dr Constantino Xavier and Riya Sinha of the Centre for Social and Economic Progress in their study of India's connectivity projects in Nepal, for an article in the Economic Times, have highlighted the cross-border oil product pipeline that was completed 15 months ahead of schedule.<sup>55</sup> They have, however, mentioned the need for India to be more proactive and adopt best practices of some credible international agencies to ensure timely completion of projects.<sup>56</sup>

Sri Lanka needed to increase pace of basic infrastructure, in particular housing, in the war ravaged North and East of the country. In 2010, India stepped forward and offered to build 50,000 houses. Out of these, 48,300 houses have been handed over. The Government of India has announced construction of another 10,000 houses.<sup>57</sup>

Maldives has been trying to find ways to pay its loans and India has been helping, as brought out earlier, wherein the *Exim* Bank of India has provided more than \$1.2 Billion to Maldives. Whilst these are big ticket projects, it's the smaller projects that help transform lives of people and help shape opinions. The inauguration of the *Ekuveni* Running Track in Male is one

such project.<sup>58</sup>

India wishes for a harmonious periphery to ensure unhindered progress. Towards this Nepal, Sri Lanka and Maldives are considered important actors. China, though an external actor, has an enduring presence and is, therefore, an important actor. India has proved, through its response and actions in the challenging times of Covid-19, that it can deliver through timely outreach, despite domestic requirements.

India as also South Asia have fundamental requirements. These, at the macro level, translate into graduating up the income level metrics. Hans Rosling with Ola Rosling and Anna Rosling Ronnlund in their book *Factfulness - Ten Reasons We're Wrong About the World - And Why Things Are Better Than You Think* put forth the point that every individual and country likes to move up the income levels.<sup>59</sup> The World Bank adopted the Rosling model and classifies countries based on their income levels; low, lower-middle, upper-middle and high-income countries.<sup>60</sup> In South Asia, India and Nepal are in the lower-middle income countries group. Sri Lanka, due to Covid-19, has moved from upper-middle to lower-middle income group. Maldives is in the upper-middle group.<sup>61</sup>

India should reach out to these nations and create a collaborative approach that is mutually beneficial. Based on various challenges that have been faced and those that have been briefly referred to above, India's enduring strategy to enhance its diplomatic outreach and heft would entail a Whole of Government approach to include: -

- Evolving a meticulous plan of action, based on local government requirements, with clearly identified timelines.
- Incorporating best practices, in line with prevalent international norms, in project conceptualisation and execution.
- Generating capacities to cater for anticipated requirements, both at home and abroad.
- Ensuring systems work optimally to ensure achievement of targets, if not ahead of targeted timelines.
- Work quietly, away from media glare, and ensure credit firmly goes to the host nation.
- Avoid public statements on domestic developments in neighbouring nations, even if it entails being considered as 'going soft.'
- Delivering on time on promises made.
- Focus on projects that have impact for the common people to

enhance reputation through word of mouth rather than through media.

➤ Identify 'Red Lines' that have implications for India's geo-strategic interests and national security and clearly enunciate them to immediate neighbours. If crossed, initiate punitive measures on the quiet avoiding public posturing.

India inhabits a complex neighbourhood. The presence of extra-regional actors does not help matters. India needs to enhance capacities, deliver on promises and needs to stay away from limelight to enhance convergence in the region and beyond. India's actions during the intervening period between the Covid-19 waves in the country have proved that she can deliver. India needs to persevere and adhere scrupulously to a strategy that is enduring. India needs to identify, in consultation with countries in the region, sectors and areas that need to be provided due impetus to kick-start economies that have been impacted by Covid-19 and identify agencies that adhere to international norms to provide financial assistance. India's collaborative approach will help assuage feelings of unease and facilitate all round development and upliftment of people in the region.



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## AN INDIAN PERSPECTIVE ON THE QUAD AS A COUNTER TO CHINA IN THE IOR

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*Commander Siddharth Rana*

*“The Greater Indian Ocean region...will be the centre of global conflicts, because most international business supply will be conducted through this route... it is in this region, the interests and influence of India, China and the United States are beginning to overlap... two key players in this region are India and China – India moving east and west while China to the south”*

*- Robert Kaplan (2010)<sup>1</sup>*

### **Introduction**

**T**he Indian Ocean Region (IOR) has turned into a strategic hot spot in recent years. China’s growing presence and its increasing assertiveness pose serious challenges to India’s as well as to the region’s security. China continues to grow its naval presence in the area. It is increasing its geopolitical influence by building ports and other maritime infrastructure along the Indian Ocean periphery. As a rule, eight to ten ships of the Chinese Navy are deployed in the Indian Ocean (IO), including nuclear powered submarines.<sup>2</sup> China has established a military surveillance facility on Coco Island (Myanmar) and a naval base in Djibouti. It may sell eight modern submarines to Pakistan and has given two older ones to Bangladesh.<sup>3</sup> There are also indications that China might dispatch an aircraft carrier strike group to the region in the near future. Even during peacetime, its growing presence might have some impact on a few countries, which might tilt away from India towards China. India therefore, needs to shift strategic allegiances.

No single country in the region, by itself, can confront the challenges posed by China. A co-operative partnership among like minded nations is the better way to build a rules-based order. The revival of the Quadrilateral Security Dialogue or Quad in 2017, after a ten-year-long freeze, is expected to play an important part in the geopolitical and geo-economic discussions in the Indo-Pacific region in future. The Quad was widely regarded in 2007, its year of official birth, as mainly an effort at countering China without

mentioning it and without a clear vision. But Quad 2017 is increasingly being seen as a collective effort for regional order-building, especially in terms of maritime security and regional connectivity and with better legitimacy.<sup>4</sup> The association is a unique opportunity for India to play a larger role in the Indo-Pacific region. India can take the responsibility for the security of the Indian Ocean, which it considers as its primary area of interest.

Although India's recent statements and high-level speeches, have aligned closely with positions of other Quad countries on the Free and Open

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***India's partnerships within the Quad framework aim to counterbalance Chinese influence in IO***

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Indo-Pacific concept, there appear to be divergences in interests and capabilities that make it an outsider in this grouping. Additionally, the Indian policy of strategic autonomy has prevented it from embracing the full potential of Quad. While that policy may have held India in good stead so far, emerging concerns require flexibility in statecraft. India needs to identify areas of partnerships within the cooperative framework of the Quad to counterbalance increasing Chinese influence in the IO.

### **Challenges for India's Engagement in Quad**

The views professed by members of the Quad imply two important aspects: -

- Despite claims from the White House that the term is not an effort to contain China's influence, it is clear that the Indo-Pacific construct is a response to China's hegemonic ambitions particularly in the maritime domain.<sup>5</sup>
- Secondly, 'Indo-Pacific' overtly includes a rising India, whose democratic credentials and support of a rules-based order offer some comfort to the other members.

The external recognition of India's growing influence and hopes for its cooperation in upholding freedom of navigation and overflight, undoubtedly resonate with India's ambitions. However, there are clear limits to India's enthusiasm for the Quad. For India, it may be the question of provoking China at a moment when US commitment to the security of the region is uncertain. Besides, India has its own historical aversion to multi-lateral arrangements that can be construed as alliances. The current Indian government also places great value on India's relationships with



ASEAN member states through a revamped 'Act East' policy. Moreover, India's own idea of its maritime interests and strategy do not necessarily match the expectations of other Quad members.

### **Rationale Behind India's Divergences**

**Avoidance of Conflict.** India's divergences from the centrality of Quad in the Indo-Pacific and preferring broad issues like natural disasters and non-state threats as the focus of Quad might be to avoid direct confrontation with China. This coupled with Australia's decision to exit from the first version of Quad in 2007 may be the reason behind

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*In 2018, PM Modi expressed an inclination for cooperation over competition*

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India's reluctance to invite Australia to the Malabar naval exercise until end 2021. India may be facing a security dilemma where defensive mobilization could be perceived as offensive and trigger a competitive arms race, formation of counter-alliances and increase the probability of conflict. This is why India avoids competitive strategies altogether and the same was evident when at the Shangri La Dialogue in 2018, Prime Minister Modi expressed an inclination for cooperation over competition.<sup>6</sup> This was followed by India's refusal to join the US-Japan-Australia political-economic initiative to provide an alternative to China's BRI.

**Future Deterrence.** As brought out by Sameer Lalwani and Heather Byrne, India might be keeping the militarisation of Quad as a reserve to counter future Chinese escalation. India believes that the deterrence value of a militarised Quad stems from its nominal existence and not from actual level of operationalisation.<sup>7</sup>

### **Challenges for India**

China's unstoppable rise, its uncompromising posture on territorial claims and its use of Pakistan as a cat's paw, pose a dilemma for India. The options to counter China are limited. India currently lacks the economic clout, military muscle, nuclear punch and political cohesion to be able to effectively stand up to China. Thus, there is need to explore the cooperative security domain with like-minded countries. The construct of Quad emphasises assurance (rather than deterrence) with the understanding that security cannot be achieved at the expense of, or in isolation with, other players. The Quad encourages *ad hoc*, informal dialogue and inclusive

participation. The major variables, which account for India's divergences are derived from differing threat perceptions of other Quad members. A few variables are discussed below: -<sup>8</sup>

➤ **Capability Gap.** Although India aspires for blue water capability and power projection beyond the IOR, its real potential is restricted. This is due to major deficiencies in air defence, anti-submarine warfare and airborne early warning capabilities, amphibious platforms, land-attack capabilities for sustained strikes on shore and the likes. While India accrues significant advantages from her favourable geography, size and demography, when compared to other Quad members, it lags in an industrial base to generate advanced conventional combat platforms. The growing procurement of military hardware has failed to transform into military power due to shortfalls in major force transformations, jointness of its services and unreformed national security architecture. In short, India's developing economy as well as its limitations on power projection hinders its ability to fulfill the vision for its role in the Quad.

➤ **Geography.** India's definition of the Indo-Pacific varies substantially from other Quad members mainly because of its geography. Indian economy and seaborne trade are more dependent on the western IOR viz., Middle East, Africa and Europe. On the other hand, for the United States, the Indo-Pacific Command has its borders till the East coast of India. While promoting a stable, secure and open maritime commons remains of paramount importance to India in alignment with other Quad countries, India is more susceptible to interferences in the Western IOR than any of its Quad partners due to its reliance on exports and critical energy resources. Unlike the Pacific Ocean and South China Sea, the 'open geography' of the Indian Ocean, subjects it to distinct vulnerabilities requiring different strategies. However, India's land borders with Pakistan and China along with internal security threats ensure that India remains primarily a continental power, which has to invest in ground forces to defend its borders.<sup>9</sup>

➤ **India as a Developing State.** India's relative position in the world order offers another explanation for its divergence from the Quad. As a developing nation and a rising power, India prefers cooperation rather than confrontation to avoid jeopardising its own development. It is

beneficial for India to let other countries confront the revisionist power while it supports from the side lines. This might be a major factor for India to refrain from forming an alignment or a military alliance.

➤ **Strategic Preference of Autonomy.** India's strategic preference of autonomy does not allow it to indulge in formal military alliances. To avoid dependency on any one country, India engages with diverse partners. The result of India's preference for varied partners and non-alignment is that India remains unfamiliar with the likes of interoperable coalition warfare envisioned in strategies of 'federated defence' and also remains deeply suspicious of it. As brought out earlier, the possession of nuclear weapons and an assured second-strike capability guarantee its security and further reduce the incentives for such formal engagements.<sup>10</sup>

➤ **Economic Imperatives.** India perceives China's BRI as an encroachment to its traditional sphere of influence and regional economic dominance in the IOR. On the other hand, Chinese trade and investments as well as trade surplus with India is on the rise. Being a less developed country than its Quad counterparts, India possesses less bargaining power to withstand Chinese economic coercions in spite of having handled the same commendably till now. It therefore, professes and advocates a policy of 'inclusivity' in the Indo-Pacific strategy.

### **Analysis**

While the other Quad members visualize this grouping as a quasi-military alliance, for India it is another multi-lateral alliance in furtherance of its 'Act East' policy. The divergences arise mainly because of its capability gaps, geography, relative position in the international system, economic imperatives and long-standing strategic preference of autonomy. However, foreign relations and geopolitics are constantly evolving and the changing dynamics in the IOR due to rise of a revisionist China may impel India to adopt innovation in order to maintain its regional power status in the region. India wants to be seen as a responsible state in the world order and collusion with like-minded democracies, which champion India's cause, seem a natural derivative. Whether India takes the extreme step of shedding her strategic autonomy to form an 'Asian NATO' and militarise the Quad, is difficult to say. Nevertheless, an increased engagement with other Quad members seems likely.

India requires a Quad political-military strategy primarily because of its developing nation status, wherein it finds itself balancing internal and external economic/ military requirements. The multiple constraints put serious pressure on India's limited national resources and there are limits to how much it can spend on defence to counter Chinese repositioning. Hence, forming a military alliance, shedding its strategic preference of autonomy may not be a choice, but a necessity. As brought out by Abhijnan Rej in *Reclaiming the Indo-Pacific: A Political-Military Strategy for Quad 2.0*, unless Indian diplomacy finds a creative *modus vivendi* with China, which is acceptable to both states, it will necessarily have to accept that playing a balance of power game is the only way out. A Quad with teeth will be a key card for India in that game.

### **Conclusion**

Geo-politically, the world has seen the rapid rise of China as an economic, military and technological power. Economic growth over the last two decades, rapid military modernisation and stable governance coupled with an assertive foreign policy has enabled China to emerge as a key player in the Asia-Pacific region. The growing deployments of People's Liberation Army Navy in the IOR, proximity of various projects under the BRI to India, Chinese 'debt-trap diplomacy' and 'civil-military' complicity (including the likely utilization of BRI projects/ ports for future military use) mandate an authoritative approach by India. India's 'Act East' policy is the derivative of India's revamped approach to re-establish itself in the IOR. The association is a unique opportunity for India to play a larger role in the Indo-Pacific region. India can take the responsibility for the security of the Indian Ocean, which it considers as its primary area of interest. The new US National Security Strategy states that it supports India's leadership role in the security of the Indian Ocean and throughout the broader region. India along with the other Quad member countries - Australia, Japan and the United States of America, should look to drive and co-operate on four big dimensions - Diplomacy, Information, Economy and Military.

### **Diplomacy**

Diplomatic consultation would be the most significant characteristic of the Quad. During the previous three Quad meetings since 2017, diplomats from across the Department of Foreign Affairs and Trade, Ministry of

External Affairs, Ministry of Foreign Affairs, and Department of State have discussed and addressed broader agendas in the Indo-Pacific region alongside the other regional security meetings, namely the East Asia Summit (EAS) and the Shangri-La Dialogue.<sup>11</sup> This is leading to better regional policy-coordination. Given the large number of issues in the region, including maritime security, connectivity, multi-lateralism, etc., coordination amongst like-minded states is becoming more crucial than ever before. With limited membership, India, Australia, Japan and the USA can quickly build confidence and enter the preventive diplomacy stage to discuss specific policy measures based on shared perspectives of regional security.

Additionally, India should encourage member countries to strive to be a result-oriented initiative. At present, the Quad's institutional framework and ambitions are formally unstated and Quad members can work towards building an alliance unconstrained by the conventional principles of non-intervention and consensus-based decision making. Historically, the region has only seen the ASEAN way of collaboration and functioning, which has so far been indispensable for maintaining solidity amongst the multi-cultural and multi-diverse political entities in Southeast Asia.<sup>12</sup> While ASEAN has enabled regional cooperation across East Asia and the Indo-Pacific, it has been constrained by process orientation and consensus management and runs the risk of being seen as ineffective. With intensifying power rivalry and emerging ambiguity over China's adherence to the principles of the rule of law, there is a clear requirement for rapid actions and implementation of policies. The Quad can play an important role here, acting as an alternate and decisive instrument to bring out a workable policy whilst avoiding process oriented regional cooperation frameworks.

Having said this, India should in no way encourage the Quad to replace ASEAN as an alternative driver of regional security. ASEAN is, and will continue to be, the key forum for inclusive regional security dialogues across the Indo-Pacific region. With rising economic and geopolitical tensions between the USA and China, the role of ASEAN led institutions to drive inclusiveness and confidence-building initiatives across the region should only increase. The Quad should, on the other hand, act as a parallel avenue for the four large democratic and maritime states to exchange their views and coordinate their positions and responses. Additionally, it should



also be welcoming towards any country which shares the same basic objectives and threat perceptions.<sup>13</sup> The European Union, the United Kingdom and separate South East Asian countries, such as Vietnam, Indonesia, Malaysia, Thailand and Sri Lanka, should be embraced to occasionally participate in the forum in consultation with the Quad member states.

### **Information**

Maritime peace and security in the Indo-Pacific region has come under immense Chinese threats, both across traditional and non-traditional channels. On the traditional front, China has, over the years, increasingly resorted to following aggressive grey zone tactics.<sup>14</sup> It has gradually changed situations to its favour through covert and assertive ways as seen in

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***Maritime peace and security in the Indo-Pacific region has come under immense Chinese threats***

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multiple incidents such as their *de facto* control over the Scarborough Shoal in 2008,<sup>15</sup> harassment of the *USNS Impeccable* in Mar 09,<sup>16</sup> a Chinese warship approaching the *USS Decatur* sailing past the Gaven reefs in 2018<sup>17</sup> and the most recent foray into Indian waters by a Chinese research ship.<sup>18</sup> Similarly, despite the arbitration awarded under the UN Convention on the Law of the Sea (UNCLOS), which had rejected China's historical rights in the Nine-dashed line in Jul 16, it has not discouraged China's assertiveness till date. The PLA had in fact, recently completed successful land reclamation and instalment of military equipment on the disputed maritime features.<sup>19</sup> Parallely on the non-traditional front, while piracy has been significantly reduced and the total number of piracy incidents have hit a record low in 2019, the issue continues to be a security concern with more than 180 incidents being reported in 2018. All these circumstances require maritime countries in the IOR to be collaborative in information sharing and be well equipped in their naval capabilities to cater for such contingencies.

With the Quad not having been declared as a formal alliance, intelligence and information sharing among its members is restricted, quite like Japan being excluded from the "Five Eyes" intelligence sharing cooperation framework.<sup>20</sup> However, there are still avenues, which the member states can explore for information sharing as they have significant and large military assets across the IOR and the Indo-Pacific. With the

existing Trilateral Information Sharing Arrangement (TISA) between Australia, Japan and the USA, and India setting up an information sharing mechanism with the USA and Japan, there is a possibility to develop a symbiotic and robust maritime information sharing agreement.<sup>21</sup> Additionally, the four member states can also look to cooperate and enhance regional maritime security cooperation initiatives, such as the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP).<sup>22</sup>

### **Economic**

The economic dimension of the Quad covers economic integration and regional connectivity. For the former, there are hardly any bloc level discussions involving trade and investment liberalisation. There are a few existing multi-lateral partnerships such as the Regional Comprehensive Economic Partnership (RCEP), which includes Australia, India and Japan, and the Trans-Pacific Partnership (TPP), which now includes only Australia and Japan after the withdrawal of the United States. With India and the USA embracing somewhat protectionist economic policies like ‘Make in India’ or ‘America First,’ economic integration of the Quad seems improbable.

At the same time, regional connectivity is emerging as a new avenue, which could encourage cooperation amongst the Quad states. China’s BRI is driving investment with more than \$1 trillion, of which according to one analysis, more than \$210 billion has already been invested, the majority being in Asia.<sup>23</sup> While some of the maritime states in the IOR such as Sri Lanka, Malaysia, Maldives and Myanmar have recently started to relook at these Chinese investments, most smaller countries still welcome the capital inflow from China.

To balance Chinese investments, Quad members have undertaken bilateral and trilateral initiatives to expand and enhance regional connectivity. India stands to gain the most here. India and Japan have dovetailed their “Act East Policy” and “Free and Open Indo-Pacific” aspirations respectively into the Asia-Africa Economic Corridor.<sup>24</sup> At the same time, Australia, Japan and the United States have also agreed on a trilateral investment cooperation between Australia’s Department of Foreign Affairs and Trade (DFAT) and Export Finance and Insurance Corporation (EFIC), the Japan Bank for International Cooperation (JBIC) and the US Overseas Private Investment Corporation (OPIC).<sup>25</sup> The region

will see large scale investments from the Quad members with Japan proposing \$50 billion infrastructure investment in 2018.<sup>26</sup> Similarly, USA, under its Asia Reassurance Initiative Act 2018, has pledged \$1.5 billion in infrastructure spending and Australia expressing \$2 billion in funding for infrastructure and \$1 billion in financial support to small and medium-sized Australian businesses to operate in the South Pacific.<sup>27,28</sup>

### **Military**

Military cooperation is central for the association to be relevant for regional security. However, owing to the absence of security alliances between India and other nations and low likelihood for large scale and highly intensive military conflicts (due to the large density of nuclear capable states in the region), the Quad has a lower need for active military cooperation. Having said this, military cooperation among the Quad countries could apply to peacetime and for grey zone threats. India and the other member states should look to three main areas for military cooperation; interoperability, military technology and defence equipment transfer, and capacity building.

India and the other member states have already undertaken multiple exercises like the trilateral *Malabar* Exercises. These exercises have improved interoperability and have proved to be beneficial across multiple aspects of defence capabilities. India could also look to gain on favourable military hardware prices as it expands its purchase of American equipment and lowers its dependence on Russian military hardware. In addition, Communications Compatibility and Security Agreement (COMCASA) will open up the window for India to access more sensitive military technology from the USA.<sup>29</sup> Similarly, India can look to gain significant traction on its US-2 amphibious aircraft deal with Japan.

To conclude, it is postulated that India should strive to create a coordination mechanism through the Quad for realizing functional cooperation across a range of areas. The Quad most likely will not develop an “anti-China policy,” but it should at least counter significant Chinese assertiveness in the IOR.



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## STRATEGIC SIGNIFICANCE OF THE MOZAMBIQUE CHANNEL FOR INDIA

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*Commander Sibapada Rath*

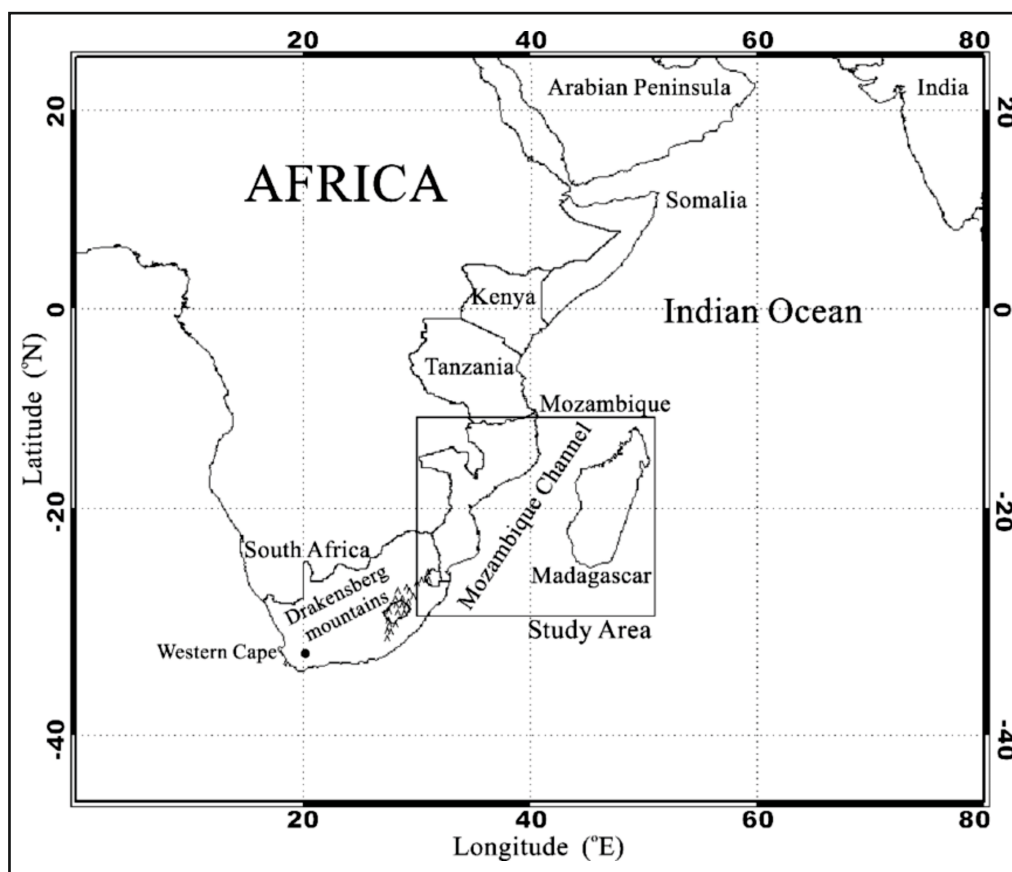
*If India desires to be a naval power it is not sufficient to create a navy, however efficient and well-manned. It must create a naval tradition in the public, a sustained interest in oceanic problems and a conviction that India's future greatness lies on the sea.*

*- K. M. Panikkar, "India and the Indian Ocean:  
An Essay on the influence of Sea Power on Indian History".*

**O**n the fateful day of 23 Mar 2021, a 400-metre-long container ship, the *Ever Given*, owned by the Taiwanese shipping firm Evergreen Marine, got stuck sideways in the Suez Canal. It is likely that this happened in a sandstorm, but the causative factors are not yet clear. It completely blocked traffic in both directions. As the Suez Canal's average daily traffic totals 40 to 55 ships, about 200 vessels were stranded on either side of the canal. Prior to the inauguration of the Suez Canal in 1869, ships bound for the East from Europe and the Americas used to navigate the Cape of Good Hope and through the Mozambique Channel to reach South Asia and further onto East Asia (Map 1). Since then, the Suez Canal has been a vital waterway connecting Europe to Asia. As per the records of the Suez Canal Authority (SCA), 19000 vessels, averaging 52 vessels per day transited through this Canal in 2020.<sup>1</sup> The important items shipped are consumer goods, grains and oil. As per the Lloyd's List, per day loss of disruption to trade amounts to \$9 billion.<sup>2</sup> After the *Ever Given* jam was cleared six days later, there came another challenge. The sudden influx of over 200 ships, which were waiting on either side of the canal, caused tremendous congestion at European ports, which negatively affected subsequent supply chains.<sup>3</sup>

Approximately 80% of global merchandise traffic is transported by sea since it is the cheapest means of transportation. However, using sea for trade has never been free of obstacles and choke points have often posed risks to trade. There could be structural risks, which result in traffic jams like the

Suez Canal blockage. There could also be geopolitical risks which could be triggered by political developments when there comes a need for alternative shipping routes.



Map 1: The Mozambique Channel<sup>4</sup>

### **The Mozambique Channel**

In the event of the closure of the Suez Canal for any reason, one of the options for trade is to route via the Cape of Good Hope and through the Mozambique Channel. The Mozambique Channel is approximately 1000 nautical miles long and 250 nautical miles wide at its narrowest point. It is situated between Madagascar in the East and East Africa on the West and carries 30% of global tanker traffic. Further, the discovery of a commercially viable gas reserve in the Rovuma Gas Basin in northern Mozambique, has considerably increased the strategic and commercial significance of the Channel and the region. Mozambique could dominate/

disrupt/ assist in ensuring freedom of navigation up to the South of Madagascar, even for those who do not use the Channel.

### **Rovuma Gas Basin and the Stakeholders**

As already brought out, East Africa has emerged as the next global supplier of LNG. The Rovuma Basin offshore region, straddling north eastern Mozambique and south eastern Tanzania, contains over 100 trillion cubic feet of recoverable natural gas, making it one of the largest gas finds in the world.<sup>5</sup> To tap the gas reserve, US energy giant *Anadarko* and the Italian energy giant *ENI* have invested heavily in the offshore gas fields in north east Mozambique. Thus, Mozambique will elicit more interest from the right quarters, and perhaps interference from the wrong quarters, geo- strategically speaking.

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***US and European energy giants have invested in the offshore gas fields in Mozambique***

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### **Growing Indian Interests**

At present, Qatar is India's largest source of Liquefied Natural Gas (LNG) contributing to 60% of India's import.<sup>6</sup> However, as the Strait of Hormuz is fraught with instability and there is always a fear of security of energy, the Rovuma Gas Basin provides India an alternate option. The other suppliers of LNG to India are Nigeria (12%) and Australia (5.3%).<sup>7</sup> The Mozambique Channel is at present, free of piracy related issues and there are no choke points for the transition of gas to India with tankers taking seven days of transit from Mozambique to the ports of western India.

The *Oil and Natural Gas Corporation Videsh Limited* (OVL), *Bharat Petroleum Corporation Limited* (BPCL) and *Oil India* have purchased a 30% stake in Area 1 of the Rovuma Gas Basin (Map 2) from the *Anadarko* at a cost of more than \$6.5 billion.<sup>8</sup> Area 1 covers around 10,000 square kilometres and is situated at the northern most part of the Mozambique Rovuma Gas Basin. An additional \$6 billion of investment is also in the pipeline.<sup>9</sup> It is estimated that the Indian investment in the Mozambique energy sector constitutes one fourth of India's foreign direct investment in Africa.<sup>10</sup>



Map 2: Rovuma Gas Basin<sup>11</sup>

China's state-owned China National Petroleum Company (CNPC) has bought the Italian firm ENI's Mozambique lease at a cost of \$4.2 billion for a 28% stake.<sup>12</sup> *Total* from France and USA's *ExxonMobil* are also major investors. In order to avoid insurgency related disturbances in the region, France's *Total* has shifted its logistical operations from North Mozambique to the French Territory of Mayotte Island, to the East of the Mozambique Channel. Japan and South Korea have also invested with USA's *Anadarko* and Italian firm *ENI*'s holdings. Japanese energy major, *Mitsui*, holds a 25% stake with *Anadarko* and Korean Gas Corp (*Kogas*) has a 10% stake with *ENI*'s.<sup>13</sup> The European Union has also shown interest in the region as it wants to have an alternative LNG source away from Russia.

### **Insurgency in Northern Mozambique**

In recent years, Mozambique has turned into a major security concern. The Islamic insurgency in North Mozambique has the potential to disrupt

traffic in the Channel. On 24 Mar 2021, Islamic State (IS) militants were involved in an ambush in Palma, a coastal town near the French petrochemical giant Total's Mozambique LNG offshore gas project. The mode of operation and the resultant damage caused by the IS militants has showcased their growing sophistication and capability.<sup>14</sup> Subsequent analysis has established that the insurgents attacked Total's Palma site soon after the company resumed work after a two-month security reshuffle. The ambush also indicated an intelligence failure on the part of the Mozambique government.

Insurgency in North Mozambique started in 2017, within a few Muslim communities on the East African coast called the 'Swahili Coast.'<sup>15</sup> Islamic insurgents in the Cabo Delgado province have shown an increased capability in amphibious warfare. On 12 August 2020, they had seized the strategic seaport of *Mocimboa da Praia*, which is a port town in North Mozambique. This

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***In August 2020, insurgents seized a strategic seaport in North Mozambique***

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attack on *Mocimboa da Praia* may subsequently lead to piracy, as seen along the Horn of Africa, especially since 30 percent of the world's tanker traffic transits through the Mozambique Channel. These insurgents have launched around 800 attacks in North Mozambique since 2017. This has resulted in displacing around 600,000 people and around 2,600 people have been killed in violent attacks. The region is now very unstable. There are indications that the command and control of the insurgents in Mozambique is from Puntland in Somalia.<sup>16</sup> In 2020, these groups increased their activities, which also spilled over to neighbouring Tanzania.

### **Smack Track**

The chief source of revenue for the insurgents comes from maritime drug smuggling. The infamous 'Smack Track' brings the heroin produced in Afghanistan to North Mozambique. From here, it gets transported to East African states, Europe and other destinations.<sup>17</sup>

### **State Response Status**

The government in Maputo seems unable to address this issue adequately. Its debt-ridden economy finds itself in a military-funding deficit and consequent difficulties in countering the insurgency.<sup>18</sup> A South Africa based think-tank, Institute for Strategic Studies (ISS), has commented that



Mozambique is adopting the African playbook in responding to the insurgent attacks. It gives the analogy of Nigeria's initial approach towards *Boko Haram* - initially denying that the threat existed, but whenever it went out of control, approaching the African Union (AU) for help.<sup>19</sup> Due to the paucity of adequate resources, Mozambique has turned to foreign assistance. One such is Russia, which seeks a stake for Gazprom and Rosneft in the gas fields.<sup>20</sup> Therefore, Russia provided private security contractors to address the problem of insurgency in Mozambique. In September 2019, up to 200 private security guards from the Russian *Wagner* group were deployed to Mozambique with equipment and logistical support from the Russian Air Force and possibly, the Russian Navy as well.<sup>21</sup> However, the mission could not be accomplished as it was ill-coordinated. The Wagner group operated in the Cabo Delgado Province and targeted the *Ansar al-Sunnah* insurgents from 2019, having access to UAVs and high-end military data analysis equipment. But owing to the environmental and climatic conditions prevailing in the region, the group had to change its tactics of operations.<sup>22</sup>

Other nations eyeing their gas reserves have also started assisting the government in tackling the insurgency. France is an Indian Ocean power with La Reunion and Mayotte islands in the South West Indian Ocean as its dominions. It operates two frigates and patrol boats from Reunion. However, it does not operate maritime patrol aircraft in the region and thus, has inadequate Maritime Domain Awareness (MDA). Portugal, the erstwhile colonial ruler of Mozambique, has agreed to send 1400 troops for training Mozambican forces. As President of the European Union, Portugal is also lobbying for deployment of an EU military mission in the region. USA has also shown interest in the region, but as yet nothing concrete has happened. In the fitness of things, it would be better to involve the organisations of Africa itself like AU, as they appreciate the ground realities better.

India is a security partner of Mozambique. It has conducted joint patrols in association with the French Navy in the Mozambique Channel since 09 December 2019, staging a P8I maritime reconnaissance aircraft through Reunion. India is also reportedly in the process of constructing an airstrip in the Agalega islands of Mauritius, which is situated in the northern end of the Mozambique Channel, which could facilitate MDA and reactive measures.<sup>23</sup>

Additionally, the South African Navy has been patrolling the Mozambique Channel since 2011. It has shown intent to set up a forward operating base at Richards Bay in northern South Africa. This would offer South Africa easy access to the Mozambique Channel. But as of April 2021, no specific progress has been reported about this.

As a part of soft diplomatic outreach, India has signed an MoU with Mozambique in 2016 for the production of pigeon peas with technical know-how being provided by India. India has committed to procuring 200,000 tonnes of pigeon peas in 2020-21, twice the amount ordered in 2016-17. Mozambique's neighbour, Kenya too, has been a traditional partner of India and is home to an Indian diaspora of 80,000. India has actively engaged with several African nations, but must adopt a more future-oriented foreign policy in East Africa. The region as a whole has an increasing importance for India due to its economic, political and geo-strategic attributes. Within this canvas, the Mozambique Channel becomes even more relevant.

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***India has actively engaged with several African nations***

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### **Need for Greater Activism from SADC, AU and Quad-Plus**

For a long-term solution to the problem of insurgency, the Southern African Development Community (SADC) and the AU should take active part as these are the organisations who know and understand the problem better. They must address local grievances, which militants tend to leverage to radicalise youth. The present need is to help the government in Maputo to regain control of the security situation. Therefore, the AU's Peace and Security Council (PSC), through SADC, should be a critical player. SADC has 16 member countries, including South Africa, which can be mobilised appropriately for ground, air and naval surveillance. Further, the Quadrilateral Security Dialogue Plus (Quad-plus) countries, Japan, USA, India, Australia and France, could take steps to roll back insurgent groups, like the *Al-Sunnah*, from converting Mozambique and its Channel into another Somalia. India's operational bandwidth could be enhanced with the logistical arrangements with France. India and France could agree to provide support to Indian ships operating in the Western Indian Ocean and along the Eastern coast of Africa through bases in the Reunion and Mayotte islands.

During the visit of the US Secretary of Defence, Lloyd Austin, to India

on 20 March 2021, India's defence minister remarked that India and USA must "pursue enhanced cooperation between the Indian military and the US Indo-Pacific Command, Central Command and Africa Command."<sup>24</sup> Mr Austin also advocated greater collaboration in the Western IOR in addition to the Indo-Pacific region as a whole. This signals the importance being given by both the countries to the Western Indian Ocean Region.

Although India has established an Indian Ocean Division in the Ministry of External Affairs in 2016, insufficient importance was given to the Western IOR and Eastern Africa. It was only in 2019, that Madagascar and Comoros were included in the Indian Ocean Division. To put the matter in perspective, China has steadily charted a path for engaging the Western Indian Ocean and East Africa by opening a naval base in Djibouti in 2017 and consistently engaging with Sri Lanka in the East, to the Comoros Islands in the West thereby, spanning the entire Indian Ocean Region. Therefore, it is incumbent upon India to leverage her association with USA and France, and play a more constructive role in the Mozambique Channel.

## **Conclusion**

The recent closure of the Suez Canal brought to light the susceptibility of the regular international shipping lanes and the alternative significance of the Mozambique Channel to carry on with trade. However, the Mozambique Channel may itself not remain free from potential disturbances. The region is fraught with Islamic insurgency, possible piracy and drug peddling on a large scale. Since India has invested heavily in the Rovuma Gas Basin, the Indian Navy, as the 'first responder' and a 'preferred security partner' in the region, can ill afford to be a mere spectator to the developments in the region. As has been discussed earlier, India has played its cards quite well and the need now is to play them more vigorously and emphatically. India has tremendous geo-strategic and geo-economic stakes in the Mozambique Channel and must work in that direction.



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## SPACE THE NEXT FRONTIER: OPPORTUNITIES AND CHALLENGES FOR INDIA

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*Commander Hitender Chaudhury*

*“Space is for everybody. It’s not just for a few scientists or astronauts. That’s our new frontier out there, and it’s everybody’s business to know about space.”*

*- Christa McAuliffe <sup>1</sup>*

### Introduction

**S**ince antiquity, mankind has gazed at the stars and wondered what lies beyond the horizons. While a few questions have been answered, the greater part of outer space still remains enigmatic. The quest to convert this mysterious space into a province, is not a recent one. If ancient *Vedic* scriptures are to be believed, mankind may have ventured into space millennia ago. Almost all these scriptures describe *Vimanas* (aircraft) of several different types, including the ones capable of travelling across the country and even from planet to planet. The sacred texts of *Ramayana* and *Mahabharata* also have accounts of craft capable of undertaking hypersonic, invisible and extra-terrestrial flights. Some ancient *Sanskrit* texts speak of saucer shaped flying machines, which utilised mercury as part of their propulsion fuel and gleaned electric charge from the sun.<sup>2</sup> While the existence of such niche aerospace technology in ancient times can be debated, it reiterates the fact that space as an arena has occupied the thoughts of mankind for millennia across all cultures.

**First Sojourns.** In October 1957, the Soviet Union placed the first artificial satellite *Sputnik One* into orbit, igniting the space race with the USA. The competition over who had superior technology and military power took centre stage during the Cold War. Soviets claimed first victory by sending the first man into space in 1961, on a capsule-like spacecraft, adapted from an Inter-Continental Ballistic Missile.<sup>3</sup> The space race reached its dramatic high-point with the first American astronaut landing on the moon in 1969.

The aim of this essay is to undertake an analytical review of space as the next frontier and arena for competition and possible clashes. It also

examines opportunities for India and suggests response strategies. The essay shall evaluate the following: -

- India's journey into space.
- Existing global capabilities and strategic developments in outer space, including militarisation.
- Implications for India's national security.
- A road map for India to counter challenges and tap opportunities in space.

Considering the limitation on the length of this essay, cyber-attacks, though associated with space warfare have not been addressed.

### **India's Space Odyssey**

**Dawning in Space.** The seeds of rocketry were sown in India by Haider Ali and Tipu Sultan, the rulers of Mysore who unleashed rocket barrages and wreaked havoc on British troops in the late 18<sup>th</sup> Century. However, the first contemporary steps into space can be traced back to 1963, when a sounding rocket named *Nike-Apache* was launched from Thumba Equatorial Rocket Launching Station.<sup>4</sup> Much credit for this humble beginning goes to Dr Vikram Sarabhai, the father of India's space programme, who understood the potential of space for socio-economic development of the country. Despite political apathy and meagre resources, he worked hard to realise his long-cherished dream of India's autonomous access to space. With a small group of young, inexperienced, but nevertheless energetic scientists and engineers to lead, which included Dr A P J Abdul Kalam, Dr Sarabhai created a new frontier in the field of science and technology in India. In the year 1984, Squadron Leader Rakesh Sharma became the first Indian to venture into space, albeit on a Soviet rocket and with Russian shipmates.

### **Present Framework**

**Organisational Structure.** The Government of India established the Department of Space in 1972 with a view to 'harness space technology for national development, while pursuing space science research and planetary exploration.' It implements space programmes through various government owned laboratories and organisations like the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO).<sup>5</sup> The security of India's space-based military and civilian hardware systems is looked after by the Defence Space

Agency, which is likely to be converted into a full-fledged military space command in the near future.<sup>6</sup>

**The Space Programme.** India's space programme is primarily focused on peaceful uses with several scientific and technological applications that include communication, broadcasting, internet services, medicine, education, health, navigation and positioning. It also reduces the dependency on foreign satellites and enhances the overall national security by offering eyes and ears in the skies. Some of the existing capabilities are as follows: -

- **Remote sensing.** Beginning with the Indian Remote Sensing series in the 1980s, an array of Earth Observation satellites now provide wide-field and multispectral high-resolution data for land, ocean and atmospheric observations. The existing imaging capabilities in visible, infrared, thermal and microwave regions of the electromagnetic spectrum, including hyper-spectral sensors, have helped the country in realising major operational applications. The imaging sensors have been providing spatial resolution ranging from 1 kilometre to 1 metre; repeat observation (temporal imaging) from 22 days to every 15 minutes and radiometric ranging from 7-bit to 12-bit. This has significantly helped in several applications at the national level.<sup>7</sup>
- **Satellite Communication.** The Indian National Satellite is today one of the largest domestic communication satellite systems and provides communication and broadcasting, weather forecasting, disaster warning and search and rescue (SAR) services in the Indo-Pacific Region. The GSAT-7, *Rukmini*, is a multi-band military communications satellite with a comprehensive coverage over the Indian Ocean Region (IOR) and enables the Indian Navy to extend its blue water capabilities. It also enhances network centric warfare capabilities of the Indian Air Force (IAF) and the Indian Army (IA).
- **Satellite-Aided Navigation.** Considering the limited accuracy and vulnerability of the US controlled, commercially available Global Positioning System (GPS), a need was felt to develop parallel indigenous capabilities. As a result, GPS-Aided GEO Augmented Navigation (GAGAN) and NavIC (Navigation with Indian Constellation) were launched in 2013. While GAGAN caters for the civil aviation requirements, NavIC provides precision navigational inputs for critical national applications.<sup>8</sup>

➤ **Launch Vehicles.** Polar Satellite Launch Vehicle and Geosynchronous Satellite Launch Vehicle (PSLV/GSLV) are the two operational workhorses of the Indian space programme. In 2017, ISRO launched a record 104 satellites in two orbits, which was followed up with the success of GSLV Mk III. Powered by an indigenous high thrust cryogenic engine, GSLV Mk III has the capability of launching four tonne class of communication satellites.<sup>9</sup>

➤ **Space Probes.** In order to expand the frontiers of knowledge in space science, astronomy, physics and celestial mapping, numerous deep space probes have been launched by India in the past few years. The most notable have been the Lunar Exploration Program - *Chandrayaan* and the Mars Orbiter Mission - *Mangalyaan*, with a manned space mission *Gaganyaan*, planned for its first test flight next year. The *Mangalyaan*, realised in a short span of 18 months was the first Mars mission in the world to succeed in its very first attempt.<sup>10</sup> It was also the most economic interplanetary mission till date, with overall costs rather interestingly presented as lower than the Hollywood movie, 'The Martian.'<sup>11</sup> The project has opened a new regime for space physicists to analyse data.

➤ **Mission Shakti.** With the increased dependency on space-based systems, a need was felt to secure the vulnerability of our precious space assets from hostile enemy action. As a result, India successfully launched 'Mission Shakti' in 2019, wherein a live satellite was engaged at a height of 300 kilometres in Low Earth Orbit (LEO) with an Anti-Satellite (ASAT) weapon. The DRDO claimed that the weapon had been developed to engage targets up to 1,000 kilometres in space but was tested at a much lower distance to minimise debris fallout from the test.<sup>12</sup> The test catapulted India into an elite league of nations that includes USA, Russia and China; and provides India the much-desired capability of defending space assets while strengthening overall national security.

### **Commercial Global Developments**

From *Sputnik One* to *Falcon Nine* - first reusable rocket - the world has come a long way, enabling manned and unmanned missions to explore the new ocean of space. This combined scientific quest has also produced wondrous technologies, which have been applied to practical benefits on

earth in the field of medicine, aeronautics, metallurgy, disaster-relief, remote-sensing, weather watch, communication and many such useful domains. Some of these marvels can be seen in our day-to-day lives in the form of ultrasound scanners, Magnetic Resonance Imaging (MRI), artificial limbs, laser heart surgeries, convection ovens, carbon monoxide detectors, global positioning systems, infra-red cameras, solar powered appliances, satellite television broadcasting and internet services. As stated by Neil Armstrong, the first voyage to the moon was “One small step for a man, but one giant leap for mankind.”

**Martian Mysteries.** In 2015, NASA discovered liquid water running on the surface of Mars, which potentially brings new hope for the discovery of life on the red planet.<sup>13</sup>

**Lunar Landers.** On 22 February 2019, Israel made an unsuccessful attempt to land on the moon by launching her spacecraft *Beresheet*. India made a similar attempt on 22 July 2019 by launching *Chandrayaan-2*, which brought together an orbiter, lander and a rover with the goal of exploring the South Pole of the Moon. However, the lander deviated from its intended trajectory while attempting to land, resulting in a ‘hard landing.’<sup>14</sup>

**Commercial Space Flights.** The most recent advancements have come in the form of privatisation of the space industry. Technology is evolving at a rate never seen before, and it is well within the realms of possibility that we would see commercial space flights in the next few years. Space Exploration Technologies Corporation (SpaceX), the leading commercial space company in the world, is developing its *Crew Dragon* capsule to carry cargo, and eventually people into space orbit. This would be followed by the launch of the Boeing *Starliner* capsule, which is designed to land on the ground and can be reused up to 10 times. The *Starliner* will have a turnaround time of six months and will feature wireless internet and tablet technology for crew interfaces.<sup>15</sup>

**Autonomous Docking.** Launched on 02 March 2019, SpaceX’s *Dragon* became the first American spacecraft in the history to autonomously dock with the International Space Station (ISS).<sup>16</sup>

**Space Colonisation.** Space colonies are still a dream but progress in making space access easier is happening every day. With experiences gained from the ISS, NASA is planning a human mission to Mars by 2030 for the benefit of humanity.



**Micro-satellites.** The revolution in space technology has presented micro-size, lightweight, incredibly versatile, cube-shaped satellites that weigh between 10 to 100 kilograms. While commercial needs are primarily cost-driven, they also offer military advantages by spreading space assets over

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***Too many targets in space makes it difficult for the adversary to engage a particular satellite***

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constellations of thousands of satellites. With too many targets orbiting in space, it makes it difficult for the adversary to detect, track and engage a particular satellite. Other categories include nanosatellites (1 to 10 kilograms), pico-satellites (0.1 to 1 kilogram) and femto-satellites (less than 100 grams).<sup>17</sup> Planet Labs and Spire are the two well-known global companies in the field of nano and micro-satellites.

### **Military Global Developments**

Today space is closely integrated with war-fighting and is extensively utilised for C4ISR, integrated early warning, navigation and precise positioning for ordnance delivery. The evolving counter-space weapons can be categorised into three distinct types: kinetic, non-kinetic and electronic measures like jamming and spoofing.

**Kinetic Weapons.** These weapons attempt to damage the space assets by making a physical contact. A few examples are as follows: -

- **SM-3.** In 2008, USA deployed an *Aegis* Ballistic Missile Defence (BMD) System to destroy a decaying satellite with hydrazine fuel leak. This was also symbolic of its demonstration of offensive capabilities in space.<sup>18</sup>
- **XSS-11.** XSS-11 is a small, washing-machine-sized, low-cost spacecraft developed by USA to demonstrate autonomous rendezvous and proximity manoeuvres. It is capable of approaching, investigating, and photographing another spacecraft in orbit.<sup>19</sup>
- **SC-19.** China conducted a ground-based, mid-course anti-missile test in January 2010, which involved detecting, tracking and destroying a ballistic missile flying in space.
- **SJ-15.** In July 2013, China launched the SJ-15 *Shiyan* satellite equipped with a robotic arm for grabbing or capturing items in space. The satellite is capable of shadowing and eventually hijacking a smaller satellite.<sup>20</sup>
- **Luch.** Launched in 2014, this Russian satellite takes offensive

space capability to a new level. It combines the advantages of a military fighter and a spy plane by manoeuvring through geo-synchronous space, up close to various communication satellites, listening to the flowing traffic and selectively attacking them.

➤ **Kosmos 2499.** Launched in 2014 by Russia as an experimental satellite with plasma propulsion engines/ ion thrusters, *Kosmos 2499* is capable of manoeuvring close to other satellites thereby, undertaking a kinetic attack.<sup>21</sup>

➤ **X-37B.** With a striking resemblance to a space-shuttle, X-37B is a reusable spacecraft used to transfer payloads into space. While its actual employment remains classified, its manoeuvrability, payload space and ability to stay in orbit for hundreds of days gives it the potential for offensive and defensive missions in space. The spacecraft successfully completed its fifth classified mission on 27 October 2019.<sup>22</sup>

➤ **Nudol.** *Nudol* direct-ascent ASAT missile was tested by Russia on 15 April 2020. The satellite has a maximum altitude of 1,500 kilometres and is capable of engaging satellites in LEO.<sup>23</sup>

**Non-Kinetic Weapons.** These include high-powered microwaves, electromagnetic pulses, lasers and linear particle accelerators that damage space assets without making physical contact. While kinetic weapons are necessary deterrents, non-kinetic and dazzling weapons offer the advantages of ‘speed, low signature and plausible deniability.’<sup>24</sup>

### **International Code of Conduct**

The consequences of a battle in space could be devastating and lead to an orbiting minefield of debris. The resultant environment could render much of space unusable for centuries and may even take away the dream of exploring the darkness around the earth. Thus, there has long been some movement towards a rules-based order in space.

**Extant Treaties.** Presently, there are five United Nations (UN) treaties in force that govern the use of space for various exploration activities. These are: -

- The Outer Space Treaty (1966).
- The Rescue Agreement (1967).
- The Liability Convention (1971).
- The Registration Convention (1974).

➤ The Moon Agreement (1979).<sup>25</sup>

**Pitfalls.** Each of these stress upon the notion that the activities carried out in outer space and the benefits accrued thereof, should be devoted to the well-being of all countries and humankind, with an emphasis on promoting international cooperation. While the stationing of weapons of mass destruction (nuclear, biological and chemical) in outer space is prohibited, none of these treaties address the more flexible non-nuclear systems.

**India's Outlook.** India has ratified all treaties except the Moon Agreement, which has not been ratified by any nation that engages in self-launched human space-flight. Strongly opposing any attempts to place weapons in space, the Indian space programme has only been focussed for national security purposes, without violating any of the UN treaties. India looks forward to a global role in proposing a new legal and organisational framework that promises collective prosperity of mankind and sustainability in the use of the space environment.

**Implications for India's National Security**

**Geopolitical Considerations.** India is among a few countries that face two hostile nuclear armed neighbours viz., China and Pakistan, with active space military capabilities and a history of mutual strategic cooperation. A low-intensity border skirmish intensifying into a two-front, full-spectrum (including space domain), sharp and intense combat engagement is a daunting reality that India must prepare for.

**China's Space Dominance.** While China claims peaceful orientation of her space programme, its missions have strong military applications that project undertones of space weaponisation like the constellation of Chinese *Yaogan* satellites, which enables it to monitor military activity. Even the Anti-Access/ Area-Denial strategy, in the massive expanse of North Pacific Ocean utilises space capabilities for tracking, C4ISR and missile guidance. The wide array of ballistic missiles, space assets, and ASAT weapons demonstrate China's growing capabilities in space and illustrate the challenges right in India's neighbourhood and in the IOR.

**Pakistan's Space Potential.** Pakistan does not have a confirmed offensive space capability but has an extensive missile programme and is capable of undertaking ASAT tests with Chinese assistance in the near future. Additionally, Pakistani missiles are potentially convertible to direct-ascent kinetic projectiles capable of satellite intercepts.<sup>26</sup>

### Threat Perception

Given India's dependence on space-based systems like GPS, internet, communication and remote-sensing satellites, China's cyber and space-warfare potential could leave us deaf, dumb and blind in seconds. In the event of a two-front war, India's precious space and land support systems are likely to become prime targets of Pakistani and Chinese missile forces. With the omnipresent risk of escalation, the armed forces need to formulate a multi-pronged approach and a joint war-fighting strategy to counter a superior enemy on land, sea, air, cyber and space domains. Credible BMD and ASAT capability will allow India to enhance space power deterrence and provide the option of an asymmetric escalation in extreme contingencies.

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***In a two-front war,  
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to become prime targets***

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### A Road Map - Challenges

**Physical Characteristics.** Despite its emptiness, space has physical challenges as existing in other dimensions. Apart from the need for certain orbital preferences, altitudes for satellites, etc, there are issues of space debris, extreme thermal conditions, radiation hazards, isolation, etc. Space engineering regularly needs to account for these.

**ISRO's Capacity.** The demand for space-based services in India is far greater than what ISRO can presently deliver; yet it is the only agency in the country that builds spacecraft for civilian, commercial and military purposes. The existing workload, manpower shortages and deficit issues in technical capacity severely constrain its production and output.

**Political Encumbrance.** India's recent ASAT tests received sharp criticism from several quarters. NASA identified 400 pieces of orbital debris from the test and claimed that at least 24 of them were found above the apogee of the ISS posing increased risk to human space life.<sup>27</sup> Considering the fact that other countries have conducted similar, rather more powerful tests in the past, India would need to skilfully overcome such discriminatory reactions with deft diplomacy and strength of conviction.

**Collaborations.** India has a long history of cooperation in space with USA, Russia, France and Israel. While we have attained a very high degree of self-sufficiency, there still exists a need for international cooperation and technology assistance, especially in the field of carbon composites,

semiconductor chips and radiation hardened electronic components. Until we become *Atmanirbhar* (self reliant) in these fields, collaboration and cooperation with various international agencies is of vital importance.

**Triad of Kinetic Energy Weapons.** In order to build up an operationally flexible deterrent with a vast geographical reach, the existing kinetic capabilities must be diversified to mobile land, sea and air platforms. IAF's

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*India has a long history of cooperation in space with USA, Russia, France and Israel*

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Sukhoi-30 MKI aircraft, being similar to the American F-15 in terms of thrust-to-weight ratio, could be the ideal platform for testing and demonstrating air-launched ASAT capability. However, the Indian Navy faces

significant challenges in developing sea-launched ASAT capability, as the existing inventory of surface platforms does not include any 'hit-to-kill' BMD capability.<sup>28</sup>

**Funding.** Given that India is a developing country with enough socio-economic problems to address, it will be tough to support funding for space missions that do not have a direct bearing on economic development. The shrinking budgetary allocations to the defence forces in the recent years could also impact any attempts to integrate space capabilities on military platforms.

### **A Road Map - Opportunities**

**Interoperability.** India's need for utilising space for human progress, might be difficult without leveraging others. Strengthening partnerships, and pooling-in available space resources to attain interoperability, especially with member nations of the Quadrilateral Security Dialogue (Quad), is an important area to consider.

**Private Entities.** The value of the global space industry is estimated to be \$350 billion today and is likely to exceed \$550 billion by 2025. Despite impressive capabilities, India's share is only \$7 billion, which is just two percent of the global market. In order to enhance this share, a suitable policy environment for private players and level playing field for profitable revenue generation needs to be created.<sup>29</sup>

**Indigenisation.** In order to become self-reliant in the space domain, small-scale industries and start-ups must be encouraged to step-up commercial activity, especially in the small satellite segment. This would create an enabling ecosystem of entrepreneurial incubators, which will not only



attract more talent, innovation and capital but also reap strategic, as well as commercial benefits for the country.

**Research and Development (R & D).** Adequate funding must continue, to promote R & D activities, especially in developing more compact, efficient and greener energy resources for space systems.

**C4ISR Capacity Building.** Satellite operations are conducted at speed of light, permitting near-instantaneous transfer of information and facilitate rapid application of force upon the adversary. It also prevents surprise by an adversary's earth-based forces by revealing strategic mobilisations. Dedicating more space resources towards C4ISR is a critical requirement that will strengthen the overall security architecture and provide maximum decision-making window for a launch-on-warning posture.

**Soft Kill Measures.** American strategic studies scholar, Ashley J. Tellis argues, "India's ASAT test was perhaps necessary, but it will not suffice to protect India's space assets during any major conflict with China." Therefore, blinding techniques and Direct Energy Weapons like microwaves and space-based lasers must be developed further, which can be equally effective, yet discrete in ASAT capabilities. A report by scientists working for China's top laser-research institute admitted that China is developing ASAT laser weapons and conducted a test in 2005 that blinded a Chinese satellite. The test was not public knowledge until the report was published in 2013; this displays the ease with which soft-kill tests can be conducted.<sup>30</sup>

**National Space Policy.** Space is a vast and unpredictable domain that requires a well-thought out strategy and a vision to face future security challenges. With the recent successes of *Mangalyaan* and Mission *Shakti*, the time is now ripe to infuse more vigour into India's space programme by means of national legislation. A comprehensive legislation that covers International Regulations, National Security Policies, Intellectual Property Rights (IPRs) and responsibilities of both public and private players is long awaited.

**Jointmanship.** In order to achieve operational synergy, various sensors on land, at sea and in the air should be integrated with space-based systems. This would significantly enhance battlespace transparency and enable cooperative engagement over prolonged ranges. As 'Guardians of the Skies,' the IAF could take the lead in collaborating with the other two services and civilian agencies and gear up to deter and counter conflict in

the space domain. The proposed Joint Space Command of the three services should also integrate the existing civilian aerospace infrastructure into war-fighting capabilities.

**Joint Space Doctrine.** Aerospace power can be defined as the product of aerospace capability and aerospace doctrine.<sup>31</sup> Doctrine is therefore, an important component that provides the underlying rationale for the development and deployment of capabilities. The existing doctrine only focuses on the security needs of yesteryears and does not clearly enunciate the probable character of future wars. Therefore, it must be reviewed rationally in a comprehensive manner to allow for the changing global military order and enable regulation of national space activities, depending upon perceived national threats.

**Global Reforms.** India's failure to get a permanent seat in the UN Security Council in the 1950s was a missed opportunity. Before a formal treaty banning space-weapons is formalised, akin to the Treaty on Non-Proliferation of Nuclear-Weapons, India should gain recognition as a credible space power. At the same time, it should leverage its global standing to spur space reforms and control measures that are unbiased and enhance India's national security.

**Net Security Provider.** India must continue to project herself as a responsible 'space-faring' nation and promote her vision of collective welfare of humankind and sustainability in the use of space environment. As a 'Net Security Provider,' we should be willing to share the benefits of our space programme with smaller nations in the IOR. The launch of GSAT-9 in 2017 as a gift to South Asian countries is a step in the right direction.

## **Conclusion**

As space might be one more amphitheatre for gladiatorial contests, it poses myriad geostrategic challenges for a space-faring country like India, which guards its frontiers from not one, but a combination of hostile neighbours. Safeguarding the country from a space attack and building credible space deterrent is therefore, essential to ensure national security. India's ability to grow into a global power would also depend upon space being a sanctuary for dominance. Towards this, India must develop indigenous, reliable, efficient, affordable and competitive technical capabilities, and adopt a comprehensive strategy in which space has a dominant role.

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## ENHANCING COMMUNICATION AND SURVEILLANCE ON NAVAL SHIPS USING TETHERED DRONES

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### **Background**

**T**he use of tethered balloons for reconnaissance onboard warships was first experimented with, as far back as the American Civil War. Unmanned Aerial Vehicles, commonly known as drones entered military service in the First World War. During the Vietnam war, the use of drones for observation became widespread. However, it is really in the last 20 years that drones have come into widespread military use. The sheer amenability of drones to technological innovations, along with advancements in camera technology, have been the driving factors for exploring wider applications of this amazing equipment. This paper is about the use of tactical drones for a largely unexplored application.

Traditional flying drones have been limited by their endurance which, especially in quadcopters, is decided by the capacity of the flight battery. Tethered drones are a more recent development that seek to overcome some of the limitations of traditional drones, while providing other advantages to military units. Here we discuss their use on naval ships and offshore platforms for extending the range of V/UHF communication and for providing a back-up / alternative to radar for near sea surveillance.

### **Ship Launched Observation Balloons**

During the American Civil War, a balloon tethered to the steam powered gunboat Fanny was launched on 03 August 1861 with one of the pioneer balloonists of the time, John La Mountain, to observe Confederate positions. This was followed by the ascent of another balloonist from the Adriatic and later from the George Washington Custis in support of army operations along the Potomac. This boat was in fact modified for tethered balloon operations.<sup>1</sup>

Tethered balloons have also been used for civilian applications. In 2009, a tethered balloon was developed for use by the Prince William Sound



Science Centre, Alaska to determine its usefulness for oil spill surveillance. The helium filled balloon was designed to be operated from a 15m 'Purse Seine' fishing vessel and its main objectives were to observe the area of around two nautical miles around the vessel and transmit the images to the

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***During the last ten years, use of multi-rotor surveillance drones has mushroomed***

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mother ship as well as to another nearby vessel. It was designed to operate in both, fair weather and rain. A computer on the mother vessel allowed the crew to control

the on-board camera in pan, tilt and zoom. A winch was used to raise and lower the balloon. In accordance with regulations, the balloon height was limited to 150 m or less, depending upon the cloud height.<sup>2</sup>

### **Use of Drones for Surveillance**

Drones have been widely used for military surveillance since the 1980s, and even earlier. However, many of the earlier drones required a small runway or launchpad. The small platoon level drones that could be deployed by ground troops on the move, came into use only around 2005. During the last ten years, the use of multi-rotor drones for surveillance and monitoring has mushroomed. The entry of multi-rotors meant that the job of the larger fixed wing or helicopter drones could now be done by a much smaller craft. The multi-rotors brought with them the advantage of Vertical Take-off and Landing (VTOL). Not only was it feasible to launch a drone from anywhere, but controlling the motion of the drone also became much easier. Drones became more silent, which meant that they could be used for discreet surveillance.

One common limitation of smaller drones is their relatively low endurance, restricted by the capacity of the flight battery, and the energy intensive rotors they carry. On an average, a single battery gives no more than 30 minutes flying time. Greater endurance can be achieved with a bigger battery, but that means a larger, more noticeable and noisier drone with a possible compromise on the quality of camera, all of which are factors that run counter to the wisdom of covert surveillance.

One can have a tiny, barely seen drone, but then flight time and optical quality are the tradeoffs. Company and platoon-sized units prefer short-range reconnaissance drones used for determining the strength, location, and tactical weaknesses of the enemy - vital information for determining the right course of action.<sup>3</sup>

The need is to have eyes in the sky for long durations, with high resolution day and night cameras passing data in real time, on a platform that remains unobtrusive without intruding into enemy air-space and preferably one that does not fall into the wrong hands. It is to the advantage of the force deploying a drone, if the drone could observe enemy movements and positions without intruding into the target's zones, since flying into enemy air space could be seen as a provocation. It follows that flying drones require a sufficiently skilled pilot who can provide the tactical commander with the information he desires, while preventing the craft from crashing into a hillside or trees, and in the worst case, from being captured by the adversary.

The other vulnerability of flying drones is their susceptibility to jamming and/or spoofing of their control radio signals along with their reliance on GPS for guidance, whose loss can lead to a crash. While there are pre-programmed drones that can obviate the need for GPS and command signals, these problems remain in most cases. Tethered drones do not require GPS, as they do not fly independently and remain in one place.

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***Tethered drones do not  
require GPS, as they do  
not fly independently***

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### **Combat Drones**

The conflict between Armenia and Azerbaijan, in September-October 2020, over the disputed Nagorno-Karabakh region, saw the widespread use of drones as combat weapons. Drones of Russian, Turkish, Israeli and indigenous designs performed both, reconnaissance and strike missions.<sup>4</sup> Azerbaijan had built up a fleet of Turkish and Israeli UAVs including loitering munitions, also known as 'suicide' or 'kamikaze' drones, including the 'Harop,' 'Orbiter' and 'SkyStriker' UAVs, as well as some modified Soviet-era 'An-2 Colt' biplanes with remote-control systems, to function as drones. These were used to great effect against tanks and air defence systems.<sup>5</sup> Azerbaijan's use of drones along with conventional weapons, contributed significantly to their victory and is a useful case study on the military use of drones.

### **Tethered Drones**

Tethered drones are more recent derivatives of regular flying drones that have emerged during the last three to four years. A tethered drone is an

unmanned aerial vehicle physically connected to a ground station. More specifically, a tethered drone system consists of a base station/ power station, drone tether and the drone/ UAV, which is connected to the power station through the tether.<sup>6</sup>

The drone/ UAV is a standard multi-rotor drone, except that it does not have a flight battery. Power is provided by the ground station through the tether. However, it does carry an emergency battery. A tethered UAV has a reduced spatial area where it can fly. Because of flying restrictions, the tether has lesser control requirements and does not require a trained pilot. It also does not require GPS navigation, which significantly reduces technical errors that can cause a crash.

The tether cable contains thin, lightweight conductors, which reduce wind drag, enabling the drone to reach a higher altitude (around 120 m). Tethers can be made of ‘aramid’ or other lightweight synthetic materials to provide strength, with copper or plated copper for energy conduction and optical fibre for data and communications. The system can be ground-based or vehicle-based.<sup>8</sup> The tether can also incorporate a fibre optic connection allowing for totally secure communications between the drone and its operator. This means that the drone is no longer susceptible to jamming or spoofing, as all control signals are passed via a fibre.

The ground station is basically a power supply unit and a winch that holds the tether. The power supply from the ground source is converted to DC. The tether reel has an auto-tensioned reel-in/ reel-out system, designed to simplify cable management. The drone’s altitude, operational duration in the air and the payload are determined by the type of drone and operational requirements. Input power is required to be converted, regulated and fed to the drone depending upon the drone’s needs. Hence, the ground station may include a smart power management unit, in addition to automated tether winding with Global Navigation Satellite System (GNSS) positioning to maintain flight ceiling and position even in adverse weather. Status monitoring, health checks and fail-safe procedures for the drone may also be built-in. Should the power supply fail, the drone uses its stand-by



Fig 1: The Three Main Components of a Tethered Drone<sup>7</sup>

onboard battery.

### **Advantage Drone Commander**

Thanks to the continuous flow of energy to the drone from the ground station, the drone can stay aloft almost indefinitely (upto 400 hours has been achieved) at heights of nearly 120 -150 m above sea level. Such a capability can become an advantage for reconnaissance, providing a constant aerial view of an area, without any interruptions for recharging. This concept could also be applied for the defence of static positions, where a tethered UAV could be placed at each corner of a base to provide a constant video stream of the surrounding area, helping to guard against attacks.<sup>9</sup>

The advantage becomes immediately apparent when the tactical commander realises that with his drone stationed, say, at a height of 70 m and continuously sending him visual information. With an impressive 30X zoom capability, he can see vehicles when they are nearly 10 km away, and can track approaching ground personnel long before they know they have been spotted.

According to *Elistair*, a leading manufacturer of tethered drones from France, their 'Orion 2' tethered drone features IP54 ingress protection. It provides the lift to handle a two kg payload and is designed to be an in-flight tactical tower with a simple, one-pushbutton starting routine. It has gimbal stabilisation for continuous day and night, large-area surveillance. It is capable of 24 hour continuous operation at 100 m altitude, equipped with a safety battery that recharges in the air. The 'Orion 2' tethered drone can handle digital communication rates upto 200 Mbps and is modular and man-portable, packed in a two-case transportable configuration. It is capable of 30X electro-optical zoom, with 1080-pixel High-Definition (HD) resolution and 4X InfraRed (IR) digital zoom, with 640 X 480 pixel resolution.<sup>10</sup> In other words, almost indefinite surveillance with a dramatically increased line of sight has been made available, giving significant advantage to the drone commander.

### **Use of Tethered Drones on Ships**

The advantages of a tethered drone are not limited to static positions on land. As said earlier, they can be used from ships as well, with some modifications. In Oct 2020, the US Navy began trials for ship-mounted tethered drones for Intelligence, Surveillance, and Reconnaissance (ISR);

communications, and video applications.<sup>11</sup> Another company, DPI UAV Systems USA, has tested its tethered UAS systems on various vessels from 15 m US Coast Guard vessels to US Navy ships and even US Army ground platforms. It is also learnt that the British MoD has selected tethered drones for a Royal Navy project.<sup>12</sup>

Tethered drones, which hover 60-80 m above a ship, overcome the limitations of visual range, which is restricted by the height of eye and

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***Tethered drones provide advantages of enhanced line of sight and greater endurance***

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curvature of the earth. Additionally, the drone stationed high above the ship can act as a high communication antenna to increase V/UHF range, since these bands too use line of sight communication. The tethered drone provides a double advantage in that the ship can see and communicate beyond visual line of sight for much longer durations than with a flying drone.<sup>13</sup>

As a rule, warships may prefer to remain silent on radio and radar as tactically necessary. Like every other technology, radar too has its limitations. Range and bearing discrimination, minimum range, blind zones are well known, as also the difficulties for radars in picking up non-metallic objects. With stealth features on warships becoming common, the strength of received echoes also reduces, making it more difficult for radar to detect stealth ships at the same ranges as non-stealth ships.

These drawbacks of radar can be overcome by optical day/ night surveillance that tethered drones provide. A tethered drone placed at say 100m height, with its high resolution cameras and optical zoom capability would have an optical range of around 30 km, which is close to what a standard navigational radar would provide. It may be argued that the latest generation of nav radars provide greater ranges. However, having visual information about a target, especially when that target is unknown, provides useful value addition. Allowing for some degradation of the farthest images, it would still provide a visual range of around 25 km during day and 10 km during night. A ship mounted tethered drone can therefore, augment radar surveillance and can substitute it, if radar silence is desired, with visual 360 degrees day and night surveillance. Further, it can increase V/UHF communication range by relaying radio signals from a payload radio set, but from a height much greater than the shipboard antennae, where the line of sight is limited by the curvature of the earth.





Fig 2: Unmanned Multi-rotor Aerial Relay<sup>14</sup>

### **Limiting Factors and Challenges**

**Power Supply.** According to the firm DPI, which is working on their US Navy project, the design challenges for the tethered architecture are mainly centered around the power supply system. Power must be delivered from the host ship to the multi-rotor drone at very high voltage and low current to allow the use of thinner and lighter hardware resources, which in turn allows greater mobility of the drone and higher air payloads. The weight, dimensions and electrical properties of the tether have a direct impact on the performance of tethered drones.<sup>15</sup>

**Tether Weight.** The biggest challenge is to reduce the weight of the tether. A heavy tether will require more power and will place extra load on the motors. More weight will also limit the height and range of the drone. In the US Navy's case, the requirement was to accommodate the weight of a 50 m tether and conversion modules within 400 gms.<sup>16</sup>

**On-board DC Voltage Conversion.** Another challenge for a tethered drone is power management involving rotor drive motors and control electronics. Having power flowing through a long cable introduces transmission losses that must be compensated. The objective of the cable (transmission line) is to keep the drone at a pre-defined height and to guarantee power and data transmission. Constraints on thickness and length are also linked to the application. In order to keep losses low, high voltage is

used over the cable after which, power conversion to the desired levels is carried out inside the UAV. A high DC voltage lowers the current flowing in the tether. Obviously, weight is a critical element in the choice of DC/ DC converter components.<sup>17</sup>

Inside the multi-rotor drone, high voltage conversion must be done with the smallest footprint possible and with a form factor that reduces space and thermal effects. In the US Navy's case, reduction in onboard weight was achieved by using small fixed-ratio Bus Converter Modules (BCM), to efficiently convert high voltage (400-800 V) to loads (20-50 V). These BCMs can achieve 98% peak efficiency and continuous efficiency of 95%.<sup>18</sup>

**An Uncertain Area.** There remains one important question to be addressed. This is a problem typical to ships underway at high speeds. It would obviously not be a consideration for say, an offshore platform or a stationary land-vehicle or location. Would the tether and its winch be able to withstand the pull on the tether when the ship is making way at a reasonable speed, say 15 to 20 knots in sea state 3? What would be the operating conditions of the tethered drone? Or is there a need for the drone to simply 'fly along' with the ship, while remaining tethered to the ship? Course and speed inputs converted to an acceptable form, could be provided to the system from the ship, should that be the case. However, at the moment, in the absence of deeper trials-based data, this remains an uncertain area.

## **Conclusion**

Tethered drones offer significant tactical advantages to small unit commanders assigned to border guard duties and at forward operating bases. The fact that a tethered drone has a limited spatial flying envelope means that it will never be out of sight of the host unit. It does not require a pilot to fly it. The absence of radio links means that the tethered drone is 'non-jammable' and provides continuous 360 degrees surveillance for extended periods, of upto a few days at a time.

The same advantages are carried forward to tethered drones being used onboard naval ships and offshore platforms. Tethered drones offer a useful back up to shipboard radars when operating in crowded waters and when searching for objects like rubber rafts, fast attack craft, swimmers and any non-metallic object that may not show up on radar. It can also provide the ship with a means to monitor the surrounding sea area when radio silence is required. When used as an extended antenna, it can increase the

communication range of V/UHF sets.

There do exist some technological challenges and uncertain areas that need to be studied. However, these do not seem unsurmountable. The USN and the RN have already commenced trials and while there remain some grey areas, it would be to India's advantage to also examine this emerging technology.



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## LESSONS FROM SYNCRETIC TRAINING: FLASH BACK TO 1969 IN THE SOVIET UNION

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*Vice Admiral SCS Bangara, PVSM, AVSM (Retd)*

Perhaps the most difficult decade for our armed forces was the 60s. The Sino-Indian war of 1962 exposed our chinks on the land border, without testing the Air Force or the Navy. The 1965 Indo-Pak war was a stalemate; until 1971 placed us right on top. Not often is one blessed to see a new nation born in a short war of under two weeks. The army had to handle 93,000 prisoners of war and oversee their repatriation to Pakistan. Having been posted in Islamabad as the Naval Attaché in 1985, I can vouch for the goodwill that our Army earned while looking after the well-being of Pakistani prisoners in make shift camps. The Geneva convention was followed in letter and spirit.

But this is not about the war. This story is about how the Soviet Navy trained us in their own way to be effective in combat. In fact, they could not have believed that we would use their ships not only as well as they might have, but even better than they could. Quite by default, they had created just the environment to make our crews bond as never before. This story captures the gist of what happened on a remote island off the secret city of Vladivostok in 1969.

So secret was our training mission that little was known about the missile boats that we were to acquire. Need-to-know communication and the absence of reference material on both the city and the platform merely helped to accentuate the mystery.

We were in our early twenties and unlike the more senior officers with families, we didn't really care much about our destination. Not many of this generation may know that in the 1950s and 60s, an average Indian had to struggle for any comfort, which is taken for granted today. We lived in non-airconditioned ships, sometimes infested with bandicoots. Cabins below upper decks were uninhabitable to sleep at night. Most of us would carry our beds to the open decks just to sleep. Nonetheless, we were content with our life as we were better off than many of our countrymen. Going to the Soviet Union we thought, was a leap from the Third world to the First world.



So, in August 1969, when we found ourselves on an island, eight kilometres off a secret city called Vladivostok, it did not worry us. Our navy had been training there for what NATO called *Foxtrot* class submarines, and the *Petya* class frigates. When we landed with over two hundred officers and men, the island hosted the largest Indian naval contingent in the USSR.

It is pertinent to recall that it was then very much a bi-polar world. The Soviet Union and its Warsaw-pact allies were arrayed against the United States, NATO and other allies. India was seen as an ally of the West despite

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***The crews were  
trained, manned and  
fought with largely  
Western methods***

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our ‘non-aligned’ policy. Paradoxically we were, until then, trained, manned and taught to fight with largely what we had inherited from the West. This encompassed our doctrines, training, traditions, logistics and even thinking! Given the freedom

that we enjoyed in our democratic system, we were not quite equipped to comprehend the Marxist-Leninist political, social and economic underpinnings, which governed every aspect of their lives well into the early 1980s, when it began unravelling. But, we couldn’t have known that in 1969!

The Soviet Union was a powerful country with a command economy and highly centralised planning. To meet its ideological focus on beating the West, it invested heavily in education, science and technology, child Welfare and the Military. In particular, the Soviet Union had made rapid strides in missile and space technologies.

The point relevant to my story is that until the mid-1960s, the Soviets had not dealt with the military of a free, democratic and a highly diverse country like ours. Dealing with us might have presented challenges for them, which we may not fully understand. For us, in turn, this was uncharted territory.

Here were some unforeseen problems. For one, we stumped them with our dietary preferences. We had vegetarians, non-vegetarians, amongst whom some ate only chicken or fish or just eggs and so on. Neither were the Russian galleys equipped to prepare a multi-cuisine meal, nor were they able to procure enough vegetables in a neglected part of the Soviet Union.

The USSR had conscripts at the lower rung on compulsory military service for three years (in the Red Fleet). On the other hand, our Navy was an entirely voluntary force, wherein even a sailor had to serve for a minimum of 10/15 years depending on his trade, and officers for twenty

years. Unlike us, they relied a lot more on officers and warrant officers to run and fight their ships. The conscripts were trained just enough to man a single system during their limited service. They did not have a logistic cadre for cooking, cleaning, stores and financial management, etc.

Our manning patterns were fundamentally different. The Russians had more of an operator-maintainer concept. This relied largely on the officers and warrant officers to maintain, as well as operate the system. We had a separate electrical and engineering branch to handle technical matters spanning sensors, weapons, communications, propulsion and power-generation. Both systems had their pros and cons; the challenges for us were in figuring syncretism! We did start thinking of changes that could be made in the manning pattern of ships. But the philosophy of an operator-maintainer concept could not be resolved by our navy for decades to follow. We did embrace significant technicalisation of the officer corps. Its effectiveness would need to be carefully evaluated as we go along.

The Soviets soon realised that the Indian sailor had to be periodically introduced to the ‘greatness’ of communism as an ideology. All Soviet military establishments were overseen by a political commissar, whose primary task was to uphold and propagate the virtues of their ideology. Subtle indoctrination through a Soviet model was supplanted with the training curriculum for sailors. Lectures on the socialistic, egalitarian pattern of society were cleverly introduced. Most of it failed to succeed because our officers and men lived in close proximity, shared the same vagaries of weather and were equally inadequately clothed to face 32 degrees below zero, while also experiencing the surreal sight of the sea freezing. That the only language spoken was Russian, turned out to be a blessing, in that subtle suggestions and innuendos ‘encouraging’ egalitarianism, fell on deaf ears. Strong religious beliefs and multi-cultural diversities did not yield to the most sophisticated attempts to convert the average Indian.

Our sailors also witnessed very harsh and inhuman punishments awarded to the defaulting Russian sailors who were often chained for the duration of punishment. The lesson ‘free people are not equal and equal people are not free’ was brought home to our men during our stay.

There was a social cost that our senior officers had to bear. Most of them had to share rooms with two or three others depending on the size of the room. Bear in mind that a Commander was a senior officer in a small navy

like ours. There were common bathing and toilet facilities for all. The sight of very senior officers in queue for morning ablutions alongside the junior-most, was not a pleasant one. The gesture *après vous* was impractical given the physiological pressures and the need to be on time for training. The next embarrassment was washing clothes. The Soviets did not provide a washing machine for nearly half of our one-year tenure on the island. The Juniors avoided washing their clothes in the afternoon thus, preventing undue embarrassment to the seniors ones.

Toothpastes and toiletries were a rarity in town. They were just not available and when a consignment arrived, people queued up to buy mere toiletries. Ergo, the naval detachment managed to convince Naval Headquarters to send canteen goods to Vladivostok through the Indian Naval Canteen Services. 'Colgate' toothpaste was a luxury that an average 'Vostokian' could not afford. Banned jeans and Japanese watches along with chewing gum were much sought after items on the streets of many deprived cities, not just confined to the east of the Soviet Union. Desperate and dejected youth deprived of freedom to access the quality of life readily available to their western counterparts, was a common sight. They were desperate enough to beg our personnel to trade items from what we wore. Here lies the irony. While show pieces of modernity in the form of cities like Moscow were open to visitors, the closed parts were tightly shut, much like China today.

Lack of avenues for entertainment was the root cause of hard-working Russian men taking to vodka drinking on an unimaginable scale. Over weekends, it was a common sight to see drunken citizens along the roadsides of almost all cities. Alcoholism was a national health issue. Not much was done to address this addiction as it was seen to be a pressure release mechanism, against lack of social amenities so freely available in Western Europe, and for that matter, on a much better scale in India as well. Briefly put, Communist Soviet Union was far from being an egalitarian society. We realised that those in Moscow or Leningrad lived charmed lives in comparison to several other cities and rural areas. Little did we know that the Soviet empire, with all its glory, would collapse like a pack of cards in two decades.

But the environment that I tried to illustrate thus far, was in contrast to what we were there for - to be trained to operate and maintain missile boats. On the training front we could not have asked for better facilities and

expertise from them. They had a process driven programme, which was meticulous, and it facilitated identification of weak links in the chain. Given their human resource limitations they had no option, but to evolve foolproof processes.

The eco system prevailing on the island left us with little options but to improvise activities to focus on our tasks. We soon discovered means to form groups to interpret and convert Russian documentation into English. We discussed technical details of the boat and the missile in particular. There were discussions on how to deviate from the recommended operational and tactical deployment of the Missile Boats. The Indian *jugad* (Hindi for improvisation) philosophy started a whole new approach.

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***The crew bonded because of the extreme climate, restricted living space and administrative issues***

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This could not have happened had we remained in India or in a city in Russia, which offered off-duty social opportunities. If the crew bonded, it was because of the extreme climate, restricted living space, conflicts with the hosts on ideological and administrative issues, graduating from rudimentary knowledge of the Russian language to technical language to assimilate the nuanced operational philosophy and a host of such activities. These were perforce collaborative and complimentary efforts within our teams for which burning of midnight oil was a necessity. Innovations followed.

In the process we discovered quite to our surprise that technical subjects, which appeared to be beyond the grasp of a non-technical seaman could also be mastered with a bit of guidance and assistance. As such, this approach was not implemented more widely across the Navy when beginnings could have been made. There was a watering down of Russian training methods to meet career requirements and cope with inter-branch sensitivities within the navy. The whole concept of keeping an entire crew together during training was allowed to dissipate, ostensibly to meet exigencies of service. Close billeting that we experienced in Vladovostok helped bonding as well as deeper ship knowledge, perhaps because there was not much else to do.

As a result of extreme pressure on limited manpower resources, NHQ had to perforce juggle crisis management instead of systematic long-term perspective planning. Not surprisingly, when I finally headed the Naval Training Command in 2004, the dilution of training philosophy hit me hard.

That we had structured a major part of our training on the Western system of short 'Type Training,' interspersed with specialisation courses (mainly for the Executive branch), was not sufficiently reconciled with the Soviet approach. It was inevitable that a hybrid approach would be necessary to audit and verify various methodologies to suit our very special mix of platforms and weapons. This is an endless process, the study of which ought to be invested in, by an independent commission on a periodic basis.

Quite simply put, the Soviet training module was an input fortuitously timed, to enable us to streamline and develop the one that suited us. If we

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***Education and training  
are two complimentary  
aspects leading to optimal  
use of personnel***

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have top-of-the-line ships today and they are being manned by competent crews, the exposure to UK and USSR played a vital role in perpetuating a mixed model. The question is - have we found the most suitable system to

restructure, not only the ab-initio training academies, but also professional courses? Education and training are two complimentary aspects leading to optimal use of personnel. They are not mutually exclusive.

We must deeply introspect on the assessment methodology practised in our training and educational institutions that promote the rote system, vis-a-vis the assessment that promotes creativity, imagination and innovation needed to win wars. It would be appropriate and instructive to look through the rear-view mirror to assess what was the telling impact of the Soviet training methodologies on the phenomenal success of Operations *Trident* and *Python*, in 1971.

When we arrived in Vladivostok, two Divisions with four boats each and a spare crew were placed under K-25 duly supported by a Squadron Staff headed by a Chief Staff Officer. In addition, the crew to man two Technical Positions, to store and prepare the missiles before deploying the boats, were to be trained by the Russians. The Commanding Officers and the Senior Squadron Staff were grouped together, while officers afloat and their men were placed in the next category for ease of training. Technical training aspects related to propulsion, power generation, maintenance of radar and communication were handled separately.

Training commenced with comprehensive ship knowledge including design and build features, damage control and fire-fighting. No one was allowed to go further unless these facts and figures were mastered. Missile and gunnery aspects were designed to study technical and tactical details by



tracing wall charts from one end of the class room to the other. Cut-out models were available for greater appreciation. To cite an example, all the officers (except the marine engineer) were to be proficient on the design and construction of the missile, its parameters and be competent to trace the circuits from the moment the launch button is pressed, the booster ejects the missile, the smooth transition to cruise mode, detachment of the booster, behaviour of the airframe and control surfaces to reach the cruising altitude, the point pre-set for activating the missile seeker and its subsequent search and ECCM functions, acquisition of target and finally the activation of the warhead before impact. The trainer was aware that each of us had to face an external group of examiners and that failure meant that he was accountable.

The mode of examination was noteworthy. There were no written answers to test one's knowledge. Five wise and experienced experts would arrive, with all of us seated in a class room full of circuit diagrams and wall charts. There were sets of question papers on their table, in three categories. Simple parameters, one requiring explanation and the last one of in-depth knowledge. The examinee would take his pick, prepare for 5 minutes and then proceed to answer the questions, as if he were the teacher. No short cuts, no time to copy and not all could be answered by rote alone. If one wished to reject the questions, one could pick another set by dropping grades.

The final phase of whole crew assessment was done by a Flag Board drawn from the front-line Squadron. They were called Task-1 and Task-2. The first consisted of ship board knowledge conducted on two boats placed alongside and all drills, from safety to switching on equipment, without proceeding to sea. This was conducted by the Soviet crew manning these boats. On confirmation that the Indian crew was competent, Task-2 commenced with putting to sea, similar to the charter of Flag Officer Sea Training (FOST). Two live firings were included at our request.

Needless to say, the tactical exploitation phase included single ship engagement, to divisional attack procedures, to coordinated and timed multi-directional attacks on a carrier task force. All eight crews may not have achieved the highest gradings as a crew, but it was crystal clear as to which crew needed to do more. If we were not ready for war after this intense phase, we would never have returned without losses as we did in December of 1971.

Our basic profession is 'management of violence.' This must not be lost

*Syncretic Training: Flashback to 1969 in the USSR*

sight of if we want to be victorious in war.



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## A BLOODY REMINDER OF A COMPLEX CONFLICT THROUGH THE EYES OF ARCHER BLOOD

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*The Blood Telegram – India's Secret War in East Pakistan, Gary J Bass*

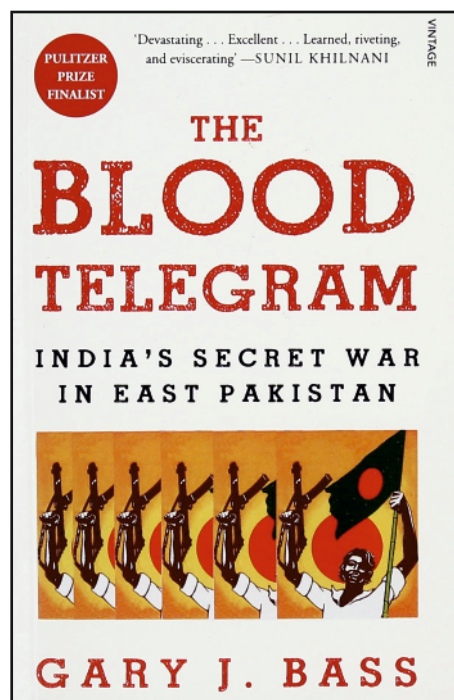
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*Book Review by Captain M Doraibabu, NM*

The Swarnvarsh (Golden Anniversary) of the momentous achievement by the Indian Armed Forces in the 1971 Indo-Pak War is being celebrated in the coming year. It is only befitting that a book review on the topic of how the war started in the first place through an assessment of a third nation be written. There are but few instances of such epochal events, wherein a war between two neighbours culminated in the creation of a new country, Bangladesh, formerly East Pakistan. The 1971 war is memorable for a lot more political and military lessons than the other wars that India has fought since Independence. The entire spectrum of conflict (short of a nuclear exchange) was discernible from March to December 1971, in the achievement of translating the aims of policy into objectives of cohesive political-military strategies. Cohesion and jointness were evident. But, as other histories show, had gaps as well.

*The Blood Telegram* by Gary J Bass is a riveting recall of events as they happened in the early months of 1971, mainly as seen from Dacca (now Dhaka). Bass is an established author of many books and is currently the Assistant Professor of Politics and International affairs at Princeton University. As a former reporter, he has written for *The Economist*, *The New*



*York Times*, *The Washington Post*, *Boston Globe*, to name a few. He has also been nominated for the Pulitzer in the general non-fiction category.

This book is a thoroughly researched and detailed account of the events that shaped the Indian subcontinent through the perspective of Archer Blood, the United States' Consul General in Dacca. The author describes Archer Blood as a gentlemanly diplomat, a World War II navy veteran, who had an upwardly mobile career in the Foreign Service, till the time he decided to report the atrocities being wrought upon the Bengalis of East Pakistan. He railed against the positions taken by President Richard Nixon and his National Security Advisor, Henry Kissinger. No wonder, then that western editions of the book carried the more accurate sub title: *Nixon, Kissinger and a Forgotten Genocide*. The Blood Telegram is about the reports mainly in the form of 'telegrams,' or diplomatic cables sent back to the United States by Archer Blood. These reports contained the very thing his superiors did not want to hear - the complicity of the United States in ignoring the despotic acts of Yahya Khan and his generals. The author cites numerous declassified documents and White House tapes to record statements and discussions of Nixon with Kissinger, on circumventing the US Senate and aiding Pakistan during the War. The cold *realpolitik* of the US President and key members of his administration is described in detail. Archer Blood did not turn a blind eye to the genocide being carried out in East Pakistan.

Bass examines the roles of several key politicians involved, at the global level, in the passage of events in 1971. Sheik Mujibur Rehman, Indira Gandhi, Yahya Khan, Richard Nixon, Henry Kissinger, Zhou Enlai, Aleksei Kosygin, were some of the *dramatis personae*, who played key roles in the 1971 War. Importantly, he sees the book being about two of the world's greatest democracies, USA and India - when faced with one of the most terrible humanitarian crises of the twentieth century. The trials and tribulations of the Bengalis in East Pakistan were no less than the slaughter and genocide wreaked in Bosnia or Rwanda or the Holocaust, says the author. The pressures created on India, struggling on its own to rise from its internal problems, to allow millions of refugees from across the border and to create for them gigantic camps to house and feed them, were quite unprecedented. All this, while the rest of the world looked away or offered only platitudes. Blood's cables from the Dacca Consulate have been studied closely by Gary Bass to help him stitch together the web of politics,

intrigue, sinister international affairs, backdoor alliances, covert operations, cables of high ranking officials *et al* to give the reader a good grasp of the events surrounding the Indo-Pak War of 1971.

Of particular interest to the Indian Navy is the sailing of the US Seventh Fleet into the Bay of Bengal on 15 December 1971. While the Western Fleet achieved complete control of the northern Arabian Sea, the newly formed Eastern Fleet along with the carrier *INS Vikrant* was earning its battle spurs in the Bay of Bengal by blockading the ingress or egress of Pakistani troops by sea from Chittagong and Khulna ports. The Commander-in-Chief (C-in-C) East, VAdm Nilakanta Krishnan, had signalled the fleet with “MOTTO FOR EASTERN FLEET IS - ATTACK-ATTACK-ATTACK.” *PNS Ghazi* had failed in its hunt for the carrier and lay at the bottom of the sea. The Indian Army and the *Mukti Bahini* were closing in on Dacca and there was growing clamour in the UN, with 104 countries voting for a ceasefire and withdrawal on 07 December 1971. There was immense pressure on India to stop operations from the superpowers, USA, China and even the USSR. The Soviets had used their veto powers a number of times in the UNSC to stop others from interfering in the war. The author states in his book that China was ready to make belligerent moves with troops along the northern borders of India, for which the USSR would have pressed upon China to stay its hand, while the US might have moved militarily against the USSR. These things of course, did not come to pass, but there could have been a more serious global conflagration.

In this tense environment, Nixon and Kissinger ordered a force from the Seventh Fleet to move into the Bay of Bengal with an implausible pretext of evacuating Americans from East Pakistan. The force was comprised of USS *Enterprise*, a nuclear aircraft carrier, *USS Tripoli*, a helicopter carrier, seven destroyers and an oiler under the command of VAdm John McCain Jr. The force posed, in VAdm Krishnan’s words “a fantastic threat” to the Eastern Fleet. The author says it was President Nixon’s biggest bluff to force the Indians to back down. The Indian military was skeptical about the US getting involved militarily with the Vietnam war raging on one side. VAdm Krishnan writes in his book *No Way But Surrender* that India intensified its naval assault on Chittagong and Cox Bazar in defiance of the *Enterprise*. He even considered a submarine torpedoing the US Fleet to slow it down, while India achieved its stated objectives. On 15 December 1971, the *Enterprise* carrier group entered the Bay of Bengal and remained a thousand miles



away from Chittagong. The Russians had also positioned four to five ships and submarines of their own in the vicinity. The author has dedicated a section in the book to describe the decision making and diplomatic parleys around the *Enterprise* incident.

The book is rather longish, but the author has neatly divided the narrative into 19 sections with individual situation- oriented chapters. The thorough research and the meticulous detail, which Gary Bass brings to the reader, is reflected in the 130 pages of references alone. The book was a Pulitzer prize finalist, a testimonial to his story-telling. The prose flows easily, and the stark descriptions gives the reader a good sense of the despondency and despair the Bengalis of East Pakistan experienced. As a naval reader, this is definitely a great book to have read, even if a few years after publication.



*Capt M Doraibabu, NM was commissioned on 01 July 97 and is a specialist in Communication & Electronic Warfare. The officer is an alumni of the Defense Services Staff College, Wellington and the College of Air Warfare, Secunderabad. He was awarded the Nao Sena Medal for gallantry during the rescue operation for outstanding contribution in the 2004 Tsunami relief operations. Presently, he is posted at the Maritime Warfare Centre (Mumbai) as Additional Director (Studies).*

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## A 'DIME' FOR OUR THOUGHTS?

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### ***Cracking the China Conundrum: Why Conventional Economic Wisdom Is Wrong*, Yukon Huang**

ISBN: 978-0-19-063003-4, Number of Pages: 263

Published by Oxford University Press, 2017

*Book Review by Lieutenant Commander Rishabh Sharma*

China has always been a mystery, even to an incurious onlooker. Shrouded under the veil of its secretive government, its reluctance to reveal to the world what it really is upto, no country generates as much fascination or curiosity on such a large scale as China. Whether it is the fascinating story of how it is challenging the USA to become a global power in the current century, or its clever use of reforms and actions during the multiple financial crises over the past few decades, China is truly becoming a force to be reckoned with.

The book *Cracking the China Conundrum: Why Conventional Economic Wisdom Is Wrong* is authored by Yukon Huang, who immigrated to the USA after World War II. Having studied economics from Yale and Princeton, the author confesses to having American-centric ideas about China and its economic policies till the time he worked for the World Bank in Beijing. It was here that he finally understood the sheer scale and thinking behind China's policies and reforms. After revisiting his own thoughts and beliefs about China, he finally presented many of his conclusions in this book for the international audience.

He covers a wide array of topics in his book ranging from the



unbalanced growth model, real estate bubble, foreign investment aspects, issues of debt, and the sheer pace at which China is catching up with global economic powers. In Yukon Huang's opinion, the two definitive figures of the Chinese reform and opening-up policy are "political entrepreneurs" Deng Xiaoping and Zhu Rongji, whose introduction of economic liberalisation opened the doors to China's rise.

The logical flow in the book stems from a sound structure, an accurately assessed rubric and integration of thoughts. The book is spread over ten chapters. Chapter 1 covers varied global views of China and its unbalanced growth model, which the author describes as both, a boon and a bane. Chapter 2 covers public opinions of China's economy and the effect of socio-political decisions, which have affected China's image in the eyes of an international audience. A highly informative insight is offered in the next Chapter, into Deng Xiaoping's opening up of the Chinese economy in the 1980s, which forms the bedrock for China's growth model. Chapters 4 and 5 take us right into China's unbalanced growth process and flag concerns relating to debt and property problems, with emphasis on the well documented Real Estate bubble and the usual debt concerns, which riddle several economies. The following chapter elaborates on the social and political conflicts that China faces due to its self-confessed historical ideology and jingoistic obligation towards honouring their heritage and past. Chapters 7 to 9 discuss China's trade, capital flows, and how foreign policy has impacted world economics, particularly those of the USA and Europe. This portion of the book provides some really interesting reading and important take-aways. Finally, Chapter 10 wraps up with an overview of China's current economic prospects and the likely course the Chinese economy is going to take in the coming decades.

The author has made a compelling case about the sheer imbalance of global public opinion about China and its economy, ably supported by appropriate data. He has illustrated his case with numerous graphs and charts for ease of understanding by even a novice in the field of economics. As a naval reader, it is a reminder of the centrality of economics in statecraft and the need for militaries to strategically evaluate "DIME" (Diplomatic, Informational, Military and Economic) lines. The author reiterates that in spite of repeated warnings by well-known economists of the impending collapse of Chinese economy, China has maintained dynamic growth in the past four decades and more importantly, it is likely to sustain a growth of 5-

7% over the next decade, contrary to what global economists feel. One may add here that even under the global economic setbacks, as a result of Covid-19, the Chinese economy is doing better than most, although there is now a better understanding of the weaknesses as well.

The title of the book stems from the fact that there has been no simple explanation as to why China has generated such a diverse range of views and emotions, creating the said conundrum. The author also reminds us that within China itself, the situation is such that anyone criticising the State's policies is labelled Pro-Western, and anyone supporting the state, is labelled a super optimist by the West and Europe.

China is also an easy target from a Western perspective because of its debatable human rights record and the authoritarian nature of its regime. Regional skirmishes and needless needling of smaller nations, vying for territorial issues and projection of power using military action also does not help its case. Thus, China is still seen in a negative light by a significant section of the public in the West, and even Asia, for that matter. These feelings seem to have sharpened in a way that Yukon Huang may not have sensed at the time of his research. One can see, from some of his recent analyses - as a Carnegie fellow - that he has seen a greater correlation between security concerns and economic worries. Many economies would prefer that the Chinese model fails in the near future, completely ignoring the fact that the Chinese economy has now reached a stage, where any fall in its system is going to be a failure of a large part of the global economy.

In conclusion, I would say that this book has provided good value for someone from a completely non-economic background. The sheer magnitude and energy with which China is able to do things, like initiate reforms and change policies to aid its economy, is truly staggering. Of course, we can argue that it is helped by the kind of regime the government has, but the sheer rapidity with which the country has closed the gap with leading global economies is remarkable. The Chinese economy was projected to fail by well-known economists around the world, and it has generally proven everyone wrong by tiding over the 1997 Asian Financial Crisis in the last century and the global recession in 2008. Though the economy is definitely showing signs of a slowdown since 2015, the author makes it a point to note that this is definitely not the beginning of the end for China. It is merely a sign of a growing and maturing economy. *Cracking the China Conundrum* is a good initial insight in understanding what exactly is

*Book Review - Cracking the China Conundrum*

transpiring in China.

It is more than a DIME for one's thoughts!



*Lt Cdr Rishabh Sharma is a fully-operational Seaking pilot. He is an alumnus of the 84<sup>th</sup> Indian Naval Academy Course, the first batch of BTech (Executive) officers, and the 198<sup>th</sup> Pilot Course, AFA, Dindigul.*



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## A PIECE OF THE PUZZLE THAT IS CHINA

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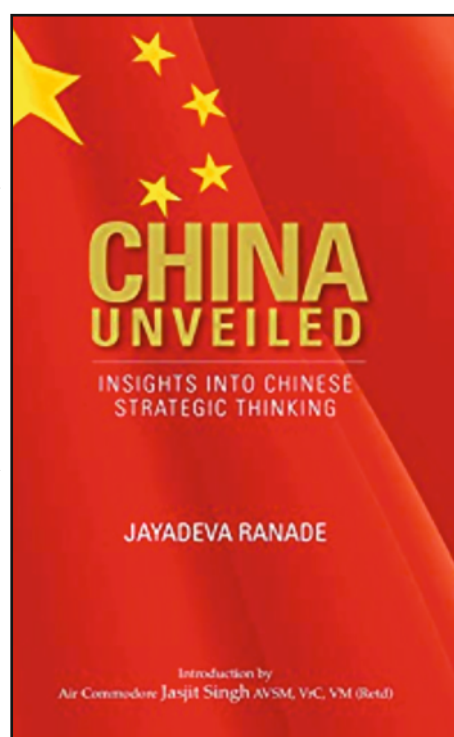
***China Unveiled: Insights into Chinese Strategic Thinking*, Jayadev Ranade**

ISBN: 10: 938190443X ISBN 13: 9789381904435, Number of Pages: 312

Published by KW Publishers Pvt Ltd, New Delhi 2013

*Book Review by Lieutenant Commander Siddharth Sohoney*

For the past many years, much of Indian strategic thinking and discourse has visibly shifted from its Pakistan-centric focus to study India-China relations. The rise of China and its implications for India is now a preferred area of serious study. At the same time, Chinese inroads into India's strategic neighbourhood, Beijing's continuing attempts to use Pakistan as an instrument against India and New Delhi's balancing act of establishing a strategic partnership with the United States, while trying to maintain dialogue with China, are some of the highlights of the past decade. To understand China's stand in the present scenario, the book gives a deep insight to perceive the preface to Chinese strategies and actions.



*China Unveiled* is a compilation of 32 essays/ chapters on strategies and developments related to China. The essays cover five different aspects viz., leadership and domestic politics; Chinese military, especially the Navy and Cyber power; the India-China relationship; the China-US relationship; and the China-Tibet issue, including China's policy towards Buddhism and the Dalai Lama.

The author has been a diplomat, scholar of China studies and with wide security assessment qualifications. The book offers insights into Chinese

leadership by discussing two leaders (Hu Jintao and Xi Jinping), whose influence has shaped China's policy for long and, of course, Xi is now the leader for life. The author discusses Hu Jintao's rise and his real power. In the first chapter, "Hu's in charge?" he writes, "though Hu's tenure has been dogged by comments that he was not as powerful as his predecessors, his career path shows otherwise. It is likely that Hu Jintao's influence will, in fact, continue to exist well after he steps down from office." He provides illustrations for this.

The book, published in 2013, also has some interesting facts and anecdotes about Xi Jinping. In 2012-13, when the book must have been written, Xi was still relatively new and it would have been difficult to imagine that in 2021, he would be a permanent leader of China, in the manner that Mao was. The chapter gives a good grasp of Xi's education, entry in the CCP and to becoming one of the most influential personalities in China. Ranade delves into Xi's military affiliations and pronounced linkages with senior PLA officers, which as we know now, played a very important role in his consolidation of power and for shaping China's policies. The author predicts that higher budgetary allocations and the modernisation of the PLA would be a focus areas for Xi. He turned out right. Another significant assessment is that China's diplomacy, backed by strong military power, would be leverages in world geopolitics.

The next few chapters examine the changing political scenario in China and how the politics of the CCP were evolving. On Bo Xilai, the leader who fell into disgrace over corruption, the author explains how even a 'princeling' could fall from favour.

China has been trying to secure its presence in Indian Ocean even while concentrating on strengthening itself within the Western Pacific. He cites an example of the growing confidence - even cockiness - of the PLA Navy, wherein a senior PLAN officer told the visiting US Admiral Keating in 2009, "As we develop our aircraft carriers, why don't we reach an agreement, you and I. You take Hawaii East, and we will take Hawaii West and the Indian Ocean." China's growing cyber warfare capabilities have also been examined, which certainly are a growing concern, every passing year.

Taking about India-China relations, Ranade states that the Chinese leadership and officials list three main concerns. These span the Dalai Lama and Tibet issue; the border dispute; and India's geopolitical ambitions. They

are explained well in relevant chapters. Looking at China's attitude towards India, the unsolved border issue and other areas of competition, it is evident that India will have to shape its policies to allow it to withstand increasing Chinese pressure, while simultaneously working towards areas of cooperation and reduction of tensions.

Overall, the book is of considerable value for diplomats, military men, academic experts and readers with special interest in China's impact on geopolitics, especially as a primer for beginners. However, inclusion of maps, and references would have been helpful in better appreciating and following up on the research.



*Lt Cdr Siddharth Sohoney is from the 15<sup>th</sup> Naval Orientation Course of the Indian Naval Academy and underwent Seaking Observer conversion in 2017. At present, he is undergoing the Qualified Navigation Instructor Course at the Observer School, Kochi.*

## AWARD OF KINDLE e-READER

With a view to encourage critical and creative thinking in the Navy, the Chief of the Naval Staff (CNS) has instituted award of Kindle e-Readers to officers/ sailors who author high quality papers offering novel ideas/ suggestions. In January 2021, the Directorate of Strategy, Concepts and Transformation (DSCT) sought papers from various establishments that have a large body of officers in an academic environment. 79 papers were received, which were assessed for aspects such as relevance, content, structure, language and style, as well as quality of analysis. For the year 2021, Kindle e-Readers have been awarded to: -

Name and Rank	Topic
Cdr Hitender Chaudhary	Space the Next Frontier - Opportunities and Challenge for India
Cdr R Nirmal kumar	Nurturing Innovation in the Armed Forces
Cdr Mithilesh Upadhyay	SLOC Interdiction - Challenges and Prospects for Indian Navy
Cdr Ashok Garg	Objective Driven or Effects-based Operational Philosophy: Option for <i>IN</i>
Cdr Parashant Chaudhari	Emerging Dynamics of Warfare - Role of AI and Robotics and How India can Exploit it
Cdr Prasad Rao	Drone Swarms and Make in India Program - A Potential Game Changer
Cdr Abhilash Sreekumaran	Formulation of Indigenous Ergonomic Standards based on Crew Centric Process
Cdr Manu Tripathi	Optimisation of Inter-docking Intervals of <i>IN</i> Ships for Hull Maintenance towards Enhancing Operational Availability
Lt Cdr Paul S Moses	Design of Modular Lightweight Small Arms Post (MOLSAP) for Mitigating Challenges faced in Effective Delivery of Small Arms Ordinance from <i>IN</i> Ships
Lt Cdr Parth Sehgal	Germany's Third Reich and China's CCP under Xi Jinping - A Comparison and Analysis

<b>Name and Rank</b>	<b>Topic</b>
Lt Cdr Shekhar Raj Singh	Rationalisation of Policy on Provisioning, Accounting and Usage of MRE in <i>IN</i>
Lt Cdr Mayank Saxena	Need for Infrastructure Development by Tapping of New Technology in Civil Works
Lt Cdr Preeti Sehrawat	Streamlining of FCL Management for Enhanced Compliance and Effective Budget Utilisation
Lt Kshitiz Kumar Singh	Augmentation of Ordinance Delivery Capabilities of WJFACs
Dr Debasis Dash	Dockyard Civilian Training Establishment (DCTE): A Framework for Civilian Training in Naval Dockyards
Cadet Gaurav Tehlan	Construction and Structural Analysis of Floating Dry Dock
Praveen Sharma, Sea II(RP)	Proposal for Indian Naval Ensign Amendment

Call for papers for the next cycle of assessment and shortlisting for consideration for award of Kindle e-Readers by the CNS will be issued in July 2021 by DSCT.



## NOTE TO CONTRIBUTORS

This page from the editorial board of the *INDES* is to share just a few outline thoughts and for the general understanding of readers who may wish to write for the journal and encourage others to consider doing so as well.

In a manner of speaking, the journal, would be a mixture of a few long essays/ papers, most of which will be peer-reviewed and a few shorter articles, as well as other sections. In that sense, it is conceived to be an amalgamation of a professional naval journal as well as a professional naval magazine. We encourage original, unpublished papers and articles as contributions. However, exceptions can be made for a few previously published articles depending upon the educational and thematic value they bring to readers. Where necessary, such authors may also obtain permission from the copyright holder and *INDES* will acknowledge these details.

For a new periodical, the initial print runs are considerably large and we expect readership to grow. The editorial board will evolve and share details of a few regular sections in the *INDES* and this would include a forum for reader's comments and discussions including responses from authors to enable useful, professional discussions. As in the case of all articles, the editors shall oversee editorial corrections and moderation as necessary for brevity, clarity, propriety and prudent information security.

We are in the process of uploading a comprehensive writing guideline to include submission details, style sheet, formats and method of e-file titles to enable handling ease. The comprehensive writing guidelines will be uploaded on the NWC, Goa web page ([www.indiannavy.nic.in](http://www.indiannavy.nic.in)) and will be accessible across the board for all.

In any case, if there are any queries, the editorial team is at hand to assist. We are available at [indes-nwc@navy.gov.in](mailto:indes-nwc@navy.gov.in) and it will be our pleasure to respond to your queries, critique and suggestions as soon as possible.





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