

China's Aircraft Carrier Ambitions

The Numbers Game

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The defined goal of China, which has been widely analysed, is to achieve 'the great rejuvenation of the Chinese nation' by 2049, and the road to that would go through periods of cooperation and, later, confrontation with its main trading partners, that is, the USA and the rest of the democratic world, effectively changing the established world order as per their understanding.¹ Considering the vast coastline of 18,000 km² that China is blessed with and needs to defend, as well as the heavy dependence upon its maritime routes of mercantile communication, it is inevitable that China would need to become a maritime superpower to achieve its great rejuvenation.

In its quest towards achieving supremacy in the maritime domain, China has embarked on a journey of modernising its maritime fleet, which includes an Aircraft Carrier programme, the aim being to have the numbers to counter inimical agencies and States, specifically the USA and its allies in the Pacific and the Indian Oceans. At the time of writing this article, China has two functional aircraft carriers, with the third in the final stages of production. However, are these numbers adequate? In its need to achieve supremacy at sea, how many aircraft carriers does China need?

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This article endeavours to arrive at a figure through comparison with the Japanese Mobile Force, the 'Kido Butai', which wreaked havoc during the Pacific War from 1941 to 1942. The article compares the forces in play during World War II with the current scenario, and tries to draw conclusions as to the likely numbers that China must have to achieve the necessary devastating effects in the case of a war in the future in the Indo-Pacific.

The comparison with that specific era has been drawn considering the similarity in the geo-strategic conundrum faced by Imperial Japan as well as the technological parity that Japan held with the US Navy at that time. Through this research, it is hoped that a few lessons may be learnt which would be relevant for Indian maritime strategy to become more contemporaneous.

Keywords: *China, Aircraft Carrier Programme, Maritime Strategy*

INTRODUCTION

The defined goal of China, which has been widely analysed, is to achieve 'the great rejuvenation of the Chinese nation' by 2049, and the road to that would go through periods of cooperation and, later, confrontation with its main trading partners, that is, the USA and the rest of the democratic world, effectively changing the established world order as per their understanding.³ Considering the vast coastline of 18,000 km⁴ that China is blessed with and needs to defend, as well as the heavy dependence upon its maritime routes of mercantile communication, it is inevitable that China would need to become a maritime superpower to achieve its great rejuvenation.

On 17 June 2022, China launched its third aircraft carrier, the Type 003, *Fujian*, fitted with the advanced Electromagnetic Catapult System and commenced her sea trials.⁵ In a subsequent editorial in the newspaper *South China Morning Post* on 17 July 2022, Liu Zhen raised the burning question which has been doing the rounds in the strategic community: how many aircraft carriers does China need?⁶ Zhen subsequently postulates that China will require at least seven aircraft carriers, two each for its three fleets (North, East and South), and at least one for undertaking further operations in the Indian Ocean Region (IOR).⁷ The need for two each for its three fleets is fairly straightforward, since China considers the USA as its strongest competitor, and accordingly requires to build its Carrier Fleet to counter the might of USN's 3rd and 7th Fleets comprising at least 2–3 carriers. However, the key question that Indian strategists need to think about is why the need for the seventh carrier? And, what exactly does Liu Zhen mean by operations in the IOR?

Before proceeding further with how many, it is critical to understand why does anyone need an aircraft carrier? The famed military observer and researcher, Milan Vego in his book *Operational Warfare at Sea* (Second Edition)⁸ has stated that:

the main objectives of warfare at sea are sea control, sea denial, choke-point control/denial, basing/deployment area control/denial, and destroying/weakening enemy and preserving friendly military-economic potential at sea. These objectives are, in turn, subordinate to the respective political strategic and military/theatre strategic objectives.

He has further defined Sea Control as:

one's ability to use a given part of the sea/ocean and associated air (space) for military and nonmilitary purposes and deny the same to the enemy. Sea control implies sufficient and extensive control of a major part of a given maritime theatre by a stronger side.

Thus, Sea Control includes superiority in all six domains at sea: anti-surface, anti-sub-surface, anti-air (including space), anti-missile, mine warfare, and the electromagnetic spectrum. Sea Denial has been defined as:

one's ability to deny partially or completely the enemy's use of the sea for military and commercial purposes. A weaker side at sea would normally try to contest or dispute control in certain sea or ocean areas for the duration of the hostilities at sea.⁹

This can be achieved through the denial of a sea area through the deployment of submarines, or mines, or a threat of attack on non-combatants (for example, merchant ships) through conventional and sub-conventional aerial/surface/sub-surface assets.

Thus, depending upon their geo-strategic imperatives and economic wherewithal, modern navies try to tailor their fleets to achieve either of the above naval objectives. The USA, and now China, prescribe to their ability to undertake sea control to achieve their political and military objectives because of their stature. Sea control, which necessitates the control of all six domains at sea, requires platforms capable of achieving this mission.

Aircraft carriers, along with their escorts are, thus, a necessity to achieve this. To the uninitiated, an aircraft carrier is a large floating runway which can launch and recover aircraft. These aircraft could be fixed-wing, including

fighters and rotary-wing. An aircraft carrier is capable of projecting air power to far shores. Their mobility includes their ability to traverse up to 500 nautical miles (900 km) in a day. Typically, each aircraft carrier, along with its organic self-defence capability against submarines and missiles, is also accompanied by a fleet of destroyers, frigates and other escort ships, to provide protection to the carrier as well as fleet support ships for logistic support (fuel, oil, stores, etc.). An aircraft carrier, along with her escort ships, is typically termed as a Carrier Battle Group (CBG), with integral anti-air, anti-surface and anti-submarine capabilities¹⁰ and is, thus, a potent force.

The success of the US Navy's Fifth Fleet during Gulf War I is testament to the efficacy of a CBG. Hence, the fascination of nations to achieve this capability is evident from the fact that the UK revived its Aircraft Carrier programme through the commissioning of *Queen Elizabeth II*. China has long been interested in the acquisition of aircraft carriers. Liu Huaqing, who served as PLA(N)'s Commander-in-Chief from 1982 to 1988, was the first to articulate the dream of a Chinese-built aircraft carrier.¹¹ His efforts led to the procurement of the decommissioned and damaged *HMAS Melbourne* from Australia in 1985, to enable them to study the catapult system.¹² This procurement kick-started China's Aircraft Carrier Programme, with China now having indigenously built two aircraft carriers: *Shandong* and *Fujian*, along with the indigenously re-furbished *Liaoning*.

CHINA'S AREAS OF INTEREST

In 2015, China enunciated its Naval Strategy of 'Near Seas Defense', and 'Far Seas Protection'.¹³ In their 13th CMSI Report, Jennifer Rice and Erik Robb define

Near Sea Defense as defending the territorial sovereignty of China under Informatised conditions and win local wars within the First Island Chain ... Far Sea Protection has both peacetime and wartime elements. In peacetime, the PLA Navy is expected to conduct a range of 'non-war military operations' such as participating in international peacekeeping, providing humanitarian assistance and disaster relief, evacuating Chinese citizens from danger, and engaging in joint exercises and naval diplomacy. In wartime, the PLAN could be tasked with securing China's use of strategic sea lanes and striking important nodes and high-value targets in the enemy's strategic depth.¹⁴

It is a well-known fact that China claims sovereignty over the East and South China Sea, including the Taiwan Strait, by its active belief that the

waters enclosed by its Nine Dash Line are its territorial waters.¹⁵ In this regard, it has shown insouciant disregard for rules and regulations, including the universally acknowledged UNCLOS 1982, as well as for the ASEAN decided Code of Conduct in the South China Sea. In its Defence White Paper of 2019, China acknowledged that its Aircraft carrier, *Liaoning*, has operated in the 'Far Seas' in the Western Pacific.¹⁶ Hence, 'Far Seas' as a term finds increasing mention in China's Maritime declarations. A clear understanding of this term is necessary to comprehend China's Maritime Areas of Interest.

Considering its large-scale industrialisation in the past five decades, and a burgeoning population, China imports, as per the 2020 data, nearly 307 MT of Coal, 1.16 million barrels per day of crude oil, 131 trillion Cu Meters of natural Gas per year, to support its industry.¹⁷ Thus, its dependence on the Pacific—and more critically on the seas encompassing the First Island Chain—cannot be over-emphasised. An estimated trade value of US\$ 3.37 trillion flows through South China Sea alone, thereby necessitating Chinese exertions to control these sea lanes.¹⁸ However, consequent to the large volume of its trade, primarily its Energy Lanes, flowing through the Indian Ocean and, specifically the Malacca Strait and the Sunda Strait, China has redefined the regional security environment, and shifted it towards the IOR.

In his article for the Asia Maritime Transparency Initiative, Wilson Vorndick has aptly described China's maritime outlook. He has clearly enunciated and explained the American concept of Island Chains with respect to China's landmass, and to understand the degrees of China's maritime interests in the Pacific and, subsequently, in the Indian Ocean. Whilst, originally, it was used in conjunction with Imperial Japan's expansion during the World War II, it has now been juxtaposed for China. The First Island Chain has been defined as the line joining the Kurile Islands, the Japanese archipelago, Taiwan, Philippines, and encompasses the South China Sea. The Second Island Chain stretches from Japan through the Marianas and Micronesia, and the Third Island Chain is centred in Hawaii. The author further postulates that the addition of fourth and fifth chains in the Indian Ocean would better describe the expanding Areas of Interest of China.¹⁹ The Chinese 'String of Pearls'—created through its bases in the Indian Ocean—is synonymous with the US presence in the region, which itself has bases in the Middle East, Djibouti and Diego Garcia, with logistics arrangements existing with India, Australia, and France for sustaining its fleet.²⁰

China now possesses the largest Navy in the world. With 370 ships, including two aircraft carriers, and an ever-increasing fleet with nearly

25 new ships being inducted every year, China has looked to surpass the integrated and multi-domain capable US Navy through a comprehensive expansion of its fleet. The US Department of Defense (DoD) states that China's navy

is the largest navy in the world, with a battle force of over 370 platforms, including major surface combatants, submarines, ocean-going amphibious ships, mine warfare ships, aircraft carriers, and fleet auxiliaries. Notably, this figure does not include approximately 60 HOUBEI-class patrol combatants that carry anti-ship cruise missiles (ASCM). The ... overall battle force [of China's navy] is expected to grow to 395 ships by 2025, and 435 ships by 2030.²¹

China has undertaken a comprehensive expansion and modernisation of its naval prowess. This modernisation includes a substantial increase in its C4ISR (command and control, communications, computers, intelligence, surveillance, and reconnaissance) acquisition programmes, improvements in logistics, doctrine, personnel quality, education and training, and exercises. China has also focused on having a capability to undertake anti-access/area-denial (A2/AD), a force that can deter US intervention in a conflict in China's near-seas region over Taiwan or some other issue, or failing that, delay the arrival, or reduce the effectiveness of, the intervening US forces.²² In this regard, in 2015, China established the PLARF (People's Liberation Army Rocket Force) which, along with its land attack capability, includes indigenously developed anti-ship ballistic missiles (ASBM), anti-ship cruise missiles (ASCM), and supporting C4ISR.²³

In his book *Following the Leader* (2014), David M. Lampton writes that, 'Beijing rejects the US-dominated alliance system (particularly in East Asia), and even more the right of Washington to act unilaterally (or through the ad hoc coalitions it creates) on a global basis'.²⁴ Whilst enhancing its A2/AD capability to deny USN freedom of action in the western Pacific, China has also focused on expanding its surface and submarine fleet. Accordingly, China has also enunciated, in its Grand Strategy, the Chinese Military, and in turn its navy, to be a fully modernised force by 2035, and a 'world class' force by 2050.²⁵ This 'world class' force is envisaged to be centred around Carrier Battle Groups, which can enable China to *project force* in every corner of the five island chains. Hence, we revert to the same question: how many aircraft carriers does China need—to be a world-class navy, to be able to project force around the world, and to be able to counter US Navy's naval power centred around its 11 CBGs?

An understanding of 'What is' and 'What was' is necessary so that a reasonable assumption can be made of the likely future position or state of China. History, as they say, provides a lot of answers. Hence, the intention is to investigate history to find an answer to China's goals *vis-à-vis* its aircraft carriers. In this regard, a newspaper article of 16 October 2019 reporting that China got the port rights of the entire island of Tulagi, in Solomon Islands²⁶ is relevant. Tulagi is an island in the Solomon Island Chain, east of Papua New Guinea and North-East of Australia. Here, the tagline 'What could Beijing want with Tulagi, where Allied forces fought a bloody battle with Japan in World War II? Some fear military ambitions'²⁷ assume special significance. While there was tremendous blowback against this muscle-flexing by China,²⁸ the intent was very clear: to expand its interests beyond the First Island Chain.²⁹ Considering the similar geographical imperatives with Japan in the Pacific, China's efforts in the Solomon Islands have a startling similarity to the Imperial Japanese campaign of military-economic expansion in the Pacific. Accordingly, it is proposed to study the Imperial Japanese era, specifically its aircraft carrier programme and its efficacy, to answer the question posed by Liu Zhen.

COMPARISON WITH IMPERIAL JAPAN

Prior to World War II, a similar dilemma was faced by Japan under the Imperial Command of its Emperor in the 1930s until 1945. Until the early 1920s, Japan considered the USA as its ally, and participated in the World War I as a 'Big Five' power. Japan consolidated the Pacific Operations, thereby countering German expansion dreams in East Asia and the Pacific. At the end of World War I, Japan expected to be equally remunerated with 'war spoils' along with the other allied powers. However, the unequal treatment meted out exacerbated Japan, and the racially discriminatory policies followed by the USA and Britain increased the divide. The Washington Treaty of 1922, wherein the total tonnage of warships that Japan could hold was randomly reduced, resulted in the forced decommissioning of their newly commissioned battleships, thus alienating Japan even further. In 1933, the sanctions placed by the Western powers on Japan due to its expansion into China was the final nail that broke its tenuous alliance with the allies, resulting in Japan exiting the League of Nations and, subsequently, from the Washington Treaty in 1936.³⁰ Japan considered the USA as the key pillar of the Allied Powers, and the USA's expansion in the Pacific to rein in Japan resulted in a competition which resulted in the Japanese attack on Pearl Harbour in December 1941.

However, despite Western sanctions, Japan bided its time, primarily to build its maritime prowess. In this regard, the innovative rise of 'Kido Butai', or the 'Mobile Force' which consisted of six Fleet aircraft carriers, seven Light, and three Escort aircraft carriers with over 400 embarked aircraft as well as a multitude of escort ships changed the maritime warfighting paradigm. The progenitor of this 'Kido Butai' was the inspirational Admiral Isoroku Yamamoto who believed that,

war with the United States was inevitable once the Japanese began hostilities. He believed that, since a traditional victory against the US was not possible, he had to shatter American morale and force a negotiated peace. For this reason, he scrapped the Imperial Japanese Navy's (IJN) traditional passive strategy of creating a decisive battle in the western Pacific in favour of an initial blow so crippling that it would undermine American morale.³¹

In order to restrict the scope of the Pacific Battle, the IJN divided their operations into two key phases, with the first operational phase being further sub-divided into three sub-phases. The first phase involved the capture and occupation of the islands and nations in the immediate vicinity: the Philippines, British Malaya, Borneo, Burma, Rabaul and the Dutch East Indies.³² The second operational phase called for consequent expansion into the South Pacific by occupying Eastern New Guinea, New Britain, the Fiji, Samoa, and 'strategic points in the Australian area'.³³ In the Central Pacific, Midway was targeted as were the Aleutian Islands in the North Pacific. The seizure of these key areas would provide defensive depth, and deny the allies staging areas from which to mount a counter-offensive.³⁴ The last major phase of the operation was to undertake a raid into the Indian Ocean using the Combined Fleet to neutralise the Royal Navy's Fleet, and to undertake punitive strikes against merchant ships supporting allied operations in the Indian Ocean.³⁵

Japan's conquests till the fateful Pearl Harbour attack on 7 December 1941 was largely attributable to the 'Combined Fleet', consisting of all six Fleet aircraft carriers with their 400 aircraft and the supporting armada of smaller aircraft carriers, battleships, cruisers, destroyers and frigates. The Zero Fighters, along with the slower but torpedo laden bombers, were game-changers and, for the first time, displayed what a strong heavily armed Carrier Battle Group could achieve. However, subsequent political pressures precluded Admiral Yamamoto from committing all six Carriers together, with the Imperial Army forcing Yamamoto to divide up his force to support

landing operations in Rabaul and Port Moresby in New Guinea.³⁶ This division of the force for undertaking the nearly concomitant Coral Sea and Midway operations, combined with some overconfident planning, led to the disastrous loss of four aircraft carriers, thereby significantly affecting their efficacy. The rest, as they say, is history, since Japan's key objective of forcing the Americans onto the negotiating table failed in the absence of any credible strike force.

CHINA'S OPTIONS

Owing to the similarity of geography involved, in case of a large-scale conflict, China may progress its operations in the same logical sequence as was followed by the Japanese, since it provides a graded expansion, and counters the USN footprint in the region slowly.

The recent Russia–Ukrainian war and the Hamas–Israel war has taught us that the era of a short and swift war, using overwhelming force, is a myth since the factor of surprise in today's age of Battle Space Transparency is difficult to achieve. Nearer home, the Kargil Conflict also revealed that, despite the Indian troops fighting with sub-conventional forces, it took nearly two months to reclaim lost territory. Hence, Admiral Yamamoto's swift and decisive action cannot be truly achieved in today's day and age. Thus, China specifically will require to build its forces to sustain a prolonged operation in the Pacific, and try and limit the same within these waters. Expanding its deployment into the IOR may become an option if it wishes to protect its trade lines through the Malacca and Sunda Straits.

Whilst PLARF claims to have the famed DF 26 and DF 31 Carrier Killers, its efficacy against a highly mobile CBG, with its integral AMD, has not been proven, and may be difficult to prove in the future. The PLA (N) submarines, with their swelling numbers of surface assets along with the potent Renhai class Type 52 Destroyers, would also play a critical role. However, China's belief in its primacy in the region, and the need to ensure decisive action, as also be seen as a superior force, would inevitably devolve around their ability to exert *sea control* in the region under consideration, be it in the *near seas* or *far seas*. Hence, in the case of any misadventure by China, the main counter to the inevitable American action in the West Pacific is likely to be centred around the concept of CBGs defined earlier. China would hope that, with decisive action, the efficacy of the USN CBGs may reduce. and allow it adequate time to achieve its objectives. Hence, we come back again to the key question: how many aircraft carriers does China need?

For this, let us revisit the era from 1939 to 1941, when the 'Kido Butai' was potent and effective. As has been said earlier, the 'Kido Butai' had six Fleet aircraft carriers, seven light and three escort carriers, with nearly 400 aircraft. After the fateful watershed event of the Pearl Harbour attack, the USA initially committed four fleet carriers which were part of the Pacific Fleet.³⁷ The pre-occupation with the Atlantic War, the need to support the Convoys to Russia, the continued assistance sought by Britain for its European War, and the large threat posed by the German U-Boats precluded the USA from deploying any additional aircraft carriers. However, the increasing tempo of Japanese expansion towards the South and Southeast Pacific to interdict the US–Australian SLOCs forced the Americans to deploy additional assets. The Battle of Coral Sea, wherein the US Navy lost two of its aircraft carriers, resulted in increased deployment, with nearly 28 aircraft carriers being deployed by the end of the war. The 'Kido Butai', which was at its rampaging best till May 1942, lost its momentum during the Battle of Midway, wherein, Japan lost four of its Fleet Carriers.³⁸ The subsequent American campaign, and the inability of Japanese industry to replenish its losses, resulted in Japan losing its momentum, which resulted in its subsequent surrender on 2 September 1945.

The Japanese initial success in the Pacific and Indian oceans can be directly attributed to the superior fire power of 'Kido Butai' and the lack of credible resistance from the allied forces. However, when the Americans matched the Japanese Carrier Force, Japan floundered. The inability of Imperial Japanese industry to match the industrial might of the US Navy was a key cause. The disjointed planning by the Japanese Military hierarchy also contributed towards the sub-optimal utilisation of their battleships and submarines (the Battle of Leyte Gulf and the Battle of Coral Sea being prime examples) and, consequently, to Japan's downfall.

Thus, China needs to overwhelm the American prowess and pivot in the Pacific. China's Warship Production programme has outperformed that of the USA in the past few years, and its speed of production is likely to ensure that it has the largest fleet of ships, submarines and aircraft in the foreseeable future. PLAN's present strength of 370 warships/submarines,³⁹ and its growing military-industrial prowess contrasts with the Imperial Japanese disadvantaged warship production *vis-à-vis* the USA during the Pacific War. However, China produces aircraft carriers at the rate of one every 3–5 years. This has been arrived at by the fact that the first indigenously constructed aircraft carrier, *Shandong*, was commissioned in December 2019,⁴⁰ and the second, *Fujian*, was launched in June 2022 and is likely to undergo sea trials

in 2024.⁴¹ Hence, despite embracing that principle of ensuring a Fleet vs Fleet superiority against the combined force of the USA, Japan and South Korea, China finds itself at a disadvantage. At present, China has two aircraft carriers, and a third has been launched in 2022⁴² *vis-à-vis* the USN inventory of 11 Super Carriers, and nine smaller Wasp and America class carriers (helicopter and STOVL carriers). At any time, the USA is mandated by the 10 US Code 8062 (b) to have *not less than 11 operational aircraft carriers*.⁴³ Currently, the US Navy has 11 aircraft carriers.

Taking this figure as a planning number, a few facts emerge. By the one-third law, at least 3–4 carriers would be under maintenance,⁴⁴ which means having around 7–8 deployable aircraft carriers. Considering the volatile security situation in the Middle East as well as Russian muscle flexing, at least three aircraft carriers would be required in the Persian Gulf, the Mediterranean Sea, the Red Sea, and the North Sea. Thus, it is envisaged that four aircraft carriers could be deployed in the Indo-Pacific to counter Chinese overtures during hostilities, especially if China decides to act upon its intent to militarily re-unify Taiwan. Taiwan's defence officials postulate that China could have the ability to mount a full-scale invasion of Taiwan in 2025.⁴⁵ When specifically queried on this subject, the President of the USA, Joe Biden, clearly enunciated that since Taiwan is considered to be a non-NATO Ally, the USA will assist in accordance with Article 5 of the NATO Charter of 1949.⁴⁶ In addition, The Taiwan relations Act of 1979, passed in the US Congress in March 1979,⁴⁷ would also compel the USA to act in Taiwan's defence. China's trying to re-unify Taiwan in 2025 is subject to speculation, and cannot be easily predicted.

AIRPOWER ONBOARD CARRIERS

Modern US Navy aircraft carriers, typically, carry 70–90 aircraft onboard. These aircraft include about 50–60 fighters and fixed-wing aircraft, and about 20–30 helicopters. The fighters include the potent F/A-18 Hornets, F/A-E/F18 Super Hornets, and the newly developed F35B/C Lightning Joint Strike fighter. These aircraft can undertake anti-ship strikes, the bombardment of shore-based targets, anti-aircraft operations, etc. The other fixed wing aircraft include Carrier Onboard Delivery (COD) aircraft, which can ferry personnel from ashore to onboard 200 nautical miles into the sea. In addition, the carriers have E2C Hawkeye early warning aircraft. The new Gerard Ford class of aircraft carriers are expected to carry more than 100 aircraft onboard. In addition, the USN has evolved the ability to generate a high sortie rate for

its aircraft through the expeditious launch and recovery of various waves of aircraft as well as quicker turnaround servicing and re-armament. The efficacy of these aircraft carriers was proved during the Gulf War I and, subsequently, during their operations. PLA (N) inducted the first aircraft carrier, *Liaoning*, in 2012 and, thereafter, commissioned the second carrier, *Shandong*, in 2019. *Liaoning* and *Shandong* have a complement of about 40 aircraft, including 26 J15 fighters. The third carrier, *Fujian*, is likely to be inducted into their service in 2024. The aircraft carrier with the latest Electromagnetic Aircraft Launch System (EMALS) is likely to operate about 60–70 aircraft, which would include about 40–45 F15 fighters and KJ 600 early warning aircraft. It is estimated that subsequent aircraft carriers would match more closely to the carrier complement of USN. Hence, whilst the USN has an advantage owing to its long experience of operating aircraft carriers, it is envisaged that China would be able to match the numbers of aircraft onboard its carriers with subsequent constructions.

As brought out by L. Zhen,⁴⁸ China would require at least six aircraft carriers to counter these 3–4 aircraft carriers of the US Navy which, at the current rate, would take at least 8–9 years. As, Zhen has postulated, this capability would be achieved by around 2035.⁴⁹ However, by 2025, China is likely to have only three operational aircraft carriers, considering its present pace of production. Whilst the multitude of airbases created by China in the various islands in the South China Sea, its potent Carrier Killer missiles—the DF 26 and DF 31⁵⁰—as well as the advantage of operating on Interior Lines will enable China to counter any operation that the USA and its allies in the region could mount.

Most people are of the opinion that to ensure that China can deliver a decisive blow during the initial skirmish, and subsequently sustain its operations in the Pacific, it would need at least six aircraft carriers to have a force ratio advantage close to two times that of the USA and its allies. The USA may well look at enhancing the number of deployable carriers in the Pacific by the early completion of refits of carriers under maintenance. However, their continued deployment in various parts of the world would necessitate sustained maintenance to enable them to replace the already deployed carriers. Recent wars have also shown that conflicts take a prolonged duration to be resolved. Hence, the reduction of the maintenance period of carriers in the longer run may not be an option.

In addition, China would be mindful that any of its overtures within the first and the second island chain would have a ripple effect in the Indian Ocean (the fourth and fifth island chain) as the majority of its trade flows

through this area. This would necessitate China to deploy its forces in this region. The question that Indian strategists need to delve into is whether, like the Imperial Japanese capturing the A&N Islands on 23 March 1942 to undertake strikes on the British Fleet, China would consider such an operation. There are many intangibles involved whilst answering this question, the primary issue being whether China will bide its time till 2035—or 2049—for achieving adequate Carrier Strength prior undertaking any major overtures on Taiwan.

This issue is critical since it is envisaged that any overtures of China in the IOR will invite the involvement of India's Carrier Fleet as well as the US Fifth Fleet deployed in the Middle East. To protect its trade, China will have to show significant force presence in the region, which would involve at least 2–3 aircraft carriers. Considering China's industrial capacity, and the propensity it has displayed of speeding up its warship production over the past few years, it is likely that the current trends of 3–5 years of the production of an aircraft carrier could be substantially reduced. Hence, by 2024, China would have three carriers; by 2027, it is expected to have two more, that is, five aircraft carriers by 2027, and around four more by 2035. Hence, by 2035, China is envisaged as having at least nine aircraft carriers to have adequate firepower in the Indo-Pacific.

INDIA'S OPTIONS

India enjoys cordial relations with many like-minded democracies, which includes participation with international militaries in bilateral and multilateral exercises. However, the Doklam and the Galwan incidents taught us that whilst China's actions may be condemned, the possibility of getting any military support can be intangible, and cannot be completely depended upon. National interests of the countries would determine their response, whether military or otherwise. Hence, there is a need for India to strengthen its military capability, and arrive at strategies to defend her national interest.

The key point to note is the distances involved from Hainan to the Indian Ocean and, subsequently, to the Persian Gulf and the Gulf of Aden. Despite Pakistan, Djibouti, Maldives, Tanzania and Sri Lanka providing China with overseas basing options, China would be mindful that it cannot rely upon the goodwill of local governments for progressing its operations. The 'low hanging fruit', thus, are the Andaman and Nicobar Islands. Just as in March 1942, Japan occupied the A&N Islands, and undertook certain decisive

strikes to prevent the British fleet from deploying, China may consider this option to be in play. Hence, India needs to first secure these islands by building robust defences, undertake sustained surveillance, and create offensive capability (both shore-based and naval). This is a slow process, but is already under progress by Government of India's capacity-building and capability enhancement programmes.

In the Maritime Strategy enunciated in 2015, the Indian Navy envisages its fleet to comprise three CBGs,⁵¹ with two Carrier Task Force (CTFs) consisting of 1–2 CBGs each.⁵² The Indian Navy needs to ensure this force availability and, like the USN Super Carriers, there is optimal firepower available in terms of adequate strike aircraft (at least two squadrons each) as well as potent escort ships, with multi-dimensional strike capability. In addition, having at least *three Carriers* would ensure that there is force parity between India and China in the IOR (that is, if China decides to deploy three carriers in the IOR). There is also an urgent need for India to expand its aircraft production line, and speed up the indigenous aircraft production capability. Dependence upon the goodwill of other nations, or any other allies, may not be the way forward as their own national interests may preclude them from providing overt military support to India.

There is an urgent need for those formulating 'staff requirements' for our ships and aircraft to move away from traditional thinking of singularly configured bulky weapons—such as anti-surface, or anti-air or anti-missile weapons—and embrace the concept of modular weapon packages, more compact missiles, with more such units fitted on our platforms, to significantly enhance the firepower of escort ships. As an aside, the Chinese Type 52 *Renhai* class ships have 112 missiles with a multitude of configurations, allowing for the mission to dictate the type of missiles held. Such flexibility and firepower significantly add to the potency of the platform. A similar concept may need to be considered by our planners.

The economics of operating aircraft carriers would preclude India from matching China *vis-à-vis* the number of aircraft carriers as well as embarked squadrons. The need for investing in potent submarines (conventional with AIP as well as nuclear propelled) is critical. The numbers of such submarines would merit a separate study. However, the numbers necessary to counter the mobility of the Carrier Task Force would be a key factor in determining India's submarine acquisition plan.

India would also need to review its Area of Interest in line with its ability to maintain surveillance. This would obviate stretching India's limited maritime assets, avoid operating on external logistic lines, and enable India

to leverage the advantage accrued by its centrality of location in the Indian Ocean and Energy SLOCs. The operational plans would require to be reviewed accordingly.

CONCLUSION

China's ambition to be the pre-eminent power in the world, with the rest of the world, including the USA, kowtowing to its imperatives are well known. This thirst for supremacy is inexorably leading to the clash of these two nations in the Pacific which, in turn, would spill over into the IOR. Whilst China is utilising its entire gamut of Comprehensive National Power to compete with the USA, there is every possibility of a military action between the two nations.

The launch of the third PLA(N) aircraft carrier in June 2022 resulted in discussions on the number of aircraft carriers that would be adequate for PLA(N) to effectively counter the US Navy in the Indo-Pacific. A look at the historical Pacific War between the Imperial Japanese Navy and the US Navy during World War II, provides us with a possible understanding of the number of aircraft carriers required. This necessity, combined with China's Industrial Will Power, China is envisaged to have at least nine aircraft carriers by 2035 to have adequate firepower in the Indo-Pacific.

A consequent effect would be for India to prepare for the possible spillover of the military action in India's Areas of Interest in the IOR. Despite India's engagements with like-minded democracies through QUAD, RIMPAC, and bilateral and multilateral exercises, the possibility that any overt military assistance may be available from these countries is debatable. This is evident in the recent Ukraine–Russian war, the Israel– Hamas action, or Iran's increasing rhetoric in the region. The inability of the United Nations to meet its primary charter of maintaining global and regional peace as well as the individual national interests of various nations may preclude any overt support to India's security concerns. Hence, India needs to secure its *own* maritime interests through a robust military strengthening programme.

The 200-page US DoD report on the PRC to the Congress (released in October 2023) is testament to the shifting focus of the USA. In addition, the volatile situation in Europe, the Middle East as well as in East Asia off the Philippines is likely to only escalate, precluding USA to completely focus on China. Thus, India would need to look out for its own interests, and plan for independent action in the region to ensure safeguarding its strategic interests,

with limited dependency on any other country. Any additional support that we can get, or give, would be considered a bonus. The key point is the constant of revision of Operational Plans to match the realities created by the volatile global security. What can be depended upon is the fact that the sheer presence of our strategic QUAD partners in the region would preclude the PLA from completely committing all its resources against India. Taking this variable into account in our operational plans can give India some realistic military goals.

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