March of the Carriers

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Aircraft carriers are finding favour with Indo-Asia-Pacific countries keen on bolstering their defences in an increasingly volatile neighbourhood

With simmering territorial disputes inflaming the Indo-Asia-Pacific, countries in this fastest growing economic region in the world are making all efforts to buttress their defences. In their anxiety to batten down the hatches, several of these countries are viewing the aircraft carrier as the preferred platform for sea control and are pulling out all the stops to commit funding for it. These platforms, at times amphibious ships that are essentially helicopter destroyers with the potential to operate fixed-wing aircraft, including drones, have been gaining favour as the South and East China Seas find themselves in the cross-hairs of territorial ambitions. But this military build-up is raising tensions even higher in the region and is likely to provoke an avoidable arms race. As many as 18 flatdecks have been, or are being, bought, built or operated by the six regional powers: China (five), Japan (four), India (four), Australia (two), South Korea (two) and Thailand (one).

Last August, India launched its 37,500-tonne indigenous aircraft carrier, the *Vikrant*, while Japan launched its 19,500-tonne *Izumo*, modelled more as a destroyer with a flight deck that can embark helicopters. With the *Vikrant*, India is now part of an exclusive group of countries like the UK, the US, Italy, Spain, Russia and France that can make these floating airfields. China has already started building its own maiden aircraft carrier at the Beijing-based China Shipbuilding Industry Corporation, which is scheduled for completion

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in 2018. Four such conventionally powered carriers are planned to be eventually built. Beijing at present has a lone carrier, the *Liaoning* (ex-*Varyag*), that it bought in an unfinished form from Ukraine in 1998 and which joined the People's Liberation Army Navy (PLAN) in 2012 after major refurbishment at the Dalian Naval Shipyard in northeast China. Australia decommissioned its sole aircraft carrier, the HMAS *Melbourne*, in 1982, but is currently building two 27,800-tonne *Canberra* class Landing Helicopter Docks (LHDs). South Korea launched the 18,000-tonne ROKS *Dokdo* in 2005 and commissioned it two years later. One more of the class has been planned. Thailand operates the smallest operational aircraft carrier in the world, the 11,485-tonne HTMS *Chakri Naruebet,* constructed in Spain and commissioned in 1997.

Global attention is evidently on an assertive China that is taking concerted strides towards becoming a dominant military power in the Pacific, with a commensurate Navy that can project its maritime power across the littoral. The United States and its allies in the Asia-Pacific and Indian Ocean were taken aback when, last November, Beijing announced an Air Defence Identification Zone (ADIZ) over much of the East China Sea, cautioning all foreign military or civilian aircraft to report their flight paths through the zone to China.

The Chinese government followed this up in March by budgeting almost US$132 billion for its military for 2014, a 12.2 per cent rise over last year. This marked a rate of growth in spending greater than that of recent years: 10.7 per cent in 2013 and 11.2 per cent in 2012. China has often been criticised by its neighbours like Australia, Japan and Taiwan for lacking transparency in its military growth, by keeping much of its funding for developing new technologies out of its official figures. It is, hence, widely assumed that Beijing will be spending over US$200 billion on its military this year. Even by its official pronouncements, China spends almost four times more on defence than India, which has a defence budget of US$37 billion, and more than Japan, South Korea, Taiwan and Vietnam combined.

Indeed, China's military spending is the second largest in the world, though well behind that of the United States, which for Financial Year (FY) 2015 has allocated US$495.6 billion. Washington plans to reduce its active force from 572,000 at present to the smallest size – 440,000 to 450,000 – since before World War II, when the US Army was a force of 570,000, but is disquieted enough by the developments in the Asia-Pacific to heighten its already formidable presence

there. US President Barack Obama's "pivot" strategy in the Asia-Pacific is based on the premise of "rebalance" that entails the relocation of 60 per cent of the US' naval assets – up from 50 per cent today – to the region by 2020. The Chinese actions have also prompted regional players like Japan and Australia to boost their military spending. Budgeting US$46 billion for its defence this year, Japan has also proposed to increase its military expenditure by 5 per cent over the next five years, to US$238 billion for the period 2014-19.

Australia too feels it cannot remain complacent about its languishing defence budget, which was AU$25.3 billion for 2013-14. It has announced it will not prune defence spending in the May budget, but has yet to reveal when the defence sector will start being apportioned the target of 2 per cent of Gross Domestic Product (GDP). The Defence White Paper released in May 2013 bases the defence funding model on the four-year Forward Estimates Budget cycle, determined annually on the basis of strategic economic and fiscal circumstances and a subsequent six-year general guidance for defence planning purposes. Canberra will, thus, provide defence with AU$220 billion of funding guidance from 2017-18 to 2022-23. With the Asia-Pacific having become a cauldron of intense emotions, other countries in the region too are investing as much as they can in security. Thailand's defence budget is US$5.39 billion, while its external debt is US$133.70 billion, and Indonesia's is US$8 billion. There is an inevitability in budget escalations as they enable more of these regional countries to make more expensive and major inductions like aircraft carriers. In fact, even in Africa, Angola is said to be acquiring Spain's recently decommissioned aircraft carrier, the *Principe de Asturias*!

There are currently 37 active aircraft carriers in the world within 12 Navies. The growing appeal of the aircraft carrier as a viable capital ship of a fleet – that in the past had replaced the battleship of yore – lies in its capacity of being a credible force multiplier. As the centrepiece of naval operations, these floating airfields are geared for sea control, empowering Navies to project their maritime and air power far beyond their areas of operations. They can also serve as powerful platforms for ISR (Intelligence, Surveillance and Reconnaissance), logistics and close air support, anti-submarine and anti-surface missions, and land assault. Strategists, however, have for long debated the relevance of the flatdeck in a theatre of long-range strategic air power, submarine-launched ballistic and cruise missiles, and unmanned aircraft and drones. Yet the utility of the carrier has sustained over the years since its primal advent back in November 1910 when Eugene Ely, a 24-year-old civilian pilot, pioneered naval aviation when he took off in a 50 horse power (hp) Curtiss plane from a wooden platform built over

the bow of the American scout cruiser, the USS *Birmingham*. Two months later, he also recorded the first landing of an aircraft on a ship's deck when he touched down on a 130 ft by 32 ft wooden platform built on the fantail of the armoured cruiser, the USS *Pennsylvania*, which was anchored in San Francisco Bay.

Aircraft carriers today vary from converted cruisers and aviation-capable ships to steam and nuclear powered warships that cater to the operational, and budgetary, requirements of their Navies. Apart from the type, or mix, of rotor and fixed-wing combat aircraft they can carry, they have their own range of firepower. But they are extremely expensive to build and vulnerable to an extent, unless part of a battle group. Often, aircraft carriers have priced themselves out of military planning. Many Navies find it more affordable to buy them rather than build them. But for a superpower like the US, aircraft carriers have been essential for securing the seas and asserting its maritime supremacy, having played a direct or supporting role in almost every major military operation of the US since World War II. Last November, the US Navy unveiled the first of its newest generation of aircraft carriers with the launch of the US$13 billion USS *Gerald Ford*. This costliest, and most lethal, supercarrier ever built will be manned by 4,000 sailors and marines, is virtually invisible to enemy radar and is equipped to launch 220 air strikes per day. It will enter the fleet in 2016 and is expected to stay commissioned for five decades. Though this Ford-class project has been criticised for delays and cost overruns, there are plans to build three more of this type, at a cost of US$43 billion.

For France, however, surging costs have deterred extension of its aircraft carrier programme. Not only is its solitary carrier, the *Charles de Gaulle*, operational for only 65 per cent of the year owing to heavy maintenance requirements on its nuclear power system, France has also had to exit the joint Anglo-French aircraft carrier programme. The French Court of Auditors recently revealed that France had lavished £214 million on studies on this initiative, £112 million of this to the UK in 2006-07 towards the latter's Carrier Vessel Future (CVF) programme and an additional £102 million on contract studies related to industrial cooperation, "with results now unusable". This common agenda to share development costs had been negotiated by the two countries in 2002, but was suspended in 2008 and finally cancelled in 2013 by France's military programming law. The proposal was for constructing two carriers for the Royal Navy, of the currently in-build Queen Elizabeth class, and one for the French Navy.

India is an Indian Ocean/Asia-Pacific power that has recently both purchased and built aircraft carriers, but has been overburdened by the costs of the acquisition. The Indian Navy has traditionally relied upon two carrier battle groups, one each

for its operational commands of the western and eastern seaboards. Its maiden ex-British carrier, the INS *Vikrant* (former HMS *Hercules*), commissioned in 1961, was, however, paid off in 1997, and its second ex-British flatdeck, the INS *Viraat* (former HMS *Hermes*), is due to be decommissioned in 2018, nine years behind schedule, as it has been sailing with the Indian Navy since 1987. In fact, both were the world's oldest operational carriers, the hull of the 19,500-tonne *Hercules* having been laid down in 1943 and launched in 1945 and of the 28,700-tonne *Hermes*, in 1944, but not launched until 1953. With the induction last November of the 44,750-tonne INS *Vikramaditya* (former *Admiral Gorshkov*, bought from Russia), the Indian Navy finally again has two carriers after a breach of 17 years. India has besides built its first Indigenous Aircraft Carrier (IAC), the 37,500-tonne INS *Vikrant,* which was launched in August 2013. As with all major inductions in India, the *Vikrant* too was behind schedule by three years, but it will now be joining the Indian fleet by 2018 after extensive trials starting in 2016. It was designed by the Directorate of Naval Design of the Indian Navy and constructed by the public sector Cochin Shipyard Limited (CSL), using high grade steel made by a state-owned steel company. Named after its forebear, India's first carrier, the *Vikrant* measures 260 m in length and 60 m in beam and will embark the Indian-made Tejas Light Combat Aircraft (LCA) and Dhruva Advanced Light Helicopter (ALH), and the Russian MiG-29K fighter aircraft and Kamov-31 helicopters. Its total cost is expected to exceed $4 billion once it is fully equipped.

The purchase of the *Admiral Gorshkov* from Russia has proved strenuous for India. The deal has been rebuked by the Comptroller and Auditor General (CAG) of India that noted, "The Navy is acquiring a second-hand refitted aircraft carrier that has half the lifespan of, and is 60 per cent costlier than, a new one." The CAG report mentioned that the ship was in poor condition even at the time of purchase and needed a complete overhaul to make it battle-ready. New Delhi had signed a US$947 million contract with Moscow in January 2004 for revamping the *Admiral Gorshkov,* a modified Kiev-class missile cruiser with an aircraft complement, which had been launched in 1982 and moth-balled after the Cold War. This conversion into a full carrier, with the removal of missile launchers and guns from the front deck and construction of a full runway and ski jump saw time-lines slipping to such an extent as to warrant repeated refits of the INS *Viraat* just to ensure that India was not bereft of even a single carrier-based task force. The first delivery date for the Russian ship had been August 2008, around the time the INS *Viraat* was scheduled to retire. Once India was committed to the deal, Russia sought its renegotiation to US$2.2 billion in March 2010.

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The revised deal involved the supply of additional MiG-29K/KUB naval fighters and Ka-27PS/PL and Ka-31R helicopters. A boiler blowout during sea trials also led the *Gorshkov* to miss the revised deadline of December 2012. Meanwhile, India is pursuing its plan to build two indigenous Vikrant class carriers, having already begun construction on the second carrier.

The two 27,800-tonne Canberra-class Landing Helicopter Docks (LHDs), also known as amphibious assault ships, being constructed for the Australian Defence Force (ADF) at a cost of AU$3.1 billion, will provide one of the most capable and sophisticated air-land-sea amphibious deployment systems in the world. To be jointly crewed with personnel from the Navy, Army and Air Force, the LHD will be able to land a force of over 2,000 personnel by helicopter and water craft, along with all their weapons, ammunition, vehicles and stores. The range of ADF helicopters that will operate from its 202.3 m by 32 m flight deck will include the MRH90, CH-47 Chinook, Blackhawk, S-70B-2 Seahawk, Romeo Seahawk and the Armed Reconnaissance Helicopter. On-board defensive systems will be the AN/SLQ-25 Nixie anti-torpedo towed defence system, the Nulka active missile decoy system, four 20 mm automated guns, and six 12.7 mm machine guns.

The HMAS *Canberra,* the first LHD, will be commissioned this year, while the second, the HMAS *Adelaide*, will join the fleet in 2016. Spain's Navantia, the world's ninth largest shipbuilder, is responsible for the design and construction, while BAE Systems Australia, a subsidiary of BAE Systems plc and the largest defence contractor in Australia, is the prime contractor. Navantia's Ferrol-Fene shipyard in northwest Spain has constructed the hull to the level of the flight deck, including the majority of fitting out, after which the hulls are shipped to BAE Systems' Williamstown shipyard in Victoria for the installation of the island structure. The island modules are being constructed at sites across Australia before being moved to Williamstown for final installation on the flight deck.

What has drawn much attention has been Japan's launch of the 19,500 tonne *Izumo*, its largest military ship since World War II. Classified as a Helicopter-Destroyer (DDH) by Japan's Maritime Self-Defence Force (MSDF), the *Izumo* class – built by IHI Marine United (previously Ishikawajima-Harima Heavy Industries) – is widely seen to be configurable as an offensive aircraft carrier, which is proscribed by the country's pacifist Constitution.

Article 9 of Japan's Constitution, which came into effect in May 1947, says: "… the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes. In order to accomplish the aim of the preceding paragraph, land, sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognised." The *Izumo*, to be commissioned in 2015, and its yet-to-be-named planned sister ship will complement the 13,950 tonne Hyuga-class helicopter destroyers, the JS *Hyuga* and JS *Ise*, which entered service in 2009 and 2011. This makes Japan the second Asian power, after India, to have four carriers in operation, launched or under construction. China, of course, has one, with four planned for construction. The *Izumo* launch has roused much controversy in the Asia-Pacific, with Beijing branding it an "aircraft carrier in disguise". China and Japan have been engaged in a prolonged territorial wrangle over the uninhabited group of islets called Diaoyu by China and Senkaku by Japan that is estimated to have potentially vast gas and oil fields off its shores. Tokyo has a similar dispute with Seoul over the island of Liancourt Rocks that it calls Takeshima and which South Korea knows as Dokdo. Hence, Seoul's christening of its Landing Platform Helicopter (LPH) as the ROKS *Dokdo* had irked Japan.

The primary mission of the Japanese DDHs is anti-submarine warfare, for which they can embark Sikorsky SH-60K Seahawk anti-submarine helicopters, Agusta-Westland MCH-101 Merlin airborne mine counter-measures helicopters, as also the Boeing MV-22B Osprey tilt-rotor. But the likelihood of unmanned surveillance drones being operated from the decks of the larger Izumo-class by the MSDF has unsettled other Asia-Pacific countries which view this as a prelude to fixed-wing flights they believe can be possible with appropriate alteration of the decks. Japan's Prime Minister Shinzo Abe, after all, has been seeking a greater role for his country in international peace-keeping and desires to step up its defence posture by amending the Constitution, if necessary. While any such amendment requires a two-thirds vote in both Houses of the Japanese National Diet as also a majority vote in a national referendum, both of which appear daunting, a novel reinterpretation of the Constitution may allow reinforcement of the Self-Defence Force (SDF), which is currently forbidden from conducting combat operations.

The Asia-Pacific region was unsettled also by China last November when it dispatched the *Liaoning* to the disputed waters of the South China Sea, escorted by two destroyers and two missile cruisers. Beijing maintained it was a "scientific and training mission", but it was evident to all that the carrier-led armada was steaming through the waters China claims sovereignty over and which has drawn

it into disputes with its neighbours such as Japan, the Philippines, Vietnam, Taiwan, Malaysia and Brunei Darussalam.

While construction of the first of China's own aircraft carriers has begun, the hull of the second of the planned four of the Type 001A indigenous carriers will be laid down next year. The cost of the two is estimated at US$9 billion and they are proposed to be outfitted with ski-jump ramps. Beijing is reportedly aiming to establish three carrier battle groups by 2020 to serve all the three major fleets of PLAN. The Type 001A will be an upgraded version of the *Liaoning*, which was originally the Admiral Kuznetsov-class *Varyag*. Chinese defence officials are yet to determine whether the J-31 stealth fighter will replace the J-15 as the carrier-based fighter. In 2012, the J-15, the precursor to the newer J-31, made its first successful landing on the *Liaoning*.

The South Korean ROKS *Dokdo* and its proposed sister ship are intended to expand the country's blue-water force to cope with the rapid naval build-ups of China and Japan. The second Dokdo-class landing platform helicopter ship will have a ski-jump ramp to operate Short, or Vertical, Take-Off and Landing (STOL or VTOL) aircraft. It is possible that the *Dokdo* too would be fitted out with such a ramp by 2019. Seoul may also build an amphibious assault ship, similar to the Spanish Navy's *Juan Carlos*, before 2019, and two 30,000-tonne light aircraft carriers between 2028 and 2036. Built by Hanjin Heavy Industries and Construction in Busan, the ROKS *Dokdo* is the largest vessel in the South Korean Navy. Its flight deck can accommodate five UH-60 Black Hawk helicopters at a time and is armed with the RIM-116 RAM (Rolling Airframe Missile) system, which is an infrared homing surface-to-air missile used against anti-ship cruise missiles. The ship has specifications similar to the Spanish Navy's aircraft carrier, *Príncipe de Asturias*, which Angola has bought. The 11,485 tonne *Príncipe de Asturias* is the smallest carrier afloat and the Royal Thai Navy's flagship, the HTMS *Chakri Naruebet* is of this type, constructed in Ferrol, Spain, by Spanish shipbuilders, Izar (formerly EN Bazan), at a cost of US$336 million. Commissioned in 1997, the carrier's main role is Exclusive Economic Zone (EEZ) surveillance and Search and Rescue (SAR). But apart from assisting in SAR after the March 2011 tsunami disaster in the region, the carrier has been berthed most of the time owing to high operational expenses. As of now, the unpredictable, and often times combative, regime of North Korea has no plans for carrier inductions. But if it ever did, battle-lines in the Asia-Pacific would be drawn even tighter.

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