

INS Vikramaditya - Deployment Options for India

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Summary

With the INS Vikramaditya's arrival in India, it is time to undertake a dispassionate assessment of the ship's possible uses and deployment options. Notwithstanding the debate among analysts about the aircraft carrier's role and relevance in a modern day context, the narrative of recent maritime developments suggests, it is still a potent platform of 'power projection' and naval presence operations. But even beyond the considerations of its hard-power usage, the Vikramaditya may prove to be an effective tool of regional outreach. The Indian navy would be well served if it considered employing the ship in a 'soft power projection' role - as a versatile asset to be used in diplomacy and regional outreach, disaster relief and humanitarian missions.

Introduction

Six weeks after it set sail from Severodvinsk in North Russia, India's newly commissioned aircraft carrier, INS Vikramaditya, home-ported at the Karwar naval base in Karnataka recently. The ship, escorted along nearly its entire passage by INS Trikand – the Indian navy's latest and the last of the six Talwar class 'stealth' frigates ordered from Russia - the INS Delhi and the tanker-ship INS Deepak, traversed a distance of nearly 10,000 nautical miles before reaching Indian waters. On entering the Indian navy's area of operations in the Indian Ocean, it was greeted by the entire Western Fleet that had sailed all the way from Mumbai to receive the ship.

The Indian navy is understandably elated at the development. For naval planners, it has been a long wait for their premier operational platform. It was almost nine years ago that the Vikramaditya's procurement process got underway, with the ship entering an extensive refit and refurbishment programme at the Sevmash shipyard in Severodvinsk, North Russia. Many additions and alterations later, and a series of installations and trials - involving numerous hits and misses, reverses and successes - the aircraft carrier's was finally commissioned on Nov 16, 2013.

Now, as the new aircraft carrier enters an Indian port for the first time, it is time to finally take a good hard look at the asset and examine its possible uses and deployment options.

A Brief History

An assessment of the Vikramaditya's attributes and capabilities needs an objective and clinical consideration of the history of its acquisition. The ship's metaphoric 'journey' into an Indian realm has, indeed, been a long and eventful one. For starters, this was not an aircraft carrier in its original form at all. Formerly, the 'Baku' - a Ukraine constructed, Kiev class 'aircraft carrying cruiser' - the ship was originally designed for Vertical Take-off and Landing (VTOL) fighters like the Yakovlev-38 aircraft. The 'Baku' was renamed as the 'Admiral Gorshov' in Nov 1990 and remained in service till 1996 when high cost of operation in the post-cold war era led the Soviet navy to decommission many of its ships.¹

Negotiations for acquiring the 44,500 ton Admiral Gorshkov aircraft carrier started in 1994 after the ship was put up on offer by Russia - ironically, as a 'free gift' to India provided the costs for refit and fighters were paid.² The Indian navy was then looking for a new carrier, as the old warhorse 'Vikrant' was on its last legs. By the time the Vikrant

¹ Lawrence Sondhaus, "The Soviet navy, 1956-1991", *Navies in Naval War History*, Reaktion Books, London, UK, 2004, p 36

² INS Vikramaditya: All about India's second aircraft carrier, Dec 17, 2013, *Defence News*, available at <http://www.defencenews.in/defence-news-internal.asp?get=new&id=2701>

retired in 1997, the navy's search had turned frantic. So when Russia repeated its offer, it was just too attractive for India to pass up. New Delhi moved fast, assigning naval and scientific delegations to examine the ship. Soon, the ship's hull has been assessed and declared it fit for procurement.

The deal, however, got bogged down in the official negotiations. While a memorandum of understanding (MoU) was signed in Dec 1998, followed by an Inter-Governmental Agreement, there was still some ambiguity about the price and the extent of work. As per the initial terms of purchase in April 2000, the refit cost of the ship was set at \$400 million. However, by the time a commercial contract came up for consideration in Jan 2004 the price had jumped to \$1.5 billion (Rs 4881.17 crores) for the entire package of ship, spares, infrastructure augmentation and documentation (with \$974 million earmarked for the refit and rest for 16 MiG-29Ks).³At that point, the ship was scheduled to be completed within 52 weeks at the Sevmash shipyard.⁴

Designated "Project 11430", the ship was handed over to the Sevmash shipyard in Severodvinsk so that the process of refurbishment could start.⁵India, however, was to soon find out that Russia has plans to milk the deal further – this time, on the grounds that the refit work was in need of a serious review on account of a gross underestimation. A bitter wrangling began, which caused much sourness in the India-Russia bilateral relationship. A slighted India, accused Russia of reneging from its commitment to a "fixed price contract".⁶

Another deal was inked in 2010 – the revised cost, this time, set at \$2.33 billion - with training, logistics packages and shore facilities counted, but excluding an additional \$2 billion for 45 MiG-29Ks.⁷ Finally, Russia agreed to deliver the INS Vikramaditya by December 2012. Work shifted into high gear to complete the refurbishment work. But there was to be one final slip: during the concluding sea trials it was observed that there was a major snag in the boilers. During the last full speed trails of the ship, insulation 'bricks' in eight fast firing boilers collapsed setting back the ship's delivery by another 12 months.⁸

³ *ibid*

⁴ Vikramaditya is like no other ship Indian Navy ever had, *Defence News*, Nov 16, 2013, available at <http://www.defencenews.in/defence-news-internal.asp?get=disagree&id=2465>

⁵ Admiral Arun Prakash (Retd), "A Sea Change", *The Indian Express*, Nov 18, 2013

⁶ RajatPandit, "INS Vikramaditya will be a game-changer", *Times of India*, Nov 14, 2013

⁷ Vladimir Karnozov, "First Navy Day with Vikramaditya in commission", Dec 4, 2013, *Russian Aviation*, available at <http://www.ruaviation.com/docs/3/2013/12/4/76/print/>

⁸ "Vikramaditya's Boiler Problem. How Serious?", *Indian Strategic Studies*, Nov 18, 2012, available at <http://strategicstudyindia.blogspot.in/2012/11/vikramadityas-boiler-problem-how-serious.html>

Essential Characteristics

The Vikramaditya has a 44,500-tonne displacement, and is 284m in length. With 22 decks and 1600 crew members, it is virtually a floating city. A capacity of over 8,000 tonnes of fuel, gives the ship an operational range of over 7,000 nautical miles.

The modification work on the ship involved converting it from VTOL aircraft operating cruiser ship, to a STOBAR (Short take off but arrested recovery) class of a conventional aircraft carrier. This involved a massive redesign and modifications including changing the flight deck to include ski-jump and arrester gear; modification of bulbous bow. Nearly 2000 compartments in the ship are said to have been modified with the required installation of required equipment and fittings. Apart from engine room boilers, generators, distilling plants, sensors and warfare equipment installed, this also included installation of a new 14 degree Ski jump and arrester gear to accommodate MiG 29 K fighters. The steel work for carrying out structural modification on flight deck is said to have added almost 2500 tons to the ships weight.

A glaring limitation with the ship is that it lacks an on-board close-in-weapon-system and short range surface-to-air missiles.⁹ In the absence of integral defensive capability, it needs an entire armada of escort ships and defending aircraft to perform its intended role effectively. The navy, apparently, has plans to rectify this deficiency by an urgent installation of defensive systems (Long Range SAMs and Close-in-weapons systems) onboard the ship.¹⁰

Displacement	44,570 ton
Deck	273m, 14 degrees Ski jump
Aircraft complement	20 MiG-29 fighters and up to eight Kamov Ka-28/Ka-31 anti submarine helicopters

Operational Capabilities

The main-stay of the Vikramaditya's aviation capability is the MiG-29K naval combat aircraft. Along with the Kamov 31 and Kamov 28 anti-submarine warfare and maritime surveillance helicopters, the Mig 29Ks form the operational spearhead of the ship's combat capabilities. Additionally, there are plans for the aircraft carrier to host Sea Kings, ALH-

⁹ "Vikramaditya may lack air defence", *The New Indian Express*, Aug 3, 2013

¹⁰ Reportedly, by 2017 the IN plans to fit the ship with locally-developed Close-In Weapon Systems and Rafael-Israel Aerospace Industries' Barak 8 long-range air-defence missile system; See Rahul Bedi, "India's Vikramaditya arrives at home port", Jan 7, 2014, *IHS Jane's Navy International*, available at <http://www.janes.com/article/32159/india-s-vikramaditya-arrives-at-home-port>

Dhruv and Chetak helicopters. With its aircraft and helicopters, the ship is able to exercise sea-control over a three-dimensional bubble of about a 400-450 mile radius.¹¹

Reportedly, the aircraft carrier is already being prepared for the next phase of integration with the air wing, comprising about 30 Mig 29K aircraft and six Kamov Ka-31 reconnaissance and anti-submarine helicopters. The procedure of integration of the air-component is likely to take around four to six months after which the aircraft carrier will be officially ready to take on fully operational role. This is also when the ship will be equipped with surface-to-air missile (SAM) and close-in weapon system (CIWS) – a telling gap in its defensive capabilities.

Meanwhile, Indian naval fighter pilots are in the final phase of training to carry out flying operations from the carrier deck. In May 2013, the Indian Navy commissioned a 'Black-Panther' squadron at INS Hansa in Goa.¹² A batch of combat fliers from the squadron has already undertaken simulator drills in Moscow, and are perfecting their take-off and landing skills on the shore-based test facility (SBTF) at INS Hansa in Goa.

For the Indian Navy, operating two full-fledged carrier battle groups (CBGs) - one each for the eastern and western seaboard – is not just a long-standing ambition, but also an essential component of its operational strategy. The ship, though, has a crucial limitation. It has no air defence systems and relies completely on its escort ships for defence against incoming enemy missiles. The INS Vikramaditya brings the navy one step closer to actualising a desirable end-state. If intended plans are properly implemented, by the end of the next phase, the navy will induct the 40,000-tonne INS Vikrant, being built at the Cochin Shipyard. The Vikramaditya, in the words of India's Naval Chief, Admiral D K Joshi, is in many ways intended to "bridge the gap between the INS Viraat's decommissioned, and the entry of the indigenous INS Vikrant".¹³

An Aircraft Carrier's Operational Role

The Vikramaditya's commissioning brings into focus a debate among maritime analysts on the relevance of aircraft carriers. Proponents argue they constitute the core of a blue-water navy's operational strategy, while opponents say an aircraft carrier's high

¹¹ Vladimir Karnozov, n 9

¹² Indian Naval Air Squadron 303 (INAS 303), nicknamed the Black Panthers was commissioned in May 2013 and will operate 16 single-seat MiG-29K fighters, and four twin-seat MiG-29KUB aircraft. A second squadron of MiG-29K fighters still remains to be delivered by Russia, which was earmarked for the first Indigenous Aircraft Carrier (IAC-1) that Cochin Shipyards is expected to deliver by 2015; See Ajai Shukla, "Indian Navy commissions first MiG-29K squadron", *The Business Standard*, May 12, 2013

¹³ "INS Vikramaditya Sets Sail for India", *The Hindu*, Nov 27, 2013

vulnerability and inadequate logistical sustainability renders it an obsolete asset. Not only is it an exorbitant proposition, it is also incapable of projecting any considerable offensive power. The fact that it is virtually defenceless against under-water attacks, make it a liability in war.

Compelling as the sceptics sound, it is the proponents that still make the stronger case. Modern day maritime discourse, supporters aver, requires aircraft carriers to be seen in radically new light. Ocean-going navies today need three types of conventional assets. The first category comprises 'hard-power assets' - fighting platforms like destroyers, frigates, missile boats and attack submarines meant for the real combat operations in a conventional naval battle. Many of these platforms are used - in what is usually referred to as - a 'sea denial' role. The second lot is of 'soft power' assets like hospital ships, HADR ships, survey vessels, etc. These provide a valuable regional (and global) service and are critical for a navy's soft power outreach, also contributing substantively to a nation's diplomatic effort. Finally, and most significantly, a navy needs assets for 'power projection' - a critical component of a nation's military and foreign policy. Power projection assets are embodiments of a nation's strategic capability and political intent. Aircraft carriers fall in this category.

The Indian navy is beginning to realise that hard-shelled 'persuasion' is usually more effective than a tepid form of regional outreach characterised by low-level maritime exercises. The sight of combat aircraft and helicopters operating from the deck of an aircraft carrier in distant waters sometimes does more to convince potential partners of the potency of a maritime force, and the benefits of a potential partnership than any other form of engagement.

Options for Deployment

Navies are inherently inclined to see aircraft carriers are combat assets first - meant to control the seas, project power and convey strategic intent. Indeed, in light of the Indian Navy's increasing role as guardian of sea-lanes, it is natural for the Indian navy to conceptualise the new aircraft carrier's operational role in hard power terms - for the policing of the SLOCs and to maintain a strong presence in the Indian Ocean. The Vikramaditya is likely to be a huge force multiplier, as it not only adds a lethal punch to the navy's arsenal, but also allows for an integration of operational platforms and capabilities allowing them to be used flexibly in both defensive and offensive ways.

The Indian Navy would also be keen to use the carrier to retain its expertise in aircraft carrier operations. It is germane that the delay in acquiring the indigenous aircraft carrier caused great anxiety among the navy's leadership about an eventual loss of skill

and proficiency in handling aircraft carrier operations.¹⁴ This was one of the primary reasons why the Indian navy pushed for the Gorshkov's acquisition. The new carrier enables the Indian navy to continue with its fine tradition of maintaining an aircraft carrier in its armada. It is just as well that the Vikramaditya is a major improvement over the INS Viraat, which has technically reached the end of its service life, with an aging bunch of Sea Harrier fighters.

As significant as the ship's 'hard power' role is, however, the Indian navy can ill-afford to ignore its utility in a disaster-relief and humanitarian role. As the previous section of this brief observes, aircraft carriers, these days, have more than a hard-power role. The U.S. response to typhoon Haiyan disaster in the Philippines recently showed that the deployment of an aircraft carrier in support of humanitarian assistance and disaster relief (HA/DR) operations is singularly the most important strategic mission for a navy. In the case of the US navy, during the past five years, its principal strategic deployments have all been deployments of aircraft carriers for disaster relief missions in Indonesia, Pakistan, Haiti and Japan.¹⁵ These ships are now deemed useful instruments in the U.S. foreign policy tool-kit and play a part in the conduct of US strategic relations.

In contemplating the Vikramaditya's 'soft-power' role, the Indian navy will also be aware of China's maritime ambitions and the role that the PLA-N's new aircraft carrier - the Liaoning - might play in China's Indian Ocean expansion. China's new aircraft carrier may play an increasing role in the PLA-N's soft power diplomacy, a key component of its 'far-seas' naval strategy.

Needless to say, there are both opportunities and vulnerabilities inherent in aircraft carrier operations. In Dec 2013, for instance, the U.S. Navy deployed the USS George Washington and two other cruisers for the disaster relief mission in the Philippines. A few days later, one of these ships - the USS Cowpens - ended up getting embroiled in an incident with the Chinese aircraft carrier Liaoning, as it shadowed the latter during a PLA-N training exercise in the South China Sea.¹⁶

Regardless, however, of how it eventually culminated, the incident is a reminder of the overlap that exists between non-traditional and traditional naval missions these days.

¹⁴ "The Gorshkov Package", *The Hindu*, Jan 22, 2004, available on <http://www.hindu.com/2004/01/22/stories/2004012201301000.htm>

¹⁵ Commander Elton C. Parker III, "Aircraft Carriers and What Comes Next", *War on the Rocks*, Dec 2013, available on <http://warontherocks.com/2013/12/aircraft-carriers-90000-tons-of-soft-and-hard-power-projection-but-what-comes-next/>

¹⁶ Carl Thayer, "USS Cowpens Incident Reveals Strategic Mistrust Between U.S. and China", *The Diplomat*, Dec 17, 2013, available at <http://thediplomat.com/2013/12/uss-cowpens-incident-reveals-strategic-mistrust-between-u-s-and-china/>

Ships planned to deliver humanitarian aid in one mission, are usually sent for patrolling, surveillance and presence missions in the very next instance – all during the same deployment. Naval assets thus end-up being used along the entire spectrum of combat and non-combat operations.

A Soft 'Power Projection' Mode

It is instructive that the developing tactics of naval operations suggests an inclination towards a benign power projection role for naval assets. The pattern of operations of naval operational trend with both the US navy and PLA-N suggests that maritime power is welcomed if it is for altruistic purposes. This has especially been the case with the multi-national anti-piracy operations off the coast of Somalia. Importantly, when naval ships are deployed in a non-traditional mission, it has most often created opportunities for navies to also play a hard-power role. Smart maritime forces recognise this aspect and capitalise on these chances.

If the Indian navy acknowledges this unique feature of evolving maritime operations it may consider a bigger role for the Vikramaditya in HADR operations. In this, the navy might be well served if it acquired a hospital ship. The absence of such a platform constrains India's ability to expand its humanitarian role in its region of influence. In the case of the US, the USNS Mercy had played a robust role in disaster relief operations and has been a part of nearly all recent strategic missions.¹⁷ Even the PLA-N has been actively deploying its own hospital ship, the 'Peace Ark' for a variety of humanitarian and out-of-area contingency missions – deployments that have only helped in the greater expansion of its national influence. More pertinently, a hospital ship validates the legitimacy of a humanitarian mission. When an aircraft carrier is accompanied by a hospital ship, the mission acquires the complexion of a genuinely benign operation – thereby making the former's deployment more palatable for regional countries.

This is not, in any way, to detract from the Indian navy's contribution in regional humanitarian operations. If anything, the service has a fine track-record of participation in such missions – amply attested to by its relief and aid effort in the aftermath of the 2004 tsunami in the Indian Ocean. In recent years, the Indian navy has, in fact, developed a better appreciation of itself a tool of regional diplomacy and humanitarian relief.¹⁸ The Indian naval maritime doctrine professes to the new diplomatic role that the service

¹⁷ Admiral Gary Roughead (USN Ret.), J. Stephen Morrison, Rear Admiral Thomas Cullison (USN Ret.), Seth Gannon U.S. Navy "Humanitarian Assistance in an Era of Austerity", *Center for Strategic and International Studies*, Global Health Policy Center March 2013

¹⁸ Hash Pant eds, *The Rise of the Indian Navy*; C UdayBhaskar, "The Navy an instrument of Foreign Policy", Ashgate Publishing Company, 2012, p 41

envisages for itself.¹⁹ Within the broad framework of its envisioned role, the navy must now think about using the new carrier in a 'soft power projection' role - both showcasing India's growing regional influence, and carrying out benign out-of-area contingency missions.

For a start, the new aircraft carrier must be deployed on India's East coast and also, if possible, to the far-flung island territories, including the Andaman Islands. This will amply demonstrate the Indian navy's power, presence and influence in both the Arabian Sea and the Bay of Bengal. India must then plan dispatching the ship on a tour of the Gulf countries and even consider sending it, at a later date, for a foray into the Western Pacific - as a goodwill measure, and a sign of India's willingness to be a part of the security dynamic of the Asia-Pacific region.

Conclusion

An aircraft carrier has the ability to combine soft power and hard power in one entity, producing smart power projection on a scale unmatched by any other platform in existence today. As an operational platform while the Vikramaditya will enhance the Indian navy's 'blue-water capability, it is equally representative of the nation's fundamental maritime 'vision'. The Indian navy must thus view the ship as a 'versatile' asset - one that can switch smoothly between 'soft power diplomacy', 'power projection' and a 'combat' role

The Vikramaditya must also be seen as a potent measure of India's regional outreach, and used liberally to showcase the quality and depth of India's relations with its neighbours (through increased port calls) and to validate India's growing role in humanitarian relief and disaster assistance efforts (by way of substantive missions and increased HADR exercises).

In the final analysis, the Vikramadiya could prove to be a unique platform with the ability to burnish the Indian navy's image as a potent player in the Indian Ocean, and a capable and compassionate force of common good. It must go beyond being a blunt instrument of military might by embracing "soft power" initiatives. Only then will it be able to effectively shape India's maritime environment.

¹⁹ What is worth noting is that what was defined as naval diplomacy in 1998 has been split into two different roles - benign and diplomatic - in 2009.; See "Diplomatic Role - Objectives, Missions, Tasks", *Indian Maritime Doctrine*, Integrated Headquarters, Ministry of Defence (Navy), 2009, p 105