

# A WARSHIP PROGRAMME THAT MUST GO FULL STEAM AHEAD

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One of the sea trials of the aircraft carrier INS Vikrant, off the Kerala coast | Photo Credit: SPECIAL ARRANGEMENT

Early this month, the Indian Navy chief, Admiral Hari Kumar, at the annual press conference on the eve of Navy Day (December 4) had said that the Indian Navy had put on hold its plans to build a second indigenous aircraft carrier (IAC-2) that is larger than IAC-1 (INS Vikrant). Instead, he said, it is considering the option of a repeat order of the IAC-1. The Navy chief added that this decision had been taken as INS Vikrant had performed well during its trials and would also help capitalise on the expertise now available in the country.

In terms of size, aircraft carriers can be classified as light, medium and large/super-carriers. Light carriers can carry up to 25 aircraft, the medium-sized ones around 30 to 50 aircraft, while the large/super-carriers can carry over 90 aircraft. In terms of role, they can be categorised as fleet, escort, air defence, amphibious assault and anti-submarine warfare (helicopter) carriers. In terms of the methodology used to launch and recover aircraft, they can be categorised as Catapult Assisted Take-Off But Arrested Recovery (CATOBAR), Short Take-off But Arrested Recovery (STOBAR), and vertical/short take-off and landing (V/STOL) carriers.

India's first aircraft carrier, INS Vikrant (British-built), predecessor to INS Vikrant (IAC-1), was a 19,000-tonne CATOBAR-type light carrier designed for fleet air defence. It could carry between 21 to 23 aircraft (including helicopters). Its replacement, INS Viraat (British-built), at 28,000 tonnes, was a V/STOL-type light fleet air defence carrier, with an air wing of 26 to 30 aircraft and helicopters. Notably, its Sea Harrier aircraft also possessed dedicated land attack capability. INS Vikramaditya (Russian-built), at 45,000 tonnes, is a medium-sized STOBAR-type aircraft carrier, capable of both fleet air defence and land attack, carrying up to 30 aircraft and helicopters. INS Vikrant IAC-1) is almost similar in size, classification, role and capability to INS Vikramaditya.

The commissioning of INS Vikrant in September this year demonstrated India's capability to design and build the largest and most complex of warships, a capability held only by few countries. The planning for IAC-I, as it was called before commissioning, began in the mid-1980s. There were several iterations by the Indian Navy's Design Directorate before the plan was finalised and government approval obtained for construction in 2002. Built with indigenous steel developed by the Defence Research and Development Organisation, its keel was laid in 2009 and the ship launched in 2013. Sea trials began in August 2021 and the ship was

commissioned on September 2, 2022.

The elaboration of this timeline is to show the time and the effort that went into the design, construction and trials of India's first indigenous aircraft carrier. This time period can, of course, be shortened considerably if the next carrier is a repeat order. The expertise gained from the design and the construction of IAC-I will also enable faster development if a new and larger ship design is approved by the Government.

Due to the smaller and relatively less capable air wing carried on its first four carriers, as compared to other carrier-capable navies, the Indian Navy envisaged a medium-sized CATOBAR aircraft carrier in the region of 50,000 tonnes-65,000 tonnes, as a follow-up to INS Vikrant.

This is the tonnage of aircraft carriers operated by advanced navies such as the United Kingdom, Russia, China and France — with only the U.S. Navy operating nuclear-powered super-carriers of tonnage greater than 1,00,000 tonnes. Various constraints, principally financial in nature, seem to have curbed India's ambitions. However, the fall-back plan for a repeat order would ensure that valuable infrastructure, design capability, ship-building expertise and the indigenous industrial ecosystem, built through extensive investment and effort over two decades, are not lost.

It would also ensure that India finally achieves the goal of having three aircraft carriers — a target that has remained elusive since the first Naval Plan Papers in 1948 stipulated the need for three aircraft carriers for the Indian Navy. Having two aircraft carriers of similar design and configuration would also make their operation/maintenance easier.

However, in the long term, India should not lose sight of the fact that China's first two aircraft carriers displace over 65,000 tonnes, and its third indigenously designed and built carrier, Fujian, displaces 85,000 tonnes, with a possible air wing of 60-odd aircraft. China's future plans for a seven-ship carrier force include ambitions to build nuclear-powered super-carriers of over 1,00,000 tonnes displacement, with construction reportedly having commenced in 2017.

As a major emerging global power, with an inimical China at its doorstep, India can ill-afford to fall behind in its sea control and maritime deterrence capability, exemplified by an aircraft carrier-centric navy. While aircraft carriers are designed for 'arrested recovery' of aircraft, India should not allow the development of its aircraft carrier programme itself to be 'arrested'.

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