



KAMARAJ IAS ACADEMY
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INS Vikrant

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What's in News?

India's **first Indigenous Aircraft Carrier (IAC-1) INS Vikrant** was commissioned into the Indian Navy.

Aircraft Carrier:

An aircraft carrier is one of the most potent marine assets for any nation, which enhances a Navy's capability to travel far from its home shores to carry out air domination operations.

Having an aircraft carrier is essential to be considered a **"blue water" navy** — **that is, a navy that has the capacity to project a nation's strength and power across the high seas.**

An aircraft carrier generally leads as the capital ship of a carrier strike/ battle group.

As the aircraft carrier is a prized and sometimes vulnerable target, it is usually escorted in the group by destroyers, missile cruisers, frigates, submarines, and supply ships.

India's Earlier Aircraft Carriers:

India has had aircraft carriers earlier too — but those were built either by the British or the Russians.

The 'INS Vikramaditya', which was commissioned in 2013 and which is currently the Navy's only aircraft carrier, started out as the Soviet-Russian warship 'Admiral Gorshkov'.

India's two earlier carriers, the **'INS Vikrant' and the 'INS Viraat'**, were originally the British-built 'HMS Hercules' and 'HMS Hermes'.

These two warships were commissioned into the Navy in 1961 and 1987 respectively.

Original INS Vikrant:

The original 'Vikrant', a Majestic-class 19,500-tonne warship, which was acquired from the UK in 1961, played a stellar role in the 1971 War with Pakistan.

India deployed the 'Vikrant' in the Bay of Bengal, and its two air squadrons of Sea Hawk fighter jets and Alize surveillance aircraft were used in strikes on ports, merchant ships, and other targets, and to prevent Pakistani forces from escaping through maritime routes.

It was decommissioned in 1997

Indigenous Aircraft Carrier (IAC-1) INS Vikrant:

INS Vikrant has been built with state-of-the-art automation features and is the **largest ship ever built in the maritime history of India.**

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IAC-1 has been designed by the **Indian Navy's Directorate of Naval Design (DND)**, and is being built at Cochin Shipyard Limited (CSL), a public sector shipyard under the Ministry of Shipping.

It has a large amount of indigenous equipment and machinery, involving major industrial houses in the country as well as over 100 MSMEs.

The carrier displaces about 45,000 tonnes, making it the largest warship in the Indian naval inventory.

Termed as a floating city with 18 floors, INS Vikrant consists of 14 decks with 2,300 compartments which can carry around 1,500 sea warriors and to cater to the food requirements

Vikrant carries a mix of about 30 aircraft.

It could fly the MiG 29k fighter aircraft in anti-air, anti-surface and land attack roles.

It will be able to **operate the Kamov 31** which is an early air warning helicopter, the recently inducted but yet-to-be commissioned multi-role helicopter MH-60R.

Using a novel aircraft-operation mode known as **STOBAR (Short Take-Off but Arrested Landing)**, the carrier is equipped with a ski- jump for launching aircraft, and a set of 'arrestor wires' for their recovery onboard.

With an overall **indigenous content of 76 per cent**, Vikrant has been built with a high degree of automation for machinery operation, ship navigation and survivability, and has been designed to accommodate an assortment of fixed-wing and rotary aircraft.

Significance:

With it, **India also joins the elite group of nations** – the US, Russia, France, the UK and China – who are capable of designing and constructing aircraft carriers.

Also, with a displacement of 43,000 tonnes when fully loaded, INS Vikrant is set to be the **seventh largest among the carriers or carrier classes in the world.**

It will be crucial as it will safeguard **India's security and economic interests.**

IAC makes India a **significant maritime power in the Indo-Pacific region** and empowers India to counter China in the region more effectively.

This also acts as an **assurance to friendly foreign countries that India is fully capable of meeting the collective security needs of the region.**

The indigenisation efforts have also led to the **development of ancillary industries, besides the generation of employment opportunities**, both locally as well as pan-India.

Indigenisation in Indian Navy:

Indian Navy in 2014 promulgated the **Indian Navy Indigenisation Plan (INIP) 2015-2030** to enable indigenous development of equipment and systems is further ramping up indigenisation efforts especially in weapons and aviation related items

Till date, Navy has indigenised around 3400 items under INIP

The **Naval Innovation and Indigenisation Organisation (NIIO)** was launched in August 2020 to provide a flexible and accessible interface for academia and industry with Indian Navy capability development apparatus

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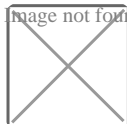
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In July 2022, during the Naval Innovation and Indigenisation Organisation (NIIO) seminar 'Swavlamban' in New Delhi '**SPRINT Challenges**' was unveiled which aimed at giving a boost to the usage of indigenous technology in Indian Navy.

In a bid to achieve 'Aatmanirbharta' in defence and as part of 'Azadi ka Amrit Mahotsav', NIIO, in conjunction with the Defence Innovation Organisation (DIO), aims to induct at least 75 new indigenous technologies/products into the Indian Navy.

This collaborative project is named **SPRINT {Supporting Pole-Vaulting in R&D through Innovations for Defence Excellence (iDEX), NIIO and Technology Development Acceleration Cell (TDAC)}**.

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