

## Nilgiri-class Frigate

The Nilgiri-class frigates, also known as Project-17 Alpha frigates (P-17A), are a line of guided-missile frigates being manufactured for the Indian Navy by Mazagon Dock Shipbuilders (MDL) as well as Garden Reach Shipbuilders & Engineers (GRSE).

The topic has a very high chance of being asked as a UPSC Prelims Science and Technology Question or as a Current Affairs Question, as it has been in the news recently.

### History of Project 17A

The Defence Acquisition Council (DAC), India's major procurement body subservient to the Ministry of Defence (MoD), approved a proposal in June 2009 for the acquisition of 7 stealthy frigates – codenamed "Project 17A" – in keeping with the Indian Navy's aim to build a fleet of 160 ships. The Cabinet Committee on Security (CCS), India's topmost decision making body on defence and issues of national security, approved the plan for the "development cum construction" of the 7 frigates in September 2012. The Indian Navy initially supported a plan to build the first two frigates at an overseas shipyard in order to shorten the project's total construction time; nonetheless, this recommendation was overturned by India's Ministry of Defence (MoD), which preferred local frigate manufacture.

The 7 frigates were intended to be a "follow on series" to the Shivalik class frigates (Project 17), that were also being constructed for the Indian Navy at the same time except with more advanced capabilities. The seven frigates' schematic design was finished in mid 2013. The CCS officially authorised the programme in February 2015, which included the building of seven specified frigates over a five year period.

### Technical Facts of Project 17A

- **Type:** Guided Missile Frigate
- **Displacement:** 6,670 tonnes (6,560 long tons)
- **Length:** 149 metres m (488 ft 10 in)
- **Beam:** 17.8 metres (58 ft 5 in)
- **Draft:** 5.22 metres (17 ft 2 in)
- **Depth:** 9.9 metres (32 ft 6 in)
- **Speed:** 32 knots (59 km/h)
- **Range:** 2,500 nmi (4,600 km) at 28 kn (52 km/h) and 5,500 nmi (10,200 km) at 16–18 kn (30–33 km/h)
- **Crew:** 150 (Including 35 officers)

### Difference between P-17 and P-17A

The P-17A is a derivation of the Shivalik class frigates (P-17), a three-ship multi-mission frigate type that currently serves as the Indian Navy's workhorse frigates; both classes have significant design similarities: -

- In contrast to the P-17, which utilises an outdated single-arm missile launcher, the P-17A is the very first class of frigates within the Indian Navy to deploy vertical launching system (VLS) cells for shooting its surface-to-air missiles.
- The P-17A and the P-17 have comparable hull geometry; nonetheless, the P-17A's hull measurements, especially its length and breadth, are around 4-5 percent larger than the P-17's.

## Design and Development of Nilgiri class Frigates

The frigates have been designed by the Directorate of Naval Design (DND), an inner Indian Navy organisation responsible for designing the warships. The DND is also known for contributing to the design of various Indian warships, including the INS Vikrant, India's first domestically produced aircraft carrier, the Arihant class submarines, India's first domestically produced nuclear-powered ballistic missile submarines, and the Shivalik class frigates. The architecture of the frigate was approved by the Department of Defence in 2013, and it was first shown to the people in April 2018 during the "DEFEXPO 2018" defence exhibition held in Chennai, India.