

What is Project-75I?

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About Project-75I:

- Under this, the **Indian Navy will procure six advanced conventional submarines processed through the Strategic Partnership (SP) model.**
- These will be **diesel-electric submarines, having advanced Air-independent propulsion (AIP) systems.**
- Project 75I **requires an Indian bidder to tie up with a foreign collaborator and build six conventional submarines equipped with AIP systems.**
- The **first submarine must have a minimum of 45% indigenisation**, with the indigenous content **going up to 60% in the sixth.**

What are the types of Submarines?

- **Conventional or Diesel-electric submarine:** They need atmospheric oxygen to run the diesel generator which in turn charges the batteries.
- **Nuclear Submarine:** It is a submarine powered by a nuclear reactor, but not necessarily nuclear-armed. They have considerable performance advantages over conventional submarines.

What is an Air-independent propulsion (AIP) System?

- With the emergence of submarines, there was a problem finding satisfactory forms of propulsion underwater.
- **AIP is mostly implemented as an auxiliary source**, with the **traditional diesel engine handling surface propulsion**.
- **Most of these systems generate electricity, which in turn drives an electric motor for propulsion or recharges the boat's batteries.**
- A typical conventional power plant provides 3 megawatts maximum, and an AIP source around 10 percent of that. A nuclear submarine's propulsion plant is much greater than 20 megawatts.
- **Key features of the AIP system:**
 - It **allows the submarines to stay for longer hours in water**. The **submarines need to come to the surface of the water to charge their batteries**. This is reduced by the AIP System.
 - It **decreases the noise levels made by the submarines**. This makes it hard to detect the submarines.
- **Types of AIP: Open-cycle systems, Closed-cycle diesel engines, Closed-cycle steam turbines Stirling cycle engines and Fuel cells.**

Q1) What is the Strategic Partnership (SP) model?

The strategic partnership model seeks to identify a few Indian private companies as Strategic Partners who would initially tie up with a few shortlisted foreign Original Equipment Manufacturers (OEMs) to manufacture big-ticket military platforms. In the initial phase, the selection of SPs would be confined to four segments: Fighter Aircraft, Helicopters, Submarines, and Armoured Fighting Vehicles (AFV)/Main Battle Tanks (MBT).

Source: [L&T, Nevantia join hands to bid for Indian Navy's mega submarine acquisition programme](#)

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