

## INS Agray

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### Why in News?

The Indian Navy has received INS Agray, the fourth (ASW SWC), indigenously designed and built by GRSE, Kolkata.

- **Classification** - It is an **Anti-Submarine Warfare Shallow Water Craft** (ASW SWC).
- It is the 4<sup>th</sup> ship in the **08 x Anti-Submarine Warfare Shallow Water Craft (ASW SWC) Arnala-class**.
- **Objectives** - This vessel is specially designed for:
  - Anti-submarine warfare
  - Coastal surveillance
  - Mine detection and neutralization
- It will mainly operate in shallow coastal waters, where large warships face difficulty.
- **Historical Legacy** - Named after the erstwhile *INS Agray (1241 PE Class Patrol Vessel)*, decommissioned in 2017.
- **Design & Construction** - Designed and constructed by **Garden Reach Shipbuilders and Engineers (GRSE), Kolkata**.
- Built in accordance with Indian Register of Shipping (IRS) classification rules.
- Over **80%** indigenous content, involving MSMEs and domestic industry.
- **Key Features**
  1. **Waterjet Propulsion System** - Unlike traditional ships, it uses waterjet propulsion.
    - **Benefits**
      - Better manoeuvrability
      - Lower noise levels (important for stealth operations)
  2. **Low Acoustic Signature** - The vessel produces less noise, making it harder

for submarines to detect. This is crucial for successful anti-submarine missions.

- **Powerful Anti-Submarine Warfare Capabilities**

- INS Agray is specially built to detect and neutralize underwater threats.

- It is equipped with:

- Advanced SONAR systems (Sound Navigation and Ranging)
- Indigenous rocket launchers
- Lightweight torpedoes

- These systems help in

- Detecting enemy submarines
- Tracking underwater movement
- Launching precise attacks
- Designed for Complex Coastal Environments

- **Operational Roles**

- **Anti-Submarine Warfare (ASW)** - Detection and engagement of submarines in shallow waters.
- **Mine Warfare** - Capable of mine detection and neutralisation.
- **Coastal Defence** - Surveillance and protection of littoral zones.
- **Fleet Support** - Escort and protection in near-shore operations.

- **Strategic Significance -**

- Strengthens maritime security in the Indian Ocean Region.
- Reflects India's self-reliance in warship design and construction.
- Supports employment generation and expansion of the domestic defence ecosystem.

## Reference

[PIB | INS Agray](#)

