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EDITORIAL ANALYSIS

India's Naval Indigenisation — Building Capability, Not Just Ships

INDIAN EXPRESS

28 February 2026

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India's Naval Indigenisation — Building Capability, Not Just Ships

The Indian Express 28 February 2026 GS3 GS2

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INTERVIEW ANGLE

"India has commissioned many indigenous warships in recent years, yet some argue it still depends heavily on foreign systems for sensors, weapons, and propulsion. How should India close this gap?"

WHY IN NEWS

The commissioning of INS Anjadip — the fourth Anti-Submarine Warfare Shallow Water Craft — at Chennai on February 28, 2026, adds another milestone to India's naval indigenisation drive. But beyond the ceremony, it raises critical questions about the depth and sustainability of India's naval 'Make in India' agenda.

SHIPS VS SYSTEMS — A CRITICAL DISTINCTION

When India commissions an indigenous warship, the natural headline is the hull: the steel, the welding, the deck machinery. India has genuinely mastered the construction of warship hulls. Garden Reach Shipbuilders & Engineers (GRSE) and Mazagon Dock Shipbuilders (MDL) are world-class builders by any measure.

But a warship is not a hull. It is a platform for **sensors, weapons, communications systems, and propulsion machinery** — the components that determine combat effectiveness. And here, India's indigenisation record is more mixed.

What India makes well:

- Steel hull fabrication and structural integration
- Propulsion systems (increasingly)
- Some naval gun systems (OTO Melara licence)
- Basic electronics integration

What India still imports:

Advanced ASW sonar systems (largely French, US, Russian)

Combat Management Systems (partially foreign-origin)

Anti-ship and surface-to-air missiles (BrahMos is a Russia-India JV)

Gas turbine propulsion for higher-speed vessels

The "80% indigenous content" cited for INS Anjadip deserves scrutiny: what is included in that percentage, and does it include the most capability-critical systems?

THE ANTI-SUBMARINE WARFARE GAP

Anti-submarine warfare is perhaps India's most critical naval capability gap. The Indian Ocean Region has seen a dramatic increase in Chinese submarine activity. PLAN (People's Liberation Army Navy) submarines — nuclear-powered Type 093 and diesel-electric Type 039 — have been documented in the IOR with increasing frequency.

India's ASW capability chain includes:

Shore-based maritime patrol aircraft: Boeing P-8I Poseidon (8 in service initially; 4 more on order under a follow-on contract)

Shipborne helicopters: Sea King (aging), Romeo (MH-60R, being delivered)

Surface vessels: ASW-SWC vessels, frigates with towed array sonar

Submarines: ~16 in service (6 Kalvari/Scorpene class + Kilo/Sindhughosh class + 2 Shishumar/HDW class + INS Arihant SSBN)

The ASW-SWC vessels fill a specific gap: shallow-water coastal detection where deeper-draught frigates cannot operate effectively. But the **sonar technology** aboard these vessels — the critical "ears" of ASW — is a domain where India remains heavily dependent on foreign suppliers, particularly the French DCNS/Naval Group systems used in the Kalvari submarines and some surface ships.

DRDO's Naval Physical and Oceanographic Laboratory (NPOL) in Kochi has developed indigenous sonar systems — the USHUS and HUMSA series — that have been fitted to some vessels. But achieving performance parity with Western sonar systems across the full fleet remains an ongoing challenge.

GRSE AND THE PUBLIC-PRIVATE MODEL

The ASW-SWC programme's use of both **GRSE** (public sector) and **L&T Shipbuilding** (private sector) is a structural innovation worth noting. India's shipbuilding has historically been dominated by DPSUs (Defence Public Sector Undertakings), with private yards playing secondary roles.

The **Defence Acquisition Procedure (DAP) 2020** was designed to change this. By mandating indigenous content thresholds and creating pathways for private shipyards, it aims to build a competitive domestic defence industrial base where public and private yards drive each other to improve. L&T's Kattupalli yard has

invested heavily in modern shipbuilding infrastructure — it is not a captive contractor but an increasingly capable competitor.

This model has risks: private yards need a sustained pipeline of orders to justify capital investment. If order flow is inconsistent — as has historically been the case in Indian defence procurement — private capacity atrophies and the gains are lost.

THE LONGER HORIZON — A 50-SHIP NAVY?

India's current fleet of approximately 130 ships and submarines will need significant expansion to match the strategic footprint of a $5 trillion (target) economy with 7,500 km of coastline and critical interests across the IOR.

Naval expansion requires:

- A stable long-term shipbuilding plan with confirmed order pipelines
- Investment in **naval design capability** (not just construction) — DRDO's NSTL and DND (Directorate of Naval Design) must be substantially funded
- Expansion of **naval electronics and weapons** indigenisation — the hull is only as good as its systems
- **Export orientation:** Without defence exports, Indian yards will never achieve the scale efficiencies that give South Korean and Japanese shipbuilders their cost and quality advantages

The commissioning of INS Anjadip is a celebration. But true naval indigenisation means the day when India exports a warship to a friendly navy — not just builds one for itself.

UPSC RELEVANCE

GRSE, MDL, ASW-SWC, DAP 2020, NPOL, P-8I Poseidon, Kalvari class, DPSV.

MAINS GS-3:

Defence indigenisation; naval modernisation; Make in India in defence.

GS-2:

IOR security; India-China maritime competition.

📌 FACTS CORNER — KNOWLEDGEPEDIA

INDIAN NAVAL SHIPYARDS:

GRSE (Garden Reach): Kolkata; PSU; 100+ warships; ASW-SWC lead yard

MDL (Mazagon Dock): Mumbai; PSU; submarines (Kalvari class), destroyers, frigates

L&T Shipbuilding: Kattupalli, Tamil Nadu; private; ASW-SWC co-builder

HSL (Hindustan Shipyard): Visakhapatnam; PSU; repair + offshore vessels

KEY NAVAL PROGRAMMES:

ASW-SWC: 16 vessels planned; 4 commissioned by 2026

INS Vikrant (IAC-1): First indigenous aircraft carrier (commissioned 2022)

Project 17A (Nilgiri class): 7 stealth frigates ordered; 1st commissioned 2024

Kalvari class: 6 Scorpene submarines; under Project 75

Project 75I: 6 more advanced submarines (AIP technology) — under procurement

ASW CAPABILITY:

P-8I Poseidon: **8 in service + 4 more on follow-on order** (Boeing, USA); total fleet target: 12

MH-60R Romeo: Shipborne ASW helicopter (US Navy also uses); being delivered

USHUS/HUMSA sonar: Indigenous (DRDO's NPOL, Kochi)

PLAN submarines in IOR: Documented Type 093 (nuclear) and Type 039 (diesel-electric) patrols

POLICY FRAMEWORK:

DAP 2020: Defence Acquisition Procedure; mandatory indigenous content

DDP (Department of Defence Production): Oversees defence industry

Defence exports target: **$5 billion by 2025** (revised target); India achieved **~₹21,083 crore (~$2.6 billion)** in FY 2023-24 — a record high

OTHER RELEVANT FACTS:

India's coastline: **7,516 km** (including islands)

Indian Navy fleet: **~130 ships and submarines**

BrahMos missile: India-Russia joint venture (DRDO + NPO Mashinostroyenia); anti-ship

NSTL (Naval Science and Technological Laboratory): Visakhapatnam; DRDO unit for ASW systems

Sources: Indian Express, PIB, Indian Navy

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