Project 18

Prelims: *Current events of national and international importance*

Why in News?

India's Project 18 is emerging as one of the most ambitious warship programs undertaken by the Indian Navy.

- **Project 18** – It is a proposed class of *next-generation destroyers/cruiser-sized warships* for the Indian Navy.
- **Designed by –** Indian Navy's Warship Design Bureau (WDB)
- **Collaboration with** – Mazagon Dock Shipbuilders Limited (MDL) and Garden Reach Shipbuilders & Engineers (GRSE).

Key Features

- **Expected displacement** – *11,000–13,000 tonnes,* significantly larger than the current Visakhapatnam-class destroyers (~7,500 tonnes).
- **Expected length** – Around *180 metres,* envisioned as a multi-domain command platform capable of coordinating manned and unmanned naval assets.
- **Integrated Electric Propulsion (IEP) –** Advanced propulsion system generating large amounts of electrical power.
- It reduces acoustic signatures, improving stealth & supports future technologies such as laser weapons and advanced radars.
- **Powerful Weapons Suite –** Up to *144 Vertical Launch System (VLS) cells.*
- It is likely to carry the following
    - BrahMos Missile
    - Future BrahMos-II hypersonic missile.
    - Long-Range Land Attack Cruise Missiles (LR-LACM).
    - SMART anti-submarine missiles.
    - Project Kusha air-defence missiles.
    - Anti-ballistic missile interceptors.
- **Advanced Sensors –** Indigenous *S-band AESA radar* developed by Defence Research and Development Organisation.
- Surveillance range reportedly exceeding 500 km.
- Advanced electronic warfare and battle-management systems.
- **Unmanned Systems Integration –** Capable of controlling:
    - UAVs (drones)
    - USVs (Unmanned Surface Vessels)
    - XLUUVs (Extra-Large Unmanned Underwater Vehicles)

- **Directed Energy Weapons –** Provision for 50–100 kW laser systems.
- Intended to counter drone swarms and low-cost aerial threats.

Strategic Significance

- Enhances India's blue-water navy capabilities.
- Strengthens maritime dominance in the Indo-Pacific.
- Improves air defence, anti-submarine warfare, and long-range strike capability.
- Supports the vision of Atmanirbhar Bharat through indigenous design and shipbuilding.

Reference

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