'Sayyad-3G' Missile

Prelims: *Current events of national and international importance | Defence*

Why in News?

The Islamic Revolutionary Guard Corps (IRGC) Navy successfully tested 'Sayyad-3G', air defense system for the first time.

- The Sayyad-3G is an advanced ***naval surface-to-air missile*** developed by **Iran.**
- **Operational Range -** Approximately 150 kilometers (93 miles).
- **Launch System -** Utilizes a Vertical Launch System (VLS). This allows the ship to fire the missile without needing to turn toward the target, providing 360-degree coverage.
- **Speed** - Estimated to reach speeds between Mach 4.5 and 5.1.
- **Guidance -** Features advanced radar-based terminal homing and inertial mid-course guidance.
- It can operate as part of an integrated command network or track targets independently using the host ship's radar.
- **Launch Platform** - It was launched from the Shahid Sayyad Shirazi, a catamaran corvette of the Shahid Soleimani class.
- **Target Profile** - Designed to intercept high-performance fighter jets, maritime patrol aircraft, high-altitude UAVs (drones), and cruise missiles.
- **Significance of the "G" Variant -** The Sayyad-3G is specifically engineered for maritime environments.
- **Maritime Adaptation -** Unlike the original 2016 land-based Sayyad-3, the "G" variant is optimized for the humid and corrosive conditions of the sea.
- **Layered Defense -** Its deployment allows Iran to create a "regional air defense umbrella" far from its coast, shifting its naval strategy from point-defense (short-range) to area-defense (medium-to-long-range).
- **Impact on Regional Security -** The introduction of the Sayyad-3G allows Iranian naval units to contest airspace in the Persian Gulf and the Strait of Hormuz more effectively.

- By establishing a 150 km defensive bubble around its warships, Iran aims to increase the "cost of entry" for adversary aircraft and surveillance drones in these sensitive waters.

Reference

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