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Supersonic Missile Assisted Torpedo

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Supersonic Missile Assisted Torpedo

Recently, the **Defence Research and Development Organisation (DRDO)** successfully launched the **Supersonic Missile Assisted Torpedo System (SMART)** from Wheeler Island in Odisha.

▪ About:

- It is a **missile assisted release of the lightweight Anti-Submarine Torpedo System** for anti-submarine warfare (ASW) operations far beyond torpedo range. It is a **canister based missile system**.
- **The system is a next generation missile-based standoff torpedodelivery system.**
- The system has been designed to enhance anti-submarine warfare capability far beyond the conventional range of the torpedo.

▪ Functioning:

- SMART, when launched from a warship or a truck-based coastal battery, takes **off like a regular supersonic missile**.
- It covers **most of its flight in the air at lower altitudes with two-way data link from the warship or an airborne submarine** target detection system and provides the exact location of the hostile submarine to correct its flight path midway.
- Just when it approaches close enough to the submerged submarine, the missile will eject the torpedo system into the water and the autonomous torpedo will start moving towards its target to take out the submarine.
 - Torpedo is a cigar-shaped, self-propelled underwater weapon, launched from a submarine, surface vessel, or airplane and designed for exploding upon contact with the hulls of surface vessels and submarines.
 - **Varunastra** is the first indigenous heavyweight ship launched anti-submarine electric torpedo.

▪ Significance:

- Strengthens the country's maritime strategic capabilities.
- A major breakthrough for stand-off capability in anti-submarine warfare.
 - Project 28, approved in 2003, is a class of anti-submarine warship corvettes currently in service with the Indian Navy. It includes INS Kamorta, INS Kadmat, INS Kiltan and INS Kavaratti.
 - **Project 75** is a programme by the Indian Navy that entails building six Scorpene-Class attack submarines (Kalvari, Khanderi, Karanj, Vela, Vagir and Vagsheer).
 - **Project 75 India** envisages indigenous construction of submarines equipped with the state-of-the-art Air Independent Propulsion system at an estimated cost of Rs. 43,000 crore.