Dark Eagle Hypersonic Weapon

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

Why in News?

During Exercise Valiant Shield 2026, the U.S. Army executed its first-ever forward deployment of the Dark Eagle to the island territory of Guam in the Western Pacific.

- It is a ***Long-Range Hypersonic Weapon (LRHW).***
- **Weapon Class -** Ground-launched, conventionally armed, two-stage boost-glide hypersonic missile system.
- **Speed -** Exceeds **Mach 5** (over 6,000 km/h).
- **Operational Range-** Estimated between **2,775 km and 3,500 km**.
- **Launch Mechanism**
  - A two-stage solid rocket booster propels the unpowered **Common-Hypersonic Glide Body (C-HGB)** into the upper atmosphere.
  - The C-HGB detaches and glides toward the target at hypersonic speeds while performing mid-flight manoeuvres.
- **Mobility -** A full operational battery includes **4** Transporter Erector Launcher (TEL) trucks carrying two missiles each (8 rounds total), supported by a mobile Battery Operations Center.

Strategic & Geopolitical Implications

- This marks the first time a ground-launched U.S. hypersonic missile system has been placed within direct striking distance of mainland China's eastern seaboard and coastal defence networks.
- **Countering China's Anti-Access/Area Denial (A2/AD) -** For years, China’s dense missile array along its coast aimed to prevent U.S. aircraft carriers and warships from operating inside the first and second island chains.
- Dark Eagle gives U.S. land forces an independent, rapid-response capability to hit high-value targets (such as radar installations, command

centres, and anti-ship missile batteries) within minutes without relying on airfield or naval carrier operations.

- **Balancing China's Hypersonic Advantage -** China already fields deployed operational hypersonic systems, including the **DF-17** (medium-range) and the **DF-27** (intermediate-range boost-glide missile).
- Forward-deploying Dark Eagle reduces the capability gap in ground-launched prompt global strike systems in the Western Pacific.
- **Deterrence Over Taiwan and the South China Sea -** Positioned in Guam, it covers potential conflict zones across the *Taiwan Strait, the South China Sea, and major People's Liberation Army (PLA) naval bases in Eastern and Southern China.*

Reference

Times of India | Dark Eagle Long-Range Hypersonic Weapon