



LONG RANGE CRUISE MISSILE : SCIENCE & TECHNOLOGY

NEWS: DRDO carries maiden test of land attack long range cruise missile

WHAT'S IN THE NEWS?

The DRDO has successfully tested a new Long-Range Land Attack Cruise Missile (LRLACM) with a range of 1,000 km off the coast of Odisha. Developed by the Aeronautical Development Establishment, this missile boosts India's standoff strike capabilities and is comparable to the U.S. Tomahawk.

Long-Range Cruise Missiles

- **Purpose:** Designed to strike land or sea targets precisely from long distances, often hundreds of kilometers away.
- **Low-Altitude Flight:** Flies at low altitudes to avoid radar detection and uses terrain-following capabilities.
- **Engine and Speed:** Powered by a jet engine, it maintains a constant speed, which can be either subsonic or supersonic.
- **Guidance Systems:** Equipped with systems like GPS or inertial navigation for accurate targeting.
- **Trajectory:** Unlike ballistic missiles, follows a flat, controlled flight path.
- **Launch Platforms:** Can be launched from land, air, sea, or submarines.

India's Ballistic and Cruise Missiles

| Feature | Cruise Missile | Ballistic Missile |
|---------------|--|---|
| Trajectory | Follows a flat, low-altitude, guided path | Follows an arc-like, high-altitude, ballistic path |
| Speed | Generally subsonic, sometimes supersonic | Can reach hypersonic speeds |
| Guidance | Guided throughout flight with GPS or terrain-following | Primarily guided in initial phase, free-falls later |
| Purpose | Used for precise, targeted strikes at close to mid-range | Primarily for long-range, strategic targets |
| Detectability | Harder to detect due to low-altitude flight | Easier to detect at higher altitudes |

Source: <https://www.thehindu.com/news/national/drdo-carries-maiden-test-of-land-attack-long-range-cruise-missile/article68861163.ece>