



India's Advancements in Ballistic and Air Defence Systems

[Source: TH](#)

India has successfully test-fired its indigenously developed ballistic missiles **Prithvi-II** and **Agni-I** from the Integrated Test Range in **Chandipur, Odisha**.

- The development comes after the Indian Army carried out successful trials of the **indigenously developed Air Defence System "Akash Prime"** in Ladakh.

Prithvi-II

- It is a short-range, surface-to-surface ballistic missile developed by [Defence Research and Development Organisation \(DRDO\)](#) under the [Integrated Guided Missile Development Programme](#).
- It has a **range of 250-350 km**, can carry **conventional or nuclear warheads**, and uses a **liquid propulsion system** with **inertial navigation** for accurate targeting.

Agni-I

- Developed by the DRDO, Agni-I is a **nuclear-capable, short-to-medium range ballistic missile** with a range of 700-900 km.
- It can carry a 1,000 kg payload, is road and rail mobile, and fills the gap between the **Prithvi series and longer-range Agni missiles** in India's credible **minimum deterrence strategy**.

Akash Prime

- It is an upgraded version of the **Akash missile system**, now featuring an **indigenous active Radio Frequency (RF) seeker** for better accuracy across terrain and weather.
- First used in [Operation Sindoor](#) against Pakistani aerial threats, it's a **medium-range, surface-to-air system** designed to defend mobile and static assets.
 - The Akash system features high automation, cross-country mobility, and simultaneous multi-target engagement using real-time multi-sensor data.
- It operates at altitudes up to **4,500 m** and targets threats **25-30 km** away.

Ballistic Missiles

- Ballistic missiles are rocket-propelled weapons that follow a **free-fall trajectory** after launch. They can carry **conventional or nuclear warheads** and be launched from **land, sea, or air**.
- Based on range, they're classified as short (< 1,000 km), medium (1,000-3,000 km), intermediate (3,000-5,500 km), or long-range or intercontinental ballistic missiles (ICBMs) (> 5,500 km). [Agni-V](#) is India's longest-range missile, an ICBM with a range of over 5,000 km.

Read more: [Strategic Defence Technologies in India](#)

