



Enhanced Pinaka Mk-I Rocket System

Why in News?

The [Enhanced Pinaka Mk-I Rocket System \(EPRS\)](#) was successfully test fired in the Pokhran range in Rajasthan.

- As part of the same set of trials, the **Area Denial Munition (ADM)** was also successfully tested.
- The tests also **validated the performance of different variants of munitions and fuzes** that can be **used in the Pinaka rocket system**.
- ADMs are **a category of ammunition used to prohibit the adversary from occupying or passing through a particular area**.

What is EPRS?

- The EPRS is the upgraded version of the Pinaka variant that has been in service with the Indian Army for the last decade. [//](#)



- The design and development has been carried out by Pune-based [DRDO \(Defence Research and Development Organisation\)](#) laboratories - **Armament Research and Development Establishment (ARDE)** and **High Energy Materials Research Laboratory (HEMRL)**.
- The upgrades include advanced technologies enhancing the range to meet the emerging requirements of the battlefield.
- While the **Mark-1 has a range of 38 km, the enhanced version of Mark-1 tested in the last fortnight has a range of 45 km** with some key additional features.
- The new incarnation of **pinaka represents one of the few examples of an evolutionary process** being followed with an indigenous Indian weapon system.

What is Pinaka?

- **About:**

- The Pinaka rocket system is a **multi-barrel rocket system, which is** named after Lord Shiva's bow.
 - It is developed by Pune-based Armament Research and Development Establishment (ARDE) and High Energy Materials Research Laboratory (HEMRL).
- The development of the Pinaka was started by the DRDO in the late 1980s as an alternative to the Multi Barrel Rocket Launcher systems of **Russian make called the 'Grad', which are still in use by some regiments.**
- After successful tests of Pinaka Mark-1 in late 1990, it was **first used in the battlefield during the [Kargil war](#) of 1999, quite successfully. Subsequently, multiple regiments of the system came up in the 2000s.**
- **Features:**
 - It can fire a salvo of **12 rockets over a period of 44 seconds.**
 - One battery of the Pinaka system consists of six launch vehicles, accompanied by loader systems, [radar](#) and links with network-based systems and a command post. **One battery can neutralise an area of 1 km by 1 km.**
 - As a key tactic of **long-range artillery battle**, the launchers have to 'shoot and scoot' to **ensure they themselves do not become the targets, especially being detectable due to its back blast.**
- **Multiple Variants:**
 - DRDO has also developed and **successfully tested the [Mk-II](#) and guided variants of the Pinaka, which has a range of around 60 km**, while the Guided Pinaka system has a range of 75 km and has integrated navigation, control and guidance system to improve the end accuracy and enhance the range.
 - The navigation system of the Guided Pinaka missile is also aided by the [Indian Regional Navigation Satellite System \(IRNSS\)](#).

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. What is "Terminal High Altitude Area Defence (THAAD)", sometimes seen in the news? (2018)

- (a) An Israeli radar system
- (b) India's indigenous anti-missile programme
- (c) An American anti-missile system
- (d) A defence collaboration between Japan and South Korea.

Ans: (c)

- **[Terminal High Altitude Area Defence \(THAAD\)](#)** is an American anti-missile system designed to intercept and destroy short and medium-range ballistic missiles during their "terminal" phase of flight when they are falling towards the target.

[Source: PIB](#)

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