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NAG Missile: Anti Tank Guided Missile

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Why in News

Recently, the final user trial of 3rd **generation Anti Tank Guided Missile (ATGM) NAG** was carried out successfully from **Pokhran range in Thar desert (Rajasthan)**.

Key Points

- **Developed By: Defence Research and Development Organisation (DRDO)**



- **Features:**

- The NAG missile has been developed to **strike and neutralise highly-fortified enemy tanks**. It also has **night strike capabilities**.

ATGMs are missile systems that can strike and neutralise armoured vehicles such as tanks.

- It has a **minimum range of 500 metres** and **maximum range of 4 km**.
- As a **third-generation ‘fire and forget’ category system**, NAG uses an **imaging infra-red seeker** to lock on to the target before launch.
- In the **top attack mode**, the missile is required to climb sharply after launch and travel at a certain altitude, then plunge on top of the target. In the **direct attack mode**, the missile travels at a lower altitude, directly striking the target.
- It has a capability to **defeat Main Battle Tanks (MBT)** equipped with composite and reactive armour.
- The **NAG missile carrier (NAMICA)** is a **Russian-origin BMP-II based system** with **amphibious capability**.

BMP-II is a mechanized infantry fighting vehicle.

- **Version of NAG ATGM:** DRDO is currently in the final stages of the development of the **helicopter-launched version of Nag ATGM**, called the **Helina**, which has undergone successful tests in 2018.

- **Significance:**

- With this final user trial, Nag will **enter the production phase**.

The **missile** will be produced by Defence Public Sector Undertaking (PSU) **Bharat Dynamics Limited (BDL)**, whereas **Ordnance Factory, Medak**, will produce the **NAMICA**.

- This means that the **Indian Army will no longer have to import this weapon from either Israel or the USA** for the range of four kilometres.

It was due to unavailability of a credible anti-tank weapon, that **India had to buy around 200 pieces of Spike anti-tank missiles from Israel** as emergency purchases after the **aggression by the People's Liberation Army (China) in Ladakh**.

- Further, the army is currently using **second generation Milan 2T and Konkur ATGMs** and has been looking for about third-generation missiles, which are important for stopping advancing enemy tanks.

- **Other Missile Systems:** Missiles have been developed by India under '**Integrated Guided Missile Development Program**'.

IGMDP (Integrated Guided Missile Development Program)

- It was conceived by Dr. A.P.J. Abdul Kalam to enable India attain self-sufficiency in the field of missile technology. It was approved by the Government of India in 1983 and completed in March 2012.
- The **5 missiles (P-A-T-N-A)** developed under this program are:
 - **Prithvi:** Short range surface to surface **ballistic missile**.
 - **Agni:** Ballistic missiles with different ranges, i.e. Agni (1,2,3,4,5)
 - **Trishul:** Short range low level **surface to air missile**.
 - **Nag:** 3rd generation **anti-tank missile**.
 - **Akash:** Medium range **surface to air missile**.

Other Recent Tests:

- The NAG ATGM trial was in continuation of a series of missile tests conducted by the DRDO in the last one-and-a-half months.
 - Among these trials were two other ATGMs - the **Laser-Guided ATGM**, and the **Stand-Off Anti-Tank Missile (SANT)**.
- DRDO, successfully tested India's first indigenous anti-radiation missile named **Rudram**, Supersonic Missile Assisted Release of Torpedo (**SMART**) **system**, nuclear capable **missile Shourya**, **Naval version of the BrahMos** and **Hypersonic Technology Demonstrator Vehicle (HSTDV)**.

Source: PIB