



Advance Version of BrahMos

Why in News

Recently, an extended range sea-to-sea variant of the [BrahMos supersonic cruise missile](#) was test fired from stealth guided missile destroyer **INS Visakhapatnam**.

- BrahMos is a joint collaboration between **India and Russia**.

Key Points

▪ About Advance Variant:

- The BrahMos missile was initially developed with a range capped at 290 km.
- The range of the missile was originally capped at 290 km as per obligations of the [Missile Technology Control Regime \(MTCR\)](#).
- However, following India's entry into the MTCR club in June 2016, the range is planned to be extended to 450 km and to 600km at a later stage.

▪ About BrahMos:

- BrahMos is a joint venture between the [Defence Research and Development Organisation of India \(DRDO\)](#) and the NPOM of Russia.
 - BrahMos is named on the rivers **Brahmaputra and Moskva**.
- It is a **two-stage (solid propellant engine in the first stage and liquid ramjet in second)** missile.
- It is a **multiplatform missile** i.e it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- It operates on the "**Fire and Forgets**" principle i.e it does not require further guidance after launch.
- Brahmos is one of the **fastest cruise missile** currently operationally deployed with speed of **Mach 2.8**, which is nearly **3 times more than the speed of sound**.

▪ About INS Viskhapatnam:

- It is the first ship of the four state-of-the-art stealth guided missile destroyers, developed under [Project-15B](#). Other Three Ships of Project 15B:
 - The second ship of P15B, **Mormugao** was launched in 2016, and is being readied for harbour trials.
 - The third ship (**Imphal**) was launched in 2019, and is at an advanced stage of outfitting.
 - The fourth ship (**Surat**) is under block erection and will be launched within this current financial year (2022) .
- The Guided missile Destroyers of Project 15B (P 15B) are under construction at **Mazagaon Dock Shipbuilders Limited, Mumbai**.

Missile Technology Control Regime (MTCR)

- It is an **informal and voluntary partnership among 35 countries** to prevent the proliferation of missile and unmanned aerial vehicle technology capable of carrying greater than **500 kg payload for more than 300 km**.
- The members are thus prohibited from supplying such missiles and **UAV systems** that are controlled by the MTCR to non-members.
- The decisions are taken by **consensus of all the members**.
- This is a non-treaty association of member countries with certain guidelines about the information sharing, national control laws and export policies for missile systems and a rule-based regulation mechanism to limit the transfer of such critical technologies of these missile systems.
- It was established in **April 1987 by G-7 countries** - USA, UK, France, Germany, Canada, Italy, and Japan.
- In 1992, the focus of the regime **extended to on the proliferation of missiles for the delivery of all types of weapons of mass destruction (WMD)**, i.e., nuclear, chemical and biological weapons.
- It is **not a legally-binding treaty**. Hence, no punitive measures could be taken against non-compliance to the guidelines of the regime.
- India was inducted into the Missile Technology Control Regime in 2016 as the 35th member.
- India can procure high-end missile technology and run joint programmes for development of unmanned aerial vehicles with other countries. eg. Procurement of theater missile interceptor "Arrow II " from Israel, military drones like "Avenger" from the USA etc.

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