BrahMos Missile

Prelims: *Current events of national and international importance | Defence*

Why in News?

Indian Defence Secretary said that India has signed a deal to sell BrahMos missiles to Vietnam, and it is in the final stage for a similar deal with Indonesia.

- **BrahMos** – It is an *unmanned payload rocket* which is considered one of the *fastest cruise missiles* in the world.
- **Cruise missiles** – They are unmanned vehicles powered by jet engines that can be launched from ground, air, or sea platforms; fly at a low distance from the ground.
- **Name** – BrahMos is an amalgamation of the names of the Brahmaputra and Moskva rivers.
- **Origin –** It is a joint venture between India's DRDO (50.5%) and Russia's NPO Mashinostroyenia (NPOM) (49.5%), which led to the formation of *BrahMos Aerospace.*
- **Technical Design** – It is a two-stage missile
  - **First stage** – *Solid propellant* booster engine which propels it to supersonic speed, greater than the speed of sound, and it then gets separated.
  - **Second stage** – *Liquid ramjet* then fires and thrusts the missile to three times the speed of sound in its cruise phase.

Liquid ramjet *– It is an air-breathing jet engine that uses liquid fuel, which is injected into the high-speed airstream and ignited to produce thrust.*

- **Range** – Original range is 290 km, which extended upto 350 km are currently being tested.
- **Compared to subsonic cruise missiles** – BrahMos has 3 times the speed, 2.5 times the flight range and a higher seeker range, leading to higher accuracy and nine times more kinetic energy.
- **Capabilities** – It is an extremely versatile *stand-off range 'fire-and-forget'* type supersonic cruise missile that has proved its capabilities in land, ship, air and submarine versions.
  - **Stand-off weapon** – Fired from a safe distance to avoid enemy defences.
- **Stealth** – It has an extremely low radar signature, making it stealthy, and it can follow a variety of paths.
- **Altitude** – It could be up to 15 km and terminal altitude as low as 10 metres.
- The missile carries a conventional warhead weighing 200-300 kg.

> *The **Philippines** became the first foreign buyer of the BrahMos missile system after signing a deal worth nearly $375 million in 2022.*

To know more about BrahMos Missile, click here

References

1. NDTV | After Vietnam, Indonesia To Buy India's Brahmos
2. Indian Express | After Vietnam, Indonesia To Buy India's Brahmos

