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MP-IDSA
Commentary

India Tests Agni-5 with MIRV Capability

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Summary

The successful test of the Agni-5 with MIRV capability serves as a clear signal of India's credible nuclear deterrence posture.

India's Defence Research and Development Organisation (DRDO) on 8 May 2026 successfully tested the next-generation Intercontinental Ballistic Missile (ICBM). This is a major achievement by DRDO that coincided with the first anniversary of Operation Sindoor, which was a landmark tri-service military operation launched by India in May 2025 in response to the dastardly terror attack in Jammu & Kashmir's Pahalgam on 22 April 2025.

India had issued a NOTAM (Notice to Airmen) for a long-range missile test in the Bay of Bengal between 6 May and 9 May 2026. Such notices are typically issued ahead of missile launches or major military exercises. With this timing coinciding with the first anniversary of Operation Sindoor, many analysts believed that India could be preparing to test the Agni-6 missile. Also, recently, DRDO chief Samir V Kamat stated that DRDO is fully prepared to test a missile with a range exceeding 10,000 km and could undertake this mission at any time, subject to government approval. Naturally, this led many to believe that India was preparing to launch an Agni-6.[1]

Ultimately, on 8 May 2026, DRDO successfully flight-tested an advanced Agni missile equipped with a MIRV (Multiple Independently Targetable Re-entry Vehicle) system from Dr APJ Abdul Kalam Island. The missile carried multiple payloads targeting different targets across the Indian Ocean region, with tracking conducted via ground- and ship-based systems. Flight data confirmed that all mission objectives were achieved, reaffirming India's capability to strike multiple strategic targets with a single missile.[2]

Earlier in May 2024, DRDO conducted a successful Agni-5 MIRV test under Mission Divyastra, marking a major leap in India's strategic deterrence capability and demonstrating its ability to deploy multiple independently targetable warheads from a single missile.[3] The recent test was the second such test about MIRV. It looks like, with two successful tests, DRDO could be operationalising this system in the near future. It is not known whether they plan to conduct a few more such tests before handing over the system to Strategic Forces for induction.

MIRV technology enables a single ballistic missile to carry and deliver multiple warheads, each capable of striking different targets independently. Developed during the Cold War, MIRV technology was first operationally deployed by the United States through the LGM-30 Minuteman III, fundamentally transforming strategic missile warfare by increasing strike capability. Today, countries such as the United States,

[1] **"DNA Decodes Agni-6: The Missile That Can Put Entire World Within India's Reach"**, *Zee News*, 8 May 2026.

[2] **"India Conducts Successful Flight-trial of Advanced Agni Missile with Multiple Independently Targeted Re-Entry Vehicle system"**, Press Information Bureau, Ministry of Defence, Government of India, 9 May 2026.

[3] **"DRDO Successfully Conducts Mission Divyastra"**, Press Information Bureau, Ministry of Defence, Government of India, 11 March 2024.

the United Kingdom, France, China and Russia possess operational MIRV capabilities.

Pakistan claims that its medium-range ballistic missile, Ababeel, is equipped with MIRV technology. According to reports, the missile has a range of around 2,200 km and is believed to be capable of carrying multiple warheads. They could have possibly tested a MIRV-capable system in 2017. However, these claims remain under scrutiny, as independent verification is limited, and some analysts have questioned the success and maturity of Pakistan's MIRV testing programme.[4]

India entered the long-range strategic missile domain with the successful test of the Agni-5 by DRDO on 19 April 2012. ICMB Agni-5 has a range of over 5,000 km and can carry nuclear payloads. India demonstrated its nuclear weapons capability in 1974 with Pokhran-I (Smiling Buddha). It further strengthened its strategic posture in 1998 (Pokhran-II) by conducting a series of five nuclear tests. However, possessing nuclear weapons alone is only the first step towards becoming a nuclear-weapon state. Credibility of a state to become a nuclear-weapon state depends on the ability to miniaturise warheads, develop survivable delivery systems, and ensure reliable second-strike capability.

The weaponisation of nuclear technology is a highly complex engineering process involving warhead design, yield optimisation, fissile material processing, safety mechanisms, and integration with delivery platforms. For ease of operations across multiple delivery systems, modern nuclear warheads are made compact and lightweight. Together, these platforms form the nuclear triad. A credible nuclear triad rests on three pillars: strategic bombers for aerial delivery; long-range or CBMs for land-based deterrence; and submarine-launched ballistic missiles (SLBMs) for survivable second-strike capability.

MIRV technology is part of the land-based missile component of this triad. By enabling a single missile to carry multiple independently targetable warheads, MIRVs significantly increase strike flexibility, penetration capability, and deterrence value. The integration of MIRV capability into the Agni-5 programme demonstrates India's transition towards more advanced and survivable strategic systems, placing it among a select group of nations with sophisticated nuclear delivery technologies.[5]

The successful integration of MIRV technology into the Agni-5 is a major achievement of decades of efforts under India's Agni missile programme. There is a long history of Indian establishment making inroads in the missile domain. The Government of India approved the establishment of the Integrated Guided Missile Development Programme (IGMDP) on 26 July 1983.

[4] **"MIRV Technology: Using Multiple Independently Targetable Warheads to Revolutionise Missile Warfare"**, *The Geostrata*, 28 November 2025.

[5] **"India's Emerging Nuclear Posture"**, RAND Research Brief, 2001.

The Agni-1 emerged from IGMDP, which also produced the Prithvi, Akash, Nag and Trishul missile systems. Initially conceived by DRDO as a technology demonstrator for re-entry vehicle validation, the early Agni used a solid-fuel first stage derived from the SLV-3 space launch vehicle and a modified upper stage. India successfully tested the Agni demonstrator in 1989, followed by upgraded trials in 1992 and 1994. After finalising re-entry studies, DRDO converted the system into the single-stage Agni-1 ballistic missile. Development of this system formally began in 1999, with successful operational testing completed in 2003.[6] Table 1 summarises the major characteristics of India's Agni missile series. The service arm for these systems is the Strategic Forces Command (Army).

Table 1. India's Agni Missiles

Missile	First Test	Operational Induction	Propellant Type	Number of Stages	Effective Range	CEP (app)	Remarks
Agni-1	25 Jan 2002	2004	Solid Fuel	1	700–1,200 km	25 m	SRBM
Agni-2	11 Apr 1999	2008	Solid Fuel	2	2,000–3,000 km	40 m	MRBM
Agni-3	9 Jul 2006	2011	Solid Fuel	2	3,000–3,500 km	40 m	Intermediate-range ballistic missile
Agni-4	15 Nov 2011	2014	Solid Fuel	2	3,500–4,000 km	100 m	Advanced avionics and composites
Agni-5	19 Apr 2012	2021	Solid Fuel	3	5,000–5,500+ km	A few metres (reported)	Canisterized long-range ballistic missile

Source: Media Reports.

Note: SRBM stands for Short-Range Ballistic Missile (300 km to 1,000 km) and MRBM for Medium-Range Ballistic Missile (1,000 to 3,000 km)

Presently, DRDO is working to expand India's nuclear strike capabilities well beyond its immediate neighbourhood. The successful integration of MIRV capability on the Agni-5 is not the conclusion of India's missile development programme, but a significant landmark in its continued evolution. Reports suggest that Agni-6 is

[6] **"Agni I"**, CSIS Missile Defense Project.

currently under development and may be approaching the testing phase. This next-generation project is expected further to enhance range, mobility and payload flexibility. Repeated successful Agni-5 trials indicate that India has achieved significant progress in advanced seeker and guidance technologies required for ICBMs.

India's next-generation Agni-6 is expected to be a lighter, more mobile, and rapidly deployable system with a potential range exceeding 10,000 km, with estimates ranging from 8,000 to 12,000 km. The missile is also expected to integrate both MIRV and Manoeuvrable Re-entry Vehicle (MaRV) capabilities, significantly enhancing its strike flexibility, survivability, and ability to evade advanced missile defence systems.

It appears that DRDO's objective is to ensure that the Indian missile system can evade the world's best missile defence systems, such as Russia's S-500, America's THAAD, and China's HQ-19. Agni-6 is expected to carry 10 to 12 warheads. The use of MaRVs, advanced decoys to deceive radars, and radar-absorbing coatings will be key to beating the S-500, THAAD, and similar systems. A MaRV is a type of ballistic missile payload designed to change its flight path after re-entering the Earth's atmosphere. A MaRV's ability to change its trajectory enables it to evade enemy missile defence systems. India is yet to test the MaRV technology.[7]

It should be noted that no major authentic details about an Agni-6 programme are available in the public domain. However, there are occasional indications that such a system may be under development. However, testing of such a missile is yet to happen. Possibly, several geopolitical and strategic factors could be influencing India's decision not to test such a system at this stage.

India follows a credible minimum deterrence doctrine as a part of its nuclear posture. Under this framework, the primary objective is to ensure survivability and a reliable second-strike capability. Since the Agni-5 already provides intercontinental reach, the introduction or testing of a further extended-range system like Agni-6 would not fundamentally alter the existing deterrence balance. Hence, there is no operational urgency for testing systems like Agni-6.

Large-scale missile testing carries significant strategic signalling consequences. Any test by India of a new ICBM with a 10,000 km range could have been interpreted as escalatory by major powers beyond China and Pakistan. In the current global environment, where two active conflicts with nuclear dimensions already exist, such a test could have heightened tensions and potentially triggered reciprocal missile development or testing by other states, essentially by China and Pakistan. In the present context, the successful test of the Agni-5 with MIRV capability serves as a clear signal of India's credible nuclear deterrence posture.

[7] **"India to Develop Lighter Intercontinental Missile Capable of Beating THAAD, S-500 Air Defence Systems: Report"**, *The Week*, 3 April 2026.

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