

How our 8th President paved the way for India's successful missile programme

Without R Venkataraman's vision, India may not have developed such a strong indigenous missile system—in fact, he was the one who helped Kalam become India's Missile Man

By Rinchen Norby Wangchuk

Daulat Singh Kothari, the scientific advisor to the Defence Minister from 1948 to 1961 and Father of Defence Sciences in India, made a critical observation in 1958.

Ballistic missiles, he believed, posed a grave threat to not just India, but all humanity for they are capable of carrying nuclear warheads that can devastate entire countries.

His warnings set the ball rolling for the establishment of the Defence Research and Development Organisation (DRDO) to streamline indigenous defence-related research and manufacturing.

Today India has a wide range of ballistic missiles in its arsenal under the Agni, Prithivi and Dhanush classes to name a few.

But India only began seriously considering the idea of strengthening its missiles system in 1979, when a Ministry of Defence-led committee under then DRDO chairman Raja Ramanna came up with the concept of an Integrated Guided Missile Development Programme (IGMDP).

However, it was in 1982, under the then Indira Gandhi government and Defence Minister Ramaswamy Venkataraman, when the DRDO's missile programme really took off.

Prime Minister Gandhi was adamant that instead of taking the import route, India must develop its own indigenous missiles system. There were past attempts at developing an indigenous missiles system, but the necessity of war, lack of a proper supply chain system and focus often stalled their progress.

All that changed in April 1982, when the Centre set up a Missile Study Team under the leadership of rising DRDO star and future President APJ Abdul Kalam, who was appointed Director of Defence R&D Laboratory.



Shri R. Venkataraman's Dr Abdul Kalam with Space pioneer Satish Dhawan and PM Indira Gandhi

Credit for bringing APJ Abdul Kalam to develop India's missile systems lies with the then Defence Minister R Venkataraman, who transferred him from the space to the defence programme.

Under the chairmanship of Kalam, this study team conducted an in-depth top-secret analysis of India's missile requirements and shared their inputs with the defence ministry and armed forces.

The real turning point, however, came during one such meeting in the autumn of 1982.

Present during this high-powered meeting was Prime Minister Gandhi, Defence Minister Venkataraman, all three service chiefs, principal secretary to PMO, a Cabinet secretary, DRDO Chief VS Arunachalam and Abdul Kalam.

Kalam recommended "the phased development of five missiles – the Trishul and Akash surface-to-air missiles; the Nag anti-tank missile; the Prithvi short-range ballistic missile; and an Agni technology demonstrator to validate re-entry technology," according to noted defence analyst Ajai Shukla, writing for the Business Standard in 2013.

Despite appreciating the vision Kalam was laying down, Venkataraman did not believe in a "phased programme", and instead pushed for the simultaneous development of all missile programmes.

Prime Minister Gandhi approved the recommendation, and the IGMDP received formal sanction on July 27, 1983, at the DRDL, with funds earmarked until 1995.

Kalam was to lead this effort as Chairman of the Programme Management Board.

Joining Kalam in this endeavour were two other brilliant scientists VK Saraswat and Avinash Chander. While the former lead the development of navigation and guidance system, the latter oversaw the propulsion development.

Former DRDO chairman VS Arunachalam lucidly presents the challenges that the DRDO team worked under and yet produced results like the IGMDP in the following words.

That remains in my mind after so many years... (is) enormous pride in our building the necessary critical technologies, in the midst of embargoes and denials; and these projects were not easy and these roads were less travelled and painfully hard. Global meetings between scientists were forbidden (to Indian scientists), commercial and committed orders were cancelled and professors from our academies were denied visas to attend scientific conferences and political pressures were applied to cancel the projects and programmes."

India has developed missile systems "capable of striking anywhere in Pakistan, and most of China, another regional rival, in the last two decades," according to this New York Times report.

Credit for this goes to not just the scientists at DRDO led by Kalam, but also the former lawyer and then Defence Minister R Venkataraman, who used his political authority to present a vision that has kept Indian defence systems in good stead for years to come.

Venkataraman was a man with a huge legacy. He actively took part in the freedom struggle (suffering two-year detention in prison for his activism in the Quit India Movement of 1942). He defended Indian nationals charged with collaborating with the Japanese during World War II in Malaya and Singapore in 1945.

He served in the Constituent Assembly and later served multiple terms in the Lok Sabha. He was appointed as Minister of Industries and eventually Finance before his tenure in the Ministry of Defence.

Clearly, Venkataraman understood the needs of this polity at a level not many politicians could.

Following his tenure in the defence ministry, he served both as Vice-President and President, where he worked with four prime ministers in just five years.

On his birth anniversary today, we would like to celebrate R Venkataraman and his contribution to strengthening India's defence.

(Edited by Vinayak Hegde)

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Shot in the arm for Make in India as Army chooses desi weapons over Israeli Spikes

By Ajit K Dubey

New Delhi: At a time when the Defence Research and Development Organisation (DRDO) is making fast progress in the field of missiles, the Indian Army is planning to scrap a project worth over Rs 3,000 crore to acquire more than 4,000 Israeli Spike anti-tank missiles and go in for an indigenous weapon system.

The Spike missile deal has been in the making for a long time but has been delayed or scrapped for one reason or another.

"The Made in India weapon system called the Man Portable Anti Tank Guide Missile (MP-ATGM) is progressing very fast and is going to go for its second trial soon. The Army is now planning to go for the indigenous system over the Spike missile," top government sources told MyNation.

Earlier, the Army had plans of acquiring over 4,000 missiles for meeting its urgent requirements for the missiles which would be used for destroying enemy tank regiments in case of war and fulfill its full requirement of 20,000 ATGMs by inducting the MP-ATGM in large numbers.

However, now the thinking in the force is that since the Spike missile would also take two to three years after the signing of the contract for induction, it would be better if the Army goes in for the DRDO equipment which would be ready for induction at around the same time-frame, the sources said.

An Israeli vendor had been selected for supplying over 8,000 Spike ATGMs to India but the tender was withdrawn by the defence ministry. Later, it was decided that the requirements would be met through a mix of import and local production. But, now the situation has changed again.

Meanwhile, the state-owned Bharat Dynamics Limited has also laid foundation of the production line for the MP-ATGMs to be produced for the Army in Hyderabad.

The Israeli vendors had also tied up with a private sector company in India for local production of the missile systems.

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