

# Indian committee calls for 'complete revamp' of DRDO

*By Jon Grevatt*

India's Parliamentary Standing Committee on Defence has tabled a series of recommendations to enhance the capabilities of the country's Defence Research and Development Organisation (DRDO).

In a report submitted to the lower and upper houses of parliament in late December, the committee said that while gains had been achieved by the DRDO in recent years inadequacies in structure, funding, and staffing were obstacles to further improvements.

In terms of its structure, the report noted, "The committee stressed the need for a complete revamp and re-orientation of DRDO functions." The committee recommended that the DRDO needed to enhance collaboration with domestic private-sector businesses and academia so that research and development (R&D) activities can be "synergized and better co-ordination achieved".

The committee went on to highlight areas of defence R&D that the DRDO needed to prioritise given capability weaknesses in India. These included, it said, chip technologies and electronic components, propulsion and aero-engines, sensors, and materials.

However, the committee added that in investigating its report it concluded that India is "self-reliant in many systems that DRDO is currently developing". These systems, it said, included "missile systems, radars, sonars, electronic warfare systems torpedoes and recent developments [in] guns and ammunition".

The committee also highlighted concerns in funding and levels of staffing. According to the committee, the DRDO faces a funding shortfall in fiscal year 2019-20 of INR39.3 billion (USD551.5 million). It said this is based on the DRDO's required funding projection of INR229.5 billion for 2019-20 and its actual allocation of INR190.2 billion.

It added that while the DRDO is "managing within the allocations by reprioritising project activities", it recommended that the government allocated "appropriate and adequate funding for DRDO projects... to enhance the indigenisation level in a true sense".

The committee also said that India spends "considerably less" on defence R&D than other prominent countries and that the government's 'Make in India' vision can only become a "reality in the defence sector when justifiable expenditure is channelled toward research and development".

Similarly, the committee pointed to deficits in workforce, specifically in DRDO scientists. It said that the number of authorised scientists employed by the DRDO has remained at 7,255 since the early 2000s despite a six-fold increase in R&D expenditure and the government's 'Make in India' campaign.

The committee said the DRDO's number of employed scientists is "grossly insufficient" and recommended that the government revises its authorised staffing level.

## **Analysis**

The DRDO, which operates under the Ministry of Defence (MoD), was established in the late 1950s and consists of 52 laboratories across India. The agency is concentrated in developing capabilities across seven domains: naval systems and materials; aeronautical systems; armaments and combat engineering; missiles and strategic systems; electronics and communications; life sciences; and micro-electronic devices, computers and cyber.

However, the agency has been the subject of criticism for many years not only from the Indian armed forces but also from parliamentary and watchdog committees. Prime concerns have focused on delays in major R&D projects and for having designed materiel of little operational worth. In 2007, the government also carried out an independent audit of the organisation, which recommended wide-scale restructuring to improve efficiencies and accountability.

While this has not resulted in major reforms, the MoD has implemented several DRDO-related measures in recent years to enhance India's defence R&D capability. These have included a policy for the DRDO to waive licence fees and royalties for several patents to provide local manufacturers with free access to military technologies; MoD efforts to encourage greater collaboration between the DRDO and state-owned companies; and the provision of greater powers within the DRDO to sanction projects internally.

<https://janes.ihs.com/Janes/Display/1963617>

**ANI**

*Fri, 03 Jan 2020*



## **DRDO Chairman pays homage at National War Memorial**

ANI | Updated: **Jan 01, 2020 14:22 IST**

New Delhi [India], Jan 01 (ANI): Defence Research and Development Organisation Chairman G Satheesh Reddy on Wednesday paid homage to the fallen soldiers at the National War Memorial in Delhi on the occasion of the 62nd DRDO day.

Earlier in the day, Defence Minister Rajnath Singh had extended his greetings on the occasion of DRDO Day and wished its personnel a successful year ahead.

"On the 62nd DRDO Day, I extend my warm wishes and greetings to all @DRDO\_India personnel and their families. The DRDO has made an immense contribution towards developing cutting edge Defence Technologies and Systems. I wish the DRDO family a remarkable and successful year ahead," Singh said in a tweet. (ANI)

## DRDO to set up five new labs to prepare Indian armed forces for future high-tech warfare

*The specialised areas of work for these laboratories are artificial intelligence, quantum technologies, cognitive technologies, asymmetric technologies and smart materials*

New Delhi: India's tactical and strategic defence capabilities are poised to get a boost with Defence Research and Development Organisation (DRDO) establishing five laboratories, each in specialising in core area of futuristic technologies. The specialised areas of work for these laboratories are artificial intelligence, quantum technologies, cognitive technologies, asymmetric technologies and smart materials.

"These laboratories are located at Bengaluru, Mumbai, Chennai, Kolkata and Hyderabad," said a senior DRDO official.

New and futuristic area of asymmetric technologies, which will change the way wars are fought, will be based out of campus of Jadavpur University in Kolkata. The research in hot and critical area of smart materials and their applications will be based out of Hyderabad.

Research in the area of rapidly evolving artificial intelligence will be carried out at Bengaluru, while the all-important area of quantum technology will be based out of IIT Mumbai. The future is dependent on cognitive technologies and IIT Chennai will house the lab embarking in this area of research.

Each of these laboratories is working on a key advanced technology of importance to the development of futuristic defence systems.

The directors of these laboratories were selected independently by a committee chaired by Principal Scientific Advisor to Central government. To realise the goals of these laboratories, directors are empowered with financial and administrative authorities at par with any director of a DRDO laboratory.

Establishment of these laboratories for work on advanced and future technologies will be a big leap forward for DRDO from goal of making India self reliant to future ready in defence technologies.

DRDO in a statement said: "The impact of science and technology on defence systems remains undisputed. Edge in technology continues to define the directions of operational, tactical and strategic warfare paradigms."

It also stated that in today's rapidly evolving world technology is challenging the traditional norms of technology assessment and forecasting. "The pace of innovation is such that today's technology needs to be evaluated and its future potential ascertained with unimaginable immediacy," the defence organisation stated.

Innovations and rapid development of future game changing technologies need to be nurtured with both financial investments and intellectual capital.

"No longer can we wait to evaluate technology till maturity for implementation and then investment. Speed of assessment, rapid prototyping, pace of evaluation and focused development are necessary for us to remain relevant in the field of cutting edge technology," it stated.

The DRDO stated that these laboratories will be known as Young Scientists laboratories and Prime Minister Narendra Modi will be dedicate these to the nation at Bengaluru.

<https://economictimes.indiatimes.com/news/defence/new-drdo-labs-to-boost-indian-defence-capabilities/articleshow/73072702.cms>

## Help nations suffering from terrorism, PM Modi tells scientists at DRDO

*"This is a decade which will decide what will be the strength of India and where we will be on the world map," PM Modi said*

Bengaluru: Prime Minister Narendra Modi on Thursday urged scientists at the Defence Research and Development Organisation (DRDO) to rethink and reshape the organisation to play significant role in helping nations suffering from terrorism.

"This is a decade which will decide what will be the strength of India and where we will be on the world map. This decade is all about young innovators," PM Modi said after dedicating to the nation five DRDO Young Scientists Laboratories.

These labs will come up in Bengaluru, Hyderabad, Chennai, Kolkata and Mumbai where scientists below the age of 35 get priority to contribute for research and development.

PM reminded scientists that they have an opportunity to not only serve the nation, but also the world in terms of security in view of growing threat of terrorism.

"Today there are many nations who do not have any border-related insecurities because they are all surrounded by friendly nations. But such nations never thought that they will have to use weapons because there was never any threat," PM Modi said. DRDO can help such nations in their internal security, he added.

"Your efforts in this direction will be a service to humanity and will strengthen India's position in the world," PM Modi said.

On the appointment of General Bipin Rawat as Chief of Defence Staff (CDS), he said the creation of the new post would bring a major change and it would have a bearing on DRDO too.

He pointed out that the need for a post like CDS was felt for better coordination, synergy and integration between the three armed forces long back and was part of BJP's commitment to the nation, which has been fulfilled.

PM Modi said DRDO should be prepared to take up the challenge where threats would not be just limited to the air and sea, but also cyber and space, which will all decide the strategic dynamics.

"You all are aware that along with air and sea, cyber and space will define the world's strategic dynamics. Along with this, intelligent machines will play a key role in the defence sector in the days to come.

<https://www.ndtv.com/india-news/pm-narendra-modi-asks-scientists-at-drdo-to-help-nations-suffering-from-terrorism-2157937>



## From aircraft to aircraft carrier, India capable of building everything: PM at DRDO

*As the Prime Minister of the country, I want to say that the government is ready to support the scientists and innovators of the country at every step, Prime Minister Modi said*

### **KEY HIGHLIGHTS**

- *According to the research and development wing of the Defence Ministry, Prime Minister Modi's address on 24 August 2014 at a DRDO award function was the inspiration behind creating the Young Scientist Laboratories*
- *The PM said India's missile programme is "one of the outstanding programmes in the world" and appreciated the Indian Space Programme and air defence systems*

Bengaluru: Prime Minister Narendra Modi on Thursday launched five Defence Research and Development Organisation (DRDO) Young Scientists Laboratories in Bengaluru and said that India is among the few countries that have the capability to build everything from an aircraft to an aircraft carrier.

"India is among very few countries that have the capability to build everything from aircraft to aircraft carrier. I am satisfied that work was done sincerely on the suggestion of setting up 5 labs in the field of Advanced Technologies and today five such institutes are coming up in Bengaluru, Kolkata, Chennai, Hyderabad and Mumbai," PM Modi said at DRDO.

He further said, "As the Prime Minister of the country, I want to say that the government is ready to support the scientists and innovators of the country at every step."

According to the research and development wing of the defence ministry, Prime Minister Modi's address on 24 August 2014 at a DRDO award function was the inspiration behind creating the Young Scientist Laboratories.

The PM asked scientists to "prepare a definite roadmap for the new decade where DRDO should be able to set the direction and pace of scientific research in various fields in India".

He also said India's missile programme is "one of the outstanding programmes in the world" and at the same time appreciated the Indian Space Programme and air defence systems.

"The PM said India cannot be left behind in the field of scientific research. The Government is willing to walk the extra mile with the scientific community so that it can invest time in emerging technologies and innovations for national security. The DRDO's innovations would play a huge role in strengthening programmes like Make in India and in promoting a vibrant defence sector in the country," the Prime Minister's Office said in a statement.

<https://www.timesnownews.com/india/article/from-aircraft-to-aircraft-carrier-india-capable-of-building-everything-pm-at-drdo/534927>