



# Defence Research and Development Organisation

**For Prelims:** DRDO and its Programmes.

**For Mains:** Significance of DRDO for Indian Defence, Various Programmes and issues related with DRDO.

## Why in News

Recently, [Defence Research and Development Organisation \(DRDO\)](#) has celebrated the **64<sup>th</sup> Foundation Day on 1<sup>st</sup> January, 2022.**

## Key Points

### ▪ About:

- DRDO is the **R&D (Research and Development) wing of the Ministry of Defence** with a vision **to empower India with cutting-edge defence technologies.**
- Its **pursuit of self-reliance** and successful indigenous development and production of strategic systems and platforms such as **Agni and Prithvi series of missiles, Light Combat Aircraft, Tejas, multi-barrel rocket launcher, Pinaka, air defence system, Akash, a wide range of radars and electronic warfare systems,** etc. have given quantum jump to **India's military might**, generating effective deterrence and providing crucial leverage.

### ▪ Formation:

- It was **formed in 1958** from the amalgamation of the Technical Development Establishment (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).
- DRDO is **a network of more than 50 laboratories** which are deeply engaged in developing defence technologies covering various disciplines, like aeronautics, armaments, electronics, combat vehicles, engineering systems etc.

### ▪ Various Programmes of DRDO:

- **Integrated Guided-Missile Development Programme (IGMDP):**
  - It was one of Dr. APJ Abdul Kalam's major works to make Indian defence forces **self-sufficient in the field of missile technology.**
  - The **missiles developed under IGMDP are:** Prithvi, Agni, Trishul, Akash, Nag.
- **Mobile Autonomous Robot System:**
  - MARS is a smart robust robot to handle land mines and Inert Explosive Devices (IEDs) which helps the Indian Armed Forces **to disarm them from far distances despite hostile surroundings.**
  - With some add-ons, this system can even be used to dig the ground for the object and defuse the Improvised Explosive Device by various methods.
- **Highest Terrestrial Centre in Ladakh**
  - DRDO's centre in Ladakh is at 17,600 feet above sea level at Changla near Pangong lake which is intended to serve **as a natural cold storage unit for the preservation of natural and medicinal plants.**

### ▪ Issues with DRDO:

- **Inadequate Budgetary Support:**
  - The Standing Committee on Defence during 2016-17, expressed concerns over the inadequate budgetary support for the ongoing projects of DRDO.
  - The committee noted that out of the total defence budget, the share of **DRDO was 5.79 % in 2011-12**, which reduced to 5.34 % in 2013-14.
- **Inadequate Manpower:**
  - The DRDO also suffers **from inadequate manpower in critical areas** to the lack of proper synergy with the armed forces.
  - Cost escalation and long delays have damaged the reputation of DRDO.
- **Big on Promise and Small on Delivery:**
  - DRDO is big on promise and small on delivery. There is no accountability. Nobody is taken to task for time and cost overruns.
  - In 2011, the Comptroller and Auditor General (CAG) put a serious question mark on DRDO's capabilities, citing the organisation has a **history of its projects suffering endemic time and cost overruns.**
- **Obsolete equipments:**
  - DRDO is just tinkering with **World War II equipment** instead of working on cutting-edge technology.
- **Recent Developments:**
  - [Extreme Cold Weather Clothing System \(ECWCS\)](#)
  - ['Pralay'](#).
  - [Controlled Aerial Delivery System.](#)
  - [Pinaka Extended Range \(Pinaka-ER\) Multiple Launch Rocket System \(MLRS\).](#)
  - [Supersonic Missile Assisted Torpedo System \(SMART\).](#)
  - [Advanced Chaff Technology.](#)
  - [Akash-NG & MPATGM.](#)

## Way Forward

- DRDO should be restructured in a leaner organisation **as suggested by the committee chaired by P. Rama Rao** for external review of the agency in February 2007.
  - The committee recommended **setting up a commercial arm of the organisation to make it a profitable entity**, besides cutting back on delays in completing projects.
- DRDO former chief V.K. Saraswat has called for the **setting up of a Defence Technology Commission** as well as a bigger role for DRDO in picking production partners for products developed by the agency.
- DRDO **should be able to select a capable partner company** from the outset, from the private sector if necessary.
- In Its document "DRDO in 2021: HR Perspectives", DRDO has envisaged a **HR policy which emphasized on free, fair, and fearless Knowledge Sharing, Open book management style and Participative Management.** This is a step in the right direction.

[Source: PIB](#)