Overhauling Defence Research and Development Organisation (DRDO)

Why in news?

It is necessary to focus the Defence Research and Development Organisation (DRDO) that performs research activity for the Armed Forces.

What is DRDO?

- **Ministry** - Department of Defence Research and Development, Ministry of Defence
- **Role**- Military's research and development
- **Headquarters-** New Delhi, India
- **1958-** It was formed by the merger of the
  - Technical Development Establishment
  - Directorate of Technical Development and Production of the Indian Ordnance Factories
  - Defence Science Organisation
- **1979-** Defence Research & Development Service (DRDS) was constituted in 1979.
- **Motto-** "*Balasya Mulam Vigyanam*" – "The source of strength is science"

The Integrated Guided Missile Development Programme (IGMDP) under A P J Abdul Kalam is the most prominent success of DRDO.

Why are the issues in DRDO?

- **Low performance-** Its performance has been low over the years causing much disappointment in the armed forces.
- **Organisational issues** - DRDO has done excellent work in flashes but this has been more due to *individual brilliance* and not because of organisational effectiveness.
- **Time constraints**- Electronic Warfare systems versions have also been successful, but the procedure to adopt have been slow.
- Product realisation timelines have been excessive and end products are often dated by the time they are fielded.
- **Long term trials**- The trials go on for years with little assurance that the desired end state will be reached. This situation needs correction.

Why DRDO needs ISRO overhaul?

About	ISRO	DRDO

Limited focus	Sharp Focus- Space applications technologies such as propulsion, material science, control, navigation, imaging and tracking.	Expanded scope- Underwater, surface and air, results in dilution of focus.
Capability	ISRO is being the developer, launcher and controller all in one, ready their product.	DRDO is only the developer thus causing a serious of cohesion and persistence from design to realisation

- **Conflict of interest**- Once a prototype is successfully developed, there are production agencies and users that have separate responsibilities for serial production, trials and acceptance.
- The user groups change frequently during the development of a product by the DRDO, leading to a slowdown of projects.

What needs to be done?

- **Audit-** A thorough audit of all our DRDO laboratories, encompassing processes, organisation and workforce should be undertaken.
- **Review research**- The degree to which DRDO conducts fundamental research also needs review.
- **Proper examination**- Skewed teeth-to-tail ratios and the top-heavy nature of the organisation must be examined.
    - *The tooth-to-tail ratio refers to the amount of military personnel ("tail") it takes to supply and support each combat soldier ("tooth").*
- **Critical assessment**- DRDO laboratories' contribution towards enhancing the combat-readiness of our armed forces must be critically assessed.
- **Infrastructure regulation-** Laboratories which not serving their envisaged purpose should be wound up.
- **Productive agencies**- The performance of production agencies as also the involvement and value-addition by user groups must be evaluated and made more productive.
- **Widen the disciplines**- The armed forces must define *niche disciplines* in which DRDO should expend its efforts.
- **Technology share**- ISRO and DRDO must share technologies that overlap between space and defence domains.
    - Kalam's long association with ISRO and the continuity he provided to the IGMDP would have been two big reasons for the success of the programme.
- **Indigenization-** Self-reliance in the defence industry will enhance India's strategic independence and promote development in the country's domestic defence and aerospace industry.

Quick Facts

Indian Space Research Organisation (ISRO)

• It is the national space agency of India.
• **Headquarters**- Bangalore, Karnataka
• **1962-** It was previously known as the *Indian National Committee for Space Research (INCOSPAR)*
• **1969-** INCOSPAR grew and became ISRO in 1969, within the Department of Atomic Energy (DAE).
• **1972-** The Government of India set up a Space Commission and the Department of Space (DoS), bringing ISRO under it.
• **Control**- It operates as the primary research and development arm of the (DoS), which is *directly overseen by the Prime Minister*.
• **Executive-**The Chairman of ISRO acts as the executive of DoS.
• **Role-** Responsible for performing tasks related to space-based operations, space exploration, international space cooperation and the development of related technologies.
To know more about ISRO, click here

References

1. Indian Express- India's defence ecosystem needs ISRO overhaul
2. ISRO- About ISRO
3. DRDO- About DRDO

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