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**STANDING COMMITTEE ON DEFENCE
(2024-25)**

(EIGHTEENTH LOK SABHA)

MINISTRY OF DEFENCE

DEMANDS FOR GRANTS (2024-25)

**DIRECTORATE OF ORDNANCE (COORDINATION AND SERVICES) – NEW DPSUs,
DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION**

(DEMAND NOS. 20 AND 21)

FOURTH REPORT



LOK SABHA SECRETARIAT

NEW DELHI

December, 2024 / Agrahayana 1946 (Saka)

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DEMANDS FOR GRANTS (2024-25)

**DIRECTORATE OF ORDNANCE (COORDINATION AND SERVICES) – NEW DPSUs,
DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION**

(DEMAND NOS. 20 AND 21)

Presented to Lok Sabha on 17.12.2024.

Laid in Rajya Sabha on 17.12.2024.



LOK SABHA SECRETARIAT

NEW DELHI

December, 2024 / Agrahayana 1946 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON DEFENCE (2024-25)

SHRI RADHA MOHAN SINGH

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CHAIRPERSON

Lok Sabha

2	Dr. Rajeev Bharadwaj
3	Shri Karti P Chidambaram
4	Shri Adhikari Deepak Dev
5	Shri Ranjit Dutta
6	Captain Viriato Fernandes
7	Shri Rahul Gandhi
8	Shri Mohmad Haneefa
9	Shri S. Jagathratchakan
10	Ms. S. Jothimani
11	Shri Ravindra Shukla Alias Ravi Kishan
12	Shri Shashank Mani
13	Shri Lumba Ram
14	Shri Bishnu Pada Ray
15	Shri Jagannath Sarkar
16	Shri Jagadish Shettar
17	Shri Virendra Singh
18	Shri Kesineni Sivanath
19	Dr. Thirumaavalavan Tholkappiyan
20	Com. Selvaraj V.
21	Shri Richard Vanlalhmangaiha

Rajya Sabha

22	Shri Naresh Bansal
23	Shri N. Chandrasegharan
24	Shri Shaktisinh Gohil
25	Shri Prem Chand Gupta
26	Shri Naveen Jain
27	Shri Muzibulla Khan
28	Shri Praful Patel
29	Shri Dhairyashil Mohan Patil
30	Shri Sanjay Singh
31	Dr. Sudhanshu Trivedi

SECRETARIAT

1. Dr. Sanjeev Sharma - Joint Secretary
2. Shri Tirthankar Das - Director
3. Shri Vikas Kumar - Under Secretary

INTRODUCTION

I, the Chairperson of the Standing Committee on Defence (2024-25), having been authorised by the Committee, present this Fourth Report (18th Lok Sabha) on Demands for Grants of the Ministry of Defence for the year 2024-25 on 'Directorate of Ordnance (Coordination and Services) – New DPSUs, Defence Research and Development Organisation (Demand Nos. 20 And 21).'

2. The Demands for Grants of the Ministry of Defence were laid on 2nd August 2024 in Lok Sabha. The Committee took evidence of the representatives of the Ministry of Defence on 21 and 26 November, 2024. The draft Report was considered and adopted by the Committee at their Sitting held on 12th December, 2024.

3. For facility of reference and convenience, Observations/Recommendations of the Committee have been printed in bold letters in Part II of the Report.

4. The Committee wish to express their thanks to the officers of the Ministry of Defence and representatives of the Services/Organisations for appearing before the Committee and furnishing the material and information which the Committee desired in connection with examination of the Demands for Grants.

5. The Committee also place on record their appreciation of the assistance rendered to them by the Committee Secretariat.

New Delhi;
17 December, 2024
26 Agrahayana, 1946 (Saka)

RADHA MOHAN SINGH
Chairperson
Standing Committee on Defence

REPORT

CHAPTER – I

Directorate of Ordnance (Coordination and Services) – New DPSUs

Introduction

Directorate of Ordnance (Coordination and Services) – New DPSUs, with headquarters at Kolkata was a subordinate office of the Department of Defence Production till 30.9.2021. It controlled and directed 41 Ordnance Factories. The Cabinet, in its meeting held on 16.06.2021 has approved to convert production units of OFB into 7 DPSUs with 41 units, namely Ammunition & Explosive, Vehicles, Weapons & Equipment, Troop Comfort items, Ancillary, Opto Electronics and Parachute. The Head Quarters of the new corporate entities have been selected based on the location and concentration of OFs, revenue and criticality of Products.

The details of information with location of various headquarters functioning under the newly created Defence Companies and the production units coming under their jurisdiction are under:

Production Units under the 7 New DPSUs

Sl no	Production unit	New DPSUs and main business
1.	Ammunition Factory Khadki	<p>Munitions India Limited This DPSU is engaged in the business of manufacturing ammunition and explosives.</p> <p>Registered office: Ammunition Factory Khadki, Pune, Maharashtra – 411003</p> <p>Corporate office: 2nd Floor, NyatiUnitree, Nagar Road, Yerwada, Pune - 411 006</p>
	Cordite Factory Aruvankadu	
	High Energy Projectile Factory Tiruchirappalli	
	High Explosive Factory Khadki	
	Ordnance Factory Bhandara	
	Ordnance Factory Bolangir	
	Ordnance Factory ChandaChandrapur	
	Ordnance Factory Dehu Road	
	Ordnance Factory Itarsi	
	Ordnance Factory Khamaria	
	Ordnance Factory Nalanda	
	Ordnance Factory Varangaon	
2.	Engine Factory Avadi	<p>Armoured Vehicles Nigam Limited This DPSU is engaged in the business of manufacturing vehicles.</p> <p>Registered and corporate office:</p>
	Heavy Vehicle Factory Avadi	
	Machine Tool Prototype Factory Ambarnath	
	Ordnance Factory Medak	
	Vehicle Factory Jabalpur	

		HVF Road, Bhaktavatsalapuram, Avadi, Chennai, Tamil Nadu - 600054
3.	Field Gun Factory Kanpur Gun Carriage Factory Jabalpur Gun and Shell Factory Cossipore Ordnance Factory Kanpur Ordnance Factory Project Korwa Ordnance Factory Tiruchirappalli Rifle Factory Ishapore Small Arms Factory Kanpur	Advanced Weapons and Equipment India Limited This DPSU is engaged in the business of manufacturing weapons and equipment. Registered and corporate office: Ordnance Factory Kanpur, Kalpi Road, Kanpur, Uttar Pradesh – 208009
4.	Ordnance Clothing Factory Avadi Ordnance Clothing Factory Shahjahanpur Ordnance Equipment Factory Kanpur Ordnance Equipment Factory Hazratpur	Troop Comforts Limited This DPSU is engaged in the business of manufacturing troop comfort items. Registered and corporate office: C/o Ordnance Factory Equipment, Headquarter G T Road, Kanpur, Uttar Pradesh – 208013
5.	Grey Iron Foundry Jabalpur Metal and Steel Factory Ishapore Ordnance Factory	Yantra India Limited This DPSU is engaged in the business of manufacturing Military Grade components

	<p>Ambernath</p> <p>Ordnance Factory Ambajhari</p> <p>Ordnance Factory Bhusawal</p> <p>Ordnance Factory Dumdum</p> <p>Ordnance Factory Katni</p> <p>Ordnance Factory Muradnagar</p>	<p>and Ancillary products.</p> <p>Registered and corporate office: C/o The General Manager Ordnance Factory, Ambajhari Amravati Road Ambajhari, Nagpur, Maharashtra - 440021</p>
6.	<p>Ordnance Cable Factory Chandigarh</p> <p>Ordnance Factory Dehradun</p> <p>Opto-Electronics Factory Dehradun</p>	<p>India Optel Limited</p> <p>This DPSU is engaged in the business of manufacturing opto-electronic items.</p> <p>Registered and corporate office: C/o Opto Electronic Factory, Raipur, Dehradun, Uttarakhand – 248008</p>
7.	<p>Ordnance Parachute Factory Kanpur</p>	<p>Gliders India Limited</p> <p>This DPSU is engaged in the business of manufacturing parachutes.</p> <p>Registered and corporate office: C/o Ordnance Factory Equipment Headquarter, G T Road, Kanpur Uttar Pradesh – 208005</p>

Budgetary provisions

1.2 The Ministry of Defence was asked to furnish the information in respect to budgetary provisions to various newly constituted DPSUs/erstwhile ordnance factories and also about allocation of additional funds to run the factories under them along with the methodology adopted to distribute existing funds. The Ministry in its written replies stated as under:

“Government of India has allocated CAPEX Fund of Rs. 8745 Crore to the newly created DPSUs for FY 2021- 22 to FY 2026-27. Out of which, the fund distributed upto FY 2024-25 is Rs. 5757 Crore for Modernization and R&D, under the Omnibus Minor Head 190 – Investment in Public Sector & Other Undertaking, under Major Head 4076 (04) – Capital Outlay on Defence Services Estimates.

The existing funds are being distributed based primarily on accrued liabilities and modernization plan of newly created DPSUs.”

The Ministry provided the following information in a written submission regarding the projected amount, Budget Estimates, Revised Estimates and actual allocations in respect of all new DPSUs for the last five years alongwith the projections and Budget Estimate allocation for the year 2024-25:

(In Rs Crore)

FY 2019-20

Projection		Budgetary Estimates		Revised Estimates		Actual allocation	
Voted	Charged	Voted	Charged	Voted	Charged	Voted	Charged
Rev – 17040.	14	Rev – 15647.		Rev – 14290.17		Rev – 12642.17	

38 Cap – 903.00		91 Cap – 882.00		Cap – 878.55		Cap – 832.00	
17943.38		16529.91	7.23	15168.72	10.68	13474.17	13.18

FY 2020-21

Projection		Budgetary Estimates		Revised Estimates		Actual allocation	
Voted	Charge d	Voted	Charge d	Voted	Charge d	Voted	Charge d
Rev – 15681.82 Cap – 753.50	8.18	Rev – 15472.35 Cap – 753.50		Rev – 12163.81 Cap – 627.00		Rev – 11741.70 Cap – 426.00	
16435.32		16225.85	8.18	12790.81	5.70	12167.70	8.80

FY 2021-22

Projection		Budgetary Estimates		Revised Estimates		Actual allocation	
Voted	Charged	Voted	Charge d	Voted	Charge d	Voted	Charge d
Rev – 14400.50 Cap – 662.00	8.50	Rev – 13651.61 Cap – 662.00		Rev – 6660.00 Cap – 4341.00		Rev – 6660.00 Cap – 4341.00	
15062.50		14313.61	8.50	11001.00	19.00	11001.00	19.00

FY 2022-23

Projection		Budgetary Estimates		Revised Estimates		Actual allocation	
Voted	Charged	Voted	Charged	Voted	Charged	Voted	Charged
Rev – 474.00	1.00	Rev – 474.00		Rev – 400.50		Rev – 383.00	
Cap – 3810.00		Cap – 3810.00		Cap – 3811.50		Cap – 3810.10	
4284.00		4284.00	1.00	4212.00	1.00	4193.10	1.00

FY 2023-24

Projection		Budgetary Estimates		Revised Estimates		Actual allocation	
Voted	Charged	Voted	Charged	Voted	Charged	Voted	Charged
Rev – 432.50	1.00	Rev – 432.50		Rev – 424.50		Rev – 400.22	
Cap – 1315.00		Cap – 1315.00		Cap – 1310.50		Cap – 1394.50	
1747.50		1747.50	1.00	1735.00	1.00	1794.72	0.01

FY 2024-25

Projection		Budgetary Estimates		Revised Estimates		Actual allocation	
Voted	Charged	Voted	Charged	Voted	Charged	Voted	Charged
Rev –	1.00	Rev –		Rev –		Not yet	

461.75 Cap – 1499.0 0		450.25 Cap – 1499.0 0		498.35* Cap – 1637.00 *		finalise d	
1960.7 5		1949.2 5	0.2 1	2135.35	1.00		

* Projected

Budget for modernisation

1.3 The Ministry was asked to state the steps which have been/are being taken to modernize the newly constituted DPSUs and complete details of each project/programme proposed, planned and implemented since their constitution. In a written note, the Ministry apprised the Committee as under:

“In order to keep pace with contemporary manufacturing technologies and to modernise manufacturing units, the new DPSUs are adopting the following steps/methodologies:

- (i) Renewal & Replacement (RR): For renewal/reconditioning of high value/heavy duty P&M to restore the original manufacturing accuracies/functions and replacement of old P&M which are Beyond Economical Repair (BER) and those which have become obsolete, with the objective of retaining manufacturing capacities.
- (ii) New Capital (NC): Acquisition of P&M to incorporate latest available technology for the manufacturing of the future products or for capacity augmentation of existing products and to balance specific manufacturing processes for the current products in the form of NC Demand or through various capacity creation/augmentation projects.

- (iii) Civil Infrastructure: DPSUs are continuously modernizing Civil Infrastructure and services viz. Production & Services buildings, Power supply, Water supply, Compressed Air supply etc.”

1.4 During the oral evidence, the following information was also given regarding Financial Assistance to the new DPSUs:

- Emergency Authorization Fund of Rs. 5000 Crore
[Rs. 2500 Crore (FY 2021-22) & Rs.2500 Crore (FY2022-23)]
- For Modernization – Rs. 5,757 Crore (FY2021-22 to FY 2024-25)

(in Rs. Crores)

Modernization	2021-22	2022-23	2023-24	2024-25
DPSUs	1643	1310	1310	1494
AWEIL	347.74	226	225	329.26
AVNL	310.14	282	290	173.86
GIL	3.86	7	2	2.14
IOL	24.82	8	6	5.18
MIL	696.55	577	580	745.45
TCL	7.04	7	7	9.96
YIL	252.85	203	200	228.15

As per the decision of EGOM, financial assistance to the new DPSUs shall be provided till 2026-27

1.5 Details of the major project/ programme proposed, planned and implemented since the constitution of new DPSUs are as follows:

DPSUs	Details of Project/ Programme by the new DPSUs	Remarks
MIL	Production of BMCS manufacturing plant	Planned (Supply Order concluded)
	Single base propellant plant	Planned (Supply Order concluded)

	TNT Plant	Planned (Supply Order concluded)
	RDX plant	Proposed/Planned
	NG plant	
	RDX Compound Plant	
	NC Plant	
	NIGU (PICRITE) Plant	
AVNL	CNC 3D Coordinate Measuring Machine.	Commissioned
	Broaching Machine	
	CNC Gear Grinding Machine	
	CNC Gear Hobbing Machine	
	CNC Induction Hardening M/C	
	CNC 3 Axis CO2 Laser Cutting machine	
	CNC Jig grinding machine	
	300KN CNC Turret Punch press.	
	Automatic Co-ordinate Measurement with Latest Technology.	
	Computerized X-Ray Radiography System	
	SPM Gun Drilling Machine	
Flexible Machining System with four Machining Centre		
AWEIL	Indigenous production of AK-203 Rifle	Proposed/Planned

	Plant & Machinery for Indigenous production of Stabilised Remote-Control Gun (SRCG)	
TCL	Capacity augmentation for Bullet Resistant Jacket, Helmets with testing facility for Ballistic Protective Gears	Proposed/Planned
	Assembly line for Parachute manufacturing at OEF Hazratpur unit	
	Flexible Assembly line production shop for manufacturing of High-Altitude items	
	Production facility for manufacturing of Boot Multipurpose & Snow Boots	
YIL	Horizontal Boring & Milling Machine for PINAKA Project	Commissioned
	12T Capacity ESR Plant for manufacturing of Large Calibre Barrels	
	Manufacturing of Medium Calibre Barrels (10 Ton ESR Plant)	
	Hydraulic Forging Press for Steel Complex-II, Re-conditioning of Presses for manufacturing of large calibre shells	Proposed/Planned

	Electrically Heated Round Head Annealing/Anti flaking furnace for new ESR Plant	
	Resistance Welding Line including Fabrication and Connected Automation for Ammunition Container Box	
IOL	Digital Ballistic Computer and Automatic Target Tracker	Proposed/Planned
GIL	Double Needle Normal Machine	Proposed/Planned
	Four Needle Special Purpose Machine	
	ZigZag Normal Machine	

Order Book Position

1.6 On the issue of Order Book position in the Ordnance Factories for the next five years, the Ministry of Defence apprised the Committee as under:

“Order Book position for the newly created DPSUs for the next five years, DPSU wise, is as under:

(Rs in Crore)

Sl. No.	DPSUs	Order Book Position as on 30.09.2024
1	MIL	22271
2	AVNL	34049
3	AWEIL*	10014
4	TCL	1213

5	YIL	3085
6	IOL	7553
7	GIL	176
Total		77,148

(* AWEIL has on * **AWEIL has order worth Rs. 823 Cr available beyond FY 2028-29)**

With more functional and financial autonomy, these new DPSUs are exploring newer markets both in the country as well as abroad. Further, Ministry is providing financial and non-financial support to the new DPSUs to make them productive and profitable.”

1.7 During oral evidence of the committee, through a Power Point presentation, representatives of the new DPSUs, submitted on the subject as under:

i) Munitions India Limited (MIL)

- Engaged in Production, Testing, Research & Development of Ammunition & Explosives
- Products- Small, Medium and Large Caliber ammunition, Aerial bombs, Propellants and Explosives
- 12 Production Units in 5 states (MH-6,MP-2,TN-2,BH-1,OD-1) & 3 Non-Production Units for training & safety (MH-2,MP-1)

Turnover

	2021-22 (H2)	2022-23	2023-24
Revenue	2571	4652	7222
Profit after Tax (PAT)	22	73	559

- 2024-25 (Projections) - Revenue: Rs. 8500 Cr.;PAT: Rs. 625 Cr.

- Present Order Book as on 01.10.2024 - Rs. 22,271 Cr.
- 2024-25 - New Orders worth Rs. 3270 Cr. received and Rs. 8700 Cr. expected
- Since Oct 2021, export sales – Rs. 2,955 Cr. till date. Present export order book - Rs. 6,100 Cr. approx
- Crucial role in success of ISRO’s LVM3 launch vehicle and Chandrayaan-3 space craft by supplying essential explosives
- Runners up Award from Hon’ble Raksha Mantri during DEFEXPO 2022 for achievements in exports

Research & Development

- R&D expenditure increased from **Rs. 12 Cr.** in 2021-22 (H2) to **Rs. 73 Cr.** in 2023-24

R&D Initiatives

- Specialized M.Tech. Program at IIT Madras in Ammunition Technology for employees
IPRs Filed- 340, IPRs Granted-79

<u>New Products Developed</u>		
Pinaka ER & Pinaka DPICM	ERA for T-90	Multi Mode Hand Grenade
Artillery Fuze PDM 557	125 mm FSAPDS/T Practice	
<u>Major ongoing Projects</u>		

Guided Pinaka	New family of Mines	125 mm FSAPDS Ammunition
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ii) **Armoured Vehicles Nigam Limited (AVNL)**

Armoured Vehicles Nigam Limited (AVNL) is a leading manufacturer of AFVs, Engines for AFVs, Logistic Vehicles and Overhaul of AFVs and Engines.

- 5 Production Units in 4 states (TN-2, MP-1, TS-1 & MH -1) & 6 Non-Production Units (TN-2, TS-1, MH -2 & ND -1)

Turnover

	2021-22 (H2)	2022-23	2023-24
Revenue	2569	4876	4663
Profit After Tax (PAT)	54.19	271.17	605.06

- 2024-25 (Projections) - Revenue: Rs. 5,960 Cr.; PAT: Rs. 435 Cr.
- Present Order Book as on 01.10.2024 - Rs. 33,600 Cr. Approx
- 2024-25 - New Orders worth Rs 1075 Cr. received and Rs. 5000 Cr. Approx. expected
- Research & Development

New Products Developed:

- Armament Upgrade BMP-II
- 6x6 Mine Protected Vehicle
- Upgrading of 1000 HP for T-72 Engine

Major Ongoing Projects:

- Futuristic Infantry Combat Vehicle (FICV)
- Wheeled Armoured Fighting Vehicle
- Power Pack for MBT Arjun, FRCV & Upgradation for BMP & T-90
- Light Tank
- Future Ready Combat Vehicle
- Upgrading of T-72 Tanks with 1000 HP engine
- Hybrid Tracked Armoured Vehicle

iii) **Advanced Weapons and Equipment India Limited (AWEIL)**

- Engaged in Production, Testing, Research & Development of Weapon Systems & Ammunition Hardware.
- Products- Artillery Guns, Tank Gun Articles, Air Defence Guns, Naval Guns, Rocket Launchers, Mortars, Small Arms and Ammunition Hardware
- 8 Production Units in 4 states (UP-4, WB-2, MP-1, TN-1) & 2 Non-Production Units (UP-1, WB-1)

Turnover

	2021-22 (H2)	2022-23	2023-24
Revenue	1089	1939	2039
Profit after Tax (PAT)	4.53	7.86	20.24

- 2024-25 (Projections) – Revenue Rs. 2552 Cr.; PAT Rs. 76 Cr.
- Present Order Book as on 01.10.2024- Rs. 10000 Cr. Approx.
- 2024-25 New Orders worth Rs. 1236 Cr. Received and Rs. 871 Cr. Expected
- Order Book for Exports for Weapon Systems – Rs. 615 Cr.

- Export of Large Calibre Artillery Ordnances to reputed foreign manufacturer –letter of appreciation for quality.

iv) **Yantra India Limited(YIL)**

- Expertise in Metallurgy and Metal Forming
- Engaged in Manufacture of Ammunition Hardware & Ordnance Components
- Locations
 - Hqr. In Nagpur
 - Maharashtra (3+1)- Nagpur, Bhusawal, Ambarnath, Madhya Pradesh (2)- Jabalpur, Katni, West Bengal (2)- Ichapore, Dumdum, Uttar Pradesh (1)- Muradnagar

Turnover

	2021-22 (H2)	2022-23	2023-24
Revenue	956.31	2391	2821
Profit after Tax (PAT)	-123	51	425

2024-25 (Projections) - Revenue: Rs. 3463 Cr.;PAT: Rs. 600 Cr.

- Present Order Book as on 01.10.2024 - Approx. Rs. 2800 Cr.
- 2024-25 - New Orders worth Rs. 1807 Cr. received and Rs. 250 Cr. Expected
- Since Oct 2021, export sales – Rs. 390 Cr. till date. Present export order book - Rs. 1915 Cr. approx.
- Order of Rs.1150 Cr (cumulative) received for Railway Axles through Competitive bidding
- Supplied Aerospace Grade Aluminum Alloy extruded products to HAL & BDL and Armour plates to AVNL & L&T as Import substitute

Research & Development

Major Ongoing Projects:

Ammunition Hardware for

- 155mm Terminally Guided Ammunition
- 155mm Bourrelet Shell (4 variants)
- DPICM (Dual Purpose Improved Conventional Munition), Enhanced and Guided versions of PINAKA rocket
- 500 Kg GP, 1000 Kg GP & 500 Kg Guided Aerial Bomb through Forging route
- Fuzes for ammunition (Mechanical & Electronics)
- IPR Filed : 188 and Granted: 71

v) **India Optel Limited (IOL)**

- Electro-Optics Sights for Tanks, Guns and Soldiers - Design, Development, Manufacturing
- 4 Units with Corporate Headquarters at Dehradun, Uttarakhand
- 3 Production Units (02 in Dehradun, 01 in Chandigarh)

Turnover

	2021-22 (H2)	2022-23	2023-24
Revenue	562	1079	1380
Profit after Tax (PAT)	56	207	233

- 2024-25 (Projections) - Revenue: Rs. 1600 Cr.; PAT: Rs. 284 Cr.
- Present Order Book as on 01.10.2024 - Rs. 7,553 Cr.
- 2024-25 - New Orders worth Rs 1170 Cr. received and Rs. 330 Cr. expected

Research & Development

New Products developed

Commander Thermal Imager for Tank T-72 & T-90	Driver Night Sight for T90	Thermal Imaging Fire Control System for Tank T-72
Fusion Technology Based Driver Night Sight for BMP-II	Thermal Imaging Missile Sight for night firing for BMP-II	Day Sight Telescope for Assault Rifles

Major Ongoing Projects:

Automatic Target Tracker & Digital Ballistic Computer for Tank T-90 STIK (Simulation, Test & Interrogation Kit) for guided missile system validation for T-90	Fusion technology-based Driver Night Sight T-90 LoROS (Long range Surveillance AI based)	Nano Drone Technology (ARTPARK, IISc Bangalore) Drone Teaming with AFVs (ADB's project)
Gunner Main Sight for MBT Arjun Mk-1A		

- IPR Filed : 83 and Granted: 17
- Sponsored 9 iDEX Challenges

v) **Troop Comforts Limited(TCL)**

- Manufactures Clothing items & Equipment for Armed Forces since 160 years.

Units & Location :

- Ordnance Equipment Factory Kanpur
- Ordnance Clothing Factory Shahjahanpur
- Ordnance Clothing Factory Avadi
- Ordnance Equipment Factory Hazratpur

➤ Troop Comforts Limited Training Academy

Financial Year	2021-22 (01.10.2021 to 31.03.2022)	2022-23	2023-24
Revenue	617	955	279
Profit/Loss afterTax	(+)16.37	(+) 18.95	(-) 303

- Less achievement in FY 2023-24 was due to poor workload scenario
- 2024-25 (Projections) - Revenue: Rs. 1028 Cr.;PAT: Rs. 10 Cr.
- Present Order Book as on 01.10.2024 - Rs. 1224 Cr.
- 2024-25 - New Orders worth Rs. 65 Cr. received and Rs. 600 Cr. expected
- Orders of more than Rs. 1200 Cr. received from Indian Army in Feb. 2024

Research & Development

Developed Items	Items Under Development
(1) Bullet Resistant Jacket NIJ Level IV	(1) Bomb Disposal Suit
(2) Ballistic Helmet NIJ Level IIIA	(2) High Altitude Parachute Penetration System (HAPPS)
(3) Bomb Suppression Blanket	(3) Multi Spectral Camouflage Nets
(4) Vehicle Armouring	(4) Light Weight Ballistic Helmet
(5) Logistic Drone	(5) Anti G Suit
(6) Boot Crampon under indigenization	

Products under trials:

- Boot Crampon found satisfactory in User trial
- ECWCS (Extreme Cold Weather Clothing System) HIMCLOS & Boot Multipurpose under User trial

vi) **Gliders India Limited(GIL)**

- Engaged in production, testing & development of Parachutes and Rubber Inflatables.
- Products – Man Carrying Parachutes, Brake Parachutes, Pilot Parachutes, Supply & Heavy Drop Parachutes, Ammunition Parachutes, Life Cycle Clothing, Floats and Boats.
- GIL has 02 units (Ordnance Parachute Factory and GIL HQ) both at Kanpur.

Turnover

	2021-22 (H2)	2022-23	2023-24
Revenue	85.94	206	176.51
Profit after Tax (PAT)	0.71	6.86	10.77

- 2024-25 (Projections) - Revenue: Rs. 239 Cr.; PAT: Rs. 12 Cr.
- Present Order Book as on 01.10.2024 - Rs. 323 Cr.
- 2024-25 - New Orders worth Rs. 21 Cr. received and Rs. 24 Cr. expected
- Executed export orders worth Rs. 22 Cr. from Malaysia, Vietnam, Bulgaria and Ethiopia

Research & Development

➤ **New Products developed**

- Pilot Parachute SU-30
- Brake Parachute for Hawk

➤ **Ongoing projects –**

- PTA (G2) -Parachute Tactical Assault – Gajraj
- MCPS (Military Combat Parachute System)
- Brake Parachute for AMCA (Advanced Medium Combat Aircraft)

- Hovercraft Skirt with IRMRI
- Parachute for SMART (Supersonic Missile Assisted Release of Torpedo)
- Parachute for Paragliding (i Dex)
IPR Filed : 54 and Granted: 20

Research and Development Expenditure

1.8 The Ministry was asked to state about in-house Research and Development conducted in each of the DPSUs for the development of new products and the percentage of research and development expenditure to the overall allocations/ capital/turnover since their inception. In a written note, the Ministry apprised the Committee as under:

“....the manufacturing units under new DPSUs take up in-house Research and Development (R&D) projects for design, development & product upgrade of armament, ammunition and equipment. Ordnance Development Centres (ODCs) in the DPSUs are working in specific technological areas to carryout R&D. These units also take up collaborative R&D projects in association with academic institutions, Govt. owned laboratories and other indigenous private manufacturers.

Expenditure on R&D by new DPSUs, since inception, is as under:

DPSU	2021-22		2022-23		2023-24	
	Value (Rs in Crores)	% of Revenue (in %)	Value (Rs in Crores)	% of Revenue (in %)	Value (Rs in Crores)	% of Revenue (in %)
MIL	12.15	0.52%	58.70	1.3%	73.07	1%
AVNL	12	0.47%	15	0.3%	91	1.95%
AWEIL	7	0.7%	15	0.8%	41	2%
TCL	0.64	0.08%	5.5	0.57%	6.49	2.3%
YIL	4.33	0.45%	7.36	0.31%	5.35	0.19%
IOL	1.24	0.19%	4.82	0.40%	19	1%

GIL	0.11	0.1%	2.67	1.3%	2.51	1.41%
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Further on new products/projects being formulated /launched to keep pace with changing technology and outsourcing of R&D work, the Ministry in its written reply stated as under:

“ The new products developed by the DPSUs to keep pace with changing technology in order to manufacture and supply quality products to Armed Forces are as under:

- i. Commander Thermal Imager for T-Series Tanks
- ii. Fusion Technology based Driver’s Night Sight for BMP-II
- iii. Anti Material Rifle
- iv. 7.62mm Ishapore Assault Rifle
- v. Mine Protected Vehicle 6x6

Further, the new DPSUs, through in-house R&D and in association with DRDO/Industry/Academia have undertaken development of state-of-the-art equipment, weapon/ armament platforms. Major products among them are as under:

- i. Automatic Target Tracker & Digital Ballistic Computer for T-90
- ii. Gunner’s Main Sight for MBT Arjun MK-1A
- iii. Guided Bomb
- iv. Parachute Tactical Assault Gajtaj-2 system (PTA G-2)
- v. Military Combat Parachute System (MCPS)
- vi. 155 x 52 Calibre Towed Gun
- vii. 155 x 52 Calibre Mounted Gun System
- viii. 60mm Mortar
- ix. Area Denial Munitions (DPICM Pinaka)
- x. Pinaka Mk-I enhanced Rocket

- xi. Guided Pinaka Rocket
- xii. 40mm HE MGL
- xiii. 155 mm Bourrelet shells

Newly created DPSUs do take up collaborative R&D projects, seeking assistance in design and prototype development, from the government academic institutions, government owned laboratories and Indian private manufacturers. They outsource R&D tasks to reputed government institutions (new DPSUs have undertaken few projects with IIT Kanpur & IIT Madras) and government laboratories. Newly created DPSUs have taken up collaborative development projects for new technologies under the umbrella of Make-II as well as iDEX.”

Indigenisation

1.9 The Committee desired to know whether newly created DPSUs have indigenous industrial capability crucial for the country to manufacture and supply quality products to Armed forces, Ministry in its written reply stated as under:

“Ordnance Factories under newly created DPSUs have indigenous technological and industrial capability for supply of armament, ammunition and equipment. A number of components, subassemblies & LRUs (Mechanical and Electro-Optical subsystems) of Tanks, Weapons and Ammunition have been indigenised by the new DPSUs with the assistance of domestic industry, both public & private. In addition to this, variety of parachutes and troop comfort items have also been developed and supplied to the Services.”

List Of Items Developed Through In House R&D Of Ordnance Factories On Its Own

SL	Nomenclature	DPSU
1	CARTG. SA 7.62MM BALL A-7 Ammunition	MIL
2	20MM AMR Ammunition	MIL

3	KAVACH MOD-II	AVNL
4	Mine Protected Vehicle	AVNL
5	5KL Water Bowser	AVNL
6	CRN-91	AVNL
7	Pistol Auto 9mm	AWEIL
8	Rifle 5.56MM Excalibur	AWEIL
9	7.62 mm Sniper Rifle	AWEIL
10	Tear Gas Gun	AWEIL
11	Anti-Riot Gun	AWEIL
12	7.62 mm Assault Rifle (GHAATAK)	AWEIL
13	105mm LFG Gun	AWEIL
14	40MM MGL Weapon	AWEIL
15	38mm Multi Shell Launcher	AWEIL
16	Up-gunning of 130mm Gun to 155 mm	AWEIL
17	155mm x 45 Calibre Artillery Gun System 'Dhanush'	AWEIL
18	Joint Venture Protective Carbine	AWEIL
19	Coat ECC	TCL
20	Jersey V Neck Woolen DK OG	TCL
21	Trouser ECC	TCL
22	Rain Cap Multipurpose (PONCHO)	TCL
23	Overall Mazri	TCL
24	Modified Kit Bag	TCL
25	Boot high ankle DVS	TCL
26	Blanket Superior OG & AF Blue	TCL
27	Gaiters Glacier	TCL
28	Jacket & Trouser Combat Army Logo	TCL
29	ECAD SD Parachute 8.5M WHITE	TCL
30	Driver Sight for T-72	IOL
31	Commander Sight passive for T-72 & BMP II	IOL
32	Driver Night sight Passive for BMP-II	IOL
33	Driver sight for T-90	IOL

When asked about the inputs of new DPSUs on the progress made in respect of the major steps such as the 'Make in India' programme, the Ministry, in a written submission stated as under:

"The Government has taken several policy initiatives in the past few years and brought in reforms to encourage indigenous design, development and manufacture of defence equipment, there by promoting self-reliance in defence manufacturing & technology in the country. These initiatives, inter-alia, include according priority to procurement of capital items from domestic sources under Defence Acquisition Procedure (DAP)-2020; Notification of five 'Positive Indigenization Lists' of total 509 items of Services as notified by DMA and Five 'Positive Indigenization Lists' of total 5012 items of Defence Public Sector Undertakings (DPSUs) as notified by DDP, for which there would be an embargo on the import beyond the timelines indicated against them; Simplification of Industrial licensing process with longer validity period; Liberalization of Foreign Direct Investment (FDI) policy allowing 74% FDI under automatic route; Simplification of Make Procedure; Launch of Mission DefSpace; Launch of Innovations for Defence Excellence (iDEX) scheme involving start-ups & Micro, Small and Medium Enterprises (MSMEs); Implementation of Public Procurement (Preference to Make in India) Order 2017; Launch of an indigenization portal namely SRIJAN to facilitate indigenisation by Indian Industry including MSMEs; Reforms in Offset policy with thrust on attracting investment and Transfer of Technology for Defence manufacturing by assigning higher multipliers; Establishment of two Defence Industrial Corridors, one each in Uttar Pradesh and Tamil Nadu; Opening up of Defence Research & Development (R&D) for industry, startups and academia; Progressive increase in allocation of Defence Budget of military modernization for procurement from domestic sources, etc.

Till 30.09.2024, out of the 762 items to be indigenised by new DPSUs under five PILs notified by DDP, the new DPSUs have indigenised

500 items. In addition to this, new DPSUs have also indigenised 128 items out of 273 non-PIL items.

Ministry of Defence as a whole is committed to AatmaNirbharta in Defence. In this pursuit, provision has been made for minimum 50% Indigenous content in the form of indigenous material/ components/ software in the equipment being acquired with an aim at boosting indigenous production and reduce import dependency. Further, procedures have been streamlined, to reduce procurement cycle, reduction in costs etc., for procurement of technologies developed by Indian start-ups and MSMEs through schemes like iDEX & Technology Development Fund (TDF).

Army Design Bureau and Indian Army is spearheading the achievements in Make procedure of capital acquisition to give impetus to Make in India flagship programme of Govt of India.

Furthermore, in line with the Government's 'Make in India' initiative, MoD had earmarked 64% of the total capital budget for domestic Capital Procurement in 2021-22, which has been increased to 68% for FY 2022-23 and 75% for 2023-24 and 2024-25.

On being asked about the steps taken to bring down the import content in spares and components, Ministry in its written reply stated as under:

"At present, import content in Ordnance Factories items is approximately 8-10% only in which spares and components are also included.

Efforts are being made by the newly created DPSUs to reduce import content further through in-house efforts, Source Development, iDEX, Make-II procedure etc. The list of imported spares and components is also being displayed on SRIJAN Defence portal for indigenization and development through Indian industry."

The representatives of new DPSUs, during the course of oral evidence, further stated that “it is a fact that most of them are operating on Russian technology. I think almost all the companies were manufacturing the TOT by the Russian companies. Now, they are developing independent technology, mostly IOL. They are doing on their own technology. Other companies are also trying to develop their own technology. But it will take time. Till now, original design was not there in these companies. All of them were doing their TOT manufacturing on the base of Russian technology.”

Export

1.10 When the Ministry was asked to provide comparative figures during each of the last three years regarding the quantity and value of the products exported, in its written reply it was stated:

“Newly created DPSUs have identified export focus area to expand their business. They are proactively pursuing various leads received from government and other channels. The newly created DPSUs export products to the friendly countries based on the export clearance given by the Government. The details of last three years of export by the erstwhile OFB to various countries are tabulated below:

(Rs. in Crore)

S. No.	Year	Value
1	2021-22 (from 01.10.2021-31.03.2022)	22.55
2	2022-23	82.18
3	2023-24	1976.51

Munitions India Limited (MIL)

- Since Oct 2021, export sales – Rs. 2,955 Cr. till date. Present export order book - Rs. 6,100 Cr. approx

- Runners up Award from Hon'ble Raksha Mantri during DEFEXPO 2022 for achievements in exports

iii) **Advanced Weapons and Equipment India Limited (AWEIL)**

- Order Book for Exports for Weapon Systems – Rs. 615 Cr.
- Export of Large Calibre Artillery Ordnances to reputed foreign manufacturer –letter of appreciation for quality.

vi) **Yantra India Limited(YIL)**

- Since Oct 2021, export sales – Rs. 390 Cr. till date. Present export order book - Rs. 1915 Cr. approx.

vii) **Gliders India Limited(GIL)**

- 2024-25 - New Orders worth Rs. 21 Cr. received and Rs. 24 Cr. expected
- Executed export orders worth Rs. 22 Cr. from Malaysia, Vietnam, Bulgaria and Ethiopia

CHAPTER – II

DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

The Committee understand that the Defence Research & Development Organization has come a long way since its inception in the year 1958. Starting with only 10 laboratories, DRDO has grown multi-dimensionally and has evolved to be a core research organization with a vast network of 52 laboratories and establishments spread across the country. With a vision to empower India with cutting-edge technologies and equip our Services with internationally competitive systems, DRDO has proven its competence to produce state-of-the-art strategic and tactical military hardware and related technologies in diverse disciplines such as Aeronautics, Armaments, Combat Vehicles, Combat Engineering, Electronics, Missiles, Life Sciences, Materials and Naval Systems. At the core of this technological strength of DRDO is its expertise in system design, system integration, testing and evaluation and project management built over the last five decades, which has enabled it in developing indigenous capabilities in weapons and their delivery systems. DRDO also plays significant roles to provide scientific and technological advice on aspects of weapons, and platforms surveillance to the Ministry of Defence in support of Defence policy to support National Cyber Security Architecture – testing capabilities, security solutions, testing hardware, indigenous NW systems, Defence tools, support operations. The Organization also advises the Government to make technical assessments of international security threats and the military capabilities of both current and potential adversaries.

Budgetary Provisions

2.2 Details of FBE, Budget Allocations for the Deptt of Defence R&D at different Budgetary stages for last five years as intimated to the Committee along with the Projections and Allocations at Budget Estimates for the year 2024-25 is as under:-

(Rs in Cr)

Year	BE Proposed	BE Approved	RE Approved	MA Approved
2019- 20	22953.95	19021.02	17730.78	17730.78
2020- 21	23457.40	19327.35	16466.29	16145.74
2021- 22	23460.00	20457.44	18337.44	18720.44
2022- 23	22990.00	21330.20	21130.20	21130.20
2023- 24	23790.00	23263.89	23691.74	23195.89
2024- 25	24508.00	23855.61	-	-

“The budget of DRDO has been around 5% of the Defence Budget. A major amount of this goes towards expenses towards Strategic schemes & CCS Projects/ Programmes, pay & allowances and other non-salary revenue expenditure, each of which essentially keeps growing every year. Instructions have been issued to Labs to undertake projects on critical, advanced and futuristic technologies and systems that Indian industries cannot do. DRDO has identified 183 exclusive systems for development by industry which will not be taken up by DRDO. This will substantially cut expenditure on development of certain technologies. DRDO envisages taking up Projects/Programmes for development of technologies for large weapon systems, platforms and sensors in future. ”

Research & Development

2.3 During the budget announcement 2022, it has been announced by Hon'ble FM that Defence R&D will be opened for Industry, Startups & Academia with 25% of the Defence R&D budget earmarked. These are being implemented through various existing schemes and new schemes

have also been proposed and approved. This would lead to equal amount of deficit in budget of ongoing and future projects of DRDO.

During the year 2023-24 with 25% (\approx Rs 1,422 Cr) of defence R&D budget earmarked for the purpose and substantive funding is being done to industry, start-ups and academia. However, the expenditure incurred in the year 2023-24 was Rs 1883 Cr.

The union budget 2024 has made significant announcement to promote deep tech innovation in India under which a new scheme will be launched to strengthen deep tech technologies for defence purposes and expedite atmanirbharta in the defence sector. Technology Development Fund (TDF) policy is being modified to support Deep Tech technology projects for defence applications. The DRDO-Industry-Academia Centers of Excellence (DIA-CoEs) and Research Boards are prioritized DT & ISR. The process for execution is being simplified & time for sanction is being shortened.

Therefore, an equal amount of budget enhancement is required to ensure that research and development activities continue as envisaged by DRDO. In view of the above, Defence R&D Budget should progressively increase over next 25 years to reach approximately 10 % of Defence Budget.”

2.4 The Ministry was asked to furnish the details regarding the percentage of expenditure on Research and Development to the overall Gross Domestic Product (GDP) during each of the last five years and how this percentage compares with that of the developed countries, the Ministry supplied the following information:

(i) Defence R&D Final allocation as percentage of GDP w.e.f 2019-20 is as under:

(Rs. in Cr)

Year	TOTAL GDP	DD R&D Exp	DD R&D Exp as % of TOTAL GDP
2019-20	20103593.00	17375.13	0.086
2020-21	19854096.00	15706.98	0.079
2021-22	23597399.00	18290.98	0.077
2022-23 (1st RE)	26949646.00	20585.78	0.076
2023-24 (PE)	29535667.00	22927.50	0.077

- (ii) DRDO is involved in the development of new technologies & systems in domain areas of Missiles, Aeronautical Systems, Armaments & Combat Engineering Systems, Naval Systems, Electronics & Communication Systems etc. Some of the new Research and Development projects being formulated during the current year are in the areas of Naval fighter Aircraft, Hypersonic Missile Technologies, Un-manned Aircraft, IR-Fab, Ramjet, Technologies & Systems for Light Tank, Track for Armored Vehicle, Rocket Motor Static Test Facility, Digital Twins, Wind Tunnel Test Facility etc.
- (iii) The projections and allocations for Research and Development for the 14th Defence year Plan along with Projections and Allocations for this field is as under:

Year	BE Proposed	BE Approved
2022-23	22990.00	21330.20
2023-24	23790.00	23263.89
2024-25	24508.00	23855.61

The BE provisioned for the FY 2024-25 is Rs 23855.61 Cr as against the projection of Rs. 24508.00 Cr.

- (iv) The comparison of Defence allocation and D DR&D allocations at BE staged during each year of 14th Plan period is as under:

(Rs in Cr)

Year	Defence Expenditure	Budget allocated to R&D at BE stage	%age of Defence Expenditure
2022-23 (BE)	385370.15	21330.20	5.53
2023-24 (BE)	432720.14	23263.89	5.38
2024-25 (BE)	454772.67	23855.61	5.25

Collaboration with Private Industries

2.5 On the issue of mechanism for transferring DRDO technologies to Indian industries/DPSUs/OFBs (now newly constituted DPSUs) in respect of transfer of technology and major achievements of DRDO in respect of transfer of technology to industries during the last three years, the Ministry submitted in its written reply:

“DRDO has laid down procedure by which DRDO developed technologies are transferred to industries by entering into Licensing Agreement for Transfer of Technology (LATOT) for both military products and civilian spin offs products. The Category ‘A’ technologies pertain to the technologies for Military application, MHA and Government Departments. While the Category ‘B’ technologies pertain to the technologies for commercial application.

These technologies are hosted on DRDO website and Indian industry can take these high end defence technologies as per the provisions on DRDO policy and procedure for Transfer of Technology (ToT).

DRDO provides the relevant 'know-how' in the form of Technology Transfer Documents (TTD) and handholding support to Indian industry. Technology is transferred to Development cum Production Partner (DcPP)/ Development Partner (DP), Production Agency (PA) without any ToT fee and to other industries with a one-time ToT fee @5% of total project development cost. 'NIL' Royalty is charged on net sales to Indian Armed Forces and other Govt Departments. Only 2% royalty is charged for sales in Indian commercial market and exports. Uptill now around 1900 Licensing Agreement for Transfer of Technology (LAToT) have been signed with industries. During last three years, around 500 LAToTs have been signed with industries."

Indigenisation

2.6 In the written reply with respect to indigenous Defence equipment designed and developed by the DRDO during the last five years the Ministry stated as under:

"Some of the indigenous Defence equipment designed and developed by the DRDO during the last five years are:

Long Range surface to air Missile, Quick Reaction Surface to air Missile, Smart Anti Air Field Weapon (SAAW), Anti-Tank Guided Missile for Advanced Light Helicopter, Air-to- Air Missile Astra, Full Mission Simulator for LCA, Stealth Wing Flying Test Bed, Post Development Support of AEW&C System (PDSAS), Airborne early warning & Control system (AEW&C), 08 HUMSA Upgraded Sonars, Directional Sonobuoy, Submarine Sonar USHUS-2 , Portable D Detection Sonar, Product Support for Arjun MBT, New Family Munitions, Arjun Armoured Recovery and Repair Vehicle, Drone, Detect, Deter and Destroy (D4 system), Multi Kilowatt Fiber Laser Sources, Multi Kilowatt Fiber Laser Sources, Air Defence Technical Control Radar, Active Electronically Scanned Array Radar (AESAR), Software Defined Radio for Navy, Ground Based Radar for Low

Intensity Conflict, D-29 System (Internal EW System for MIG 29 Upgrade Aircraft), Low Level Transportable Radar.”

Major Achievement

2.7 With regard to some of the major achievement during XIII FYP the Ministry submitted following achievement in its written reply :

Milestone Achievements

- DRDO in Mar 2019 successfully conducted an Anti-Satellite (A-SAT) missile test '**Mission Shakti**'.
- First ever carrier landing and take-off of LCA Navy from INS Vikramaditya.
- Air Independent Propulsion (AIP) - 14 Days Endurance Trials Completed successfully. A Programme for retro-fitment of the AIP System on P75 Submarines of Indian Navy has been approved by the CCS in 2022.
- Hypersonic Technology Demonstrator Vehicle (HSTDV) – Demonstrated hypersonic air breathing scramjet technology.
- Winter Trials & most of the Summer Trials of Advanced Towed Artillery Gun System (ATAGS) conducted. For the first time, DRDO ATAGS was used for ceremonial Gun Salute during the Independence Day Celebrations – 2022.

Major Induction/ Handing Over Of Drdo Products/Systems

Long Range Surface-to-Air Missile (**LRSAM**), Beyond Visual Range Air-to-Air Missile '**Astra**', Full Operational Clearance (FOC) of Light Combat Aircraft (LCA) '**Tejas**', Airborne Early Warning & Control (**AEW&C**) System, **Short Span Bridging** System, Heavy Weight Torpedo '**Varunastra**', Aerial Delivery System '**Sahayak-NG**', Electronic Support Measures (ESM) '**Varuna**' Production Systems onboard Naval platforms,

Indian Maritime Situational Awareness System (**IMSAS**), VeriFY Organize Maintain Analyze (**VYOMA**) **NBC Suit** Mk-V, Individual Underwater Water Breathing Apparatus (**IUWBA**) system, Full Body Protector for Female Soldiers, **MBT 'Arjun' Mk-1A**, ship-borne advanced Electronic Warfare (EW) system (Shakti), Medium Range Surface to Air Missile (**MRSAM**), Smart Anti Airfield Weapon (**SAAW**), Multi-Mode Hand Grenade (**MMHG**), Bund Blasting Device Mk-II, Modular Bridge, Sonar Performance Modeling System, Chaff Variants, Software Defined Radio – Tactical

User Trials of Major Systems: Pinaka – Extended Range Multi Barrel Rockets, Arjun Armoured Recovery & Repair Vehicle (Arjun ARRV), Third Generation Helicopter Launch Anti-Tank Guided Missile ('HeliNa' for Indian Army and 'Dhruvastra' for IAF), Software Defined Radio, Integrated, Extreme Cold Weather Clothing System, Corner Shot Weapon System, 5.56 x 30mm Joint Venture Protective Carbine (JVPC), 7.62x51mm Light Machine Gun, 9mm Machine Pistol, Indigenous Magazine Fire Fighting System, High Pressure Water Mist Fire Suppression System, Instant Fire Detection Suppression System (IFDSS) for T-72 tank

Development Trials: Supersonic Cruise Missile 'BrahMos' – air version, Quick Reaction Surface-to-Air Missile (QRSAM), Akash Mk-1S, Akash-NG, Akash Prime, Stand-off Anti Tank (SANT) guided missile, Man-Portable Anti-Tank Guided Missile (MPATGM), Anti-Tank Guided Missile (ATGM) for MBT Arjun Mk-II, New Generation Anti-Radiation Missile (NGARM), Vertical Launch Short Range Surface to Air Missile (VL-SRSAM), RudraM-II, Solid Fuel Ducted Ramjet (SFDR), Supersonic Missile Assisted Release of Torpedo (SMART), Guided Pinaka rocket system, Next Generation Explosive Reactor Armour (NGERA), Advanced Light Weight Torpedo (ALWT), Air Independent Propulsion (AIP) system, Portable Diver Detection Sonar (PDDS), High-Speed Expendable Aerial Target 'Abhyas', Controlled Aerial Delivery System (CADS-500), Stealth Wing Flying Testbed (SWiFT), Air Defence Fire Control Radar 'Atulya', Active Electronically Scanned Array Radar (AESAR) 'Uttam', Fire Detection and Suppression System (FDSS) for

Passenger Buses, Quantum Key distribution technology, Quantum Random Number Generator (QRNG) etc.

Dedication Of Facilities

- Commissioning of **Hypersonic Wind Tunnel (HWT)** test facility Shamirpet, Hyderabad by Hon'ble RM
- **Inauguration of Skill Development Centre (SDC)** for Fire Safety Training and Testing of Fire Safety Products of DRDO at Pilkhuwa in Uttar Pradesh by Hon'ble RM.
- **Integrated Weapon System Design Centre** was inaugurated at Dr APJ Abdul Kalam Missile Complex by Hon'ble Vice President of India.
- Honb'le RM has laid foundation stone for a **Defence Technology and Test Centre** and a **BrahMos manufacturing centre** to be established by DRDO in Lucknow.
- Infrared technology enabling centre established for production.

Part - II

Recommendations / Observations

Directorate of Ordnance (Coordination and Services) – New DPSUs

Budget

Consequent to the gleening through of all the information available before the Committee, they note that consequent to the corporatization of OFB, the Directorate of Ordnance (Coordination & Services) has been constituted under Department of Defence Production, Ministry of Defence *w.e.f.* 01.10.2021. On scrutiny of the budget grants for preceding years, the Committee find that in 2022-23, *i.e.* post- corporatization of OFB, an amount of Rs. 4212.00 crore was allocated in RE to the Directorate of Ordnance, out of which, an expenditure of Rs. 2845.71 crore has been incurred upto December, 2022. This means that an amount of Rs. 1366.29 crore remained unutilized in financial year 2022-23. Meanwhile, a projection of Rs.1310 crore has been made by the Directorate of Ordnance (Coordination and Services) for the year 2023-24. During oral evidence, a representative of the Ministry also apprised that Rs 2,500 crore have been kept as Emergency Authorization Fund in RE 2020-21 and RE 2021-22. The Committee at this stage recommend that the amount allocated would now be prudently distributed on accrued liabilities and the modernization of the newly created DPSUs. In this regard, the Committee wish to be informed about Modified Allocation (MA) at the time of submitting Action Taken Replies.

Budget for modernisation

2. During the oral evidence, the representatives of the new DPSUs apprised the Committee about various measures being taken i.e. renewal, reconditioning and acquisition of high value/heavy duty Plant and Machinery (P&M), creating/developing infrastructure etc to keep pace with contemporary manufacturing technologies and to modernize manufacturing Units under them. While going through the budget given for modernisation of the new DPSUs, the Committee find that during the financial year 2021-22, 2022-23, 2023-24 and 2024-25, Rs. 1643 crore Rs. 1310 crore, Rs. 1310 crore and Rs. 1494 crore were given to these DPSUs respectively. The Ministry further informed that out of the total of Rs. 5757 Crores till date, the new DPSUs have incurred cumulative expenditure of Rs. 2887.43 Crore till 30.08.2024. The Committee are of considered view that the foremost need of the new DPSUs is modernization and undertaking technology upgradation. They, therefore, hope that the remaining grant of the modernization budget will be utilized by the new DPSUs prudently and productively. The Committee would like to be informed of the concrete steps taken in this regard.

Order Book Position

3. From the information furnished by the Ministry of Defence on the Order Book position for the newly created DPSUs for the next five years, it is found that there exists large variation of Order Book position amongst different PSUs. The Committee understand that this variation is also because of the nature of products they produce/provide/supply. The Ministry has also added that with more

functional and financial autonomy, these new DPSUs are exploring newer markets both in the country as well as abroad. Further, the Ministry is providing financial and non-financial support to the new DPSUs to make them productive and profitable. Therefore, the Committee believe that the order book positions of the new DPSUs will improve in future.

The Committee have been given to understand that the new DPSUs are also venturing into new areas of operations thereby fulfilling the requirements of Indian Defence Forces, especially the Army. The role of these new DPSUs during wartime is yet another facet to be reckoned with. Therefore, the Committee feel that the Department of Defence Production may explore possibilities for promoting the prospects of these DPSUs in new areas so that they grow strong and become potential sources of ammunition support to the Armed Forces.

Research and Development Expenditure

4. The Committee note that the manufacturing units under new DPSUs take up in-house Research and Development (R&D) projects for design, development & product upgrade of armament, ammunition and equipment. Ordnance Development Centres (ODCs) in the DPSUs are working in specific technological areas to carry out their respective R&D. The major products being developed are: guided bomb, development of Automatic Gear Shifter for T-90 Bhisma Tank., development/ production of Electronic Point Detonation (PD Mode) Fuze for Artillery Ammunition, Parachute Tactical Assault Gajtaj-2 system (PTA G-2), Area Denial Munitions (DPICM Pinaka),

Military Combat Parachute System (MCPS) etc. From the data supplied by the Ministry, the Committee are happy to note that the R&D expenditure of all the new DPSUs except YIL and GIL has increased significantly from 2022-23. The same increasing trend is visible from the data on year wise projection for R&D expenditure till year 2028-29. The Committee recommend in no uncertain words that the new DPSUs undertake and adopt best of the planning implementation practices and maintain this trend in their future endeavours.

Indigenisation

5. The Committee are happy to know that the Government has taken several policy initiatives in the past few years and brought in reforms to encourage indigenous design, development and manufacture of defence equipment, there by promoting self-reliance in defence manufacturing & technology in the country. These initiatives, *inter-alia*, include according priority to procurement of capital items from domestic sources under Defence Acquisition Procedure (DAP)-2020; Notification of five ‘Positive Indigenization Lists’ of total 509 items of Services as notified by DMA and Five ‘Positive Indigenization Lists’ of total 5012 items of Defence Public Sector Undertakings (DPSUs) as notified by DDP; Simplification of Industrial licensing process with longer validity period; Liberalization of Foreign Direct Investment (FDI) policy allowing 74% FDI under automatic route; Simplification of Make Procedure; Launch of Mission DefSpace; Launch of Innovations for Defence Excellence (iDEX) scheme involving start-ups & Micro, Small and Medium Enterprises

(MSMEs); Implementation of Public Procurement (Preference to Make in India) Order 2017; Launch of an indigenization portal namely SRIJAN to facilitate indigenisation by Indian Industry including MSMEs; Reforms in Offset policy with thrust on attracting investment and Transfer of Technology for Defence manufacturing by assigning higher multipliers; Establishment of two Defence Industrial Corridors, one each in Uttar Pradesh and Tamil Nadu; Opening up of Defence Research & Development (R&D) for industry, startups and academia; Progressive increase in allocation of Defence Budget of military modernization for procurement from domestic sources, etc. Furthermore, in line with the Government's 'Make in India' initiative, MoD had earmarked 64% of the total capital budget for domestic Capital Procurement in 2021-22, which has been increased to 68% for FY 2022-23 and 75% for 2023-24 and 2024-25. While appreciating the measures being undertaken, the Committee must be informed of the perspective plans along with their phase-wise implementation so that it has every reason to be confident that defence sector will achieve higher degree of Atmanirbharta in near future.

Export

6. The Committee are happy to note that export value of the new DPSUs jumped to 1976.51 cr. in 2023-24 from a meagre Rs. 82.18 cr. during the previous year 2022-23. The Committee also find that the present order book position of MIL & YIL are Rs. 6100 cr. and 1915 crore approximately, which indicates a positive trend for future. Anticipating that these two new DPSUs will achieve their targeted development soon, they also hope that the remaining new

DPSUs will also strive to achieve similar targets in their future manufacturing activities.

DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

Budget

7. The Committee find that during the year 2024-25 Rs. 23855.61 crore was allocated which is 5.25% of the current Defence Budget. The Committee have been informed that DRDO has identified 183 exclusive systems for development by industry which will not be taken up by DRDO and this will substantially cut expenditure on development of technologies.

The Committee also find that DRDO envisages to take up projects/programme for development of technologies for large warfare systems, platforms and sensors in future. The Committee hope that the budgetary allocation will sufficiently cater to the R&D needs of DRDO and expect that the Ministry would provide additional grant at supplementary stage, if need be, in future.

The Committee are of the view that the modern warfare applications/platforms/systems have drastically changed due to the introduction of kinetic and non-kinetic hybrid mode. They, therefore, recommend that DRDO should explore new areas of research not only to counter such threats but make the forces ready for such threat perceptions amalgamating the past changing scenario.

DRDO collaboration with private industries

8. The Committee note that the union budget 2024 has made significant announcements to promote deep tech innovation in India under which a new scheme will be launched to strengthen deep technologies for defence purposes and expedite 'Atmanirbharta' in the defence sector. Technology Development Fund (TDF) policy is being modified to support Deep Tech technology projects for defence applications. The DRDO-Industry-Academia Centers of Excellence (DIA-CoEs) and Research Boards are prioritized DT & ISR. The process for execution is being simplified & time for sanction is being shortened. In this connection, the Committee recommend that efforts must be intensified to ensure better collaboration between the public and private sector for improved results and given the sensitive nature of this work, due monitoring mechanism needs to be developed and put in place to ensure that no pilferage of data takes place.

9. The involvement of the private sector in Defence R&D is yet another development. The Committee also hope that private sector involvement in Defence production would help enrich technological upgradation of Defenceproducts. However, at the same time, the Committee desire, that appropriate measures need to be taken to ensure that our cutting-edge technologies are not slipped into the hands of our adversaries by methodologies such as reverse engineering etc. The Committee wish that the Ministry of Defence furnish a detailed note on procedures laid down to ensure our technologies related to Defence are fully secured.

Self-reliance and indigenization

10. The Committee observe that the country has taken a quantum jump in the procurement of defence items from indigenous sources. Schemes like SRIJAN and other initiatives such as 'Make in India' initiative, MoD had earmarked 64% of the total capital budget for domestic Capital Procurement in 2021-22, which has been increased to 68% for FY 2022-23 and 75% for 2023-24 and 2024-25 will take way ahead the process of indigenization. Notwithstanding this fact the Committee are aware that even today the country is heavily dependent on imports to meet its critical defence requirements. Given the fact that technologically advanced countries are reluctant to part with their advanced technologies with developing countries like India, it becomes all the more essential for our laboratories to develop each system, sub-systems, components etc. either independently or in collaboration with private industry/OEMs. While acknowledging the fact that undertaking original research is a lengthy and time-consuming process, DRDO may also think of developing products through other available means and short term processes. The Committee desire that they be apprised of the steps taken by the Ministry of Defence to further empower Defence R&D ecosystem in the country at the time of furnishing action taken replies on the subject.

NEW DELHI;

17 December, 2024

26 Agrahayana, 1946 (Saka)

RADHA MOHAN SINGH,

Chairperson,

Standing Committee on Defence.

STANDING COMMITTEE ON DEFENCE (2024-25)

**MINUTES OF THE THIRD SITTING OF THE STANDING COMMITTEE ON
DEFENCE (2024-25)**

The Committee sat on Thursday, the 21 November, 2024 from 1100 hrs. to 1700 hrs. in Committee Room `D', Parliament House Annexe, New Delhi.

PRESENT

Shri Radha Mohan Singh — *Chairperson*

MEMBERS

Lok Sabha

2. Dr. Rajeev Bharadwaj
3. Shri Karti P Chidambaram
4. Captain Viriato Fernandes
5. Shri Shashank Mani
6. Shri Lumba Ram
7. Shri Bishnu Pada Ray
8. Shri Jagannath Sarkar
9. Shri Jagadish Shettar
10. Shri Virendra Singh
11. Shri Kesineni Sivanath
12. Shri Richard Vanlalhmangaiha

Rajya Sabha

13. Shri Naresh Bansal
14. Shri Shaktisinh Gohil
15. Shri Prem Chand Gupta
16. Shri Naveen Jain
17. Shri Praful Patel
18. Shri Dhairyashil Mohan Patil
19. Shri Sanjay Singh

SECRETARIAT

1. Dr. Sanjeev Sharma — *Joint Secretary*
2. Shri Tirthankar Das — *Director*

LIST OF WITNESSES

Ministry of Defence

Capital Outlay on Defence Services

1.	Gen. Anil Chauhan	CDS & Secretary (DMA)
2.	Rajesh Kumar Singh	Defence Secretary
3.	Sanjeev Kumar	Secretary (DP)
4.	Dr. S. V. Kamat	Secretary (DDR & D)
5.	Dr. Niten Chandra	Secretary (ESW)
6.	Sugata Ghosh Dastidar	FA(DS)
7.	Air Mshl SP Dharkar	VCAS
8.	Lt Gen NS Raja Subramani	VCOAS
9.	Lt Gen Rajiv Ghai	DGMO
10.	Lt Gen JP Mathew	CISC
11.	Lt Gen Pratik Sharma	DCOAS(Strat)
12.	Lt Gen Rahul R Singh	DCOAS(CD&S)
13.	Vice Admiral Tarun Sobti	DCNS
14.	Samir Kumar Sinha	AS&DG(Acq)
15.	Lt Gen Ulhas Kirpekar	DG FP
16.	Lt Gen Manish Mohan Erry	DG SP
17.	Lt Gen Vineet Gaur	DG CD
18.	Ms. Dipti Mohil Chawla	AS,DoD
19.	Lt. Gen. Atul Anand	AS,DMA
20.	Sanjay Kumar	Addl. FA (SK) & JS
21.	Maj Gen G S Choudhry	JS (Army & TA)/DMA
22.	Manish Tripathi	JS (Parliament)
23.	Subhash Kumar	DS(Budget)

Procurement Policy & Defence Planning

1.	Gen. Anil Chauhan	CDS & Secretary (DMA)
2.	Rajesh Kumar Singh	Defence Secretary
3.	Sanjeev Kumar	Secretary (DP)
4.	Dr. S V. Kamat	Secretary (DDR & D)
5.	Dr. Niten Chandra	Secretary (ESW)

6.	Sugata Ghosh Dastidar	FA(DS)
7.	V Adm Sanjay Vatsayan	DCIDS (PP&FD)
8.	Samir Kumar Sinha	AS & DG(Acq)
9.	Siddhartha Singh Longjam	AS & FA (Acq)
10.	Dr. Ajay Kumar	JS & AM (LS)
11.	Dharmendra Kumar Singh	JS & AM (Air)
12.	Dinesh Kumar	JS & AM (MS)
13.	AVM GK Mohan	ADG Acq Tech (Air)
14.	Maj Gen Abhay Dhayal	ADG Acq Tech (Army)
15.	IG AP Badola PTM TM	DDG (P&P)
16.	Sanjay Kumar	Addl. FA (SK) & JS
17.	Manish Tripathi	JS (Parliament)
18.	Subhash Kumar	DS (Budget)

Indian Army

1.	Gen. Anil Chauhan	CDS & Secretary (DMA)
2.	Atul Anand	Addl. Secy., DMA
3.	Sugata Ghosh Dastidar	FA(DS)
4.	Lt Gen NS Raja Subramani	VCOAS
5.	Lt Gen Rajiv Ghai	DG MO
6.	Lt Gen Pratik Sharma,	DCOAS (Strat)
7.	Lt Gen Rahul R Singh	DCOAS (CD&S)
8.	Lt Gen Ulhas Kirpekar	DGFP
9.	Lt Gen Manish Mohan Erry	DG SP
10.	Lt Gen Vineet Gaur	DGCD
11.	Lt Gen VPS Kaushik	AG
12.	Lt Gen VMB Krishnan	QMG

- | | | |
|-----|-----------------------------|-------------------|
| 13. | Lt Gen Amardeep Singh Aujla | MGS |
| 14. | Ms. Dipti Mohil Chawla | AS, DoD |
| 15. | Sanjay Kumar | Addl. FA(SK) & JS |
| 16. | Maj Gen G S Choudhry, | JS(Army&TA)/ DMA |
| 17. | Subhash Kumar | DS(Budget) |

Indian Air Force

- | | | |
|----|-------------------------|-----------------------|
| 1. | Gen. Anil Chauhan | CDS & Secretary (DMA) |
| 2. | Atul Anand | Addl. Secy., DMA |
| 3. | Sugata Ghosh Dastidar | FA(DS) |
| 4. | Air Mshl SP Dharkar | VCAS |
| 5. | Air Mshl Tejinder Singh | DCAS |
| 6. | Ms. Dipti Mohil Chawla | Addl. Secy., DoD |
| 7. | AVM Vikram Gaur | JS(Air), DMA |
| 8. | Eddie L. Khawlhing | Addl. FA& JS |
| 9. | Subhash Kumar | DS(Budget) |

Indian Navy

- | | | |
|----|-------------------------------|-----------------------|
| 1. | Gen. Anil Chauhan | CDS & Secretary (DMA) |
| 2. | Atul Anand | Addl. Secy., DMA |
| 3. | Sugata Ghosh Dastidar | FA(DS) |
| 4. | Ms. Dipti Mohil Chawla | Addl. Secy., DoD |
| 5. | Vice Adm. Tarun Sobti | DCNS |
| 6. | Rear Admiral Alok Ananda, YSM | ACNS (P&P) |
| 7. | R. Adm. Vikram Menon | JS (Navy) |
| 8. | Sanjay Kumar | Addl. FA(SK) & JS |
| 9. | Subhash Kumar | DS(Budget) |

Indian Coast Guard

- | | | |
|----|-------------------------|----------------------|
| 1. | Rajesh Kumar Singh | Defence Secretary |
| 2. | Ms. Dipti Mohil Chawla | Addl. Secy., DoD |
| 3. | Sugata Ghosh Dastidar | FA(DS) |
| 4. | DG S Paramesh PTM, TM | DGICG |
| 5. | Shri Pawan Kuamr Sharma | JS (Training/CG/SSC) |
| 6. | Sanjay Kumar | Addl. FA(SK) & JS |
| 7. | Subhash Kumar | DS(Budget) |

Joint Staff

- | | | |
|----|------------------------|-----------------------|
| 1. | Gen. Anil Chauhan | CDS & Secretary (DMA) |
| 2. | Atul Anand | Addl. Secy., DMA |
| 3. | Sugata Ghosh Dastidar | FA(DS) |
| 4. | Ms. Dipti Mohil Chawla | Addl. Secy., DoD |
| 5. | Lt Gen JP Mathew | CISC |
| 6. | V Adm Sanjay Vatsayan | DCIDS(PP&FD) |
| 7. | R. Adm. Vikram Menon | JS (Navy) |
| 8. | Sanjay Kumar | Addl. FA(SK) & JS |
| 9. | Subhash Kumar | DS(Budget) |

Directorate General of Defence Estate

- | | | |
|----|-----------------------|-------------------|
| 1. | Rajesh Kumar Singh | Defence Secretary |
| 2. | Ms. DiptiMohil Chawla | Addl. Secy., DoD |
| 3. | Sugata Ghosh Dastidar | FA(DS) |
| 4. | G S Rajeswaran | DGDE |
| 5. | Valeti Premchand | Addl. DG, DGDE |

6.	Ms. Nigar Fatima	Addl DG
7.	Ms. Vibha Sharma	Addl. DG
8.	Ms. Sonam Yangdol	Addl. DG
9.	Rakesh Mittal	Joint Secy (L&W)
10.	Sanjay Kumar	Addl. FA(SK) & JS
11.	Eddie Lalrinliana Khawlhing	Addl. FA(EL)& JS
12.	Subhash Kumar	DS(Budget)

Border Roads Organization

1.	Rajesh Kumar Singh	Defence Secretary
2.	Samir Kumar Sinha	AS & DG(Acq)
3.	Ms. Dipti Mohil Chawla	AS, DoD
4.	Sugata Ghosh Dastidar	FA(DS)
5.	Lt Gen Raghu Srinivasan	DGBR
6.	Mayank Tewari	JS(BR)
7.	Sanjay Kumar	Addl. FA(SK) & JS
8.	Eddie Lalrinliana Khawlhing	Addl. FA concerned
9.	Subhash Kumar	DS(Budget)

2. At the outset, the Chairperson welcomed the Members of the Committee and informed them of the agenda for the Sitting i.e. oral evidence of the representatives of Ministry of Defence in connection with examination of Demands for Grants for the year 2024-25.

3. Thereafter, the Chairperson welcomed the Defence Secretary, representatives of the Armed Forces and the Ministry of Defence to the Sitting of the Committee convened to deliberate on the subjects 'General Defence Budget, Department of Military Affairs (DMA), Ministry of Defence (Civil), Capital Outlay on Defence Services, Procurement Policy and Defence Planning, Army, Air Force, Navy, Joint Staff, Coast Guard Organisation (CGO), Directorate General Defence Estate (DGDE) and Border Roads Organization (BRO)' in connection with examination of Demands for Grants of the Ministry of Defence for the year 2024-25.

4. Subsequently, drawing attention to the Direction 55(1) of the Directions by the Speaker, Lok Sabha to treat the deliberations of the sittings as 'confidential', he requested the representative of the Ministry to give an overview of the subject after introducing themselves.

5. Thereafter, the Defence Secretary initiated the discussion by giving an overview of Defence Services Estimates and other Demands for Grants of the Ministry of Defence for 2024-25. The highlights of the brief given by the Defence Secretary are as under:

- (i) The total outlay for Ministry of Defence is Rs. 6,21,940.85 crore which is approx 12.90 percent of Budgetary Estimates of the country and 1.9 percent of Gross Domestic Product (GDP);
- (ii) Out of total allocation, Rs. 4,54,772.67 crore has been allotted for Defence Services Estimates, Rs. 25,963.18 crore for MoD (Civil) and Rs. 1,41,205 crore for Defence pensions;
- (iii) Seventy-five percent of Defence Modernization budget has been earmarked for domestic industry in FY 2024-25; and
- (iv) The export percentage has been increased to thirty-one percent during the last ten years.

6. Then, a Power Point Presentation on **General Defence Budget** was made before the Committee. This was followed by detailed deliberations on the following issues:

- (i) The total Defence Budget for 2024-25 i.e. BE Rs. 6,21,940.85 crore is an increase of 4.79 percent in Defence Budget in comparison to BE 2023-24;
- (ii) Defence Service Estimates which is almost seventy-three percent of the total Defence Budget;
- (iii) Enhancement in Non-salary revenue outlays allocation for the Defence Services in BE 2024-25 in comparison to BE 2023-24;
- (iv) Increase in revenue and capital budget as compared to previous year allocation;
- (v) Initiatives for creating an enabling environment and encouraging indigenous design, development and manufacture of defence equipment;
- (vi) Reasons for less expenditure in capital head by Army;
- (vii) Critical aspects of indigenous defence acquisition;
- (viii) Types of defence equipments exported by defence sector;

- (ix) Innovative solutions for productivity of ex-servicemen and reduction in pension bill;
- (x) Budget involved in non-kinetic warfare;
- (xi) Reasons for increase in the Budget for Navy;
- (xii) Budget allocation for modern warfare to equip Armed Forces;
- (xiii) Use of advance equipments for servilance of border areas and the budget allocation;
- (xiv) Quantity of defence equipments exported by DPSUs and Private Sector;
- (xv) Implementation of 'Operation Sadbhavana' sceme in Jammu and Kashmir and north eastern areas;
- (xvi) Reasons for emergency procurement of defence equipments;
- (xvii) Inclusion of all indeginized products in Srijan portal
- (xviii) Increase in Defence allocation to meet actual requirement keeping in view current security scenario;
- (xix) Planning for upgradation and modernisation of conventional arms;
- (xx) Strategy for achieving complete indigenization and self-reliance in Defence sector;
- (xxi) Association with private players in Defence sector;
- (xxii) Comparison with neighboring countries regarding expenditure on equipments and development of infrastructure.

7. The representatives of the Ministry of Defence then gave a Power Point Presentation on **Capital Outlay on Defence Services, Procurement Policy and Defence Planning** which was followed by discussion on a wider gamut of issues encompassing the following:

- (i) Defence Planning to cater current and further modernisation needs of the Armed Forces in terms of platforms, equipment, ammunitions, infrastructure and manpower;
- (ii) Complex and technology- intensive of Modern platforms;
- (iii) External and internal factors accounting for Defence Planning;
- (iv) Invention of methodology known as Integrated Capability Development System (ICATS);

- (v) Capability planning process which includes RMOD directive, net assessment, environment scan, SWOT analysis, etc.
- (vi) Reviewing of Integrated Capability Development Plan (ICDP) by headquarters IDS;
- (vii) Annual Acquisition plan for all the acquisitions;
- (viii) Defence Acquisition Procedure (DAP)-2020 for Defence Procurement Policy;
- (ix) Fundamental Philosophy for acquisition process;
- (x) Defence Acquisition Policy which aims to ensure timely procurement of defence equipment to meet the operational requirements;
- (xi) Priority of procurement of defence equipments;
- (xii) Basic categories for classification of acquisition process i.e. pre-AoN and Post-AoN;
- (xiii) Three pillars of Atmanirbharta i.e. Atmanirbhar Bharat, Make in India and ease of doing business;
- (xiv) Push for domestic defence ecosystem in FY 2024-25;
- (xv) Indigenization of various weapons and platforms including missiles, submarines, LCA, etc.;
- (xvi) Promotion of `Make in India' aspects in domestic production ;
- (xvii) Transparency in the defence acquisition process;
- (xviii) Ensuring level playing field between the DPSUs and the Private Players;
- (xix) Recent initiative in DAP;
- (xx) Development of domestic defence ecosystem through enhanced avenues and increase vendor base.

(The witnesses then withdrew and representatives of Department of Military Affairs and the Army came in)

8. The Chief of Defence Staff gave an overview of the working of the three forces following which a Power Point presentation on the Army was made. This was followed by detailed deliberations on following issues:

- (i) Territorial Integrity maintaining by Army;
- (ii) Counter-terrorism and counter-insurgency operations in the country;

- (iii) Equipment and infrastructure deployment in border areas;
- (iv) Combating proxy war by Army;
- (v) Logistic operations in High Altitude Areas;
- (vi) Infrastructure development in northern and western borders;
- (vii) Induction of state-of-the art weapon system and platforms;
- (viii) Realistic training in all terrains by Army;
- (ix) Training of Army with friendly foreign countries;
- (x) Contribution of Army in Military Diplomacy;
- (xi) Role of women officers in Army;
- (xii) Contribution of Army in natural disaster and calamities;
- (xiii) Features of Vibrant Village Programme;
- (xiv) Budgetary allocation to Army;
- (xv) Contribution in sports by Army;
- (xvi) Role of Army towards humanitarian assistance and speedy relief during calamities
- (xvii) Medical assistance and care of veterans;
- (xviii) Modernization through induction of indigenous weapons and platforms;
- (xix) Schemes to enhance security infrastructure, surveillance, research and development and fighting abilities of Army.

(The officials of Army then withdrew and officials of Air Force came in)

9. Thereafter, a Power Point presentation on the Air Force was made. This was followed by detailed deliberations on following issues:

- (i) Integrated Air Command and Control System;
- (ii) Upgradation of Fighter Aircrafts upto 4th Generation capability;
- (iii) Indigenous upgradation of Su-30MKI;
- (iv) Shortage of authorized squadrons strength;
- (v) Study to analyze the major reasons for the delay of LCA;
- (vi) Joint air-ground-sea exercises;
- (viii) Role of women officers in combat units;

- (ix) Promoting and commitment for Atmanirbharta in Air Force;
- (x) Role of Air Force towards human assistance and disaster relief operations;
- (xi) Decline in accident rates in Air Force;
- (xi) Increase in Budget Estimate (BE) for the year 2024-25 as compared to the previous year 2023-24.

(The officials of Air Force then withdrew and officials of Navy came in)

10. Consequently, a power point presentation on the Navy was also made before the Committee following which deliberations on the following issues were held:

- (i) More allocation in Budget Estimates, Capital Budget and Revenue Budget of 2024-25 in comparison to Budget Estimates, Capital Budget and Revenue Budget of 2023-24;
- (ii) Maritime threats and challenges from traditional and non traditional sources;
- (iii) Area of operations of Navy to Africa and Australia continents;
- (iv) Bilateral and Multilateral exercises with friend foreign countries;
- (v) IOR maritime information hub linkages with 25 national and 50 multinational centres;
- (vi) Role of Navy in Multi-National contracts;
- (vii) 'Milan 24' Biennial exercise conducted at Visakhapatnam;
- (viii) Anti-piracy operations by Navy;
- (ix) Anti-Narcotics Operations by Navy;
- (x) Role of women officers in Navy;
- (xi) Promotion of Atmanirbharta through various projects like TEDBF and DBMRH;

(The officials of Navy then withdrew and officials of Joint Staff came in)

11. Following the discussion on the Navy, a power point presentation on Joint Staff was made. Members raised various queries related to the following:

- (i) Promoting jointness and integration of Armed Forces;
- (ii) Formulation of policy on Joint Op Capabilities, Training and Functional aspects;

- (iii) Financial planning and oversight of joint staff organizations;
- (iv) Defence Crisis Management Group for coordination of Armed Forces during humanitarian assistance and disaster relief operations;
- (v) Coordination of strategic defence intelligence
- (vi) Integrated Capability Development Plan for promoting jointness in procurement, implementing capital acquisitions plans of the services with a focus on achieving Atmanirbharta.

(The witnesses then withdrew and representatives of the Ministry of Defence and Indian Coast Guard came in)

12. After a brief introduction of the officials of Indian Coast Guard, a Power Point Presentation on the working of Indian Coast Guard was made. This was followed by discussion on following points:

- (i) Less allocation in BE 2024-25 as compared to BE 2023-24;
- (ii) Safety and protection of artificial islands and offshore oil terminals;
- (iii) Protection of fishermen including assistance at sea;
- (iv) Preservation and protection of marine environment;
- (v) Prevention and control of marine pollution;
- (vi) Assist customs and other authorities in anti-smuggling operations;
- (vii) Safety of life and property at sea;
- (viii) Assist in collection of scientific data;
- (ix) Enforcement of maritime enactments.

(The officials of Indian Coast Guard then withdrew and officials of Directorate General Defence Estates came in)

13. Followed by brief introduction of the officials of Directorate General Defence Estates (DGDE), a Power Point Presentation on the working of Defence Estates Organisation was made. This was followed by discussion on following points:

- (i) Increase in Revised Estimates allocation to DEO for 2022-23;
- (ii) Provisions relating to Municipal Administration of notified cantonments, land acquisition, post acquisition, land survey, etc.;

- (iii) Duties of cantonment Board i.e. sanitation, drains and sewerage, water supply, primary education health, roads and street lights, etc.;
- (iv) Status of cantonment board schools;
- (v) Infrastructure and facilities in cantonment board hospitals;
- (vi) Environment and waste management works;
- (vii) Industrial training institutes in cantonment Board;
- (viii) Features of eChhawani portal;
- (ix) New initiatives i.e. polythene Kachra Bank and E-Waste Drives/Bank
- (x) Proposal from the State Government for provision of Defence Land;
- (xi) Issues such as access to roads etc. faced by general public in Cantonment areas and efforts for resolution of these issues;
- (xii) Enforcement of building laws in cantonment area;
- (xiii) Policy regarding handing over of Defence institutions to civil municipal bodies adjoining the cantonment areas.

(The representatives of Directorate General Defence Estates withdrew and representatives of Border Roads Organization came in)

14. After a Brief introduction of the officials of Border Roads Organization (BRO), a Power Point presentation on Border Roads Organization was made. The deliberations were held on the subject on following points:

- (i) Budgetary figures for BRO for 2024-25;
- (ii) Role of BRO during the peace and in war periods;
- (iii) Involvement of Government Agencies like NHAI, CPWD, NHIDCL, State PWD by BRO;
- (iv) Challenging terrain, unfavourable climate and difficult security situation faced by BRO;
- (v) Initiation of Engineering Procurement and Construction to boost efficiency;
- (vi) Strategic projects being executed in J&K, Himachal Pradesh, Uttarakhand, Rajasthan, Ladakh, Nagaland, Manipur, Mizoram, Arunachal Pradesh, Sikkim and Andaman and Nicobar Islands;
- (vii) Leverage in technology like use of steel slag and rejuvave technology for road construction; and

(viii) Sharing of expertise and knowledge with Public Works Department of various State Governments.

15. The Chairperson thanked the representatives of the Ministry of Defence for extensive discussion on the Demands for Grants and for responding to the queries of the Members. The Chairperson also requested the representatives to furnish information (which was not readily available) to the Secretariat expeditiously.

16. A copy of verbatim record of the proceedings has been kept on record.

The Committee then adjourned.

STANDING COMMITTEE ON DEFENCE (2024-25)

**MINUTES OF THE FOURTH SITTING OF THE STANDING COMMITTEE ON
DEFENCE (2024-25)**

**The Committee sat on Thursday, the 26 November, 2024 from 1500 hrs. to
1730 hrs. in Committee Room `D', Parliament House Annexe, New Delhi.**

PRESENT

Shri Radha Mohan Singh — *Chairperson*

MEMBERS

Lok Sabha

2. Dr. Rajeev Bharadwaj
3. Shri Karti P Chidambaram
4. Shri Ranjit Dutta
5. Shri Mohamad Haneefa
6. Ms Jothimani
7. Shri Ravindra Shukla alias Ravi Kishan
8. Shri Shashank Mani
9. Shri Lumba Ram
10. Shri Jagannath Sarkar
11. Shri Jagadish Shettar
12. Shri Virendra Singh
13. Shri Kesineni Sivanath
14. Com. Selvaraj V.
15. Shri Richard Vanlalhmangaiha

Rajya Sabha

16. Shri Naresh Bansal
17. Shri N. Chandrasegharan
18. Shri Naveen Jain
19. Shri Muzibulla Khan
20. Shri Praful Patel
21. Shri Dhairyashil Mohan Patil

22. Shri Sanjay Singh
23. Shri Sudhanshu Trivedi

SECRETARIAT

1. Dr. Sanjeev Sharma — *Joint Secretary*
2. Shri Tirthankar Das — *Director*

LIST OF WITNESSES

Ministry of Defence

Defence Public Sector Undertakings (DPSUs)

	Name & Designation (Shri/Smt./Mr./Ms.)	Designation
1.	Sanjeev Kumar	Secretary (DP)
2.	Sugata Ghosh Dastidar,	FA(DS)
3.	Ms. Dipti Mohil Chawla,	AS, DoD
4.	Shri Shalabh Tyagi,	JS(P&C)
5.	Shri Rajeev Prakash,	JS(NS)
6.	Shri Amit Satija,	JS(DIP)
7.	Shri A. B. Pradhan, Dir (HR)	Director (HAL)
8.	Shri B Senapati, Dir (Fin)	Director (Finance)
9.	Shri Manoj Jain,	CMD (BEL)
10.	Cmde A Madhavarao,	CMD (BDL)
11.	Shri Shantanu Roy,	CMD (BEML)
12.	Dr. Sanjay Kumar Jha,	CMD (MIDHANI)
13.	Cmde P R Hari,	CMD (GRSE)
14.	Mr. Biju George,	Director (MDL)
15.	Shri Brajesh Kumar Upadhyay,	CMD (GSL)
16.	Cmde Hemant Khatri,	CMD (HSL)
17.	Sanjay Kumar,	Addl. FA(SK) & JS

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|-----|----------------------------|---------------|
| 18. | Shri Amitabh Ranjan Sinha, | Addl. FA & JS |
| 19. | Subhash Kumar | DS(Budget) |

Directorate of Ordnance (Coordination and Services)

	Name & Designation (Shri/Smt./Mr./Ms.)	Designation
1.	Sanjeev Kumar	Secretary (DP)
2.	Sugata Ghosh Dastidar,	FA(DS)
3.	Ms. Dipti Mohil Chawla,	AS, DoD
4.	Dr. Garima Bhagat,	JS (LS)
5.	Shri Sanjeev Gupta,	DGO(C&S)
6.	Shri Prakash Agarwala,	Dir. (Finance) MIL
7.	Shri Sanjay Dwivedi,	CMD AVANI
8.	Shri Rajesh Choudhary,	CMD AWEIL, TCL
9.	Shri Gurudutta Ray,	CMD YIL
10.	Shri G C. Agnihotri	CMD IOL
11.	Shri Sunil Date,	CMD GIL
12.	Ms. Sunita Mansukhani,	DDG (Budget)
13.	Shri Sanjay Mehrishi,	DDG (NDCD)
14.	Sanjay Kumar,	Addl. FA(SK) & JS
15.	Shri Amitabh Ranjan Sinha,	Addl. FA & JS
16.	Shri Eddie Lalrinliana Khawlhing	Addl. FA & JS
17.	Subhash Kumar	DS(Budget)

Defence Research and Development Organisation (DRDO)

	Name & Designation (Shri/Smt./Mr./Ms.)	Designation
1.	Dr. Samir Venkatpati Kamat,	Secretary, DDR&D
2.	Ms. Dipti Mohil Chawla,	AS, DoD
3.	Dr. Subrata Rakshit,	DS & DG (TM) & DG (SAM)
4.	Dr. Manu Korulla,	OS & DG (R&M)
5.	Dr. (Ms) Chadrika Kaushik,	OS & DG (PC&SI)
6.	Shri Vedveer Arya,	Addl FA & JS

7.	Shri Sunil Sharma,	OS & Director, DPARO&M
8.	Dr. Sumit Goswami,	Sc 'G' & Director, P&C
9.	Shri Sugata Ghosh Dastidar,	FA(DS)
10.	Shri Sanjay Kumar,	Addl. FA(SK) & JS
11.	Shri Saurabh Shukla,	Scientist 'F' & Associate Director DPARO&M
12.	Subhash Kumar	DS(Budget)

Defence Pension, Welfare of Ex-Servicemen & Ex-Servicemen Contributory Health Scheme (ECHS)

	Name & Designation (Shri/Smt./Mr./Ms.)	Designation
1.	Dr Niten Chandra,	Secretary, ESW
2.	Sugata Ghosh Dastidar,	FA(DS)
3.	Ms. Dipti Mohil Chawla,	AS, DoD
4.	Dr Pudi Hari Prasad,	Jt. Secy (ESW)
5.	Lt Gen VPS Kaushik,	AG
6.	V Adm Sanjay Bhalla,	COP
7.	AVM Updesh Sharma,	VSM ACAS (Accts & AV)
8.	#*Brig DS Basera,	Secretary KSB
9.	Smt. Devika Raghuvanshi,	CGDA
10.	Maj. Gen Manoj Natrajan,	MD ECHS
11.	Maj Gen SBK Singh	DG(R)
12.	Eddie L. Khawlhing	Addl. FA & JS
13.	Shri Subhash Kumar	DS(Budget)

2. At the outset, the Chairperson welcomed the Members of the Committee and informed them of the agenda for the Sitting i.e. oral evidence of the representatives of Ministry of Defence in connection with examination of Demands for Grants for the year 2024-25.

3. Thereafter, the Chairperson welcomed the representatives of Ministry of Defence to the Sitting of the Committee convened to deliberate upon Defence Public

Sector Undertakings (DPSUs), Directorate of Ordnance(Coordination and Services)-New DPSUs, Defence Research and Development Organisation (DRDO), Defence Pension, Welfare of Ex-Servicemen and Ex-servicemen Contributory Health Scheme (ECHS) in connection with examination of Demands for Grants of the Ministry of Defence for the year 2024-25.

4. Later, drawing attention to Direction 55(1) of the Direction by the Speaker, Lok Sabha to treat the deliberations of the sittings as 'confidential', he requested the representatives of the Ministry to give an overview of the subject after introducing themselves.

5. After formal introduction, the Secretary, Defence Production initiated the discussion by highlighting the works of the department which includes production of defence equipment in country, incorporating the components of indigenization, export of defence products, inclusion of new technologies in defence and creating an ecosystem of defence manufacturing wherein MSMEs, Start-Ups and private sector can participate . The highlights of the brief given by the Secretary are as under:

- (i) Defence manufacturing increase three fold to Rs. 1,27,264 crores in the year 2023-24 from Rs. 43,746 crores in the 2013-14:
- (ii) Export of defence products increased up to Rs 21,000 crores in the year 2023-24 from Rs. 686 crores in the 2013-14 ;
- (iii) Substantial steps taken towards 'Make in India' and achieving 'Atma Nirbhar Bharat'.
- (iv) A new portal ' Srijan' has been launched to promote indigenization by participation of MSMEs and Start ups. On this portal 32,000 defence components were listed for indigenization out of which process of indigenization of 12-13,000 components have been done. It is likely to be increased drastically by 2028-29. Consequently import of such components will be stopped.
- (v) Increase in R&D Budget

6. Thereafter, a Power Point Presentation was made by the representatives of nine Defence Public Sector Undertakings (DPSUs) *i.e.* Hindustan Aeronautics Limited, Bharat Electronics Limited, Mazagon Dock Shipbuilders Limited, Garden Reach Shipbuilders and Engineers Limited, Goa Shipyard Limited, Bharat Dynamics Limited, Mishra Dhatu Nigam Limited, BEML Limited and Hindustan Shipyard Limited. This was followed by detailed deliberations on the following issues:

- (xviii) Financial Data comprising turnover and profit made by said DPSUs;
- (xix) Status of Order Book Positions of DPSUs;
- (xx) Various measures undertaken to increase export and minimize import;
- (xxi) Modernisation activities taken by all DPSUs;
- (xxii) Measures taken towards indigenization and achieving 'Atma Nirbharta';
- (xxiii) Initiative taken for technological advancements in light of latest warfare techniques.
- (xxiv) Optimum focus on investment in research and Development;
- (xxv) Share of FDI and FII in DPSUs along with foreign investment by DPSUs;
and
- (xxvi) Utilisation of CSR fund.

(The representatives of the DPSUs then withdrew and representative of Directorate of Ordnance(Coordination and Services) came in.)

7. After introduction of the representative of Directorate of Ordnance (Cord. & Serv.), a brief overview regarding seven new DPSUs was presented by the Secretary. Then representatives of new DPSUs made a Power Point Presentation before the Committee. This was followed by detailed deliberations on the following issues:

- (xii) Types of products being manufactured by these new DPSUs;
- (xiii) Financial performance comprising turnover and profit made by these new DPSUs;

- (xiv) Status of Order Book Positions;
- (xv) Challenges in transfer and merger of employees;
- (xvi) Financial Assistance being given by Government to these DPSUs;
- (xvii) Diversification in products being manufactured ;
- (xviii) Merger of existing seven DPSUs to synchronize their productions;
- (xix) Various initiatives being taken towards technology upgradation;

The Chairperson commended their journey despite several challenges being faced by new DPSUs.

(The witnesses then withdrew and representatives of Department of Ex-Servicemen Welfare (DESW) came in.)

8. The representatives of the Department commenced their briefing through a Power Point presentation. This was followed by detailed deliberations on the following issues/topics:

- (i) Armed Forces Veterans (Ex-Servicemen) including pensioners;
- (ii) Armed Forces Veterans (Ex-Servicemen) Contributory Health Scheme (ECHS) along with services provided by the Poly clinics;
- (iii) Initiatives undertaken for the welfare of ESM through Directorate General of Resettlement;
- (iv) Function of Kendriya Sanik Bords;
- (vi) Status and beneficiaries of Marriage Grants and Children Education Grants;
- (vii) Challenges to generate employment for ESM and measures undertaken to resolve them;
- (viii) Measures taken for stress management and mental health of ESM;

(The witnesses then withdrew and representatives of Defence Research and Development Organisation (DRDO) came in.)

9. The Secretary, DRDO gave an overview of the the organization with the help of a Power Point Presentation which was followed by deliberations on the following:

- (i) An overview of functions of DRDO;
- (ii) New initiative taken to meet changing requirements in defence sector;
- (iii) Technology Development Fund;
- (iv) Opening of Centre of Excellence for promotion of R&D in academia;
- (v) Initiative to Atma Nirbhar Bharat in defence technologies and systems;
- (vi) Induction of women scientists;
- (vii) Upgradation in drone detection and anti missile technology;
- (viii) Progress in landmine detection;
- (ix) Investment in R&D;
- (x) Monitoring of ongoing projects for timely delivery; and
- (xi) Vacancy and attrition rates in DRDO.

10. The Chairperson, then, thanked the representatives of the Ministry of Defence and the DRDO for extensive discussion on the Demands for Grants and for responding to the queries of the Members. The Chairperson also requested the representatives to furnish information to the Secretariat expeditiously.

11. A copy of verbatim record of the proceedings has been kept on record.

The Committee then adjourned.

STANDING COMMITTEE ON DEFENCE (2024-25)

**MINUTES OF THE FIFTH SITTING OF THE STANDING COMMITTEE ON
DEFENCE (2024-25)**

The Committee sat on Thursday, the 12th December, 2024 from 1500 hrs. to 1515 hrs. in Committee Room No. '53', Samvidhan Sadan , New Delhi.

PRESENT

Shri Radha Mohan Singh - Chairperson

MEMBERS

Lok Sabha

- 2 Dr. Rajeev Bharadwaj
- 3 Shri Karti P Chidambaram
- 4 Shri Ranjit Dutta
- 5 Captain Viriato Fernandes
- 6 Shri Mohmad Haneefa
- 7 Ms. S. Jothimani
- 8 Shri Ravindra Shukla Alias Ravi Kishan
- 9 Shri Shashank Mani
- 10 Shri Lumba Ram
- 11 Shri Jagannath Sarkar
- 12 Shri Jagadish Shettar
- 13 Shri Virendra Singh
- 14 Shri Kesineni Sivanath
- 15 Com. Selvaraj V.
- 16 Shri Richard Vanlalhmangaiha

Rajya Sabha

- 17 Shri Naresh Bansal
- 18 Shri N. Chandrasegharan
- 19 Shri Shaktisinh Gohil

20	Shri Dhairyashil Mohan Patil
21	Dr. Sudhanshu Trivedi

SECRETARIAT

- | | | | |
|----|---------------------|---|-----------------|
| 1. | Dr. Sanjeev Sharma | - | Joint Secretary |
| 2. | Shri Tirthankar Das | - | Director |

2. At the outset, the Chairperson welcomed the Members of the Committee and informed them about the agenda for the Sitting. The Committee then took up for consideration the following draft Reports:-

- (i) **Demands for Grants of the Ministry of Defence for the year 2024-25 on 'General Defence Budget, Border Roads Organisation, Indian Coast Guard, Directorate General Defence Estates, Defence Public Sector Undertakings, Welfare of Ex-Servicemen and Defence Pension (Demand Nos. 19 and 22)';**
- (ii) **Demands for Grants of the Ministry of Defence for the year 2024-25 on 'Army, Navy, Air Force, Joint Staff and Ex-Servicemen Contributory Health Scheme (Demand Nos. 20 and 21)';**
- (iii) **Demands for Grants of the Ministry of Defence for the year 2024-25 on 'Capital Outlay on Defence Services, Procurement Policy and Defence Planning (Demand No. 21)';**
- (iv) **Demands for Grants of the Ministry of Defence for the year 2024-25 on 'Directorate of Ordnance (Coordination and Services–New DPSUs) and Defence Research and Development Organisation (Demand Nos. 20 and 21)';**
- (v) **Action Taken by the Government on the Observations/ Recommendations contained in the Forty-Second Report (17th Lok Sabha) on the subject 'A Review of the Working of the Defence Research and Development Organisation (DRDO)'; and**
- (vi) **Action Taken by the Government on the Observations/Recommendations contained in the Forty-Seventh Report (17th Lok Sabha) on the subject 'A Review of Functioning of Zila Sainik Boards in the Country'.**

3. After some deliberations, the Committee adopted the above reports without any modifications.
4. The Committee, then, authorized the Chairperson to finalise the above draft Reports and present the same to both the Houses of Parliament on a date convenient to him.
5. ***Does not pertain to the Report***

The Committee then adjourned.