



सत्यमेव जयते

GOVERNMENT OF INDIA

**MINISTRY OF
DEFENCE**



**2023-24
Annual
Report**





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**MINISTRY OF
DEFENCE**

**ANNUAL REPORT
2023-24**



CONTENTS

DEPARTMENTS AND ORGANISATIONS OF MINISTRY OF DEFENCE	1
DEPARTMENT OF DEFENCE	5
National Celebrations	6
National Cadet Corps	16
Border Roads Organisation	23
Indian Coast Guard	33
Armed Forces Medical Services	39
Modernization of Armed Forces	43
Other Organisations of Department of Defence	50
Defence Finance	72
Defence Cooperation with Foreign Countries	75
Key Initiatives	85
DEPARTMENT OF DEFENCE PRODUCTION	87
DEPARTMENT OF MILITARY AFFAIRS	103
Indian Army	104
Indian Navy	129
Indian Air Force	156
Headquarters Integrated Defence Staff	172
DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION	179
RESETTLEMENT AND WELFARE OF EX-SERVICEMEN	209
EMPOWERMENT AND WELFARE OF WOMEN	217

Departments and Organisations of Ministry of Defence

Ministry of Defence

After Independence, Ministry of Defence was created under the charge of a Cabinet Minister and each Service was placed under its own Commander-in-Chief. In 1955, the Commanders-in-Chief were renamed as the Chief of the Army Staff, the Chief of the Naval Staff and the Chief of the Air Staff. In November 1962, the Department of Defence Production was set up to deal with research, development and production of defence equipment.

In November, 1965, the Department of Defence Supplies was created for planning and execution of schemes for import substitution of defence requirements. These two Departments were later merged to form the Department of Defence Production and Supplies. In 2004, Department of Defence Production and Supplies was renamed as Department of Defence Production.

In 1980, the Department of Defence Research and Development was created. In 2004, the Department of Ex- Servicemen Welfare was setup. In 2019, a new department namely Department of Military Affairs was created with the aim to facilitate optimal utilization of resources and to promote jointness among the three services.

Defence Minister of India or Raksha Mantri is the head of Ministry of Defence, Government of India, which maintains India's defence and internal security. The defence minister additionally serves as President of the Institute for Defence Studies and Analysis, and as Chancellor of the Defence Institute of Advanced Technology and National Defence University. Raksha Mantri is assisted by a Minister of State for Defence (Raksha Rajya Mantri). The Defence Secretary functions as head of the Department of Defence and is additionally responsible for coordinating the activities of the five Departments in the Ministry.

Departments of Ministry

Department
of Defence

Department
of Defence
Production

Department of
Defence Research
& Development

Department of
Military Affairs

Department of
Ex-Servicemen
Welfare

Departments of Ministry

- (i) The **Department of Defence (DOD)** headed by the Defence Secretary deals with Defence Budget, establishment matters, defence policy, matters relating to Parliament, defence co-operation with foreign countries and co-ordination of all defence related activities.

Border Roads Organization	National Cadets Corps	Armed Forces Medical College	Indian Coast Guard
Directorate General Defence Estates	Institute for Defence Studies and Analysis	Military Engineering Services	Services Sports Control Board
National Defence College	School of Foreign Language	College of Defence Management	Controller General of Defence Accounts
	Armed Forces Tribunal	Defence Services Staff College	

Organizations of Department of Defence

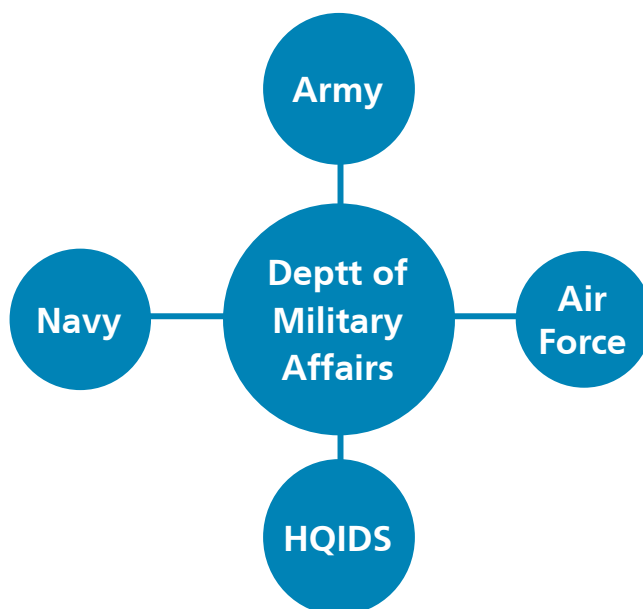
- (ii) **Department of Defence Production** is headed by a Secretary and this department is involved in developing a comprehensive production infrastructure to provide the weapons/systems/platforms/equipments required by defence. Over the years, the department has established wide ranging production facilities for various defence equipments through DPSUs and also facilitated private industry.

DPSUs	Other Organizations
- Hindustan Aeronautics Limited (HAL) - Bharat Electronics Limited (BEL) - Bharat Earth Movers Limited (BEML) - Bharat Dynamics Limited (BDL) - Garden Reach Shipbuilders & Engineers Limited (GRSE) - Goa Shipyard Limited (GSL)	- Directorate General of Quality Assurance (DGQA) - Directorate General of Aeronautical Quality Assurance (DGAQA)

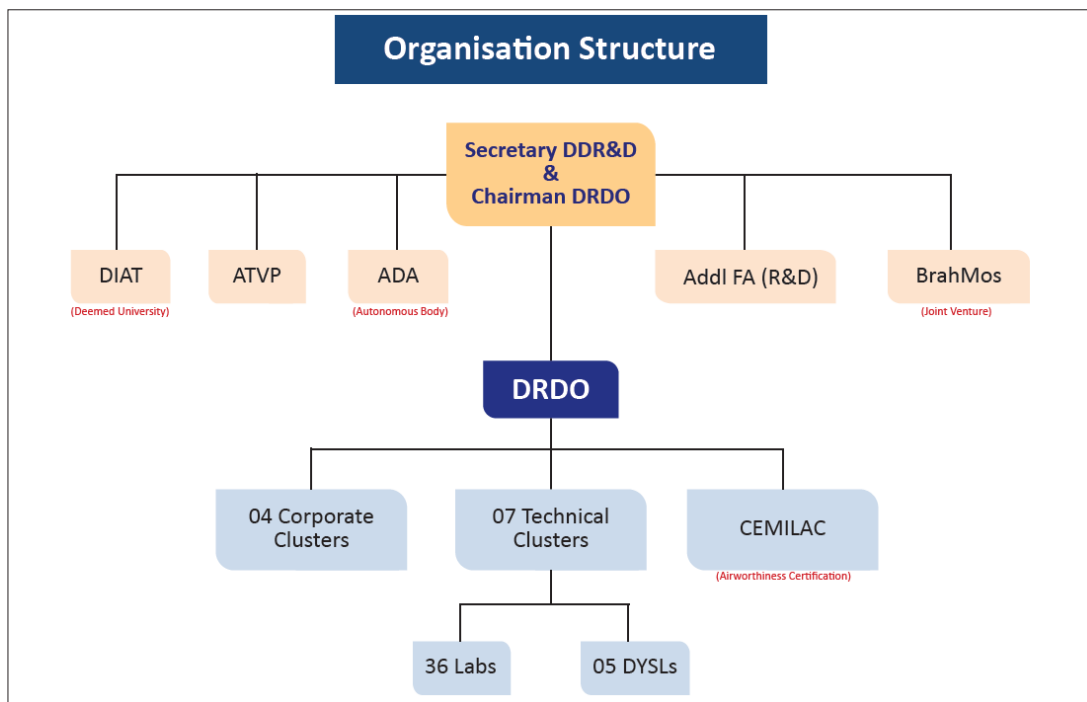
DPSUs	Other Organizations
• Hindustan Shipyard Limited (HSL) • Mazagon Dock Shipbuilders Limited (MDL) • Mishra Dhatu Nigam Limited (MIDHANI) • Munitions India Limited (MIL) • Armoured Vehicles Nigam Limited (AVNL) • Advanced Weapons & Equipment India Limited (AWEIL) • Troop Comforts Limited (TCL) • Yantra India Limited (YIL) • India Optel Limited (IOL) • Gliders India Limited (GIL)	• Directorate of Standardisation (DOS) • Directorate of Planning & Coordination (Dte. of P&C) • Defence Exhibition Organisation (DEO) • Directorate of Ordnance (Coordination & Services)

Organizations of Department of Defence Production

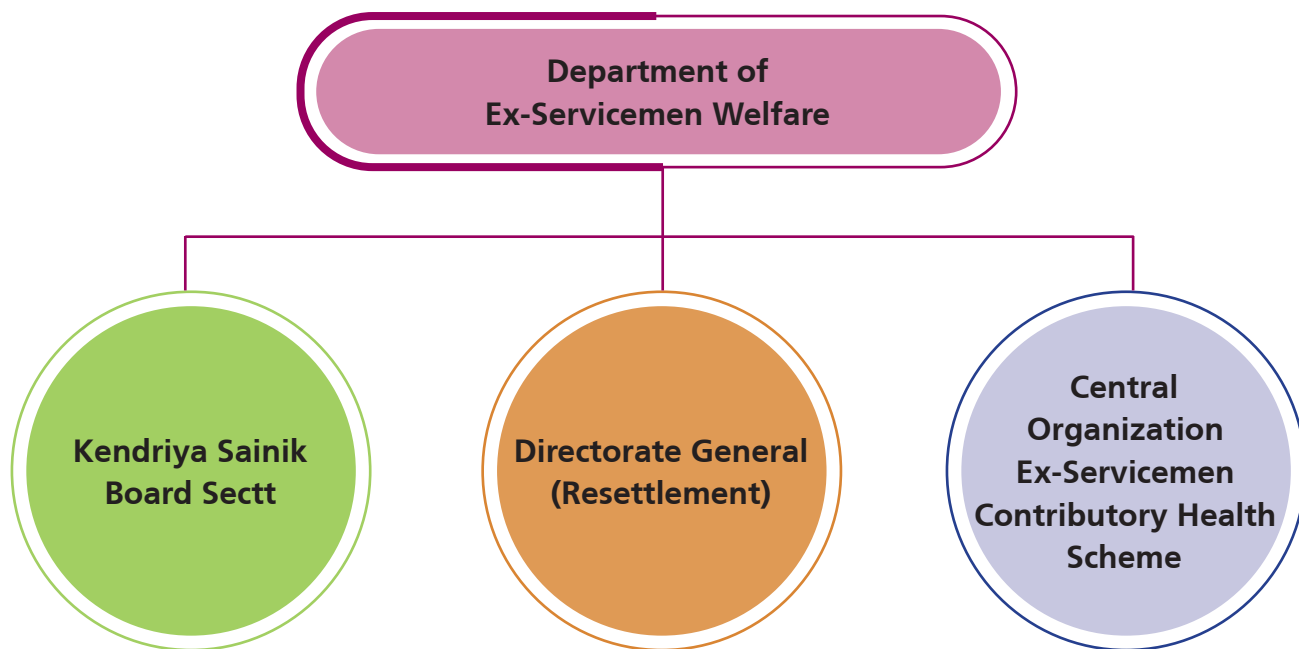
- (iii) **The Department of Military Affairs (DMA)** headed by the Chief of Defence Staff as its Secretary deals with the promotion of jointness in procurement, training and staffing for the services. Facilitation of restructuring of Military commands for optimal utilization of resources and promotion of use of indigenous equipment is also the mandate of this department.



- (iv) **The Department of Defence Research and Development (DRDO)** is headed by a Secretary DD R&D & Chairman, DRDO and is responsible for all design and development of state-of-the-art sensors, weapon systems, platforms and allied equipment in defence and security domains of land, air, sea, space and cyber. DRDO consists of 35 Laboratories/Units.



- (v) **The Department of Ex-Servicemen Welfare (DESW)** is headed by a Secretary and deals with all resettlement, welfare and pensionary matters of Ex-Servicemen.



Organizations of Department of Ex-Servicemen Welfare

DEPARTMENT OF DEFENCE



GOVERNMENT OF INDIA
MINISTRY OF
DEFENCE

National Celebrations

The ceremonial functions organized during 2023-24 are detailed in the following paragraphs:-

INDEPENDENCE DAY CEREMONY – 2023

- The celebration of the Independence Day began with the Guard of Honour to the Prime Minister presented by the three Services and Delhi Police. Thereafter, the Prime Minister unfurled the National Flag on the Rampart of the Red Fort to the accompaniment of the National Anthem played by the Services Band. Twenty one Gun Salute was presented on the occasion with 105 mm LFG indigenous gun system. After the Prime Minister's address to the nation, the ceremony concluded with the singing of National Anthem by NCC cadets and release of balloons.



- On the eve of the Independence Day-2023, following Gallantry Awards were announced:-

Name of the award	Total number of awards (including posthumous cases)	Posthumous cases
Kirti Chakra	04	04
Shaurya Chakra	11	04
Sena Medal (G) (including bar to Sena Medal)	54	---
Nao Sena Medal (G)	03	---
Vayu Sena Medal (G)	04	---
Total	76	08

- Hon'ble President of India laid wreath at National War Memorial.



G-20 LOGO AT GYANPATH

- A Large G20 Logo was drawn using floral decoration at wooden platform at the Gyanpath.



SPECIAL GUESTS FOR INDEPENDENCE DAY, 2023

- Guests from following categories / schemes / initiatives etc. were invited to witness the Independence Day Ceremony, 2023 as Special Guests of the Government:-
 - Sarpanches from Vibrant Villages
 - Farmers Producer Organizations (FPOs)
 - Shramyogis of Central Vista Project & New Parliament Building
 - PM Kisan Yojana beneficiaries
 - PM Vishwakarma Kaushal Samman (PM-VIKAS) beneficiaries.
 - Primary School Teachers
 - Nurses
 - Fishermen
 - Khadi Workers
 - Workers involved in constructing Border Roads
 - Workers involved in making Amrit Sarovar in States/UTs.
 - Workers from Har Ghar Jal Yojana
 - "75-Couples" in traditional attire were invited from each State/UT to witness the Independence Day Ceremony – 2023.

CONTESTS

- To maximize the public participation and to awaken festive mood, 12 installations were installed at various locations inside and outside the Red Fort as Selfie Points. An online Selfie contest was organised from 15-20 August, 2023. Provision for Cash Prize of ₹10,000 /- for each winner was also made.
- Online quiz contest was also conducted from 26th July to 10th August 2023 on the theme "Indian Military History" with a provision of cash prize.

DEFENCE INVESTITURE CEREMONY

The Defence Investiture Ceremony, 2023 was organised at Rashtrapati Bhawan in two phases i.e. first on 09.05.2023 and second on 27.06.2023 respectively in association with President's Secretariat.



VIJAY DIWAS

Vijay Diwas was celebrated on 16 December, 2023. On this occasion, Hon'ble Raksha Mantri laid wreath at National War Memorial at India Gate. Hon'ble Raksha Rajya Mantri, Chief of Defence Staff, three services chiefs and Defence Secretary also graced the ceremony and laid the wreath.



REPUBLIC DAY PARADE, 2024

- The Prime Minister laid wreath at National War Memorial in the morning of 26th January, 2024. Two minutes silence was observed for paying homage to those who laid down their lives in safeguarding the integrity of our nation.



- H.E. Mr. Emmanuel Macron, President of the French Republic, was the Chief Guest. The Marching Contingent along with Band of the country of the Chief Guest and Fly past by 03 Aircrafts of France also participated in Republic Day Parade, 2024.



- Unfurling of the National Flag at Kartavya Path marked the beginning of the Republic Day Celebration. The President's Body Guards presented the National Salute followed by the National Anthem played by the Services Bands and a 21 gun salute.
- The Republic Day Parade commenced with showering of flower petals by Helicopters carrying the National Flag and the Services Flags. The parade was led by GOC Delhi area and included the following main components:-
 - Heralding of Parade with Musical Instruments
 - Showering of flower petals by Helicopters
 - Marching Contingent along with Band from France (the country of Chief Guest)
 - Fly past by 03 Aircrafts of France
 - Mounted Cavalry Column
 - Mechanised Column
 - Marching contingents & bands of the three services, Central Armed Police Forces, NCC, NSS etc.
 - Pradhan Mantri Rashtriya Bal Purashkar winners
 - 01 Tableau of DRDO, 26 tableaux of various States/UTs and Central Ministries/Departments.
 - Cultural performances by group of artists selected through "Vande Bharatam" dance competition.
 - Motor Cycle display, Fly past and release of rubber balloons.



- The following gallantry and distinguished service awards were announced on the Republic Day 2024:-

Name of the award	Total number of awards (including posthumous cases)	Posthumous cases
Gallantry Award(s)		
Kirti Chakra	06	03
Shaurya Chakra	16	02
Sena Medal/Nao Sena Medal/ Vayu Sena Medal (Gallantry) (including Bar)	58	07
Distinguished Award(s)		
Param Vishisht Seva Medal	31	---
Uttam Yudh Seva Medal	04	---
Ati Vishisht Seva Medal	61	---
Yudh Seva Medal	10	---
Sena Medal/Nao Sena/Vayu Sena Medal (Devotion to duty)	70	---
Vishisht Seva Medal (including Bar)	135	---
Total	391	12

BEATING RETREAT CEREMONY, 2024

- 'Beating Retreat' is a centuries old military tradition practised by the troops at the time of disengaging from battle at sunset. The Beating Retreat Ceremony denotes departure of the troops assembled at Delhi for participating in the Republic Day Celebrations. The Ceremony was organised at Vijay Chowk on January 29, 2024, which brought down the curtain on the Republic Day festivities.
- The Ceremony included the Bands of the three Services along with Central Armed Police Forces (CAPFs) Band. The conclusion of the ceremony coincided with illumination of the Rashtrapati Bhawan, North Block, South Block, Parliament House and India Gate.
- During Beating the Retreat Ceremony, 2024 only Indian tunes were played by all participating bands. An online tune contest was organized on MyGov platform from 22-29 January, 2024 for popularizing the same in which the participants were required to upload their video clips of 45-60 seconds in Vocal and Instrumental Categories separately. The best three participants in each category (Vocal and Instrumental) were awarded cash prize by Ministry of Defence.

ARRIVAL OF HON'BLE PRESIDENT ON BUGGY

To make the Republic Day Parade an appealing one for the public, arrangements of buggy was made for arrival of Hon'ble President at Dais for taking salute of the Republic Day Parade, 2024.



WOMEN CENTRIC REPUBLIC DAY PARADE – 2024

Republic Day Parade, 2024 was Women Centric. Women Marching Contingents from Tri-Services and various CAPFs; Women Cultural artists; Women tableau artists etc. participated in the RDP, 2024. The Delhi Police women Marching Contingent and CRPF Women Marching Contingent were awarded trophies for Best Marching Contingent among CAPFs and other auxiliary Forces.



HERALDING OF PARADE

For the first time, the Republic Day Parade was heralded by 100 women artists with percussion instruments of different part of the country. The parade was commenced with the music of Sankh, Naadswaram, Nagada, etc. to be played by these 100 Women Artists.

ANANT SUTRA

“Anant Sutra – The Endless Thread” (a visually stunning installation of sarees) was installed as a view cutter behind the spectators seated in the enclosures during Republic Day-2024. This unique installation was showcased with nearly 1900 sarees and drapes from every corner of the country, mounted on a towering height with wooden frames along the Kartavya Path. These sarees have QR codes which could be scanned to know the details about weaving and embroidery arts used in it.

RELEASE OF COMMEMORATIVE COIN AND COMMEMORATIVE STAMP

In order to mark the occasion of 75th Republic Day, Ministry of Defence released special Commemorative Coin and Commemorative Stamp during the Republic Day Celebrations-2024 in coordination with Security Printing and Minting Corporation of India Limited (SPMCIL) and Department of Posts.

NATIONAL SCHOOL BAND COMPETITION

National School Band Competition (All-India level) was organised in coordination with Department of School Education and Literacy, Ministry of Education for Republic Day Celebrations-2024. A total 16 Bands selected from 15 States/UTs performed during the finale Nation level event in MDCN Stadium, New Delhi. They were awarded trophies and cash prizes.

VANDE BHARATAM 3.0

The third edition of Vande Bharatam dance competition was organised as part of Republic Day Celebrations-2024. Entries were invited under Jan Bhagidari – Open selection or approaching the Repertories and Dance Schools to submit entries. 10 groups each were selected from both the formats. Nearly 1500 selected dancers through Vande Bharatam competition performed at Kartavya Path during the Parade.



VEER GATHA 3.0

The third edition of Project Veer Gatha was organised during 13 July to 30 September, 2024 as a part of Republic Day Celebrations-2024 to inspire and spread awareness among children about the gallant deeds and sacrifices of the Armed Forces. Winners of Veer Gatha 3.0 were felicitated by Hon'ble Raksha Mantri at ceremony in New Delhi.

BHARAT PARV

'Bharat Parv' was organised at the Red Fort, Delhi from January 23-31, 2024 in coordination with Ministry of Tourism. It showcased Republic Day Tableaux, performances by the Military Bands, cultural performances, Food Courts serving pan India cuisines and Crafts Bazaar. This year, Tableaux not shortlisted for Republic Day Parade were also given a chance to participate in Bharat Parv.

ONLINE QUIZ CONTESTS

To maximize the participation of public in Celebrations of Republic Day, 2024 and to create patriotic feeling among the youth and masses across the nation, an online quiz contest on the topic "Bharat – The mother of Democracy (भारत-लोकतंत्र की मातृका)" was conducted from 05-20 January, 2024 through MyGov portal. The quiz was open for all citizens above 14 years of age. Top ten participants were awarded cash prize.

National Cadet Corps

The National Cadet Corps (NCC) was established by virtue of the NCC Act, 1948. The NCC strives to provide the youth of the country opportunities for all round development with a sense of commitment, dedication, self-discipline and moral values so that they become responsible citizens of tomorrow. The motto of NCC is **"Unity and Discipline"**.

The sanctioned strength is 17 Lakh including 2 Lakh under Fully Self Financing Scheme (FSFS) and the total number of NCC Units is 824.

NCC covers large number of educational institutions, across the country. Girl cadets make 39% of the total enrolment. There are a total of **20892** institutions, which includes **12784** schools, **2030** Inter Colleges and **6078** colleges.

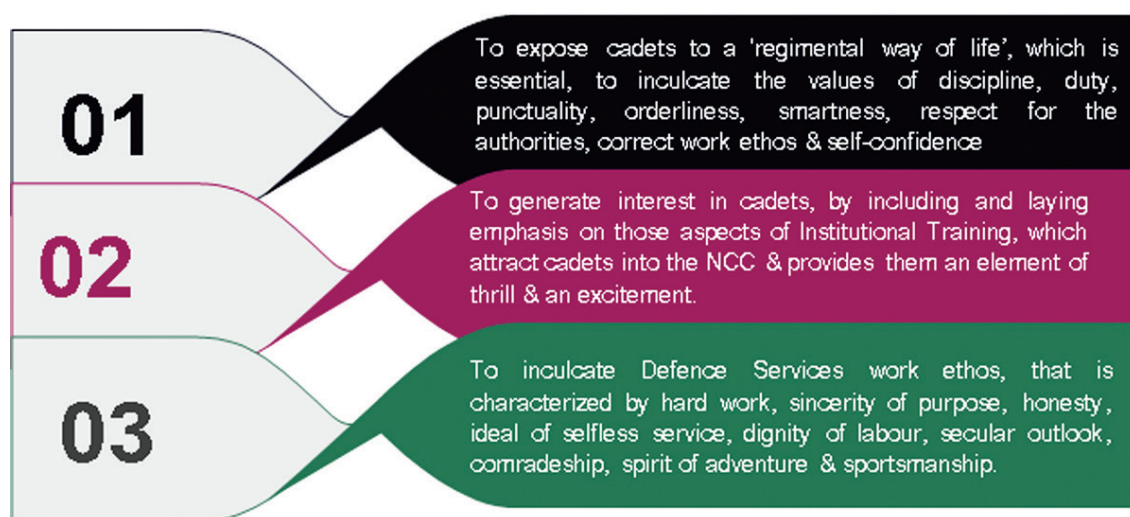
Training

NCC's Training KRA remains 'to empower cadets to become potential leaders & responsible citizens of our country'. Institutional Training & Camp Training form an integral part of the NCC curriculum.

Institutional Training

Institutional Training remains the primary focus for training of Cadets. ANOs & PI Staff impart training in both Common Subjects & Service Subjects to create a human resource of organised, trained & motivated youth for selfless service to the nation & empower them to be a useful member of the society.

Following are the specific purposes of training:-

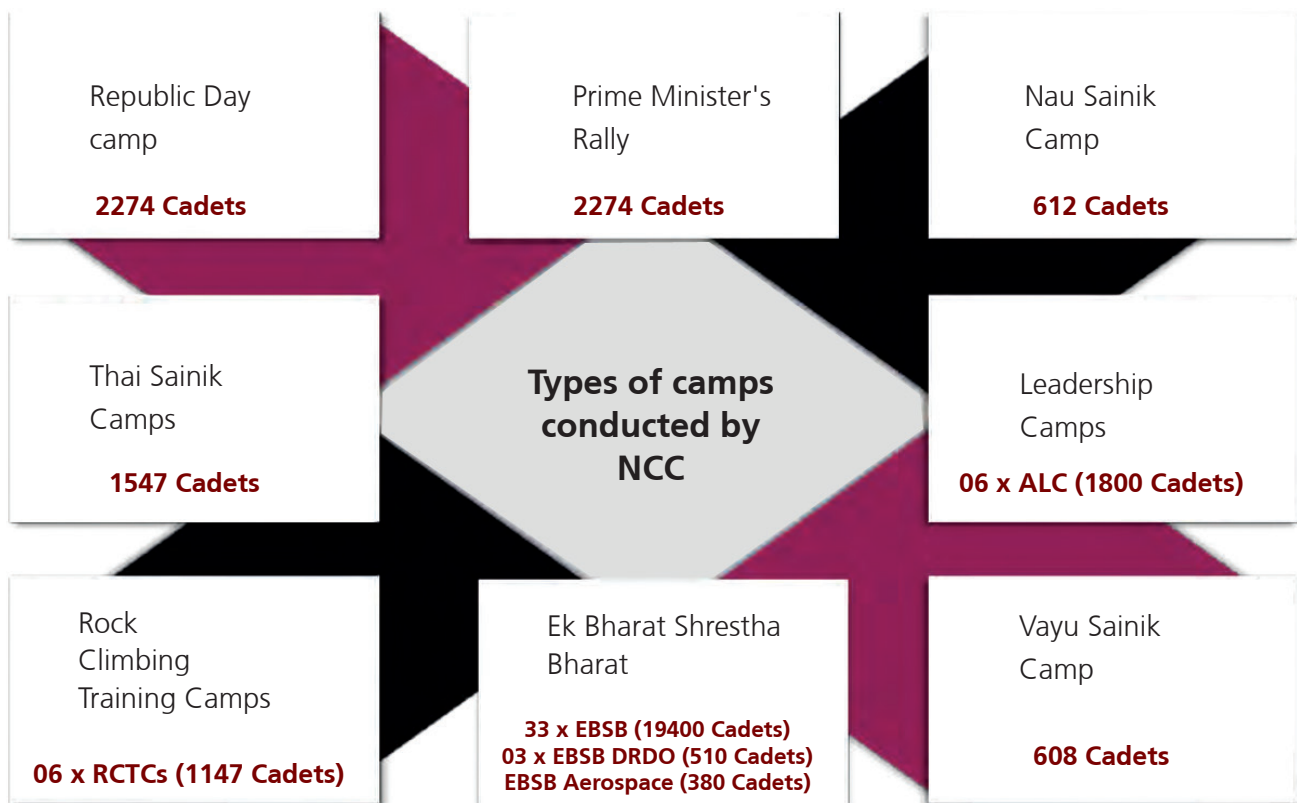


Camp Training

The cadets are exposed to the excitement of camp life, where they apply the theoretical knowledge that they had gained in Institutional Training. It is mandatory for Junior Division/Junior Wing (JD/JW) cadets, to attend at least one camp and Senior Division/ Senior Wing (SD/SW) cadets, to attend a minimum of two camps, during the period of their enrolment.

Annual Training Camps (ATCs): This year, till date, 1500ATC/CATCs have been conducted across all the NCC State Directorates in which Approx seven lakh cadets have participated.

Centrally Organised Camps (COCs): These camps are of an all – India nature and are planned at DGNCC in consultation with nominated Directorate. Selected cadets, as per vacancy allotted to each Dte attend these.



Types of Centrally Organized Camps

Certificate Exams. Approx seven lakh cadets appeared in NCC 'A', 'B' & 'C' certificate exams between Jan and Mar 2024.

PM's Rally.

The annual NCC PM's Rally took place on January 27, 2024, at the Cariappa Parade Ground in Delhi Cantt. The event witnessed the participation of 2,274 cadets from all over the country. The rally included March Past by NCC Cadets and youth from 24 Friendly Foreign countries along with a Horse Mounted Contingent. Two Mega Cyclothons (comprising of 27 girl cadets) one from Kanya

kumari to New Delhi and another from Guwahati to New Delhi which promoted the theme of 'Nari Shakti ka Abhedya Safar' were flagged in by PM. An all girls NCC band from NER & Kalpeni Island, Lakshadweep participated for the very first time in PM Rally which showcased the inclusion of our border remote areas.



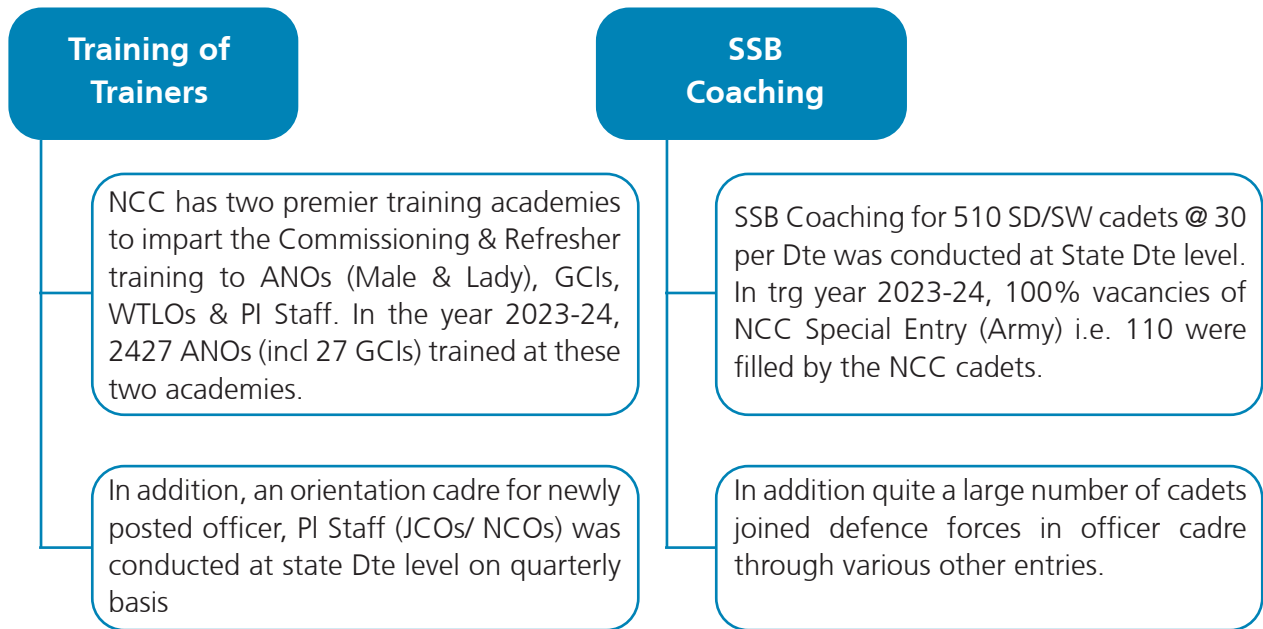
PM Rally 2024

Other Training

- (a) Flying Training
- (b) Yachting Special Training Camps
- (c) Attachment Training with Army, Naval & AF attachments
- (d) Skill Awareness
- (e) Basic & Advance Mountaineering Courses
- (f) White Water Rafting.
- (g) All India Trekking Camp.
- (h) Rock Climbing Trekking Camp.
- (j) Desert Safari Camp.
- (k) Para Basic Course.
- (l) Shooting Competitions.
- (m) Cyber Crime Prevention & Awareness training.

Training of Trainers/ SSB Training

Details of trainings conducted for trainers are as follows:



**2427 trainee ANOs were imparted training in these two premier NCC institutes.*

#8841 cadets joined as Agniveer in Indian Army.

Improvements in Training

1. One lakh NCC cadets underwent training and were briefed on cyber-crimes in collaboration with the Indian Cyber Crime Coordination Centre (I4C), Ministry of Home Affairs.
2. Collaborated with the National Disaster Management Authority (NDMA) to train volunteers over the next three years in disaster management as part of Yuva Aapda Mitra Scheme (YAMS).
3. Increased Girls participation in RDC from 710 to 907.
4. 03 × EBSB DRDO camps were conducted at Chandigarh, Chennai & Pune, wherein 510 cadets were given opportunity to visit premier installations of DRDO and to interact with scientists.
5. EBSB Aerospace camp was conducted at Bangalore wherein 380 cadets participated.
6. Cumulative 8,400 kms of sailing carried out by cadets.
7. A total of 4,054 hrs of flying achieved.

8. Following National activities were conducted to increase awareness:-
 - (a) International Year of Millets (IYOM) - 03 lakhs
 - (b) Meri Maati Mera Desh - 07 lakhs
 - (c) International Day of Yoga - 9.75 lakhs
 - (d) G-20 - 07 lakhs
 - (e) Blood Donation - 52,000 units
 - (f) Skill Manthan Workshops - 10,000 cadts
9. Participation of friendly foreign countries in Youth Exchange Programme increased in RDC from 19 to 24.
10. Nari Shakti Vandan Run (Ultra Marathon) Mega Cyclothon to promote Nari Shakti ka Abhedya Safar.
11. Mixed mountaineering expeditions to Mt Yunum and Mt Thelu.
12. Installation of the following Rifle firing simulators, Microlite flying simulators and Rowing simulators for amalgamation of technology in training of cadets.
 - (a) Rowing Simulators – 60
 - (b) Microlite Simulators – 44
 - (c) .22 Rifle Firing Simulators – 98

Adventure and Sports Activities

Adventure Activities. The aim of adventure activities is to inculcate a spirit of adventure, explorative inquisitiveness, develop stamina, endurance, self-confidence, Espirit-de-corps amongst the cadets.

02 x Mountaineering Expedition on Mt Yunum (HP) and Mt Thelu (UK)
43 Cadets

50 x Mountaineering Courses (444 Cadets)

27 x All India Trekking Expeditions (13,770 Cadets)

06 x White Water Rafting (24 Cadets)

Para Basic Course (80 Cadets)

RCTC (1,177 Cadets)

Sea Sorties (375 Cadets)

Desert Safari (100 Cadets)

Sailing Expedition : Menu (8,400 Kms)

All India Yachting Regatta (136 Cadets)

Types of adventure activities undertaken

Sports. NCC Cadets from all NCC Directorates actively participated in various sports activities at the National level.



Major sporting activities

Youth Exchange Programme (YEP)

Desert Safari. Post 2019, the inaugural Desert Safari was organized. With delegations from Kazakhstan and Nepal participating from 30 Nov to 11 Dec 2023. The delegation also toured Delhi, Jaipur, Jodhpur, Bikaner and Jaisalmer during the event.

YEP-2024- Republic Day Camp. YEP was conducted from 16-29 Jan 2024. 74 Officers Supervisors and 219 Cadets/ Youth from 24 countries (all the inhabited continents of the world) also participated. Throughout the event, they had the privilege of meeting esteemed dignitaries including Hon'ble President of India, Hon'ble PM of India and Hon'ble Raksha Mantri. As part of Cultural Exchange Programme foreign cadets and NCC cadets from India engaged in various activities, including country presentations, cultural showcases, and interactive sessions among the cadets, fostering mutual understanding and friendship.

Social Service and Community Development (SSCD) Programmes

The following activities have been carried out to sensitise not only the cadets but also the environment:-

- **Cyber Awareness.** In partnership with the Ministry of Home Affairs' Indian Cybercrime Coordination Centre (I4C), NCC trained **1,00,000 cadets** as cyber-volunteers through nationwide workshops, promoting cyber awareness and digital hygiene.
- **International Year of Millets (IYOM).** Coordinated with the Ministry of Agriculture, involving 3,00,000 cadets in awareness campaigns through street plays and lectures to encourage millet production and consumption.

- **Nasha Mukti Abhiyan.** Under the Department of Social Justice & Empowerment's initiative launched on 15 August 2020, approximately **10 lakh cadets** participated in drug demand reduction activities across the country.
- **Puneet Sagar Abhiyan** on 1 December 2021 for coastal and water body cleanup, this campaign has impacted **3.5 crore people**, removed **360 tonnes of waste**, and received recognition from the Prime Minister during *Mann Ki Baat* on 26 December 2021.
- **Swachhata Hi Sewa.** Around **10.5 lakh cadets** participated in cleanliness activities, including Waste to Wonder programmes and a Mount Thelu expedition, preceding Swachh Bharat Diwas on 2 October.
- **Meri LiFE Mission.** **8,00,000 cadets** engaged in environmental protection initiatives, promoting the P-3 Model through essay competitions, poster-making, and water body cleaning drives.
- **Blood Donation.** NCC facilitated the collection of **52,000 units** of blood through donation camps nationwide.
- **Skill Training.** In coordination with **37 Sector Skill Councils**, workshops were held for **3,000 cadets** in Lonavala, Bengaluru, and Delhi, with an additional **10,000 cadets** sensitized about the skill development vision under Viksit Bharat 2047.
- **International Day of Yoga.** 21 June, **9,75,853 cadets** participated in yoga events held at 3,568 locations across India.
- **G-20 Presidency Activities.** During India's G-20 Presidency, **1.5 million cadets** took part in outreach activities promoting the theme *Vasudhaiva Kutumbakam*, reaching over **10 million people**.
- **Meri Maati Mera Desh Campaign.** Coordinated with the Ministry of Culture, **700,000 cadets** participated in *Azadi Ka Amrit Mahotsav* tribute activities from the panchayat to the national level.
- **Mega Cyclothons.** Two all-women expeditions, each comprising **27 girl cadets**, were conducted:
 - Kanyakumari to New Delhi (3,606 km, 33 days)
 - Guwahati to New Delhi (2,305 km, 22 days)

These expeditions promoted women's empowerment, and soil collected from **21 states** was presented to the Prime Minister during the NCC PM Rally on 27 January 2024.

Border Roads Organisation

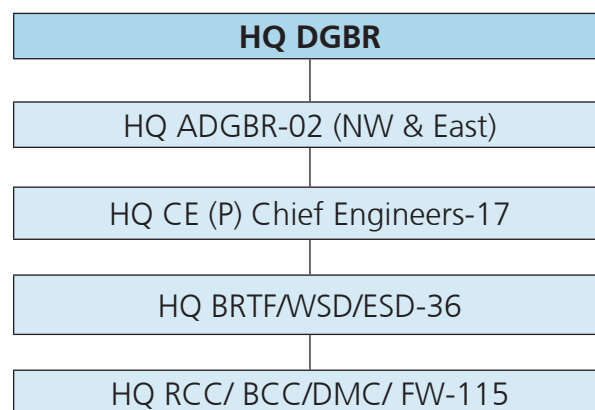
BRO is a modern and transnational construction organisation that is committed to meeting the strategic requirements of the Indian armed forces. The organisation plays a vital role in infrastructural development on behalf of following Ministries: -

- (a) Ministry of Defence.
- (b) Ministry of Road Transport & Highway.
- (c) Ministry of Home Affairs.
- (d) Ministry of External Affairs.
- (e) Ministry of Rural Development.
- (f) DoNER
- (g) PSU/other Agencies as Deposit Works.

Organizational Structure

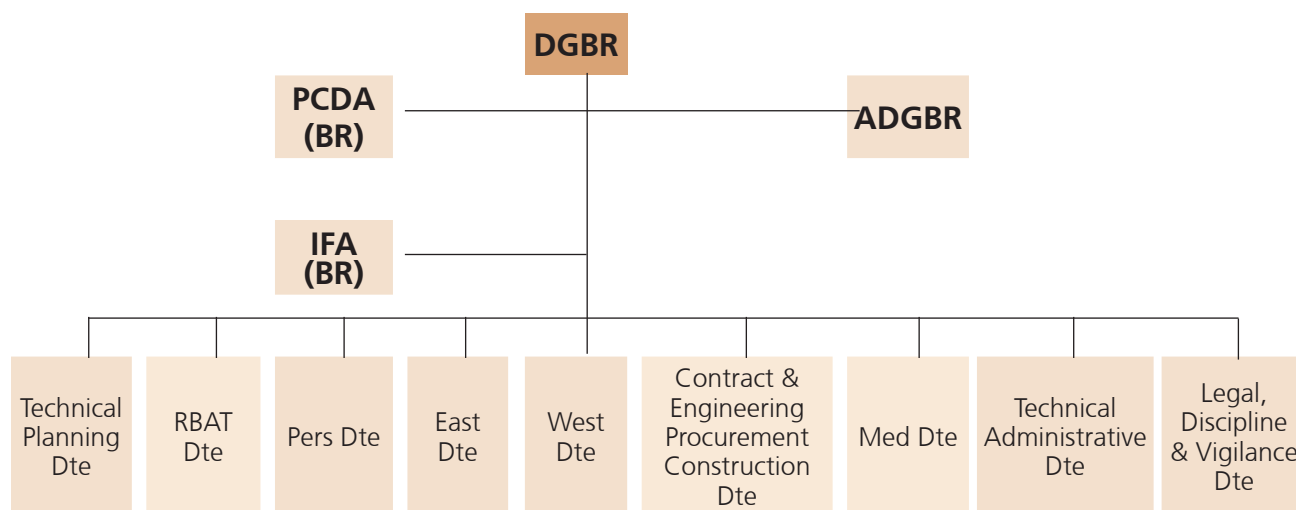
As per the current structure, BRO has 17 Projects headed by an officer of the rank of Brigadier / Chief Engineer (Civ). Each Project consists of two/ three Border Road Task Forces (BRTFs) headed by an officer of the rank of Colonel/Superintendent Engineer (Civ). Each BRTF consists of two/three Road Construction Companies (RCCs)/ Bridge Construction Companies (BCCs). RCC/BCC is headed by an officer of the rank of Lt Colonel / Major /Executive Engineer (Civ). Further RCC/BCC consists of several platoons headed by an officer of the rank of Captain/Assistant Executive Engineer (Civ) / Assistant Engineer (Civ).

- (a) The overall Organization structure of BRO is as under: -



- (b) For quality assurance, there are 03 Regional Technical Examiners located at Guwahati, Dimapur and Jammu functioning under MoD (BR).

- (c) At present, BRO has one training centre, BRO School & Centre at Pune and one R&D establishment at Shillong.
- (d) The current organization structure of HQ DGBR, is as below:



Director General Border Roads serves as BRO's executive head, responsible for planning and executing projects through the General Reserve Engineer Force, ensuring technical soundness of construction specifications, preparing budget estimates and securing government funding, and administering BRO's manpower and resources.

Chief Engineers operate under the Director General's control in designated areas, handling detailed project planning and estimate sanctions within their financial authority, ensuring compliance with prescribed specifications and sound design principles, supervising project execution through regular inspections while preventing unauthorized deviations from regulations, managing economical resource utilization, and maintaining liaison with local army and civil authorities.

Task Force Commanders lead specialized units under Chief Engineers, executing assigned works and maintenance services while ensuring compliance with rules and regulations, efficient administration of allocated funds, and proper maintenance of prescribed documents and records.

Ceremonial, Academic, Achievements and Adventure Activities

BRO has been rendering yeoman service to the Nation for more than six decades. After making a humble beginning with two Projects Viz, TUSKER (now Vartak) in the East and Beacon in the West, BRO has grown to be vibrant Organisation with 18 Projects spread across the country. Over a span of time, the Organisation has diversified into construction of permanent concrete and steel bridges, accommodation projects, border fencing, airfields and tunneling works and is recognized for its Speed, Quality and Cost Effectiveness. BRO has further strengthened the bond of friendship by executing works in Bhutan, Myanmar, Afghanistan and Tajikistan. As on date, BRO has its presence in 11 states and three union territories (including Andaman and Nicobar Islands) and Bhutan.

Record Budget Expenditure

BRO's budget has seen an exponential rise over the last few years with BRO making an expenditure of record ₹14,599.56 crore in Financial Year 2023-24.

Completion of Infrastructure Projects

Inauguration of 90 Infrastructure Projects. The Hon'ble Raksha Mantri, Shri Rajnath Singh inaugurated 90 infrastructure projects worth ₹ 2,941 crore on September 12, 2023, at Devak Bridge, Jammu & Kashmir, comprising 61 bridges, 24 roads, two helipads, two runways and one tunnel across 12 border states/UTs, with highest concentrations in Arunachal Pradesh (36 projects) and Ladakh (26 projects). Foundation stone was also laid for Nyoma Airfield in Eastern Ladakh at ₹ 219 crore.

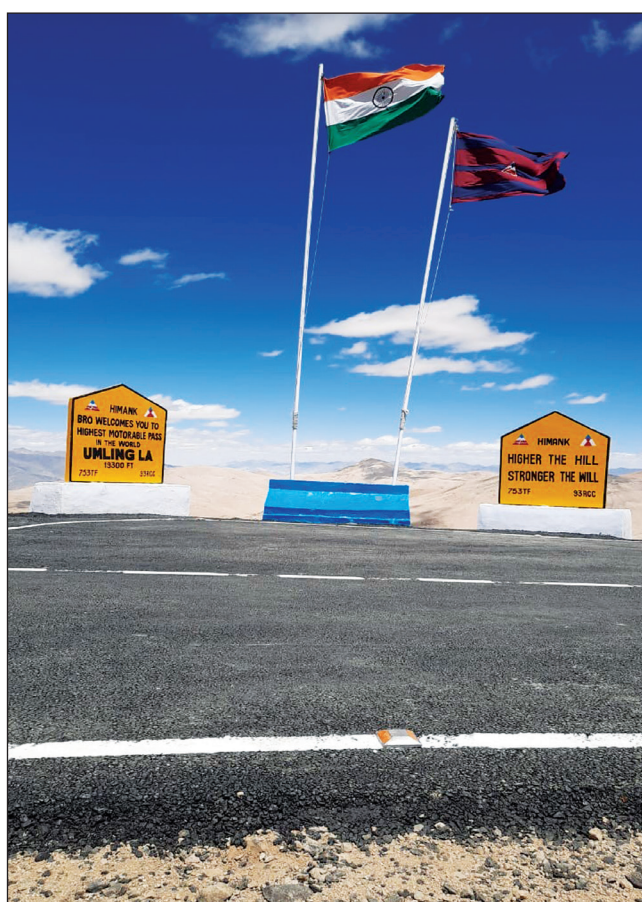


Inauguration of Infrastructure Projects by Hon'ble Raksha Mantri Shri Rajnath Singh on Sep 12, 2023

Roads

Over the past 64 years, the organization has constructed more than 62214 Km of roads in difficult and remote areas of the country where no other construction agency dared to venture. At present BRO is working in 894 roads (28864.85 Km) which includes new construction, as well as improvement from single lane to double lane.

BRO has constructed the highest motorable road in the world over Umling La in Southern Ladakh at 19024 feet situated on 52 Km long Chisumle-Demchok Road. This road has been recognized as World's Highest Road by Guinness World Records on Nov 16, 2021. Further, BRO has embarked on the construction of a road over the Mig La Pass in Ladakh at an altitude of 19,400 ft which will surpass its own record pushing the boundaries of what was considered impossible hitherto-fore.



Highest Motorable Road Connecting Chisumle-Demchock in Ladakh

In a land mark achievement, BRO has achieved connectivity on the Nimmu-Padum-Darcha road, which passes over the Shinkhun La Pass at 16,700 feet. This road which is the third and the shortest axis to Ladakh at 298 Km and has already begun to change the dynamics of travel in the region.

BRO has also paved the way for fostering religious tourism to some of our most sacred and revered places like Adi Kailash, Kailash Mansarover and Char Dham.



Road to Kailash Mansarovar



Tracks to Shri Amarnathji Holy Cave

BRO is not only working along our sensitive border regions but also in Andaman and Nicobar Islands. BRO has recently connected Indira Point to the mainland and construction of North – South Road from Campbell Bay to Indira Point in Great Nicobar Island is in advanced stages and is likely to be completed soon.

The BRO has connected the farthest and most remote villages of Demchok in Ladakh, Jolingkong in Uttarakhand and Huri Village in Arunachal Pradesh to the main land. These efforts have resulted in reverse migration in these areas.



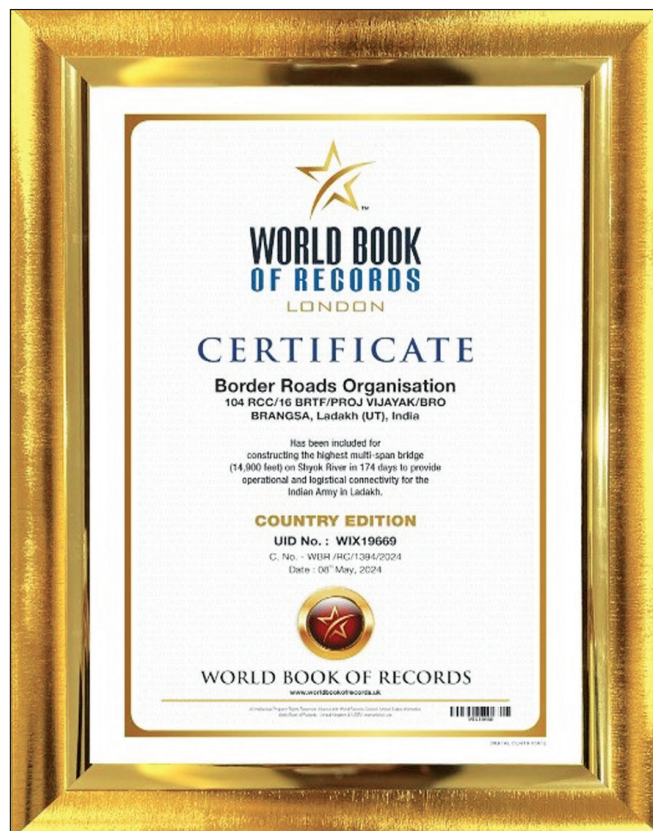
Demchok in UT of Ladakh



Huri in Arunachal Pradesh

Bridges

Till date, BRO has constructed 1005 major permanent bridges of 71507 m length in difficult and remote areas of the country. Very recently, BRO has completed 345.70 m long Saser-Brangza Bridge on Shyok River in Eastern Ladakh in just one working season. The bridge has been recognised as the World's Highest Multi span bridge at an altitude of 17900 ft constructed in a record 174 days by World Book of Records, London.



Tunnels

BRO has already constructed five tunnels and is currently working on six tunnels with 18 more under planning stages.

Breakthrough Blast of Sela-Chhabrela Departmental Tunnel. Construction of 100 m long and 9.5 m wide tunnel on Sela-Chhabrela-BJ Gompa Road in Arunachal Pradesh, at an altitude of 13900 ft is being undertaken departmentally. This historic achievement of construction of first tunnel through departmental mode will act as a trail blazer for undertaking similar works, caverns and tunnels at most forward areas where the same can't be undertaken through EPC mode due to terrain conditions/confidentiality of such projects.

Breakthrough of 260 Meters Long Kandi Tunnel on Akhnoor-Poonch Highway. A significant milestone was achieved in the ongoing 260 m long Kandi Tunnel on NH-144A from Akhnoor to Poonch on Oct 25, 2023, wherein the Break-Through Blast was conducted. The tunnel, which commenced in March 2023 has seen remarkable progress despite facing adverse weather conditions,

including heavy rainfall and landslides along the entire road stretch. This tunnel will reduce the length of the road by 2.5 Km and will play a vital role in enhancing strategic connectivity for the Armed Forces from Jammu to Poonch.



Breakthrough on Kandi Tunnel on Road Akhnoor-Poonch on Oct 25, 2023

Airfields

Till date BRO has constructed/rehabilitated 21 Airfields in the country. BRO is presently constructing an Airfield at Mudh-Nyoma in Eastern Ladakh at an altitude of 13,710 ft. Work on this project is in advanced stages and will be completed in a record time span of just two working seasons.

HADR Operations

In addition to enhancing connectivity, the BRO has been instrumental in disaster relief operations, especially in areas prone to natural calamities. Whether it is constructing temporary bridges in flood-affected areas or clearing snow-bound roads, our teams have consistently demonstrated resilience and dedication.

- (a) **Cloud Burst in Sikkim.** A major cloud burst occurred in North Sikkim on the intervening night of Oct 03-04, 2023 damaging approx 25 Km of stretches on seven roads and 13 Bridges. Complete connectivity has been established for light vehicles in the entire North Sikkim in a record time frame and 11 bridges have been restored.



Zeema Bridge Launched on Nov 28, 2023



Chungthang Bridge Launched on Nov 15, 2023

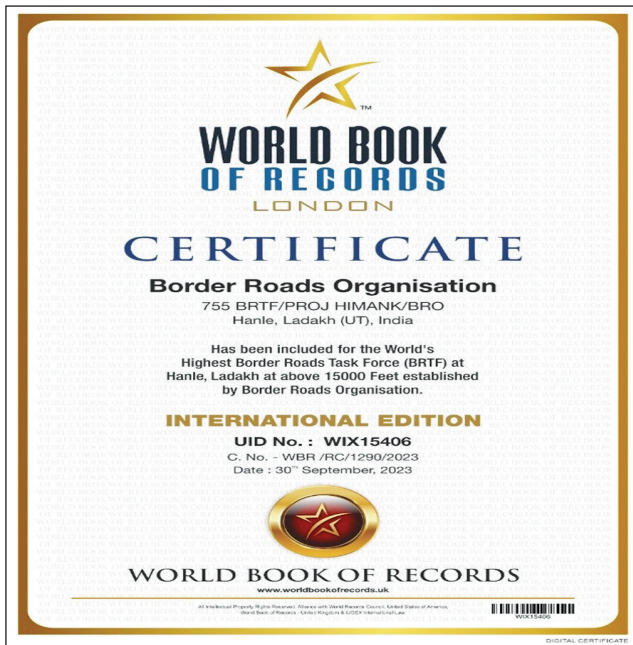
- (b) **Silkyara Tunnel Incident.** 41 brave workers were trapped inside the under construction 4.531 Km long Silkyara tunnel. The incident occurred on the day of Diwali, a day of joy, light, and celebration for our Nation. BRO mobilized its resources to assist Central and State Govt Agencies in the multi-agency efforts for the rescue of 41 workers trapped in 4.531 Km

long under construction Silkyara Tunnel. BRO constructed a 1150 m long approach road in a record timeframe and coordinated with State Govt authorities for smooth convoy movement & induction of equipment from Dehradun Airport to Tunnel site.

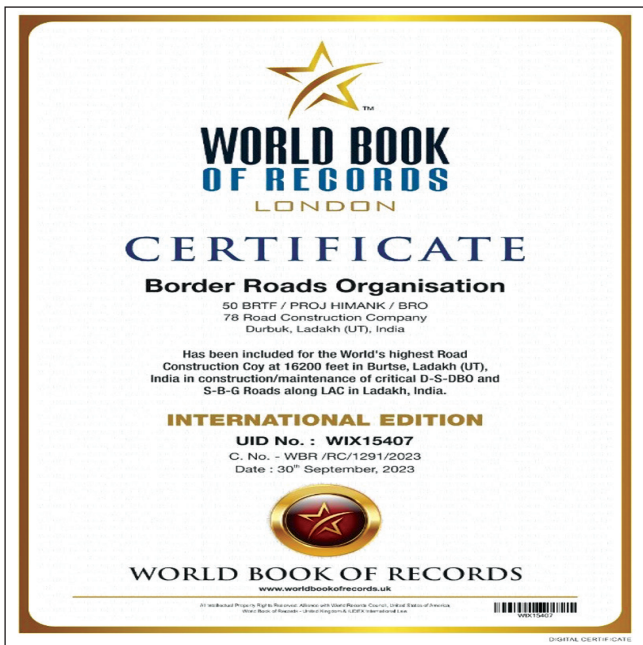


Honours , Awards & Miscellaneous

- BRO received **Editorial Choice Winner** award for "Infra Focus Awards 2023" in Most Admired Central Entity (Roads) category by Times Group on September 26, 2023 in Delhi.
- HQ DGBR obtained **ISO 9001:2015 certification** on September 15, 2023 for engineering and construction activities in border road infrastructure.
- World Book of Records recognized 755 BRTF at Hanle, Ladakh and 78 RCC at Burtse, Eastern Ladakh as the **world's highest Border Road Task Force and Road Construction Company** respectively, bringing BRO's total world records to eight.



755 BRTF - World's Highest BRTF



78 RCC - World's Highest RCC

Academic Activities:-

- **Tunnelling Training.** 15 BRO officers completed tunnelling courses at L&T Tunnel Excellence Academy, Kanchipuram from June 5-17, 2023, with field training at L&T Rishikesh site from June 19-24, 2023.
- **Administrative/Technical Courses.** Approximately 1,200 BRO officials attended various administrative, technical and management courses at civil/government institutions, BRO School & Centre, and Faculty of Highway Engineering during 2023-24.
- **Road Safety Auditor Certification.** 58 BRO officers completed road safety training in collaboration with IIT Delhi during 2023-24.

Conclusion

The Initiatives and quality of works undertaken by BRO speaks volumes about the organizational ethos and its working culture, the same is reflected in the appreciations which BRO has received over the time from MoD and PMO. **'Team BRO'** continues to Strive for Excellence in the times to come and true to its Motto **"SHRAMEN SARVAM SADHYAM"**, the BRO is keeping itself ready and is well poised to take on additional & new challenges to ensure the inclusive growth of the regions along our Northern Borders.

Indian Coast Guard

Organisation

In 1977, Union Cabinet approved the setting up of 'Coast Guard' with a fleet strength of 02 Ships ex-IN (Indian Navy) and 05 Patrol Boats ex-Customs Indian Coast Guard (ICG) was formally established as an Armed Force of the Union on August 18, 1978 by the Coast Guard Act, 1978 passed by the Parliament. ICG functions under the Ministry of Defence.

The Coast Guard organisation is headed by the Director General Indian Coast Guard (DGICG) exercising his overall command and superintendence from Coast Guard Headquarters (CGHQ) located at New Delhi. For effective command and control, ICG has five Coast Guard Regions with Regional Headquarters at Gandhinagar, Mumbai, Chennai, Kolkata and Port Blair.

Duties and Functions. The duties and functions of Coast Guard are broadly mentioned in the Coast Guard Act, 1978 to protect the maritime and other national interests of India in the Maritime Zones of India which includes the following:

- Safety and protection of the artificial islands, offshore terminals, installation and other structures and devices in any maritime zone.
- Provide protection to the fishermen including assistance to them at sea while in distress.
- Taking such measures as are necessary to preserve and protect the Marine Environment and to prevent and control Marine Pollution.
- Assisting the Customs and other authorities in Anti-Smuggling Operations.
- Enforcing the provision of such enactments as are for the time being in force in the Maritime Zones.
- Such other matter, including measures for the safety of life and property at sea and collection of scientific data, as may be prescribed.

Indian Coast Guard has also been entrusted with additional responsibilities including Coastal Security in Territorial Waters, Enforcement, Monitoring and Surveillance of Deep-Sea Fishing, Maritime Search and Rescue, Marine oil-spill response measures. It is also the Lead Intelligence Agency for coastal and sea borders.

Coastal Security Operations. With a sustained impetus on Coastal Security, a total of 558 Coastal Security Operations have been conducted since 2009, in coordination with all stakeholders. In addition, ICG conducts a special operation called 'Sajag' once every month in each Coast Guard

Region, wherein all available operational ships are deployed to conduct boarding operations and to check the documents of fishing boats. A total of 399 'Sajag' operations have been conducted till date.



Community Interaction Programme (CIP). Since 2009, a total of **13241** CIPs (including 2221 in 2023) have been conducted by ICG to sensitize fishermen on safety and security issues and to create awareness about the usage of lifesaving equipment like Disaster Alert Transmitters, lifebuoys and life jackets etc.



Boarding Operations. Since 2009, a total of **3,31,946** Boarding Operations have been conducted. A total of **28,567** Boarding Operations were carried out during the year 2023.

Joint Coastal Patrol (JCP) by ICG and Coastal Police. Joint Coastal Patrol (JCP) by ICG and Coastal Police for enhancing coastal security, enshrined in the Hon'ble Prime Minister's vision Document, was instituted in August 2020. Local Coastal Police personnel and ICG units resulted in conduct of **416** JCP sorties during the year 2023. A total of **1030** sea sorties, **829** classroom instructions and **2569** personnel have been embarked onboard ICG ships for JCP sorties from Jan 01, 2023 to Dec 31, 2023.



Significant Milestones and Achievements

ICG Efforts during Cyclone 'Biparjoy'. On June 12, 2023, during the Extremely Severe Cyclonic Storm 'BIPARJOY' ICG Ship Shoor and ALH MK III CG 858 were tasked for evacuation of stranded crew from oil rig 'Key Singapore'. Despite challenging and inclement weather conditions (**Sea state 6-7, winds 80-100 Kmph, Poor visibility, Low clouds & incessant rain**), ALH MK III CG 858 evacuated all crew (50 members) safely from jack up rig 'Key Singapore'.



Coast Guard Commanders Conference. The 40th Coast Guard Commanders' Conference was conducted from November 30, 2023 to December 02, 2023 at Coast Guard Headquarters, New Delhi. Hon'ble Raksha Mantri Sh. Rajnath Singh inaugurated the Conference. A wide range of issues were discussed in depth during the conference. Hon'ble Raksha Mantri was also briefed on the recent operations, level of preparedness, and ongoing projects.



International Coastal Cleanup Day - 2023. On September 16, 2023, in line with Government of India efforts "Swachh Bharat Abhiyan" and Hon'ble Prime Minister's appeal for the mass cleanliness & sanitation campaign, through "Swachhata Hi Seva", ICG conducted international Coastal Cleanup Day (ICC-2023) in all Coastal States/ Union Territories. A total of 11,425 volunteers participated in the nationwide campaign, and this resulted in collection of 15,008 kgs (approx.) marine litter and 10,296 kgs (approx.) plastic litter.



ARMED FORCES MEDICAL SERVICES

Armed Forces Medical Services (AFMS) provides comprehensive healthcare to defense personnel and families, para-military organizations in field areas, Central Police/Intelligence organizations, GREF units in disturbed areas, ex-servicemen and dependents, and civilian population during natural disasters and operations.

AFMS comprises Army, Navy and Air Force medical services under Director General AFMS, who reports directly to Ministry of Defence on medical policy matters and maintains liaison with DGHS, NAMS, ICMR and other research institutions. Service medical heads function under respective Chiefs as medical advisors following DGAFMS policy directions. AFMS includes Army Medical Corps (AMC and AMC-NT), Army Dental Corps, and Military Nursing Service.

Armed Forces Medical College (AFMC) Pune

AFMC was awarded an A+ grade with a CGPA of 3.45 for five years following the NAAC Peer Team Visit on 30–31 March 2023.

College Ranking. Ranked 37th best medical college globally by CEO World 2022. Also, ranked 5th among medical colleges in India in 2023 by India Today and The Week magazine.

Award of President's Colour to AFMC on December 01, 2023.

- In recognition of 75 years of glorious service to the Armed Forces, AFMC was presented the prestigious President's Colour on December 01, 2023 by Smt. Droupadi Murmu, Hon'ble President of India.
- A special commemorative coin, stamp and first day cover were also released by the Hon'ble President on the occasion.





Presentation of President's Colour to AFMC on December 01, 2023

New Facilities

- **Armed Forces Centre for Computational Medicine (AFCCM)** established at AFMC, Pune, inaugurated by President Droupadi Murmu on December 1, 2023, for AI, machine learning, and computational medicine research.
- **Tele MANAS** cell established with NIMHANS and IIIT Bengaluru support to provide 24x7 mental health services via teleconsultation.
- **Next Generation Sequencing (NGS)** facility launched July 1, 2023, at ₹ 11.86 crore to enhance DNA repair technology and molecular diagnostics.

Accreditation and Partnerships

- Department of Microbiology received Ministry of Health NTEP accreditation for anti-tubercular drug testing (February 2023).
- MoU signed with Department of Biotechnology on September 5, 2023, for collaborative biomedical research and faculty exchange.

Community Programs

- **Project SMILE** launched May 2023 for sickle cell screening of 200,000 individuals in Nandurbar district, Maharashtra.
- Rural Health Training Centre at Kasurdi initiated screening for multiple myeloma, cancer, and lifestyle diseases.

Innovations

- Lt Col Debashish Paul received patent for ultrasound probe cover with pre-filled coupling agent (June 9, 2023).

- Col Shamik Paul patented NIV mask with integrated feeding port with IIT Bombay, winning CAHOTEC 2023 (patent granted October 19, 2023).

Artificial Limb Centre, Pune

Artificial Limb Centre, Pune (ALC, Pune) is at the forefront of procuring state-of-the-art sports equipments for amputee soldiers. Eighty serving personnels have been provided sports prosthesis and components in the last 10 years. These soldiers have participated in various national and international sports events including Paralympic sports and won various medals and kept the Indian flag flying high. In recently conducted Para Asian Games-2023 at Hangzhou, China, soldiers equipped by ALC won 07 medals.

Modernisation/Infrastructure in Armed Forces Medical Services

Completion of New Hospital Infrastructure:-

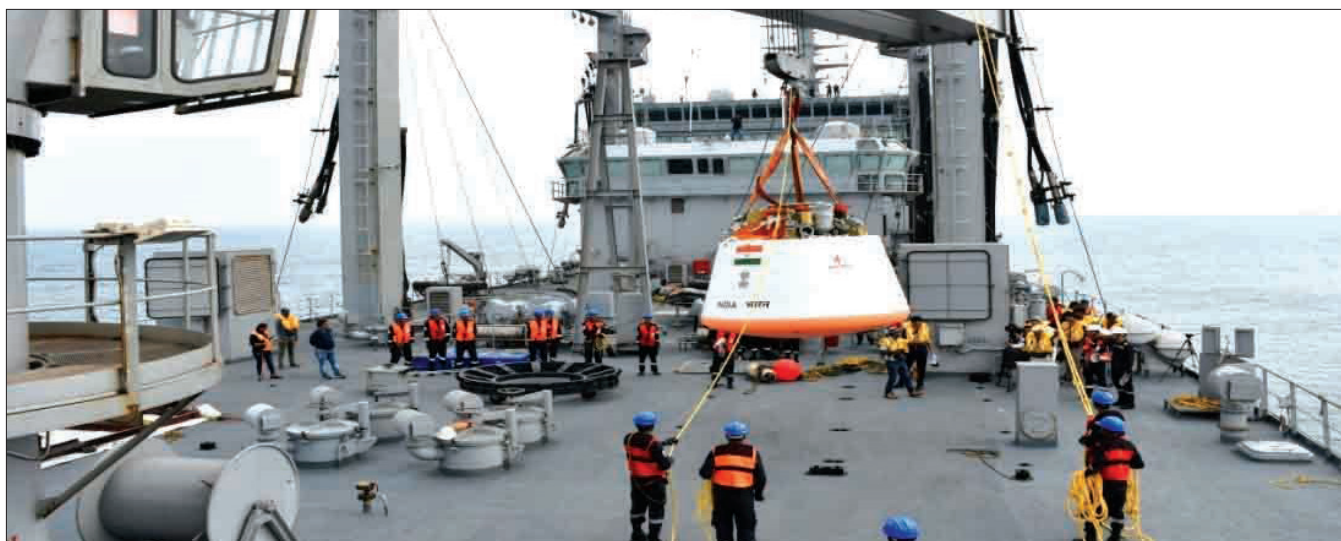
SNo	Hospital	Completion Year	Cost (₹ in Crore)
(i)	Military Hospital Panaji	2023	₹ 49.72
(ii)	Military Hospital Bagdogra	2023	₹ 153.42
(iii)	Military Hospital Liema Khong	2023	₹ 68.20
(iv)	Command Hospital, (Northern Command) Udampur	2024	₹ 273.42

Training/ Courses

Undertaking Cutting Edge Aeromedical Research. There are two ongoing high value Joint Operational Research at Institute of Aerospace Medicine (IAM) that is likely to yield practical solutions to operationally relevant aeromedical problems. These are; (i) Development of Rapid Acclimatization procedures for IAF personnel in response to Doklam like threat (in-house research) and (ii) Design & development of a dipstick-type of device for detection of sleep deprivation among IAF personnel **(in collaboration with Centre for Cellular & Molecular Platform, Dept of Biotechnology, Gol, Bangalore).**

Major Achievements

Indian Naval Medical Services Role in Mission Gaganyaan. The Indian Navy is intimately involved in the ongoing Gaganyaan mission being undertaken by Indian Space Research Organisation (ISRO). The safe recovery of the astronauts from the Crew Module after splashdown and rendering lifesaving medical assistance at sea has been entrusted to the Indian Navy. Naval Medical teams will be deployed on the Primary & Secondary recovery ships for retrieval of the astronauts and will be involved in collecting critical health data of the astronauts for future use.



Indian Air Force Medical Services Role in Mission Gaganyaan. The Institute of Aerospace Medicine (IAM), IAF Bangalore has been designated as the lead agency for providing medical support to ISRO Gaganyaan Programme under the IAF-ISRO MoU signed in May 2019.

Mission Samudrayaan. Director General of Medical Services (Navy) and Institute of Naval Medicine (INM) at Indian Navy Hospital Ship (INHS) Asvini are involved in Medical Examination and Training of crew selected for the project.

Sporting Achievements



Lt Col Sanjeev Malik of AMC Creates History, Clinches Five Gold Medals In World Medicine and Health Games In Colombia:



Maj Swapna Kumari Malo, a Nursing Officer of 14 AF Hospital, Dundigal won 2nd Position in Pre-world cup Accuracy Championship 2023 in Paragliding held at Narwana, Himachal Pradesh.

Modernization of Armed Forces

Introduction

Modernization of Indian Armed Forces with adoption of niche/ emergent technologies in war waging capabilities is an inescapable requirement. There is a constant endeavour to equip the Indian Armed Forces with cutting edge technology with specific focus on meeting futuristic requirements through indigenous technological development.

Ministry of Defence has aligned its acquisition process with Atmanirbhar Bharat clarion and it is focussed towards enhancing self-reliance in defence production, indigenisation of spares. Trial and Testing procedures based on realistic Services Qualitative Requirement.

Major Policy Initiatives

Defence Acquisition Procedure (DAP)-2020 has been driven by the tenets of Defence Reforms announced as a part of the Atmanirbhar Bharat Abhiyan of the Government of India by promoting indigenous design, development and manufacturing of defence equipment, platforms, systems and sub-systems. A number of initiatives have been taken in Defence procurement to give a thrust to Atmanirbharta in Defence while also simplifying the procedures significantly. These include:

- Simplification of procedure and institutionalizing of monitoring mechanism to aid Ease of Doing Business.
- Notification of Five Positive Indigenization lists of 509 items issued till date comprising of several high-value platforms placing an embargo on their import beyond the timelines specified in the list.
- Amendments to DAP 2020 to improve and align it with the latest government policies.

Acceptance of Necessity (AoN) accorded by DAC/ DPB

During the FY 2023-24, Defence Acquisition Council (DAC) under the Chairmanship of Hon'ble RM accorded AoN for 40 capital acquisition proposal of Indian Armed Forces amounting to ₹ 425802.85 Crore out of which 29 proposals are for procurement from indigenous sources. In addition to these, Defence Procurement Board (DPB) accorded AoN for 5 capital acquisition proposals of Indian Armed Forces amounting to ₹ 1915 Crore. The major proposals for which AoNs have been accorded are:

Replacement of Shakti Phase I & II with Shakti Phase IV

Project Shakti is the first Tactical Command, Control, Communication and Intelligence System fielded in the Indian Army. It is a network of military grade rugged tactical computers extending to all Artillery Commanders, Headquarter, firing elements and has integrated Geographical Information System (GIS), Thermal Imaging Integration Observations Equipment, Meteorological System, Muzzle Velocity Measuring Instruments, Sensors and Support Equipment for execution of Artillery Command and Control functions in an automated environment.



Ground Based Autonomous System

Induction of Ground Based Autonomous System capable of mounting various types of payloads to undertake unmanned surveillance, critical logistics delivery and casualty evacuation will reduce vulnerability of soldiers, thereby improving combat efficiency and endurance at tactical level.

Light Armoured Multipurpose Vehicle (LAMV)

The proposed Light Armoured Multipurpose High Mobility Wheeled Recce Vehicle are tailor made to match the operational requirements of Recce Platoon/ Troops and with high manoeuvrability and desired protection.

HMV 6 x 6 GTV for Med Regt & AAD

HMV Gun Towing Vehicle 6x6 for medium guns can tow all types of Medium Guns/ Radars. The HMV GTV (6x6) can also carry Gun/ Radar crew and Gun/ Radar stores both on road as well as cross country (plains, deserts and mountains) for operations. The HMV GTV can be utilized for the deployment, redeployment, side-stepping and survivability of guns.

Integrated Surveillance and Targeting System (ISAT-S)

The Mechanised Forces presently are not equipped with any integral Beyond Line of Sight. Integrated Surveillance and Targeting System (ISAT-S) for Mechanised Forces provides Integral Beyond Line of Sight (BLOS) Surveillance & Targeting Capability to a Combat Team/Group.

Area Denial Munition Type-2 for Pinaka MLRS

Area Denial Munition (ADM) Type-2 provides lethal fire support by remotely delivering anti-tank minelets at long ranges during the conduct of offensive and defensive operations.



Towed Gun System

In order to provide effective Artillery support to defensive and offensive formations by enhanced destructive firepower and reach, there was a need for a state-of-art technology gun system which has greater reach, enhanced manoeuvrability in mountains, enhanced lethality, automation and better survivability. The 155 mm/ 52 Cal TGS will meet all aforementioned requirements of defensive and offensive formations operating in High Altitude Area/ mountains terrain as well as in Plains.

155 mm Family Bourrelet Projectiles

The existing Nubbed Projectiles of NASCHEM series have design limitations of externally welded nubs requiring dynamic balancing of each projectile and are unable to sustain higher chamber pressures and temperatures generated in 155mm/52 Caliber Gun system. Graduating from present NASCHEM design of shells to a better and more stable indigenously developed (Nubless) projectile family which is compatible to all 155 mm gun systems will ensure better exploitation with all charges in 155mm/ 52 Caliber Gun Systems.



T-90 Upgrades viz. Automatic Target Tracker (ATT) and Digital Ballistic Computer (DBC)

T-90 Tanks are the mainstay of the Mechanised Forces. Automatic Target Tracker (ATT) and Digital Ballistic Computer (DBC) will enhance mission capability of Tank T-90 to include faster target acquisition, digital on board ballistic computing, enhanced lethality and increased survivability.



Advanced Land Navigation System (ALNS) Mk-II

India has recently launched and operationalized Indian Regional Navigational Satellite System (IRNSS) (Navigation with Indian Constellation (NavIC)) network of satellites. The system provides Restricted Services (RS) signals for strategic users. RS signals are spoofproof and encrypted thereby ensuring foolproof navigational capabilities to AFVs with compatible

receivers. Moreover, IRNSS (NavIC) offers navigational services covering all regions within India and up to 1500 kms beyond its borders which meets the operational requirements of AFVs. ALNS Mk-II (RS Version) will enable AFVs to tactically navigate in the battlefield using secure satellite links of IRNSS (NavIC).

Future Ready Combat Vehicle (Ph-I)

The FRCV will incorporate the technological infusion to cater for the advancements in rapidly evolving field of military technology and will be more lethal & survivable compared to the current Main Battle Tanks. The FRCV with a high Power to Weight ratio and substantial firepower, protection, surveillance and communication capabilities is essential to provide the Indian Army the requisite flexibility to execute operations in varying terrain against diverse threat and equipment profiles of the adversaries.

Air Defence Fire Control Radar (Indigenous)

Air Defence Fire Control Radar (Indigenous) will carry out surveillance, acquisition and tracking of targets and control fire of Air Defence Guns. The radar will have the capability to detect and track wide range of target from fighter aircrafts, hovering helicopters to low Radar Cross Section aerial objects.

Forward Repair Team (FRT) Tracked

There is a constant need for Combat Force Regeneration by providing in-situ engineering support. FRT (Tracked) are such platforms with suitable cross country matching mobility and suitably equipped to provide in-situ light repair cover. The use of tracks, provides improved operational mobility which allows the FRT (Tracked) to overcome rugged terrain and adverse conditions such as mud and ice/snow.

MQ-9B HALE RPAS.

The acquisition of MQ-9B HALE RPAS comes at a crucial time as India continues to modernise its defence capabilities. These drones will serve as a force multiplier, allowing Indian armed forces to operate with enhanced situational awareness and precision across diverse and challenging operational environments. The acquisition will also bring Maintenance, Repair and Operations facilities to India, thereby enhancing impetus on Atmanirbharta, while including offsets for Indian Industry aligning with 'Make in India' initiative.

Rafale M Aircraft.

Rafale M aircraft would constitute the primary strike potential of IN Aircraft Carrier to exercise sea control and project powers across the maritime domain, thereby deterring aggression and protecting own maritime interests.



Next Generation Survey Vessels (NGSV)

Next generation survey ships would enhance IN capabilities in providing advanced hydrographic, oceanographic and geospatial data. Equipped with cutting edge sensors and mapping technologies, the ships will significantly contribute towards enhancing safety of navigation. Additionally, these survey ships could be deployed for effective Humanitarian Assistance and Disaster Relief (HADR) operations and be converted to support the fleet as Hospital Ship during hostilities.

'Prachand' Light Combat Helicopter

The Light Combat Helicopter (LCH) is indigenously built by Hindustan Aeronautics Limited (HAL). LCH are light, agile, highly manoeuvrable and equipped with moderate armour protection and have a variety of potent firepower as well as accurate targeting capabilities.



Flight Refuelling Aircraft (FRA)

IAF has been looking to enhance Flight Refuelling Aircraft capability considering the requirement for increasing the range of combat aircraft and their endurance. AoN for acquisition of FRA was accorded by DAC on 15.03.2024.



Su-30 MKI Aircraft

SU-30 MKI is a multi-role aircraft with long range endurance, weapon load, sophisticated avionics, AI radar and fully integrated electronics self-defence suite. The aircraft would be utilized in varied operational roles i.e. Air Dominance, precision strikes, EW and Air Defence. The indigenous content of this aircraft has been enhanced to 62% from the earlier 50%.



Contract Signed during FY 2023-24

During the FY 2023-24 total 192 contract have been signed for capital acquisition cases of the Armed Forces amounting to ₹ 1,04,855.56 Crore. This includes 189 contracts signed with domestic vendors and only 03 contracts have been signed with foreign vendors. The major equipment which Indian Armed Forces will acquire through these contracts are Advanced Light Helicopter (ALH) Mk-III, Upgradation of BMP-2, Cadet Training Ship, 76/62 SRGM, Fleet support ships, close in weapon systems, RD-33 Aero engines for MIG-29 Aircraft, High Power Radar(HPR), AL-31FP Aero-engines for SU-30MKI Aircraft, Night Sight T1 for assault rifles, 5/7.5 ton radio relay container etc.

Other Organisations of Department of Defence

Directorate General Defence Estates

The Directorate General Defence Estates (DGDE) oversees Defence land management and civic administration across 61 Cantonments through six Principal Directorates and a network of 43 Defence Estates Offices and 4 Assistant Defence Estates Offices.

The Ministry of Defence manages approx. 18.11 lakh acres of land, primarily held by the Army (14.05 lakh acres), followed by the Air Force (1.46 lakh acres) and Navy (0.42 lakh acres). Of this, 1.63 lakh acres lie within Cantonments, and 16.48 lakh acres lie outside.

Initiatives taken on management of defence land

The Department has taken various new initiatives in the past few years for effective land management:-

- **Real-Time Record Management (RTRM).** Software under development for comprehensive, real-time defence land management.
- **Centre of Excellence (CoE-SURVEI).** Operational at NIDEM since Dec 2021; apex survey institution collaborating with NRSC, NIGST, and BARC for training and advanced land management techniques.
- **Land Use Analysis Tool.** GIS & remote sensing-based tool for optimal land use, cost reduction in acquisition, and better planning.
- **Change Detection Module.** Satellite imagery-based tool to detect changes/encroachments over time.
- **3D Imagery Analysis.** Developed by CoE-SURVEI for advanced visualization and planning.
- **Encroachment Prevention & Removal.**
 - Digitisation & computerisation of land records.
 - GIS layers of encroachments integrated into Land Management System.
 - Change Detection GIS Tool for tracking encroachments.
 - “BhoomiRaksha” module for online eviction proceedings under PPE Act 1971.
 - Threat evaluation methodology for encroachments.
 - Continuous survey, demarcation, and verification of defence land.
 - Institutionalised Defence Land Audit since 2011-12.

Acquisition of land/Hired/Requisitioned Buildings and Land

In FY 2023–24, ₹ 709.71 Cr was spent on land acquisition and ₹ 220.08 Cr on rentals for hired buildings/land. Additionally, ₹ 10.22 Cr was paid as enhanced compensation for land acquired under the Charged Head.

ADMINISTRATION OF CANTONMENT BOARDS

- There are 61 Cantonment Boards across 19 States/UTs, functioning as urban local bodies under the Cantonments Act, 2006, responsible for the administration and development of Cantonment areas.
- These Boards provide civic services including primary and secondary education, and basic to specialist health services through hospitals and dispensaries. Many have upgraded facilities such as labour rooms, minor OT, diagnostics, X-ray units, ambulances, etc.
- Currently, Cantonment Boards run 182 schools with over 61,000 students, 30 centres for differently-abled children, 28 Skill Development Centres, 39 hospitals, and 33 dispensaries, serving both Cantonment and nearby populations.
- Under the Swachh Bharat Mission, all 61 Cantonments are certified ODF/ODF+, with the status being sustained. All participated in Swachh Survekshan 2023, and Mhow Cantonment Board received the Swachhta Award 2023.
- For groundwater preservation, Gazette-notified regulations on borewell use have been issued for 55 Cantonments, ensuring sustainable water extraction.
- On energy conservation, LED streetlighting has been implemented, and solar panels totaling 4404 KW capacity have been installed in 41 Cantonments at a cost of ₹ 29.6 Cr.
- Solid Waste Processing Plants have been set up in 35 Cantonments for scientific waste disposal.
- Over 30,000 saplings were planted as part of plantation drives conducted across various Cantonments.

e-Chhawani Project

The e-Chhawani Portal offers 24x7 multilingual online civic services to over 20 lakh residents across 61 Cantonment Boards, with support in eight languages and incentives for digital payments. Doorstep services are also provided for elderly residents without digital access.

Major Services	
Information portal – CB Website	Trade Licence
Public Grievances Redressal	Miscellaneous Collection
Lease Renewal/Extension	Birth and Death certificates download
Online OPD registration	Rent collection module
Online Property Tax payment	Booking of community hall & water tanker
Mobile toilet locator	Mutation in Property Tax records

Fully Automated Services	
GIS-based Water (SWAJAL) & Sewerage connection	Community Hall Booking
Auto-renewal of Trade Licence	Online Building Plan Approval System (OBPAS)

“Suvidya”- School Management System

To enhance “Ease of living” for the citizens in the Cantonment areas, School Management System has been implemented in 183 Schools under the management of 51 Cantonment Boards in 15 States. The School Management System has been developed by DGDE in-house with the support of external consultants. The Multilingual School Management Module i.e. Suvidya was launched by Hon’ble Raksha Mantri 16th December 2022.

Major Online facilities provided through Suvidya	
Online Admissions	Online issuance of Transfer Certificate
Online Homework and Assignment	Online Grievance and incident reporting
Collection of fees	Online Notifications
Online Feedback	

Office of the Joint Secretary & Chief Administrative Officer

The Office of JS & CAO provides civilian manpower to Service Headquarters and Inter-Service Organizations (ISOs) of the Ministry of Defence. It also manages accommodation allotments for Armed Forces Officers posted at Defence HQ through its Quartering Division.

In 2023–24, support was extended to ISOs and the Security Office through provisioning of stores, IT systems, and security equipment. A total of ₹ 42.51 crore was spent under Contingent, IT, and Security Grants, with procurement routed through the GeM portal.

The Central Vista Cell allocated office space in DHQ Zone buildings and coordinated relocation of MoD offices to the upcoming Defence Enclave via the Joint Coordination Committee.

The Special Project Division managed National War Memorial-related activities and contributed a chapter to the NCERT Class VII textbook. It also organized the School Band competition during Republic Day 2024 celebrations.

The Defence HQ Training Institute, accredited as “UTTAM” by NSCSTI, trained around 1,200 personnel through 23 training programs, 46 workshops, 5 long-term and 9 specialized courses during the year.

The Security Office ensured physical security and fire safety across 18 Defence HQ buildings and is digitizing access systems through RAMS (Army & IAF networks). For the first time, 15 female civilian security guards were inducted.

Sainik School Society

Setting up of 100 New Sainik Schools. The Government has approved the setting up of 100 new Sainik Schools in partnership with NGOs, trusts, private and state government schools, starting from Class 6 onwards. As of March 2024, approvals have been granted for 45 schools, with Memoranda of Agreement signed for 41.

Admission of Girl Cadets in Sainik Schools. In line with the Hon'ble Prime Minister's announcement (Independence Day, 2021), all 33 traditional Sainik Schools now admit girl cadets, marking the transition from boys-only institutions to co-educational ones. As of December 2023, 1,319 girls are studying in 33 traditional Sainik Schools, while 314 girls are enrolled in the new schools.

Progressive use of Hindi in Sainik Schools. To foster pride in Hindi, schools actively observe Hindi Diwas, and organize debates, essay-writing, poetry contests, and conversation programs. These efforts enhance cadets' language skills while strengthening cultural identity.

National integration. Throughout the academic year 2023-24, cadets actively participated in national events and government programs such as Azadi Ka Amrit Mahotsav, Ek Bharat Shreshtha Bharat, Har Ghar Tiranga, Veer Gatha, International Yoga Day and celebrations of Chandrayaan-3 success. They also observed commemorations including Kargil Vijay Diwas, Flag Day, Army/Navy/Air Force Days, fostering patriotism and unity.

Environmental Protection and Afforestation Measures. Cadets are engaged in cleanliness drives, waste management workshops, and plantation campaigns within school campuses and nearby areas. Awareness on climate change, pollution, and conservation is promoted through debates, posters, and creative activities, encouraging responsible environmental stewardship.

Energy use and conservation measures. Sainik Schools are gradually adopting renewable energy solutions. Solar panels are being installed on rooftops and public spaces, while sensor-based lighting systems are being deployed in classrooms, corridors, and outdoor areas to reduce energy consumption.

Decision relating to women welfare. Sainik Schools are committed to gender equality and women's welfare.

- Regular workshops and meetings are held under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.
- A dedicated complaint mechanism and counselling support system have been set up for the safety of girl cadets.
- Counsellors also organize awareness sessions on the POCSO Act to sensitize students on child safety and protection.

Manohar Parrikar Institute for Defence Studies and Analyses

The Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA), is a non-partisan, autonomous body dedicated to objective research and policy relevant studies on all aspects of defence, security and international relations. Its mission is to promote national and international security through the generation and dissemination of knowledge on defence and security-related issues.

Events

- 13 Talks/ Bilateral interactions and 10 Roundtable/ Book Discussions were held during the year involving participation by 12 countries.
- 11 Training/ Orientation programmes involving SSB (03), BSF (04), ITBP (02), HQ-IDS DIA (01), Central Board of Indirect Taxes and Customs (01).
- 40 Special interaction with visiting delegations and eminent persons from 15 countries
- 15th South Asia Conference on “Achieving Regional Economic Integration in South Asia” organized on 14-15 December, 2023.



Shri Vinay Kwatra, Foreign Secretary, Government of India, delivering the Inaugural Address. Amb. Sujan R Chinoy, DG, MP-IDSA, in Chair.

Military Engineering Services

Introduction

Military Engineering Services (MES) executes strategic and operational projects in all parts of the country. The construction gambit of MES ranges from high rises, field accommodation, roads, bridges, hangars, runways, docks, harbours, power stations, water supply projects and also running of essential services even during disasters. MES has a yearly financial outlay of nearly ₹ 25,000 crore and has approximately 600 stations.

Important Achievements.

- (a) **Award for Best Performing Central Government Organisation for e-Tendering and Procurement.** MES has been adjudged Best Performing Central Government Organisation for e-Tendering and Procurement by Ministry of Electronics and Information Technology (MeitY) and certain MES units have also been awarded with prestigious Indian Buildings Congress (IBC) Presidential Award for Meritorious Services and Contribution towards Build Environment.
- (b) **Engineering, Procurement and Construction (EPC) Mode Contracts.** In order to address the growing needs of infrastructure development, provide end-to-end solution for incorporating contemporary engineering practices, introduce modern technology, delivery quality and time bound infrastructure, EPC methodology has been adopted in MES.
- (c) **Use of Latest Technology.** Utilisation of modern technologies/ techniques such as 3D Printing, Pre Cast Construction Technology, Stay in place PVC Frame Engineered Steel Structural System and Prefabricated Sandwich Panel with Pre-engineered Steel Structural System are under progress and are being adopted in works across India in major projects by the MES.
- (d) **Solar Photo Voltaic Power Projects.** MES has been entrusted with the responsibility of provisioning of 150 Mega Watt solar power plants across India for which numerous projects have been executed. LEDisation and production of solar energy by MES is resulting in annual saving of ₹ 276 Crore.
- (e) **E-Governance Initiatives.** MES has implemented seven e-governance applications namely, Web Based Project Monitoring Portal (WBPM), Contractor and Consultant Enlistment Portal (CCEP), Product Approval Portal (PAP), Electronic Measurement Book (EMB), Work Estimation Application (WEA), Budget Management Portal (BMP) and Electronic Cash Book (ECB).



Jamnagar (3D Volumetric) Technology

Important completed projects by MES

Operational Infrastructure.

- (i) **Construction of Hangar for Su-30 MKI Tech Flight.** The administrative approval amount of the work was ₹118.56 crore. The work was completed on 15 June 2023.



Training Infrastructure.

- (i) **Provision of Baffle Range at Kapurthala.** The Administrative Approval amount of the work was ₹ 8.72 crore. The work was completed in February 2023.
- (ii) **Provision of Administrative, Training and Simulator Complex for School of Naval Airmen at Kochi.** The Administrative Approval amount of the work was ₹ 9.75 crore. The work was completed in March 2023.



Health Care Infrastructure.

- (i) **Provision of Surgical and Medical Ward at Garrison Hospital, Firozpur.** The Administrative Approval amount of the work was ₹ 19.86 crore. The work was completed in February 2023.



- (ii) **Construction of COVID Care Centre at Chandinagar.** The Administrative Approval amount of the work was ₹ 1.44 crore. The work was completed in March 2023.
- (iii) **Provision of Surgical and Medical Wards at Military Hospital, Ahmedabad.** The Administrative Approval amount of work was ₹ 9.08 crore. The work was completed on 30 April 2023.



Administrative/ Security Infrastructure.

- (i) **Provision of Other Than Married Accommodation for Signal Centre at Rangapahar Military Station, Dimapur.** The Administrative Approval amount of the work was ₹ 9.89 crore. The work was completed on 31 January 2023.



- (ii) **Provision of Other Than Married Accommodation for Military Hospital at Leimakhong.** The Administrative Approval amount of the work was ₹ 68.2 crore. The work was completed in January 2023.
- (iii) **Provision of Administrative Cum Office Accommodation at Indian Naval Ship Agniban (G+20).** The Administrative Approval amount of the work was ₹ 38.50 crore. The work was completed in February 2023.



- (iv) **Construction of Girls Hostel and Allied Infrastructure for Girl Cadets in Sainik School Bijapur.** The Administrative Approval amount of work was ₹ 31.17 crore. The work was completed on 24 July 2023.



- (v) **Provision of Auditorium Cum Cinema Hall at Ahmedabad.** The Administrative Approval amount of the work was ₹ 8.04 crore. The work was completed on 30 April 2023.



- (vi) **KLP Accommodation 150 Territorial Army Battalion, Delhi Cantonment.** The Administrative Approval amount of the work was ₹ 57.16 crore. The same was inaugurated by the Chief of Army Staff on 28 June 2023.



Projects under Planning / Progress. Numerous iconic and prestigious projects of strategic importance have been planned and are under various stages of sanction / execution by MES.

- (i) Command Hospital, Lucknow
- (ii) Thal Sena Bhawan, Delhi Cantonment
- (iii) Aerospace Museum at Delhi
- (iv) Headquarters Integrated Defence Staff, Delhi

Services Sports Control Board

Organization. The Services Sports Control Board (SSCB) is an Inter Services organization which administers, promotes and controls sports for the Services personnel in all the three Services i.e. Army, Navy and Air Force. The Board has the distinction of being the founder member of Indian Olympic Association (IOA) and most of the National Sports Federations (NSFs).



The SSCB is the apex sports body of the Armed Forces established with an aim to conduct Inter-Services Sports Championships to select and train Services sportsperson to achieve excellence and produce medal winners at the National and International level.

Briefs on important contributions of Defence Services. Services contributions and achievement is as follows: -

- **37th National Games Overall Medal Tally.** The Services bagged a total of 125 medals comprising 65 Gold, 27 Silver and 33 Bronze medals and established a clear lead over other states in Men's category.

- **Services performances in Asian Games 22.** Services athletes won 24 medals in the 19th Asian Games comprising 5 Gold, 9 Silver & 10 Bronze.
- **Services players performance in Olympic Games Paris 2024.** 24 Services athletes participated and one silver medal was won by Sub Maj Neeraj Chopra.

Photographs of Olympians



*Rank & Name - Sub Maj Neeraj Chopra.
Discp, Event & Medal – Athletics/ Javelin Throw
Won Silver medal*



Services Best Sportsmen 2023-24
*Rank & Name - PO Md Ajmal Vaiyathodi
Discp & Event – Athletics/ 4X400M Men's Relay
Paris Olympic 24 – Participated in 4X400M Men's Relay
Asian Games 22 - Won Gold in 4X400M Men's Relay & Silver medal in 4X400M Mixed Relay*



*Rank & Name - JWO Abdulla Aboobacker
Discp & Event – Athletics/ Triple Jump*



*Rank & Name - CPO Reetika Hooda
Discp & Event – Wrestling/ Women's
76 Kg Freestyle*



*Rank & Name -CPO Mohammad
Anas Yahia
Discp, Event & Medal – Athletics/
4X400M Men's Relay*

Mountaineering Institutes

The following four mountaineering institutes, (which are autonomous bodies, registered under Societies Registration Act, 1860) under the aegis of Ministry of Defence are governed by their Executive Councils which are headed by the Hon'ble Raksha Mantri:-

- 1) Himalayan Mountaineering Institute (HMI), Darjeeling
- 2) Nehru Institute of Mountaineering (NIM), Uttarkashi
- 3) Jawahar Institute of Mountaineering and Winter Sports (JIM&WS), Pahalgam
- 4) National Institute of Mountaineering & Adventure Sports (NIMAS), Dirang

These Institutes conduct various short and long term courses in mountaineering and adventure sports throughout the year. Each institute maintains a fully functional website containing complete details on contacts and courses. Interested candidates may visit these websites for relevant information and approach the institute for admission to a particular course.

These Institutes were in the limelight for many achievements during the year 2023. Some of these achievements are showcased below:-

HMI, Darjeeling

- (i) Display of 7500 sq ft National Flag in Pali, Rajasthan, witnessed by Hon'ble President of India and 30000 Bharat Scouts.



- (ii) Joint Expedition to Mt Khangchengyao (6889 Mtr) and Mt Chomo Yummo (6829 Mtr) successfully completed.



- (iii) Events related to International Year of Millets (IYOM) were conducted at Kanchenjunga National Park (14600 ft).



NIM, Uttarkashi

- (i) Mountain Terrain Biking Expedition (Jadhang to Dehradun via Banbasa-1062 km) from 26 June 2023 to 16 July 2023 flagged-Off by the Hon'ble Chief Minister of Uttarakhand and Flagged-In by the Hon'ble Governor of Uttarakhand at Dehradun.



Flag-Off by the Hon'ble Chief Minister of Uttarakhand



Flagged-In by the Hon'ble Governor of Uttarakhand

JIM&WS, Pahalgam

- (i) Joint Expedition to Mt Kun (7086 M) and Mt Nun (7143 M) which resulted in creating following records:-
- Fastest Climb from base camp to summit (07 days) and new height recorded at Mt Kun -7086 m.
 - Fastest Climb from base camp to summit (04 days) and new height recorded at Mt Nun -7143 m.
 - Fastest climb of any 7000m (04 days).
 - Successive summiting of Mt Nun and Mt Kun in single attempt.



Team on the Summit of MT KUN



Team on the Summit of MT NUN

(ii) Expedition to Mt Machoi (5393 M) and Mt D 41 (5918 M).



Summit of MT MACHOI



Summit of MTD 41

NIMAS, Dirang

- (i) Mission 'HAR SHIKHAR TIRANGA': NIMAS led expeditions to unfurl the Indian National Flag on the highest peaks of all 28 states, including the Himalayan ranges. The feat, in sync with "Azadi Ka Amrit Mahotsav," commemorated 75 years of Indian independence and set a world record. The soil collected from all peaks was part of the Prime Minister's "Meri Mati, Mera Desh" campaign, celebrating India's rich heritage.
- (ii) Seven-Nation Cycling Expedition: In an effort to honor the legacy of the Azad Hind Forces, NIMAS conducted a cycling expedition covering 5,374 kilometers across Vietnam, Laos, Cambodia, Thailand, Malaysia and Singapore. This expedition not only commemorated historical significance but also promoted unity and collaboration across Southeast Asia, strengthening regional ties.

Canteen Stores Department

The present Canteen Stores Department was born on 01 January 1948 with a working capital of ₹ 48 lakhs assigned to it from assets of its predecessor war time organization, on an experimental basis for three years. This situation was reviewed in 1950 and the Department was accepted as a Government undertaking on a permanent basis and the concept of canteen facilities for Indian troops got its revival.

On 01 April 1977, this was converted from a Government undertaking to a full-fledged Government Department. This change is of historic importance, as thereafter, all the funds accumulated by the Department over the years were merged with the Consolidated Fund of India and its personnel became regular Central Government employees. The Department has as on date 34 Area depots spread across the country.



CSD HO- "ADELPHI"

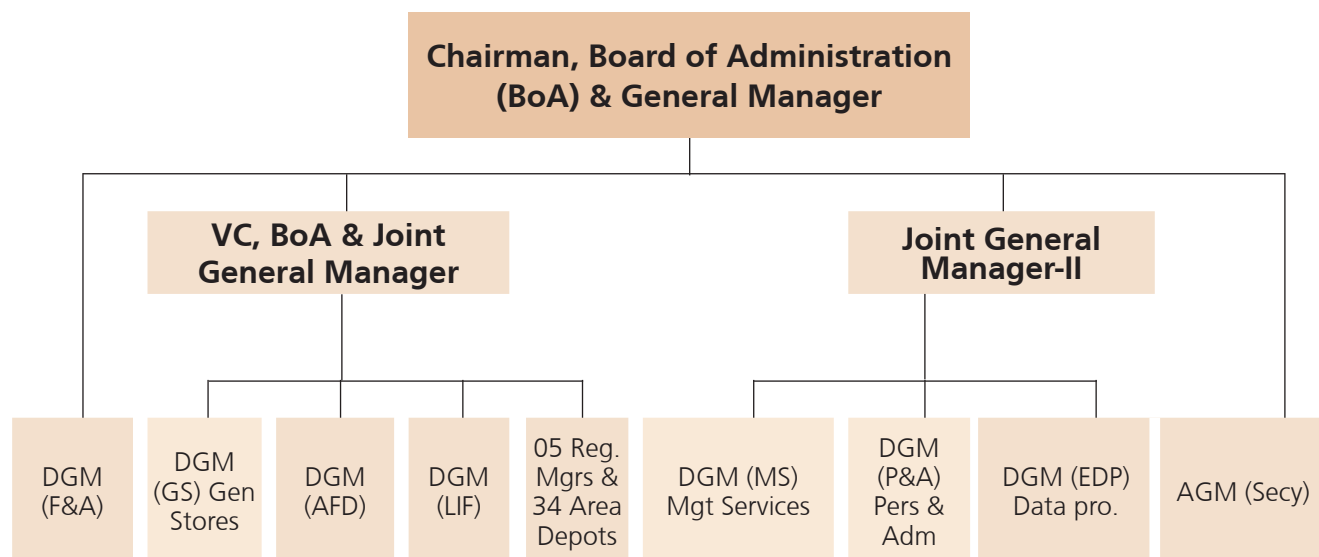
VISION

To achieve highest level of consumer satisfaction by adopting pragmatic and proactive strategies to optimally utilize and develop human, infrastructure, material and financial resources of the Canteen Stores Department to withstand the dynamics of emerging economic realities of modern India.

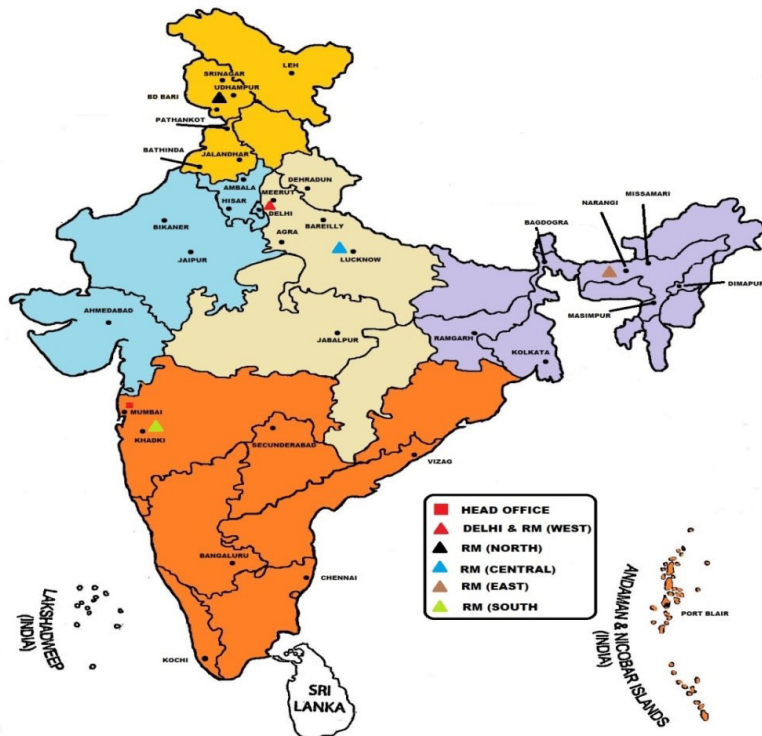
MISSION

To meet the aspirations of Armed Forces fraternity by making available latest and quality consumer products at a cheaper rate on All-India basis.

ORGANISATION CHART



GEOGRAPHICAL COVERAGE



Regions	No. of Depots
East	7
West	6
North	7
South	8
Central	6
Total	34

SIGNIFICANT MILESTONES AND ACHIEVEMENTS.

(a) COMPLETION OF GLORIOUS 75 YEARS

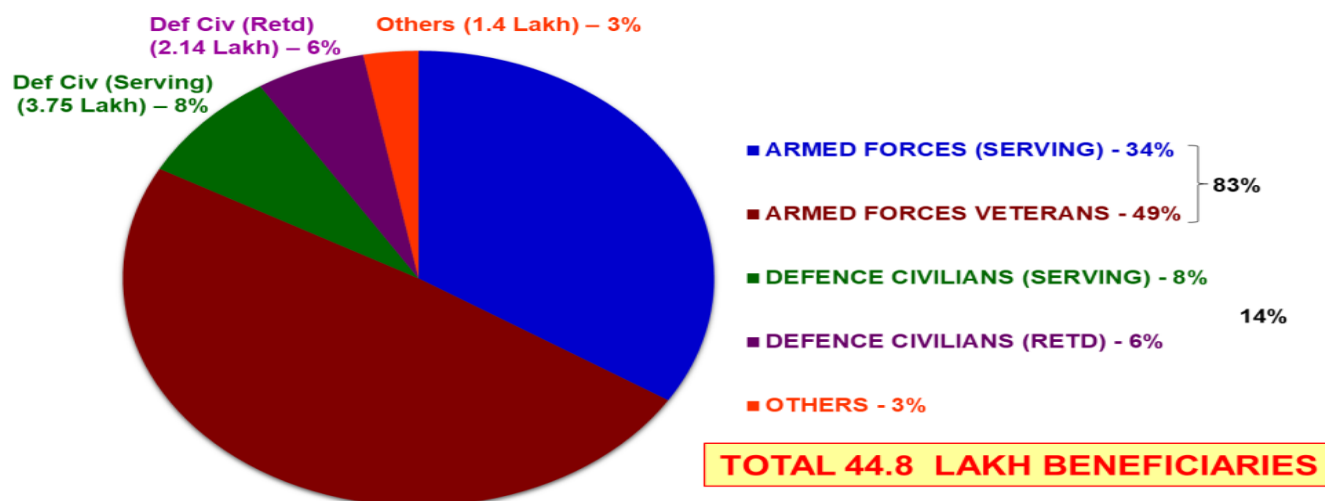
The Canteen Stores Department was formed as a Department under the Ministry of Defence on 01 Jan 1948 and completed 75 years of its existence on 01 Jan 2023.

(b) RELEASE OF CSD IN-HOUSE MAGAZINE 'SAMPARK' BY CHAIRMAN, BOA & GM CSD



(c) ONE OF THE LARGEST RETAIL CHAIN IN INDIA.

With an estimated Annual Turnover of ₹ 30,000 Cr in the FY 2024-25, the department is one of the largest retail chain in India and serving approximately 44.8 Lakh beneficiaries as per the customer profile detailed below:

**(d) AFD ONLINE PORTAL.**

The online portal of Canteen Stores Department (CSD) for purchase of High Value Items was launched by the Hon'ble RM in Dec 2021.

(e) CSD SUPPLIES TO AGNIVEER.

CSD supply chain has been enabled to support the Agniveer through augmented supplies.

FACILITIES EXTENDED BY GOVERNMENT OF INDIA TO CSD.**a) 50 % EXEMPTION ON APPLICABLE GST TO CSD.**

The GoI has extended a special concession to Canteen Stores Department to claim a refund of 50% of the applicable taxes paid by it on its purchases and outward sales to URCs and its customers is fully exempt. Implementation of GST has led to uniformity in rates of not only general goods pan India but also similar rates for two/four wheelers pan India.

b) MAKE IN INDIA.

In order to boost the Government of India vision of 'Atmanirbhar Bharat', procurement of 431 directly imported items were discontinued by the CSD and firms were advised to start manufacturing of items in India. Due to this initiative of department, indigenous production of 268 items, has been started which contributed in employment generation and indigenous production.

Directorate of Public Relations

Directorate of Public Relations (DPR) is the authorised channel of communication, tasked with disseminating information to the people through media about the key policy decisions, achievements and events of the Ministry of Defence (MoD), Armed Forces, Inter-Service Organisations, Defence Public Sector Undertakings (DPSUs) etc. It regularly facilitates media interaction with the leadership, senior officials of the Ministry and officers of the Armed Forces through interviews, press conferences and press tours.

DPR strives to promote the understanding of the policies/decisions of the Ministry and issues of national security. It is carried out pan India through its 25 Regional Offices spread across the country. The headquarters of the Directorate is situated at South Block in New Delhi. The publicity activities are carried out for all major events including Republic Day, Independence Day, Defence Investiture Ceremony, Aero India and DefExpo.

- **Publications & Broadcast.** Publishes fortnightly journal Sainik Samachar in 13 languages; produces radio programmes for troops in remote regions; provides photo coverage for MoD and Armed Forces events.
- **Digital Outreach.** Active on X, Facebook, Instagram, YouTube, WhatsApp, LinkedIn; launched WhatsApp Channel (Nov 2023) and 'Raksha Sutra' podcast (Feb 2024) to expand digital reach.
- **Special Initiatives.** Highlighted soldier achievements, Veer Nari stories, and start-up success cases under IDEX & TDF schemes.
- Media Outputs (Apr 2023–Mar 2024):
 - 913 Press Releases, 2,820 Photo Releases
 - 2,616 Tweets, 1,030 Facebook posts, 838 Instagram posts
 - 443 YouTube videos, 599 WhatsApp posts, 2,074 LinkedIn posts
 - 31 million+ cumulative impressions across platforms
- **Capacity Building.** Conducted Defence Correspondents' Course (Aug–Sep 2023) with 34 journalists; organised media tour for North East journalists (Sep 2023).

History Division

History Division was established on October 26, 1953, and functions as the record, research and reference office of the Ministry of Defence and the Indian Armed Forces. The Division has published 21 volumes of Indian Armed Forces operations since independence and reprinted twelve volumes of Second World War 1939-45 histories. Recent publications include UN peacekeeping mission histories (Congo, Korea 1953-54, Egypt, Indo-China), 'Deeds of Gallantry: Fifty Years of the 1971 Victory', 'The 1971 War: An Illustrated History', and 'Indian Armed Forces in World War-I'. Kargil War history compilation nears completion.

Declassification and Digitization. Following Government archiving policy approval in June 2021, Navy and Air Force declassified records up to 1995, while Army has declassified 10,000 files. The Division digitized 15 lakh pages and transferred 30,000 declassified files to National Archives. The Division monitors the 'Chair of Excellence' at Savitribai Phule Pune University and responds to RTI queries.

Support Services. Heraldic Cell assists Services and Coast Guard with ceremonial matters including establishment naming, crest design, and motto creation, and vets IAF unit histories for Presidential colours ceremonies. The Division reviews regimental histories, coffee-table books, and military film scripts, providing NOCs for movie releases.

The departmental library contains over 8,000 titles with 150 additions annually. The fellowship scheme awards two fellowships every three years, benefiting 22 researchers to date.



School of Foreign Language

School of Foreign Language (SFL) is an eminent foreign language institution under administrative control of Department of Defence. It has been mandated for training in strategic foreign languages since 1948 and imparts training to personnel of the three services and CAPFs and other Government departments etc. It also functions as a Nodal Agency in terms of foreign language training and examination for Ministry of External Affairs to conduct (Compulsory Foreign Language) CFL training and examination.

National Defence College

The National Defence College (NDC) is a premier training institution under the Department of Defence which has established a name for itself as centre of excellence on matters pertaining to National Security and Strategic Studies and is a crucible of strategic leadership. It is dedicated to the intellectual development and strategic enculturation of select senior officers of the armed forces and civil services of India as also of the participants from Friendly Foreign Countries. Established in 1960, NDC has over the years earned a reputation for excellence and gained world renown.

College of Defence Management

CDM is a tri-Service institution which imparts the skills of contemporary management to the senior leadership of the three Services, Para Military Forces, officers of the Ministry of Defence and International participants. The education imparted at CDM has a vast international footprint that includes Military Officers (Col & Equivalent) from Asia, Africa, South America and Pacific Islands.

Defence Services Staff College

Defence Services Staff College (DSSC) affords an invigorating environment serving as a Cradle for Middle Level Military Leadership, creating excellent staff officers and stellar leaders as the cutting edge of the armed forces with accentuated levels of professionalism and steadfastly upholding the virtues of 'Duty, Honour and Valour'.

Armed Forces Tribunal

Government has established Armed Forces Tribunal (AFT) for the adjudication of complaints and dispute regarding service matters and appeals arising out of verdicts of the Court Martial of the Members of the three Services (Army, Navy and Air Force) and to provide speedy justice to the members of the Armed Forces. At present Armed Forces Tribunals have been functioning at Delhi (Principal Bench) and at Regional Benches at Chennai, Jaipur, Lucknow, Chandigarh, Kolkata, Kochi, Guwahati, Mumbai, Jabalpur and Srinagar (functioning at Jammu).

Defence Finance

Finance Division in the Ministry of Defence deals with all matters having a financial implication. This division is headed by Secretary (Defence Finance)/ Financial Advisor (Defence Services).

Finance Division prepares and monitors Defence Services Estimates, Civil Estimates of the Ministry of Defence and the Estimates in respect of Defence Pensions. Break-up of the actual expenditure for the year 2022-23, the Revised Estimates for 2023-24 and Budget Estimates (Interim Budget) for 2024-25 in respect of the four grants of this Ministry are given in Table-A and Table-B respectively.

TABLE-A : Grant-wise Break-up of Defence Expenditure

(₹ in Cr.)

Details of Grant	2022-23 Actuals	2023-24 RE	2024-25 BE(Net) (interim Budget)
Grant No 19 MoD (Misc.) (Net)	20,567.74	25,896.99	25,563.18
Grant No 20 Defence Services-Revenue (Net)	2,56,183.44	2,98,668.75	2,82,772.67
Grant No 21 (Capital Outlay on Defence Services)	1,42,940.01	1,57,228.20	1,72,000.00
Grant No 22 Defence Pensions	1,53,406.9	1,42,095.00	1,41,205.00
Grand Total	5,73,098.09	6,23,888.94	6,21,540.85

TABLE-B : Service-Wise {Revenue(Net)+Capital} Details

(₹ in Cr.)

Service/ Department	2022-23 Actuals (Rev.+Cap)	2023-24 RE (Rev.+Cap)	2024-25 BE (Rev.+Cap) (Interim Budget)
Army	2,06,636.05	2,28,444.39	2,26,984.55
Navy	76,133.90	86,202.71	95,324.71
Air Force	90,584.93	1,14,772.61	1,05,285.56
Directorate of Ordnance (Coordination & Services)	4,164.37	1,731.00	1,941.46
Research and Development (R&D)	20,585.76	23,691.74	23,855.61
DGQA	1,018.42	1,054.50	1,380.78
Total	3,99,123.43	4,55,896.95	4,54,772.67

International Conference on Defence Finance & Economics

To engage in global narratives on defence finance and economics and to chart a sustainable blueprint for India's defence expenditure, the Ministry of Defence (Finance) organised the International Conference on Defence Finance & Economics (ICDFE) in New Delhi from April 12–14, 2023. The event marked 75 years of India's Independence, India's G20 Presidency, and the 275th year of the Defence Accounts Department.

Inaugurated by the Hon'ble Raksha Mantri, the conference saw participation from eminent policymakers, academics, and officials from India and countries including the US, UK, Australia, Japan, Bangladesh, Sri Lanka, and Kenya. The Raksha Mantri emphasised innovative methods to maximise value for defence expenditure and highlighted the role of a strong legal and procedural framework in ensuring budget discipline and efficiency.

Speakers included senior leadership from the Armed Forces, MoD, DRDO, the Comptroller and Auditor General, and other key departments. Discussions covered strategic allocation of the defence budget, human resource management in defence, procurement efficiency, timely payments, and the implementation of a faceless bill processing and payment system by the Defence Accounts Department.

The Key action points that emerged from the discussions during the conference are summarised below:-

- Integrate economic analysis with defence strategy.
- Create fiscal space within existing allocations and improve inter-service prioritisation.
- Simplify acquisition procedures, enhance international cooperation, and promote jointness.
- Budget for Atmanirbharta; support start-ups, innovation, and MSMEs.
- Develop accounting framework to rationalise pension liabilities and optimise veteran welfare.
- Optimise manpower to rebalance defence expenditure.
- Strengthen internal controls, adopt performance and efficiency audits.
- Promote defence exports and pursue joint ventures for technical collaboration and self-reliance.

Outreach Programme for Defence Pensioners on SPARSH

In 2023–24, the Defence Accounts Department conducted 11 Raksha Pension Samadhan Aayojan and over 100 outreach programmes nationwide under SPARSH to address pensioners' grievances and identification. SPARSH Service Centres were set up at 199 locations, including major bank branches. During Campaign 2.0 in November 2023, over 12 lakh Digital Life Certificates were processed using the 'Jeevan Praman' face authentication system.

Digital initiatives of Defence Accounts

On 1 October 2023, during the 276th Annual Day of the Defence Accounts Department at Delhi Cantt., Hon'ble Raksha Mantri Shri Rajnath Singh launched three digital initiatives:

- SARANSH – an integrated defence finance dashboard providing real-time, data-driven insights on accounts, budget, and expenditure for centralized monitoring.
- BISWAS – a bill management and analysis dashboard offering real-time performance tracking and process flow visualisation for Controllers' offices.
- e-Raksha Awaas – a unified online platform for managing rent and allied charges of Defence Services' buildings.

The Raksha Mantri also presented the Raksha Mantri Awards for Excellence 2023 to five teams for innovations in training, examination systems, pay and allowance management, KPI development, and the SARANSH dashboard. The event was attended by senior leadership from the Armed Forces and the Ministry of Defence.

Re-structuring of IFA Set up for Services (Army, Navy, Air Force, ICG, DRDO & BRO)

- To ensure timely processing and clearance of procurement proposals, the Integrated Financial Advisor (IFA) system was restructured in 2023 to co-locate IFAs with Competent Financial Authorities (CFAs) and strengthen manpower in IFA offices. Implemented through CGDA letter dated 27 April 2023, the restructuring positioned IFAs up to Division level in the Army, Wing level in the Air Force, Naval Area level in the Navy, Regional/District HQ level in the Indian Coast Guard, and in DRDO labs. The number of IFA offices increased from 155 to 195, addressing both functional and administrative requirements.

Implementation of Integrated Financial Advice System (IFA System) in Military Engineering Services (MES)

- To align MES Works Procedure with practices in other government departments and DPSUs, the Ministry of Defence (Finance) implemented the Integrated Financial Advice (IFA) System in the Military Engineering Services from 1 April 2023. IFAs were mapped with Competent Engineering/Financial Authorities, and a dedicated SOP was issued for works execution cases requiring IFA consultation, ensuring smooth operationalisation of the system.

Defence Cooperation with Foreign Countries

Armenia

Hon'ble RM and Defence Secretary had bilateral meeting with Mr. Karen Brutyn, Deputy Defence Minister of Armenia on the sidelines of Aero-India which was held from 13-17 Feb 2023 in Bengaluru.



The Union Minister for Defence, Shri Rajnath Singh meeting with the Deputy Defense Minister of Republic of Armenia, Mr Karen Brutyan on the sidelines of Aero India 2023, in Bengaluru on February 13, 2023

Australia

Australia Deputy Prime Minister & Minister for Defence Mr Richard Marles visited India from 19-20 November, 2023 to co-chair the 2nd India-Australia 2+2 Ministerial Dialogue with Raksha Mantri. Both sides reaffirmed their commitment to continue deepening defence and security engagement by enhancing interpretability, cooperating on situational and domain awareness, intensifying maritime cooperation across the region and exploring opportunities to grow connections on defence industrial cooperation. Chief of the Army Staff visited Australia on 03 April 2023. The 8th India-Australia Defence Policy Talks (DPT) was held at Canberra, Australia on 24-25 July 2023.



The Union Minister for Defence, Shri Rajnath Singh in a bilateral meeting with Australian Deputy Prime Minister & Minister for Defence, Mr. Richard Marles, in New Delhi on November 20, 2023

Bangladesh

5th meeting of Annual Defence Dialogue (ADD) between India and Bangladesh held on 27-28 Aug 2023. The Indian delegation was led by Defence Secretary, Chief of Army Staff (CoAS), and Chief of Navy Staff (CNS), India visited Bangladesh in the month of Jun and Jul respectively.

Cambodia

Inaugural Army to Army Staff Talks was held at Cambodia from 24-27 April 2023. As part of Indian Navy's deployment to ASEAN countries, Indian Naval ships Delhi and Satpura made a port call at Sihanoukville, Cambodia from 11-14 May 2023.

Comoros

Mr. Youssoufa Mohamed Ali, Hon'ble Defence Minister of Comoros led delegation visited Goa, India from 29-31 Oct 2023 to take part in Goa Maritime Conclave.

Germany

Hon'ble RM held a bilateral meeting with German Federal Minister of Defence Mr. Boris Pistorious in New Delhi on June 06, 2023. Both Ministers reviewed the ongoing bilateral defence cooperation activities and explored ways to enhance the collaboration, particularly defence industrial partnership.

Japan

The 7th India-Japan Defence Policy Dialogue was held in New Delhi on April 05, 2023. Army and Air Staff Talks between both the countries held in Mar and Jun 2023 respectively. Chief of Defence Staff (CDS) visited Japan in Dec 2023.

Jordan

India and Jordan have expanded their Defence Cooperation when the second consultative meeting on Defence Cooperation, co-chaired by JS(IC/AP), between India and Jordan was held in New Delhi on 21 March 2023. India and Jordan discussed wide range of issues including military training and courses, Cyber Security, Military Exercises, military medicine and capacity building in various areas to enhance defence engagements.

Kazakhstan

As part of the Annual Defence Cooperation Plan 2023-24, the 6th JWG meeting on Defence and Military Technical Cooperation between India and Kazakhstan was held on 20-22 Nov 2023 at Bengaluru. The Indian side was led by JS(IC) while the Kazakh side was led by HE Mr. Azamat Beispekoy, Vice Minister of Industry and construction of kazakhstan.

Kenya

Hon'ble RM held talks with Kenyan Cabinet Secretary for Defence Mr. Aden Bare Duale in New Delhi on August 29, 2023. As a token of friendship Hon'ble RM presented 15 pairs of parachutes manufactured by the Gliders India Limited to the Kenyan Cabinet Secretary for Defence. An MoU was signed between Goa Shipyard Ltd and Kenya Shipyard Limited in the field of capacity building and for collaboration in ship design and construction. Both sides also agreed for joint training in counter insurgency and UN peacekeeping domains. H.E. William Ruto, President of Kenya, visited India in December 2023. Among many deliverables, a joint vision statement on maritime cooperation was signed.

Madagascar

A five member IN SF Mobile Training Team (MTT) was deputed to Madagascar for a duration of 14 days from 20 Nov to 04 Dec 2023 for conduct of Special Ops Training of Malagasy Armed Forces (MAF).

Malaysia

During official visit to Malaysia on 10-11 July, 2023, Hon'ble Raksha Mantri held extensive discussions with his Malaysian counterpart. Hon'ble Raksha Mantri also inaugurated the Regional office of

Hindustan Aeronautics Limited (HAL) in Kuala Lumpur, Malaysia to facilitate close defence industrial collaboration between India and Malaysia and engagement with the wider South East Asian region. 9th India-Malaysia Army to Army Staff Talks was held from 07-09 June 2023 in India. 10th edition of India-Malaysia Air Staff Talks was conducted from 15-17 Mar 2023 in Malaysia.

Mauritius

An eight-member Indian Naval Mobile Training Team (MTT) was deputed to Port Louis, Mauritius for a duration of three weeks from 06-25 Nov 2023 for conduct of diving and Commando Refresher training for Mauritius Police Force (MPF).

Mozambique

The 4th India-Mozambique Joint Defence Working Group meeting, co-chaired by Joint Secretary, was held in New Delhi on 25 April 2023. The two sides discussed wide range of issues, including White Shipping Information Agreement, Hydrography Survey, Joint surveillance of Mozambique EEZ, Integrated Coastal Security and Surveillance System (CSS) with a view of to deepen defence engagements.

Oman

5th Indian Navy (IN) – Royal Navy of Oman (RNO) Navy to Navy Staff Talks (NNST) was held in Oman from 29-31 May 2023, State visit of Sultan of Oman to India was held on 16 Dec 2023. During the visit, Joint Vision Document between India and Oman was adopted and Defence Secretary has approved nomination of M/s MDL as the nodal shipyard for collaboration with Asyad Dry Dock Company (ADC), Oman and formulation of Steering Committee to oversee the collaboration with Oman.

Papua New Guinea

Indian Naval Ships Sahyadri and Kolkata arrived at Port Moresby on 02 August 2023, for enhancing maritime partnership and cooperation with Papua New Guinea. Indian Navy hosted Prime Minister of Papua New Guinea onboard INS Ships.

Philippines

4th Joint Defence Cooperation Committee Meeting between India and the Philippines, Co-Chaired by JS(IC/AP), was held in New Delhi on March 31, 2023. 2nd Service to Service interactions was held prior to 4th India-Philippines JDCC on 29 Mar 2023. Indian Coast Guard signed a Memorandum of Understanding (MoU) with Philippines Coast Guard (PCG) on enhanced maritime cooperation at the Coast Guard Headquarters, New Delhi on 22 August 2023 to enhance the professional linkage between the two Coast Guards in the domain of Maritime Law Enforcement (MLE), Maritime Search & Rescue (M-SAR) and Marine Pollution Response (MPR), Chief of the Naval Staff and Commandant of Philippine Coast Guard signed the Standard Operating Procedure (SOP) for exchange of White

Shipping Information on 23 August 2023 in New Delhi, to operationalize information exchange on merchant shipping traffic.

Republic of Korea

The 11th High Level Meeting (HLM) between the Indian Coast Guard and the Korean Coast Guard was held in New Delhi on 25 April, 2023. Navy Staff Talks held from 11-13 April 2023. Chief of Army visited RoK from 20-23 Nov 2023.

Russia

Hon'ble RM addressed XI Moscow Conference on International Security on 15th August, 2023 via a recorded speech on Global Security in a multiplayer world. He articulated India's consistent efforts to leverage the power of constructive and cooperative multilateralism for synergizing collective efforts towards world peace and prosperity and emphasized on 'Vasudhaiva Kutumbkam'.

Ministry of Defence delegation led by Special Secretary, MoD and accompanied by representative from DPSUs / PSU and Private Industries visited Moscow, Russia from 13-14 Apr 2023 for participation in Industry Delegates' Conference under FSMTC, Russia and MoD, India to iron out the issues in implementation of IGA on Mutual Cooperation related to Russian / Soviet Origin Arms and Defence Equipment.

Singapore

The 15th India-Singapore Defence Policy Dialogue was held in New Delhi on November 01, 2023. 14th edition of India-Singapore Air Staff Talks was conducted from 18-20 Oct 2023.

Seychelles

An IN ship visited Seychelles and participated in the Seychelles National Day celebration on 29 Jun 2023 along with 30-member marching contingent from within the ship's crew and to conduct 11th edition of India-Seychelles High Level Joint Defence Coordination Committee onboard.

Sri Lanka

Chief of Defence, Sri Lanka visited India from 07-09 Dec, 2023.

Tanzania

Tanzania is one of the important partners of India in African continent. The 2nd edition of the JDCC between India and Tanzania, co-chaired by JS(IC / AP), was held in Arusha, Tanzania from 28-29 June 2023. The two sides discussed wide range of issues, including capacity building initiatives and opportunities, military training & courses, Cyber Security Cooperation, Maritime and Hydrography cooperation, Maritime partnership exercises, development of Naval Port Infrastructure, IMTT extension and continuation and the future roadmap for defence cooperation. CDF Tanzania visited India from 18-22 December 2023.

Thailand

8th India-Thailand Defence Dialogue was conducted in Bangkok on April 20, 2023. 5th Indian Army-Royal Thai Army Staff Talks was conducted from 05-06 Sep 2023 at Secunderabad, India. 13th Indian Air Force-Royal Thai Air Force Staff Talks was held at New Delhi from 20-22 June 2023.

Maiden Bilateral Maritime Exercise between the Indian Navy (IN) and Royal Thai Navy (RTN) was conducted from 20 to 23 Dec 2023. The Indo-Thai Bilateral Exercise was named as '**Ex-Ayutthaya**', which literally translates to 'The Invincible One' or Undefeatable and symbolizes the significance of two of the oldest cities Ayodha in India and Ayutthaya in Thailand.

UAE

Hon'ble RRM, Shri Ajay Bhatt, visited UAE for attending Dubai Air Show in Nov 2023. He also interacted with his UAE counterpart and discussed opportunities for enhancing cooperation in defence sector and explored new avenues for cooperation. Defence PSUs also participated in the Dubai Air Show. 2nd edition of Army to Army Staff Talks between UAE land Forces and Indian Army was held in Abu Dhabi, UAE from 23-24 Aug 2023.

United Kingdom

India and UK commenced the 2+2 format defence foreign policy dialogue in 2023. The inaugural meeting was held in New Delhi in Oct 2023.

USA

An India-US Defence Industrial Roadmap was adopted in June 2023, providing policy guidance and priority areas to the defence industry of both countries. Indian Navy joined the Combined Maritime Force (CMF) and commenced operating with the CMF Navies in the Western IOR.

Uzbekistan

Meeting of India-Uzbekistan Joint Working Group (JWG) on bilateral Defence Cooperation was conducted in New Delhi on 24-25 April 2023.

Vietnam

Minister of National Defence of Vietnam visited India between June 18-19, 2023 and held a bilateral meeting with Raksha Mantri in New Delhi. Raksha Mantri announced the gifting of indigenously build in Service Missile Corvette INS Kirpan to enhance the capabilities of Vietnam People's Navy. Towards executing the same, INS Kirpan casted-off on 28 June 2023 from Visakhapatnam on her final journey from India to Vietnam. Chief of the Naval Staff, on an official visit to Vietnam presided the Decommissioning followed by Handing over Ceremony of Indian Naval Ship Kirpan to Vietnam People's Navy (VPN), on 22 July 2023 at Cam Ranh, Vietnam.



The Union Minister for Defence, Shri Rajnath Singh in a bilateral meeting with the Minister of National Defence of Vietnam, General Phan Van Giang in New Delhi on June 19, 2023

Zambia

A 15-member delegation led by Mr. Norman Chhipakupaku, Permanent Secretary (PS), Ministry of Defence, Zambia visited India from 15-22 October 2023. Sh. Giridhar Aramane, Defence Secretary had meeting with Mr. Norman Chipakupaku, Permanent Secretary (PS), Ministry of Defence, Zambia on 20th October 2023 at New Delhi. During the meeting both sides underlined the historic and longstanding relationship between the two countries and looked forward to deepening the bilateral ties.

Multilateral

ASEAN

The inaugural ASEAN India Maritime Exercise (AIME-2023) was conducted in May 2023 which was co-hosted by the Republic of Singapore Navy and Indian Navy. CNS co-officiated the inaugural ceremony of maiden ASEAN – India Maritime Exercise (AIME) 2023, held at Changi Naval Base, Singapore on 02 May 2023. The Harbour Phase was held at Changi Naval Base from 02 to 04 May 2023 and the Sea Phase was conducted from 07 to 08 May 2023 in the South China Sea. India's indigenously designed and built ships-destroyer INS Delhi & stealth frigate INS Satpura, maritime patrol aircraft P8I and integral helicopters exercised with ASEAN naval ships from Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam.

Indian Army conducted premier Female Military Officers Courses for officers from ASEAN countries in Sep 2023. Indian Army also conducted a Table-Top Exercise (TTX) for the Women Officers of ASEAN nations in New Delhi from 04 to 08 December 2023.

As part of India-ASEAN initiatives for Marine Pollution Response announced by Raksha Mantri during the ASEAN Defence Minister Meeting Plus meeting in Cambodia in November 2022, Indian Coast Guard Ship Samudra Prahar, conducted overseas deployment to ASEAN countries from 11 Sep to 14 Oct 2023. The ICG ship Samudra Paheredar, conducted an overseas deployment to ASEAN countries namely the Philippines, Vietnam, and Brunei from 25 March to 12 April 2024. The deployment was the third in a row by the Indian Coast Guard to ASEAN countries. Earlier in the year 2023, ICG Pollution Control Vessels visited Cambodia, Malaysia, Singapore, Thailand, and Indonesia as part of the initiative.

Hon'ble Raksha Mantri visited Jakarta from November 16 to 17, 2023 to attend the 10th ASEAN Defence Ministers' Meeting Plus (ADMM-Plus). Hon'ble RM also held bilateral meetings with his Indonesian, Vietnamese and Timor-Leste counterparts on the sidelines of 10th ADMM-Plus.

United Nations (UN)

A delegation led by Hon'ble RRM participated in the 2023 United nations (UN) Peacekeeping Ministerial meeting in Accra, Ghana from 05-06 December 2023. India made pledges for contributing troops and other resources to future UN Peacekeeping operations. Bilateral meetings were also held with other FFCs on the side-lines of the 2023 UN Peacekeeping Ministerial meeting.

Various multilateral meetings of "Convention on Prohibition or restriction on the Use of Certain Conventional Weapons" (CCW) which may be deemed to be excessively injurious or have indiscriminate effects and Anti-Personal Mine Ban Convention (APMBC) were held at Palais des Nations, Geneva, Switzerland from 08-24 Nov 2023.

SCO Members

During the maiden Presidency of India in SCO, Hon'ble RM chaired the Shanghai Cooperation Organization Defence Minister's Meeting on 28 April 2023 in New Delhi. Defence Minister of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan participated in the meeting. Pakistan participated virtually. Iran and Belarus participated as observer States. The Ministers discussed matters related to regional peace and security, counter terrorism efforts within SCO and an effective multilateralism. A protocol was signed and a joint Communique was issued. The Defence Cooperating plan of SCO member states for 2024-25 was approved.

Hon'ble RM held bilateral meeting with the Defence Minister of Russia, China, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Iran & Belarus on 27-28 April 2023 on the side-lines of SCO where bilateral Defence related issues and other matters of mutual interest were discussed.

17th meeting of SCO Expert Working Group (EWG) at the session of Defence Ministers of the SCO Member States was held on 27th July 2023 in Tashkent, Uzbekistan. The meeting was hosted by the Executive Committee of the Regional Anti-Terrorist Structure (RATS) of the SCO.



The Union Minister for Defence, Shri Rajnath Singh meeting with the Secretary General, SCO Mr Zhang Ming on the sidelines of Shanghai Cooperation Organisation (SCO) Defence Ministers, in New Delhi on April 28, 2023

Training

- Training has always been a key component of India's defence cooperation. Training includes sending our defence personnel to attend courses in foreign military training institutes and also receiving personnel from Friendly Foreign Countries (FFCs) in India's training Institutes.
- Long term courses like Staff Course, Higher Defence Management Courses (HDFC) are conducted. National Defence College course for Friendly Foreign Countries (FFCs). These prestigious courses are in high demand.
- Teams of Indian Armed Forces Officers are deputed in partner countries to train their military personnel. Currently 17 such teams with 48 instructors are deployed in FFCs. This practice is an effective means of establishing military bonding.
- FFCs are invited for training in Indian Defence Training institutes. In the year 2023-24, more than 5000 slots were offered by Tri Services and service specific institutes to various FFCs. Most of the slots were offered to neighboring and African countries.

- More than 180 officers of Indian Armed Forces have attended courses in year 2023-24 in foreign training institutes. The purpose is to learn high technologies and strategies in field of defence from advance military establishments in the world.

Exercises

PASSEX. Indian Navy's warship INS Sahyadri participated in the maiden trilateral Maritime Partnership Exercise (PASSEX) with the ships and aircraft from the Royal Australian Navy (RAN) and Indonesian Navy Conducted from 20-21 Sep 2023.

AIME-2023. The inaugural ASEAN India Maritime Exercise (AIME-2023) was conducted in May 2023 which was co-hosted by the Republic of Singapore Navy and Indian Navy. CNS co-officiated the inaugural ceremony of maiden ASEAN-India Maritime Exercise (AIME)2023, held at Changi naval Base, Singapore on 02 May 2023. India's indigenously designed and built ships-destroyer INS Delhi & stealth frigate INS Satpura, maritime patrol aircraft P8I and integral helicopters exercised with ASEAN naval ships from Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam.

MALABAR 2023. Indian Navy's warships INS Sahayadri and INS Kolkata participated in Exercise MALABAR 2023 at/off Sydney from 11-21 August 2023 along with ships and aircraft from the US Navy(USN), Japan Maritime Self Defence Force (JMSDF) and the Royal Australian Navy(RAN).

AUSINDEX. 5th edition of biennial AUSINDEX maritime exercise between Indian Navy and Royal Australian Navy (RAN) was conducted from 22-25 august at Sydney, Australia. INS Sahyadri and INS Kolkata participated in the exercise.

JIMEX 2023. The 7th edition of the bilateral Japan-India Maritime Exercise 2023 (JIMEX 23) was conducted at Visakhapatnam from 05-10 July, 2023.

SIMBEX. 30th edition of the Singapore India Maritime Bilateral Exercise (SIMBEX), a bilateral naval Exercise between Indian navy and Republic of Singapore Navy (RSN), was conducted at Singapore in Sep 2023 wherein Indian Naval Ships Ranvijay (guided-missile destroyer), Kavaratti (ASW Corvette), Submarine Sindhukesari and a long range Maritime Patrol Aircraft P8I participated.

Key Initiatives

Ease of Doing Business

The conditions and permissions to provide Economic activities have been significantly relaxed in the last few years to facilitate ease of doing business and to cater to infrastructure requirements in border areas.

Restriction lifted on 'No-Go' Areas under Ease of Doing Business. The oceans surrounding India's mainland are uniquely placed to provide a sizeable energy resource pool for the country. However, some of the areas, known as 'No-Go' areas, were beyond the reach for conduct of exploration and production activities. In order to encourage and enable integrated development of the ocean energy resources for optimal tapping of all forms of energy vectors in offshore, the Ministry of Defence, under the ease of Doing Business Mission of the Government of India. Has come up with a significant policy shift by declaring that there shall not be any 'No-Go' areas for exploration and production activities unless prohibited by any law/ rule/ order. This decision has resulted in availability of more than 99% 'No-Go' areas for exploration and production of oil.

With a view to accelerate the process of development of renewable energy infrastructure to realise India's goal of achieving 500 GW non-fossil fuel based energy target by 2023, the wind potential sites identified by Ministry of New and Renewable Energy (MNRE) in 8 States viz. Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Telangana have been categorised in consultation with stakeholders under 3 zones as follows:

- i) Green Zone – No NOC required for WTGs.
- ii) Yellow Zone - Applications received online for seeking NOC for Power Projects will be examined on case to case basis.
- iii) Red Zone - No construction allowed.

No Objection Certificate (NOC) for Construction of Power Projects/ Wind Turbine Generators (WTGs)/ Solar Power Projects (except solar power modules at the top of building for domestic usage) are considered in r/o the identified Wind Potential Sites falling in Yellow Zone only. This has resulted in drastic reduction in number of applications of NOC.

Implementation of The Rights of Persons with Disabilities (RPwD) Act, 2016

Department of Defence, Ministry of Defence is making sincere efforts for effective implementation of The Rights of Persons with Disabilities (RPwD) Act, 2016. Disabled persons selected/nominated are appointed against vacancies reserved for them and also adjusted against unreserved vacancies as per instant instructions of DoP&T. The status as on 31st December, 2023 in respect of Group A, B & C with regard to the number of Persons with Disabilities is as under:-

Group	No. of Persons with Disabilities
A	71
B	496
C (Excluding Safai Karamchari)	2179
C (Safai Karamchari)	448
Total	3194

Posts/Vacancies for which Department of Defence, Ministry of Defence is not recruiting agency, are reported to UPSC/SSC etc. Recruitment to such vacancies are made on the basis of recommendation of UPSC/SSC etc.

Implementation of The Right to Information Act, 2005

Nodal RTI Section established in the Ministry of Defence to coordinate RTI-related work, transfer applications to concerned CPIOs/Public Authorities, and submit quarterly returns to the Central Information Commission.

Section 4(1) Compliance. Ministry's functions and functionaries uploaded on RTI portal – <http://mod.gov.in>.

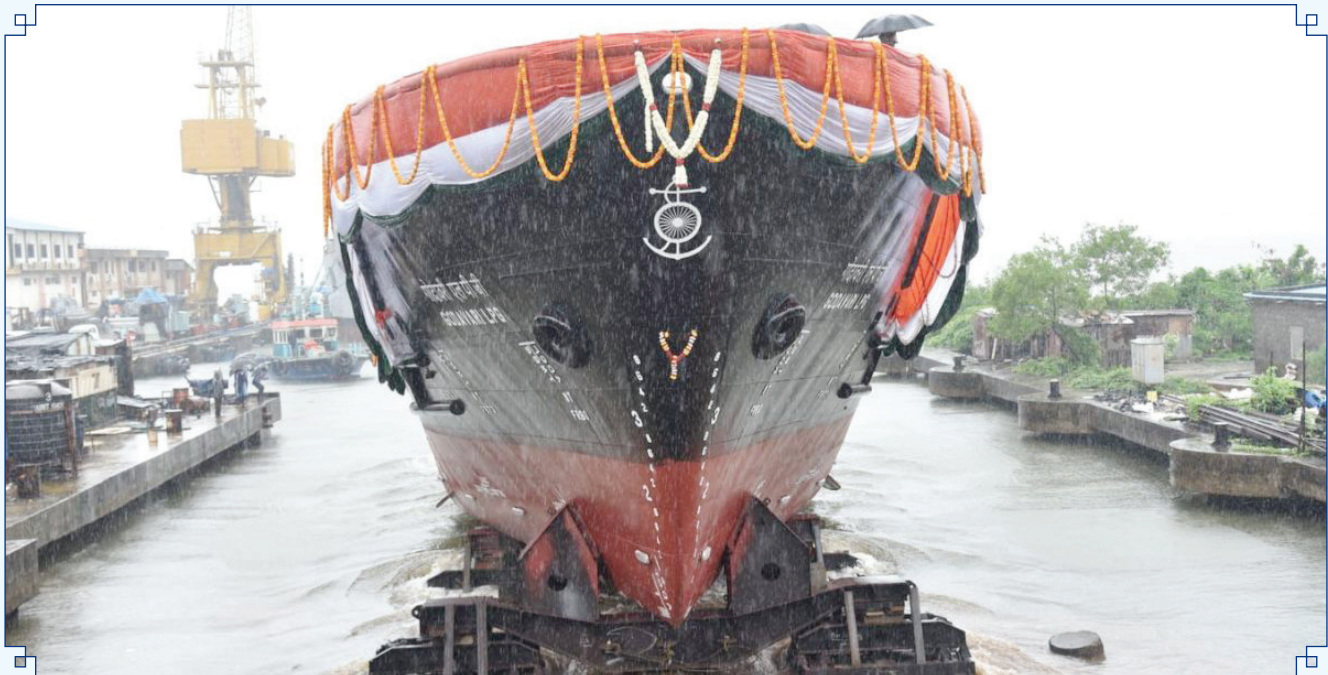
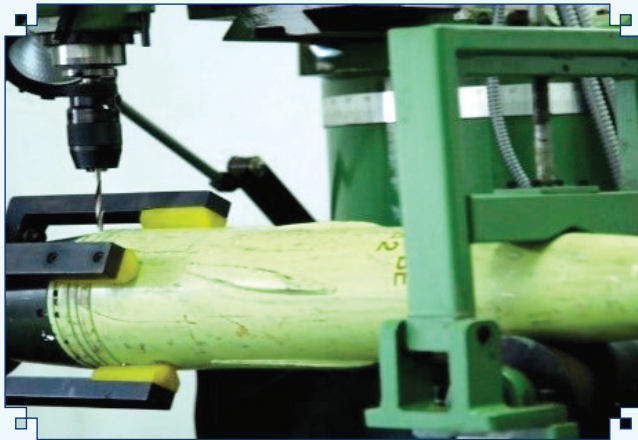
Designation of Officers. Under Secretary/ Deputy Secretary/ Director level officers have been designated as CPIOs under Section 5(1) of the Act, according to the subjects being handled by them. Officers above the rank of CPIOs are designated as First Appellate Authorities in terms of Section 19(1) of the Act.

Application Handling Process. Central Registry forwards RTI applications/appeals to Nodal RTI Office for transfer to concerned authorities.

2023 Statistics: 9,072 RTI applications and 221 First Appeals received (online & offline), promptly processed and transferred.

Transparency Measures. Updated list of CPIOs/First Appellate Authorities uploaded on Ministry's website. Also proactive disclosures as per Section 4 made regularly on the website.

DEPARTMENT OF DEFENCE PRODUCTION



GOVERNMENT OF INDIA
MINISTRY OF
DEFENCE

Department of Defence Production

Introduction

The Department of Defence Production (DDP) was set up in November 1962 with the objective of developing a comprehensive production infrastructure to produce the weapons/systems/platforms/equipment required for defence. As far as land systems are concerned, these include Artillery guns, tanks, various types of heavy vehicles, mine protected vehicles, various kinds of small arms, armoured material including bullet proof jackets and helmets, wide range of ammunition, propellants and explosives, etc. As regards aero-systems, fourth generation fighter aircrafts, helicopters of 3-5.5 tonne class, trainer aircrafts, missiles of several types, and as regards naval systems, capability to manufacture practically all type of naval vessels including Offshore patrol vessels, corvettes, frigates, destroyers, aircraft carriers, submarines etc. have been created in the country.

Export Import Profile of Indian Defence Industry

- (i) **Defence Export.** Defence Export has increased five folds in last 7 years. The important defence equipment exported during last 05 years include Weapon Simulators, Tear Gas Launcher, Torpedo Loading Mechanism, Alarm Monitoring & Control, Night Vision Monocular & Binocular, Light Weight Torpedo & Fire Control Systems, Armoured Protection Vehicle, Weapons Locating Radar, HF Radio, Coastal Surveillance Radar etc. Now Indian defence items are exported to more than 80 countries all over the world. The detail of export performance for last seven financial years is as under:

Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Export value (₹ in crore)	4682	10746	9116	8435	12815	15920	21083

- (ii) **Defence Import.** The Directorate General of Foreign Trade (DGFT) vide Order dated 28/05/2018 delegated powers to the Department of Defence Production (DDP) to grant license for import of restricted items only for defence use. The Standard Operating Procedure for issue of Import License for import of restricted items only for defence use has been notified and published on the website.

Licensing in Defence Sector

Defence Licenses have nearly tripled from 215 licenses in 2014 to 660 licenses in December 2023. 134 companies covering 202 licenses have either reported commencement of production to DDP, MoD or have received permission for commencement of production from MHA till December 2023.

The value of production for the last five years is as follows:

Year	DPSUs (In crores)	New DPSUs (erstwhile OFB) (In crores)	Non DPSUs (In crores)	Private Companies (In crores)	Total (In crores)
2019-20	46755	9227	6295	15894	79071
2020-21	46711	14635	6029	17268	84643
2021-22	55790	11913	7222	19920	94845
2022-23	63466	16998	7137	21083	108684
2023-24 Q1	11533	3236.18	1153	4636	20558
2023-24 Q2	13997	5339.06	1564	5806	26706
2023-24 Q3	17068	4803.23	1656	6490	30017

FDI policy in Defence Sector

As on date, 46 proposals/ Joint Ventures have been approved in defence sector. Cumulative FDI inflow value for the period spanning from the opening up of Defence sector till December 2023 is ₹ 5494.37 crores. Total FDI inflow in the period from April 2014 to December 2023 is 4106.16 crores.

To give fillip to the ongoing Indigenisation efforts, an indigenization portal namely srijandefence.gov.in has been launched in Aug 2020 for DPSUs/Services with an industry interface to provide development support to MSMEs/Startups/Industry for import substitution. Till December 2023, more than **34000** Defence items, which were earlier imported, have been displayed on the portal for Industry to show their interest, out of which more than 10000 items worth ₹ **6800** crore (approx) import substitution value have been indigenised.

In continuous pursuit of self reliance in defence manufacturing and to minimize import by DPSUs under 'Atmanirbhar Bharat Abhiyan', DDP/MoD has notified 4th Positive Indigenisation List (PIL) of **928** items on May 12, 2023, which included strategically important Line Replacement Units (LRUs)/ Sub-systems/ Assemblies/ Sub-assemblies/ Spares & Components/ raw Materials for time bound indigenisation.

In order to engage the budding Startup community for Defence Innovation, the Innovations for Defence Excellence (iDEX) was launched in Apr 2018. Innovations for Defence Excellence, managed by Defence Innovation Organization (iDEX-DIO) is proactively pursuing multiple objectives including seeding of defence enterprises, self sufficiency and indigenization in defence production thus leading to better defence preparedness, shortened procurement cycle, reduction in costs, reverse brain drain, creation of jobs etc. As a result, **433 start-ups/MSMEs** have been engaged and 310 contracts have been signed as on December 31st, 2023.

iDEX in partnership with US, DoD launched the India-U.S. Defense Acceleration Ecosystem (INDUS-X) Event in Washington DC, USA on 20-21 June 2023. The initiative will expand the strategic technology partnership and defence industrial cooperation between the start-up eco-system, businesses, and academic institutions of India & the US and lead to global visibility for our Start-ups. Under this initiative, two challenges were jointly launched as IMPACT 1.0 (INDUS-X Mutual Promotion of Advanced Collaborative Technologies 1.0) by iDEX and United States, Department of Defence (US, DoD) and 10 winners (5 Indian + 5 US) were declared.

Developing Artificial Intelligence based capabilities

Department of Defence Production constituted a Task Force in February 2018 under the Chairmanship of Shri N. Chandrasekaran, Chairman Tata Sons to study the strategic implications of Artificial Intelligence in National Security and Defence needs and to make appropriate recommendations in this regard. The Task Force submitted its recommendations to Ministry of Defence in June 2018. Based on the recommendations of the Task Force, a high level Defence AI Council (DAIC) headed by the Hon'ble Raksha Mantri was established to provide necessary guidance to enable and effect development or tailoring of operating framework, policy level changes and structural support for AI implementation in Defence. A Defence AI Project Agency (DAIPA) with Secretary (DP) as the ex-officio head of the agency was also established to enable the design, development and production of AI based systems and AI based processes across the services and other defence organizations.

Total 117 AI enabled projects have been identified under the AI roadmap for DPSUs out of which 60 Nos. AI products have already been developed by DPSUs till December 31st, 2023.

Defence Public Sector Undertakings (DPSUs)

There are 16 Central Public Sector Undertakings under the administrative control of the Department of Defence Production, Ministry of Defence, as follows:

- (I) **Hindustan Aeronautics Limited (HAL).** Hindustan Aeronautics Limited (HAL) is a premier aeronautical complex in South East Asia with 20 Production Divisions and 9 R&D centres spread across 7 states and 10 geographical locations in India. HAL has been providing one stop solution for the Defence Services in the areas of Design, Development, Manufacture, Maintenance, Repair, Overhaul of Aircraft, Helicopter, Aero-Engines, related Accessories and Avionics over the last 8 decades. HAL's major supplies and services are to the Indian Defence

Services - IAF, Army, Navy and Coast Guard. HAL is a major partner for the Space Vehicle programs of ISRO and has also diversified into manufacture and ROH (repair and overhaul) of Industrial & Marine Gas Turbine engines.

HAL, over the years, has produced 4304 aircraft, 5506 aero-engines and has carried out over 12378 overhauls of aircraft and 36580 overhaul of engines, besides manufacture and overhaul of related accessories and avionics. HAL has transformed from being a Production agency for Licence / Transfer of Technology manufacturing to an indigenous Design, Development and Production organisation for both fixed and Rotary Wing platforms. All the major Platform orders currently under execution are of indigenous origin i.e. Light Combat Aircraft (LCA), Hindustan Turbo Trainer (HTT-40), Light Combat Helicopter (LCH), Light Utility Helicopter (LUH), Advanced Light Helicopter (ALH) etc.

HAL has taken up various measures for reduction in energy use and substitution with clean energy. Around 49MW renewable energy capacity is installed and about 40% of electricity needs is met through clean energy. Energy efficiency lighting using LED has been adopted. Other energy conservation measures such as Brush Less Direct Current (BLDC) fans, star rated appliances are being implemented progressively.

(II) Bharat Electronics Limited (BEL). A Navratna Public Sector Undertaking under the Ministry of Defence (MoD), Government of India (GoI), BEL is a globally recognised electronics engineering company. At marketing front, BEL acquired orders of around ₹ 35000 Cr during 2023-24 through projects like Electronic Fuzes, AKASH Weapon Systems, Shakti Electronic Warfare (EW) System, LYNX U2 for Next Generation Missile Vessels (NGMV), Management of LAN Infra at CBIC, UP Dial 112, Shakti Electronic Support Measures (ESM) System, Varuna Systems etc.

BEL has secured 23 Green Channel Certificates (GCC) from DGQA for a total of 76 products in the areas of Radars, Naval Systems, Communications, Electro Optics, Mast, Batteries and Gun Upgrades.

Increased usage of Green Energy has been the focus area in BEL since long time. BEL has installed & commissioned 6.6 MW+ Rooftop/Ground mount solar power plants and 13.9 MW Wind Energy Plants. Apart from this, BEL has established 76.37 MW Solar Projects at other DPSUs (erstwhile OFB) premises as well, resulting in reduction of carbon foot print (CO₂ emission) to the extent of 90000 Tonnes per annum.

Issues of general interest to public. BEL continued to do noteworthy contributions. The most recent ones are; Donation of 3 Mobile Ophtha Units & associated equipment to Govt hospitals in Nilgiris, Madurai & Kanyakumari districts; Handing over Physiotherapy equipment to National Institute of Technology Karnataka (NITK), Suratkal; 8 Dialysis Units and an Advanced Life Support (ALS) Ambulance to Hassan Institute of Medical Sciences (HIMS), among others.



BEL distributed Motorized Tricycles to Divyangjan of Yadgiri District, Karnataka



BEL handed over CBRN HAZMAT vehicle to NDRF

(III) **BEML Ltd.** BEML Limited, incorporated in 1964, is a schedule 'A' Public Sector Undertaking, under the Ministry of Defence engaged in the design, development, manufacturing and after-sales –service of a wide range of products for core sectors of economy such as Coal, Mining, Steel, Cement, Power, Irrigation, Construction, Road Building, Defence, Railway and Metro transportation system & Aerospace. BEML is a listed Company and Government of India holds about 54% of the total paid up capital of the Company.

BEML operates in three business verticals - Mining & Construction, Defence & Aerospace and Rail & Metro which is based on specific product mix. Further to have focused approach in

different areas within the business verticals, the present business verticals of BEML have been restructured into 11 Strategic Business Units (SBU's) viz Mining, Construction, Sustenance, HMV, Armoured, Commuter Rail, Metro Rail, International Business Division, Hydraulics & Powerline, Engine and Aerospace. Further 2 micro SBUs viz SEZ & Maritime are created under SBU Aerospace.

Major Achievements.

- BEML has full-fledged Research & Development (R&D) Centres. During the year, R&D has taken initiatives for in-house design and development of high technology products, aggregates and up-gradation of existing products, including up-gradation to meet emission compliance wherever applicable and engineering of safety features as recommended by regulating authorities in all the three business verticals
- In Defence and Aerospace, development and Maiden test-firing of India's First indigenously made 1500 HP engine for Main Battle Tank was accomplished at Mysore Complex. BEML has successfully handed over the first Strap on Base Shroud (SBS) structure to VSSC, ISRO for LVM 3 Program. BEML received contract for manufacture and supply of 56 numbers of Mechanical Minefield Marking Equipment (MMME) Mark-II, and 21 Nos Command Post Vehicle (CPV) from MoD.

(IV) Bharat Dynamics Limited (BDL). Bharat Dynamics Limited (BDL), a Miniratna Category-I Company was incorporated in the year 1970 under the MoD, GoI to manufacture SS11B1 ATGM and supply to Indian Army. BDL handed over the first Radio Frequency (RF) Seeker of Akash-Next Generation Weapon System produced at BDL's newly commissioned State-of-the-art Seeker Facility Centre (SFC) to Dr Samir V Kamat, Secretary, Department of Defence Research Development and Chairman DRDO on 02 Aug 2023.

(V) Garden Reach Shipbuilders & Engineers Limited (GRSE). The shipyard was conferred the status of a Miniratna Category I Company in 2006. GRSE has built over 790 platforms including 109 warships for Indian Navy, Indian Coast Guard, and friendly foreign countries - highest warships built & delivered by any Indian shipyard till date. Major achievements of GRSE to Defence services are as follows:

- Delivery of Ocean-Going Vessel – OGV for Guyana, 'MV Ma Lisha' delivered to Govt. of Guyana on 23 Apr 23.
- 1st Survey Vessel Large (SVL) 'SANDHAYAK' delivered on 04 Dec 2023 to Indian Navy.
- Launching of 3rd P-17A Stealth Frigate, 'VINDHYAGIRI' for Indian Navy on 17 Aug 2023 in the august presence of Smt. Droupadi Murmu, Hon'ble President of India.
- 4th Survey Vessel Large (SVL), 'Sanshodhak' & 3rd Anti-Submarine Warfare Shallow Water Craft 'Anjadip' for Indian Navy launched on 13 Jun 2023.
- 4th Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), 'Amini' for IN launched on 16 Nov 2023

(VI) Goa Shipyard Limited (GSL). Goa Shipyard Limited (GSL), a Mini-Ratna Group-I status company, has proven capabilities of in-house design and is building sophisticated high technology warships for Indian Defence Forces and other varied clients, including export market. Major Events include:

- Delivery of Three 7.5T Tug Yard 1264, 1265 & 1266 to Assam Govt. on Mar 04, 2023, Apr 26, 2023 & May 19, 2023 respectively.



Delivery of 7.5 T Tug Yard

- Delivery of Damage Control Simulator Yard 1269 at Port Blair to Indian Navy on Aug 18, 2023 ahead of its schedule.



Delivery of DCS Yard 1269 on Aug 18, 2023

- Ship Repair. During the year, Ship Repair Division completed refit of Indian Navy Ship (INS) Shardul, Indian Coast Guard Ship (ICGS) Vaibhav and two (02) Commercial Vessels. It is highlighted that the Medium Refit of INS Shardul was completed by the Yard and this project has been the largest, most complex, and challenging ship handled by GSL. The Yard has benefitted in terms of the experience to handle larger and more complex platforms.

(VII) Hindustan Shipyard Limited (HSL). Hindustan Shipyard Ltd., the largest and strategically located shipyard at Visakhapatnam, Andhra Pradesh, is the nation's premier shipyard engaged in shipbuilding, ship repairs, submarine refits as well as design and construction of sophisticated state-of-the-art offshore and onshore structures. Since its inception in 1941, HSL has built 200 vessels (including 11 wellhead platforms), repaired about 2021 vessels and refitted 5 Submarines for the defence, maritime and oil sector. HSL was bestowed with 'CMD Leadership Award' and 'HR Excellence Award' in the 09th Edition of Governance. HSL bagged two Awards in the category of 'Ship Repair Facility of the Year' and 'Best Practices Award' from 'World Logistics and Supply Chain Congress' during the Award felicitation ceremony held at Mumbai on Feb 18, 2023.

(VIII) Mazagon Dock Shipbuilders Limited (MDL). Mazagon Dock Shipbuilders Limited (MDL) is the leading Shipyard amongst all Defence PSU Shipyards engaged in construction of Warships and Submarines. MDL is the only shipyard in India with proven capability of building Destroyers and two different types of conventional Submarines for the Indian Navy with its facilities located in Mumbai and Nhava. MDL is also one of the unique Shipyards in the world with such diverse range of products.

- MDL marks its 250 glorious years of existence with excellence and expertise with the launch of the fourth Stealth Frigate of Project 17A 'INS Mahendragiri' on 01 Sept 2023. The ship was named by Dr (Mrs) Sudesh Dhankhar, wife of Hon'ble Vice President Shri Jagdeep Dhankhar who was the chief guest on the occasion.



- MDL has delivered Third of Project 15B Class Guided Missile Destroyer 'INS Imphal' to the Indian Navy on 20 Oct 2023 and Commissioned on 26.12.2023 in the presence of Hon'ble Raksha Mantri Shri Rajnath Singh.



- MDL launched India's fastest Solar-Electric Boat (SaurShakti) on 13 Dec 23 at Kochi. It has been meticulously conceptualized and developed by MDL with M/s NavAlt as technology partner. This vessel represents a paradigm shift in eco-friendly Maritime Transportation.
- MDL has undertaken construction of Anganwadi centres in Nandurbar district. MDL has also worked for TB Mukta Nandurbar, one of the flagship project of Govt of India.
- MDL has continued its support for 'MDL Super 10' project and a total of 24 students from Shahapur area (Thane district) have been provided support to get quality education at Bhonsala Military School, Nagpur.
- MDL has continued its support for apprenticeship training at Apprenticeship Training School, MDL. MDL has also provided support for entrepreneurship training of Unemployed Youths in Andhra Pradesh through five Skill Development Centres.

(IX) Mishra Dhatu Nigam Limited (MIDHANI). MIDHANI, a listed PSU (Mini Ratna-I) based at Hyderabad, is one of the few integrated and modern metallurgical plants in the world manufacturing a wide range of Superalloys, Titanium and Titanium alloys and Special Steels in various mill forms using state-of-the-art production facilities.

In 2023, MIDHANI supplied special metals and alloys for Chandrayaan-3 mission, Aditya-L1 mission and Gaganyaan project. Parliamentary Standing Committee on Defence (SCOD) had visited MIDHANI in Aug'23. The uniqueness of MIDHANI & wide variety of our product offerings were held in high regard by SCOD.

New products have been developed for projects of national importance such as Advanced Medium Combat Aircraft (AMCA), Kaveri Dry Engine (KDE), Small Turbo Fan Engines (STFE). MIDHANI has supplied material for internationally reputed OEMs in healthcare and aerospace sectors.

Indigenously developed Alloy C276 sheets for Flue Gas Desulphurisation was appreciated in BHEL SAMVAAD 3.0 held at New Delhi. .

(X) Munitions India Limited (MIL). Munitions India Limited (MIL) is a Defence Public Sector Enterprise (CPSE) under the ministry of Defence, Government of India, established on Oct 01, 2021, after incorporation of erstwhile Ordnance Factory. MIL, the India's biggest manufacturer and market leader is engaged in Production, Testing Research & Development and Marketing of comprehensive range of ammunition & explosives for Army, Navy, Air force & Para-Military Forces.

(XI) Armoured Vehicles Nigam Limited (AVNL). Armoured Vehicles Nigam Limited (AVNL) is a newly formed, fully owned Government company which commenced its operations w.e.f. 01.10.2021 and was established on 14th Aug, 2021.

- AVNL has issued 51 tanks (27 x OE tanks, 24 x OH tanks), 121 vehicles (106 x OE vehicles, 15 x OH Vehicles) and 3 x KAVACH MOD-II (Emergency Procurement by Navy) during the year 2023.
- AVNL has issued 18 x Stallion Chassis Vehicle and 180 x LPTA Chassis Vehicle to Indian Army.

(XII) Advanced Weapons & Equipment India Limited (AWEIL). AWEIL is one of the seven (7) new Defence PSUs, incorporated by converting the erstwhile OFB into fully owned Government of India Enterprise. AWEIL has been incorporated under the Companies Act 2013 on 14th August, 2021 and commenced its business on 1st October 2021. It comprises eight production units and two non- production units.

(XIII) Troop Comforts Limited (TCL). Troop Comforts limited is a newly carved out Defence Public Sector Enterprise under the Department of Defence Production of Ministry of Defence, Government of India with corporate office at Kanpur.

It is involved in manufacturing of Life Cycle Clothing (LCC), Extreme Cold Climate Items (ECC), Special Clothing & Mountaineering Equipment (SCME), Ballistic Protection Gears, Supply Drop Equipment (SDE) & Arrester Barrier, Tentages for plain terrain & high altitude areas, Water Storage Equipment, General Stores and Leather Items and Drones manufacturing including Surveillance as well as Logistics.

TCL has also developed following ex-import items indigenously under **ATMANIRBHAR BHARAT**, which are presently being imported by Indian Army:

- Seven Layered ECWCS (Extreme Cold Weather Clothing System) for super high altitude areas up to -500 C temperature.
- Boot Multipurpose for super high altitude areas up to -500 C temperature.

- Boot Crampon for super high altitude areas up to -500 C temperature.
- Modular Gloves for super high altitude areas up to -500 C temperature.

These newly developed ex-import items are under user trial and evaluation with Indian Army.

(XIV) Yantra India Limited (YIL). YIL a fully owned Government of India Enterprise, under Department of Defence Production, Ministry of Defence has been incorporated under Companies Act 2013 and has commenced its business operations w.e.f. 1st October 2021. YIL is engaged in production of Ammunition Hardware and Ordnance Components. YIL strives for primary objective of "Atmanirbhar" - सशस्त्र सेनाओं का सशक्तिकरण - self-reliance in equipping the Armed Forces with State-of-the-Art battlefield equipment.

(XV) India Optel Limited (IOL). India Optel Limited (IOL), a Schedule 'B' Public Sector Undertaking is primarily engaged in production of Opto-Electronics Systems for Services and MHA.

IOL is headquartered at Dehradun (Uttarakhand) with two manufacturing units at Dehradun and one unit at Chandigarh. In addition, IOL also operates 'Ordnance Factories Institute of Learning' for the training of its own manpower in all cadres and for the training of personnel of its customers in operation and maintenance of the various equipment made by IOL.

- IOL has issued 32 numbers of first time Indigenously manufactured Thermal Imager Fire Control System (TIFCS) for the night enablement of Tank T-72.
- The indigenously designed & developed fusion sight (first time in INDIA) for the driver of BMP –II has been supplied to the Indian Army.
- Order secured for Qty. 13482 Nos. of Day Telescopic Sight for Assault Rifle from Indian Army against competitive tender.
- Successfully developed samples of Spool-A and Spool-B for Torpedo for Navy (Import Substitution), Samples have been accepted by Indian Navy.

(XVI) Gliders India Limited (GIL). Gliders India limited is Government of India Undertaking under Department of Defence Production and was incorporated on 14th August 2021 as a company 100% owned by GOI.

Ordnance Parachute Factory is the only production unit under Gliders India limited and was established in the year 1941 at Kanpur (UP), India.

Product range of OPF/GIL includes.

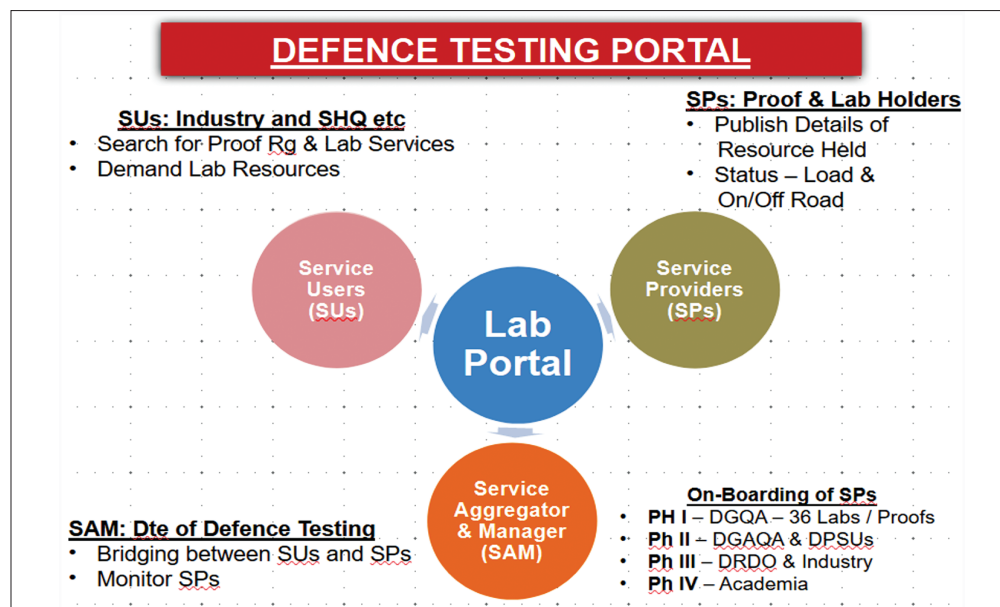
Parachute Items	
Man Carrying Parachutes	Seat Ejection / Pilot Parachutes
Supply Drop Parachutes	Aerial Delivery Systems
Brake Parachutes for Aircrafts	Illuminating Ammunition Parachutes
Recovery System Parachutes	Ammunition Drop Parachutes

Rubberized Items& Sporting Parachutes	
Float for K.M. Bridge	Inflatable Boats
Splint Inflatable	

Other Offices under Department of Defence Production (Attached/Subordinate)

(I) **Directorate General of Quality Assurance (DGQA).** Directorate General of Quality Assurance (DGQA) is an Inter-Service Organisation functioning under the Department of Defence Production in the Ministry of Defence.

- A centralised online Defence Testing Portal has been implemented as part of Digital DGQA Program for centralised, networked and optimal utilisation of Trial and Testing facilities of labs and firing ranges by industries available in the Country. Phase wise on-boarding of Lab / test facilities available with DGQA, DGAQA, DPSUs, DRDO, Industry and Academia is under progress. DGQA in various forums has encouraged DPSUs and Private Industry to on-board their testing facilities in Defence Testing Portal as service provider to generate revenue and may also use services as user.



- Defence Testing Infrastructure Scheme (DTIS).** DTIS Cell has been created in DGQA for implementation of MoD Scheme of establishing Defence Testing Infrastructure facilities in the two Defence corridors i.e. Tamil Nadu Industrial Development Corporation (TIDCO) and Uttar Pradesh Expressways Industrial Development Authority (UPEIDA).

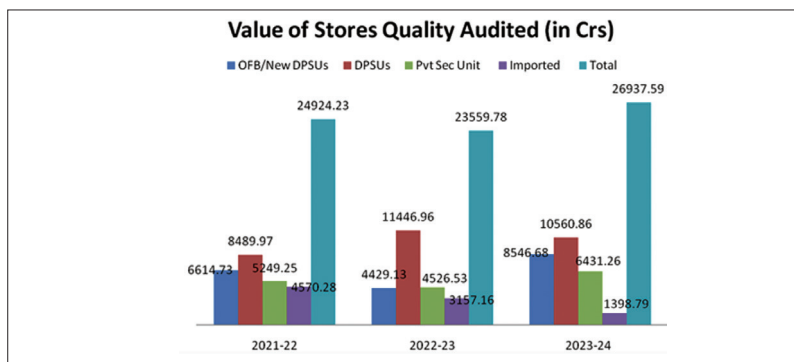
Defence Institute of Quality Assurance (DIQA) Bengaluru, the premiere training Establishment of DGQA is being developed **as Centre of Excellence**. Memorandums of Understanding (MoUs) have been signed with various reputed institutions like IITs, ISI and Jindal Global University for Certification and M. Tech courses.

Major Achievements

- **Promotion of MoD Schemes.** Under the government's policy of "Make in India" and Ease of doing business a number of new Govt Schemes were launched and implemented. Till date, the details of achievements are given below: -

Sl. No.	MoD Scheme	Achievements
(i)	Green Channel Status	Granted to 28 Firms comprising of 117 equipment & 37356 items.
(ii)	Self-Certification Scheme	Granted to 18 Firms comprising of 50 equipment and 17244 spares
(iii)	Third Party Inspection	07 Firms registered for 16861 items & Rate Contract signed with 03 Firms for 09 types of secondary batteries
(iv)	Defence Export Promotion	'Fit for Military Use Cert' issued to 05 firms for 11 Vehicles/ Equipment
(v)	iDEX Projects	DGQA has been associated with 28 iDEX Projects
(vi)	Emergency Procurements through Capital Route	DGQA has been associated with 84 Nos of Emergency Proc. cases

- **QA Work Load** Value of Defence stores inspected by DGQA wef last 03 years, are given below: -



- (II) **Directorate General of Aeronautical Quality Assurance (DGAQA).** Directorate General of Aeronautical Quality Assurance (DGAQA) is the Government Quality Assurance (GQA) Regulatory Authority for Quality Assurance and final acceptance of Military Aircrafts, Unmanned Aerial Vehicles, Aero engines, Airborne Systems, Avionics, Armaments, Consumables (Aviation Grade Fuel, Oil & Lubricants), Allied Ground Systems and Missiles during Design & Development, Production, Repair, Modification, Life Extension and Overhaul at various Defence Public Sector Undertakings (DPSUs), Ordnance Factories-Defence Public Sector Units (OF-DPSUs), DRDO Labs, Oil Refineries and Private Firms.
- (III) **Directorate of Planning & Coordination (Dte. of P&C).** The Directorate of Planning and Coordination, an attached office of Department of Defence Production, was established in 1964. The Directorate is primarily mandated to formulate various enabling policies under 'Atmanirbharta' initiative to encourage participation of domestic Industry in design, development

and manufacture of defence equipment through various routes such as Make Procedure; encourage preference to procurement from indigenous route for capital requirements of Services; handhold and galvanize the startup ecosystem and foster a sustained culture of innovation through iDEX Scheme and formulate policies to provide level playing field to private sector.

In addition, the Directorate renders advice on capital acquisition proposals of Service Headquarters and also plays key role in streamlining of Defence Acquisition Procedure (DAP).

(IV) Defence Exhibition Organization (DEO). The Defence Exhibition Organization (DEO) was established in 1981 with the main charter to organize and coordinate Aerospace and Defence (A&D) exhibitions in India and abroad. DEO, through these exhibitions promotes export potential of indigenous Aerospace and Defence sector and its ecosystem.

(V) Directorate of Ordnance (Coordination & Services). The Union Cabinet decided, to corporatize functions of 41 production units (Ordnance factories) of the Ordnance Factory Board (OFB), functioning under the Department of Defence Production, Ministry of Defence (DDP), on June 16, 2021. The management, control, operation and maintenance of 41 production units was handed over to newly formed DPSUs namely, AVNL, TCL, IOL, AWEIL, YIL and GIL w.e.f. October 01, 2021.

Under restructuring of Ordnance Factories Organization, Ordnance Factory Board (OFB) was dissolved w.e.f. October 01, 2021 and Headquarter formation of OFB was renamed as Directorate of Ordnance (Coordination & Services).

(VI) Defence Offsets Management Wing (DOMW). Defence Offsets Management Wing (DOMW), under the Department of Defence, is responsible for formulation of Defence Offset Guidelines and all matters related to post offset contract management. Defence Offset Guidelines have been continuously evolving based on the experience in management of offset contracts. Amendments in these Guidelines have been carried out from time to time in consultation with the stakeholders, which have facilitated faster conclusion of procurement contracts, significant progress in implementation of offset contracts and increased verification of offset discharge claims.

Private sector has become increasingly competitive in becoming Indian Offset Partner (IOP) with the foreign OEMs and correspondingly the prospects of private sector investment in defence manufacturing have significantly improved.

Autonomous Institute under the Department of Defence Production

(I) National Institute for Research and Development in Defence Shipbuilding (NIRDESH). NIRDESH is a Society of the Ministry of Defence/ Department of Defence Production (MoD/DDP), registered under the Societies Registration Act XXI of 1860 on 20th November 2010. NIRDESH is

guided by a General Body (GB) and Board of Governors (BoG) and the functioning is under the directions of an Executive Committee (EC). The member organizations are Indian Navy (IN), Indian Coast Guard (ICG), DRDO and four DPSU Shipyards.

NIRDESH, was set up with a vision of achieving self-reliance in warship and submarine building.

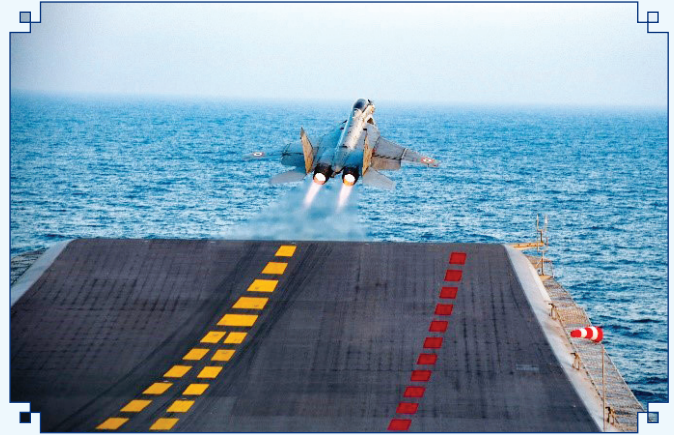
Others Divisions/ Cell

- (I) **Defence Industrial Corridors.** DICs are aimed to fillip domestic defence production and create defence manufacturing ecosystem in the country, Government of India has established two Defence Industrial Corridors (DICs), one in Uttar Pradesh and another in Tamil Nadu to attract ₹ 10,000 crore investment in each. The Major areas of investments in these Corridors are Drones & UAVs, Ammunitions & Explosives, Propellants, Small Arms, Common Facility Centres, Missiles & Satellites systems, MRO, R&D, Testing facilities, Electronic & Communication Systems, Textiles, A&D materials and components.
- (II) **Defence Investor Cell (DIC).** Defence Investor Cell was formed in January 2018, to act as an integrator & facilitator to Defence Entrepreneurs & MSMEs. It acts as a single point of contact to entrepreneurs/industry, to address queries related to policy and investment opportunities in defence production, thereby facilitating investment into defence production sector. Defence Investor Cell (DIC) can be accessed online at <https://defenceinvestorcell.gov.in>. All services provided by DIC are without any charges.
- (III) **Defence Production Information Technology (DPIT) Division.** Defence Production IT Division (DPIT) was formed in 2018 with the approval of Hon'ble Raksha Mantri to implement IT related initiatives in DDP and DPSUs. Various projects include DDP website, DDP dashboard, Srijan Defence portal, Defence Offsets management portal, Defence Exim portal, India Defence Mart (IDM) portal, DefExpo website, AeroIndia website, RM Awards portal etc. The major notable new projects designed, developed and maintained by DPIT during the year 2023 are:
- DA Funding Scheme Module of Defence Exim Portal • Defence Investor Portal
 - Mission Raksha Gyan Shakti Portal.

Progressive Use of Hindi

- Hindi Fortnight was observed in various Offices.
- Training in Hindi Prabodh, Praveen and Pragya courses were conducted at various Offices of the PSUs & personnel had been trained for progressive use of Hindi.
- Significant progress was made in the progressive use of Hindi, with successful inspections by the Parliamentary Committee promoting bilingual communication in the PSUs.
- Functional Hindi Workshops on various topics including Unicode encoding system were conducted on regular basis also.
- Majority Websites are developed in Bilingual language

DEPARTMENT OF MILITARY AFFAIRS



GOVERNMENT OF INDIA
MINISTRY OF
DEFENCE

Indian Army

The changing global geo-political dynamics presents the Nation with multiple security challenges. While constantly reviewing its operational preparedness/ postures to meet the security challenges, Indian Army is committed to the defence of the country from external and internal threats across the entire spectrum of warfare. Additionally, in times of disaster/ natural calamities, Indian Army remains at the forefront, providing aid and succour to the affected people.

Operations

Northern Borders

Situation along Line of Actual Control (LAC). Situation along the LAC is stable but sensitive, wherein forces on both sides continue to remain deployed. Indian Army has maintained a robust posture along the Northern Borders to deter Peoples Liberation Army (PLA) from any misadventure.

Disengagement. 20 rounds of Corps Commander Level Meetings and 13 related Working Mechanism for Consultation and Coordination Meetings have been held till December, 2023.

Jammu & Kashmir

Proxy War. Since the abrogation of Article 370 and 35A in 2019, rejection of violence by local Kashmiris has forced the perpetrators to re-strategise Proxy War in Kashmir and give it an indigenous hue.



Situation along the Line of Control (LC)

- (a) **Ceasefire Violations (CFV).** Both sides have adhered to the Director Generals of Military Operations (DGMOs) Understanding with no CFV during the period.
- (b) **Smuggling of War Like Stores and Narcotics.** Smuggling across LC and also by using drones continues to remain a challenge. Approximately, 97.46 Kilograms of narcotics have been recovered during smuggling attempts along the LC in the year 2023.

Situation in Hinterland

- (a) Security situation in hinterland continues to witness consistent improvement since abrogation of Article 370. The **'Whole of Nation Approach'** has resulted in reduction of violence, stone pelting and agitations in the Kashmir Valley. Incipient normalcy has resulted in consequent rise

in tourism with 4.45 lakh pilgrims visiting the Holy Amarnath Shrine and significant increase in the number of tourists visiting the Union Territory (UT) of Jammu & Kashmir (J&K) in 2023.



- (b) However, despite improvement in overall situation, intermittent spurts of violence were witnessed, especially in the form of targeted killings of non-local civilians, minorities and Security Forces personnel in Kashmir Valley. Details are as under:-
- (i) **Counter Terrorist (CT) Operations.** Kashmir Valley continues to witness a high tempo of CT operations with elimination of 34 terrorists in the hinterland in 2023.
 - (ii) **Terrorist Initiated Incidents (TIIs).** Domination of hinterland by Security Forces has degraded the ability of tanzeems to undertake sustained TIIs. Violence levels have witnessed constant downward trend over past five years with steep decline in the number of TIIs (318 in 2018, 173 in 2019, 142 in 2020, 131 in 2021, 110 in 2022 and 25 in 2023).
 - (iii) **Local Recruitment.** 19 local youth were recruited by terrorists tanzeems in 2023. Development initiatives, employment generation, de-radicalisation efforts and encouragement of surrender by Security Forces are being undertaken to discourage the recruitment of local youth.

Western Borders

Situation along IB in J&K and Punjab remained peaceful. Year 2023 witnessed intensive efforts by the adversary towards employment of drones to disturb peace and security along border areas.

Concerted efforts are being made by inimical elements across the border to smuggle narcotics and war like stores employing drones.

North East (NE) Region

Since 01st January 2023, synergised efforts by Army, Assam Rifles and State Police have resulted in neutralisation of three cadres, apprehension of 258 cadres, surrender by 193 cadres from various insurgent groups and recovery of 306 weapons of different types. Indian Army and Assam Rifles have played a key role in controlling the internal security situation in the State of Manipur, saved precious lives and property, evacuated approximately 35,000 people from both the communities and have been neutral, transparent and impartial in aid to civil authority.

Indian Army along with Assam Rifles, through effective domination of hinterland as well as India - Myanmar Border, coordination with Police and civil administration, have successfully recovered narcotics and contraband worth ₹ 1,651.32 crore during the year.

Operational Logistics

Operational Infrastructure along Northern Borders. Approximately 200 kilometres of operational tracks have been constructed along Northern Borders. Impetus to the capability development along Northern Borders has also been provided through sanction of Emergency Procurement (EP) Powers to the Indian Army by the Defence Acquisition Council (DAC) in July 2020. As part of Operation SNOW LEOPARD, habitat for accretion forces is being constructed expeditiously in an efficient manner by employing modern state of the art technology.



Ammunition Infrastructure. Safety of ammunition is critical to maintain high level of operational readiness of field forces. In the current Financial Year (FY), ammunition storage works worth ₹ 503 crore and approximately ₹ 100 crore were approved under Annual Maintenance Works Programme.



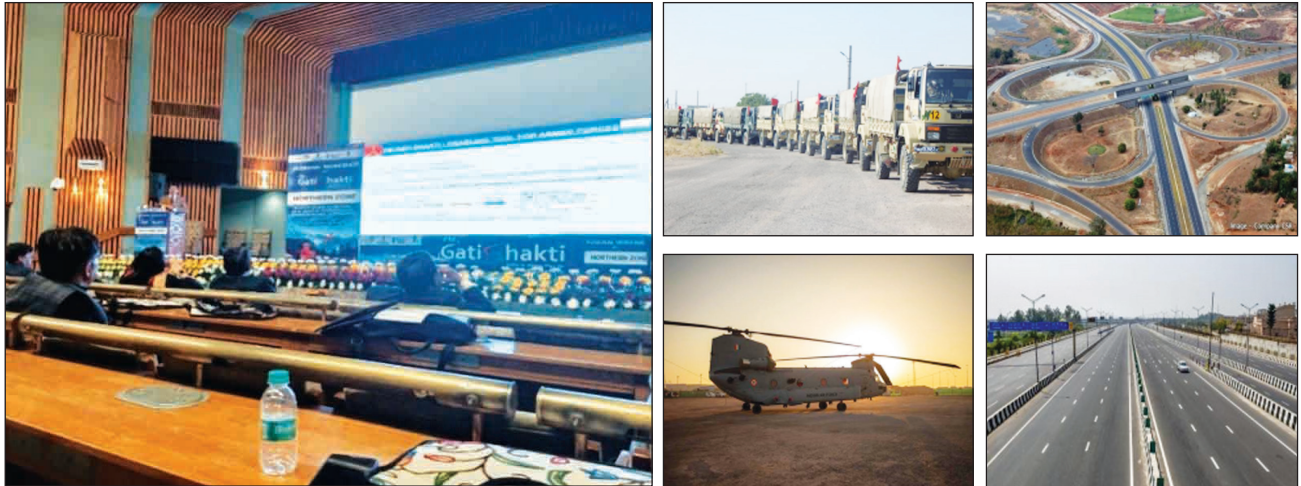
Embracing New Technology in Developing Infrastructure.

- (a) **Operational Works.** Latest technology trends are being co-opted in execution of operational works thereby enhancing efficiency in projects being undertaken and increasing operational preparedness.
- (b) **Construction of Infrastructure using Precast Elements.** To reduce construction and enhance strength of the assets created, a de-novo design using precast elements has been conceived. One such structure has been constructed at Headquarters Northern Command. Precast construction elements such as box culvert and precast slabs have been used in an innovative manner to design a precast ammunition storage facility which can be used to store the ammunition safely in field areas.
- (c) **Construction of 3D Permanent Defences (PDs).** 3D PDs have been constructed in selected forward areas. No cost, No Commitment projects are also being planned for development of 3D Permanent Defence designs for varied weapon systems. Prototype development of 3D PDs of different weapon systems is presently under preparation.
- (d) **Solar Hybrid Power Plant.** Solar Hybrid Power Plant with energy being generated by solar and wind energy has been installed in high altitude area as part of infrastructure development drive in the forward areas. The initiative paves way for other such plants in the future.



- (e) **New Generation Plant Equipment.** New generation plant equipment such as Heavy Excavators, Spider Excavators and Light Weight Crawler Rock Drills were gainfully employed to expedite the progress.

PM Gati Shakti National Master Plan (PM GS NMP) and National Logistics Policy (NLP). In the 'Year of Transformation', Indian Army aligned its infrastructure requirements to leverage the National Infrastructure Grid being developed as part of PM GS NMP. Dual use infrastructure to include 543 border roads, 109 Military/ Base Hospitals and four strategic railway lines have been uploaded on the PM GS NMP portal.



Capability Development and Modernisation of Indian Army

A total of 96 Capital Contracts worth ₹ 32,877.24 crore have been concluded in the calendar year, all from indigenous defence industry. All major weapon systems are being upgraded to current technology and acquisition schemes have been planned to systematically induct advanced systems incorporating next-generation technology.



Promoting Atmanirbharta. A total of 161 vehicles and equipment including the latest Quick Reaction Force Vehicle are being deployed in the UN Interim Security Force in Abyei (UNISFA) and similar indigenous procurement is underway for the UN Interim Force in Lebanon (UNIFIL).



Induction of Niche Technology. Numerous initiatives have been undertaken by the Indian Army towards induction of Niche Technology:-

- (a) **Compendium of Problem Definition Statement (CPDS).** The Compendium defines Indian Army's emerging requirements and capability challenges that require technology based solutions from defence manufacturing, research and development and academic ecosystem in 20 major technology domains.



- (b) **Inno Yodha - 2023.** Idea and Innovation Competition and Seminar 2023, titled 'Inno Yodha 2023', was held at New Delhi in December 2023. The annual competition aims at promoting critical thinking, absorption of fresh ideas and to encourage all ranks to 'Think Out of the Box'.



- (c) **Make Projects.** Seven Make-I and 46 Make-II projects are being steered. Two contracts have been signed, 13 prototype completions have been achieved and five Request for Proposals (RFPs) have been issued in Make-II category.
- (d) **Innovations for Defence Excellence (iDEX).** Projects under iDEX are being progressed. Few contracts have been signed for procurement and some cases are in Contract Negotiation Committee (CNC)/ Field Evaluation Stage.
- (e) **Design and Development (D&D) Projects.** Large number of D&D projects and Technology Demonstrator projects are being undertaken in collaboration with Defence Research and Development Organisation (DRDO).
- (f) **Technology Development Fund (TDF) and Army Technology Board (ATB).** Six Indian Army projects are being undertaken through Technology Development Fund (TDF).
- (g) **Command Research and Development (R&D) Projects.** A large number of R&D projects are being developed at the level of field formations.

Handholding of Industry. To promote Defence Ecosystem, various initiatives have been taken. Forward area tours for developers and entrepreneurs were conducted at Kupwara, Nagrota, Harsil, Sikkim, Dibrugarh etc, wherein, nearly 100 delegates from Industry and Academia were given first-hand experience of the challenging operating terrain and weather conditions.

Promotion of Defence Exports. Five high level delegation visits from Cambodia, Bangladesh, Brazil, Republic of Korea and Sri Lanka to Defence Industries have been organised. Army to Army Staff Talks with Vietnam in March 2023, Malaysia in June 2023 and Thailand in September 2023 were organised in Defence Industrial Hubs in Pune and Secunderabad with an aim to showcase indigenous capabilities.

Establishment of Joint Logistics Node (JLNs). Commonality exists in large number of logistic functions between the three Services. JLNs have been designed to improve efficiency of performing these logistic functions in common military stations. Joint execution of these functions also enables the Services to learn each other's procedures & processes as well as share best practices.

Joint Communication Architecture. Joint Communication Architecture is being implemented in a phased manner. Integration in Delhi has been completed in November 2023. Proof of Concept (PoC) trials has been carried out with effect from 30th November to 04th December 2023 successfully.

Cross Staffing. Cross staffing of officers have been carried out to enhance the jointmanship in Tri-Services.

- (a) **Cross Staffing in Operational Vacancies.** Officers of Indian Army have been posted in Indian Air Force (IAF) billets and Indian Navy (IN) appointments on reciprocal basis.
- (b) **Instructor Appointments.** Indian Army officers are being planned to be posted in Training Institutes of IAF and IN on reciprocal basis.
- (c) **Cross Attachment.** Cross attachment for one week duration with other Service Headquarters and Command Headquarters is being planned paving way for similar attachment at operational/ tactical levels.

Military Diplomacy

Defence Cooperation with Friendly Foreign Countries (FFCs). As on date, Indian Army is engaged with 110 countries through defence cooperation activities.

Structured Engagement. Four new Defence Wings are being opened shortly at Mozambique, Algeria, Poland & Ethiopia; while four more Defence Wings are under consideration. 64 countries are represented by resident Defence Attaches and three countries through accredited Defence Attaches in foreign embassies in New Delhi.

Visits. Multi-tiered 'Security & Strategic Dialogues' are held frequently at all levels with various FFCs to establish areas of common and mutual interest amongst the two armed forces. In 2023, a total of five in bound visits of COAS of FFCs and six out visits of COAS have been conducted.



Joint Exercises. In 2023, eleven such exercises have been hosted by India while Indian Army has participated in twelve exercises abroad.



Bi-Services Exercise (Indian Army & IAF) Conducted in 2023 (First Time)	Tri-Services Exercise (Indian Army, IN & IAF) Conducted in 2023 (First Time)
• Ex SAMPRITI with Bangladesh in October 2023. • Ex KAZIND with Kazakhstan from in November 2023. • Ex MITRA SHAKTI with Sri Lanka in November 2023. • Ex SURYAKIRAN with Nepal in December 2023.	• Ex EKUVERIN with Maldives in June 2023. • Ex TALISMAN SABRE with Australia in July 2023. • Ex BRIGHT STAR (INDIAN ARMY, IN & IAF) with Egypt in September 2023. • Ex ADMM PLUS (INDIAN ARMY, IN & IAF) with Multilateral Countries in September 2023. • Ex AUSTRAHIND with Australia in December 2023.

ASEAN DEFENCE MINISTER MEETING PLUS

AFINDEX and African Chiefs' Conclave. 10 contingents and 17 observers of 15 countries participated in the joint exercise.



Table Top Exercise for ASEAN Women Peacekeepers. In a landmark initiative to promote gender inclusivity and enhance the capabilities of women military personnel in peacekeeping operations, the Indian Army conducted a Table Top Exercise for the Women Officers (WOs) of Association of South-East Asian Nations (ASEAN) at Manekshaw Centre, New Delhi from 04 to 08th December 2023.

Training with FFCs. During the year 2023, a total of 3,113 course vacancies were offered to 75 FFCs. Presently, 800 students of FFCs are undergoing training in India. Moreover, five Mobile Training Teams (MTT) are planned to be deployed abroad.

Indo-Pacific Armies Chiefs Conference (IPACC), Indo-Pacific Armies Management Seminar (IPAMS) and Senior Enlisted Leaders Forum (SELF) - 2023.

The 13th IPACC, 47th IPAMS and 9th SELF was co-hosted by Indian Army and US Army in New Delhi from 25 to 27 September 2023. 17 Chiefs and 12 representatives from 29 Indo-Pacific countries participated in these events. These events achieved the envisaged outcomes of enhancing collective understanding of common challenges in the Indo-Pacific Region, exchange ideas and develop strong relationships built upon shared democratic values and growing convergences on bilateral, regional and global issues.



Contribution to United Nations (UN) Peacekeeping

Indian Army continues to play a lead role in United Nations Peacekeeping with presence in 12 out of 14 United Nations missions worldwide. It is one of the largest contributor of troops for peacekeeping in the last seven decades with over 2,87,000 personnel having been deployed in various UN Missions. Displaying our commitment towards participation of women soldiers in UN

peacekeeping missions, our largest ever Female Contingent in United Nations Stabilisation Mission in Democratic Republic of Congo (MONUSCO) and UNISFA were deployed as part of Indian Infantry Battalion Groups.

Yoga Outreach in UN Mission Areas. In addition to tactical operations in the mission areas, the soft power of our country is being projected through the 'Yoga Outreach Programme'. The first detachment of trained yoga instructors was inducted to UNIFIL in November 2023.

75th Anniversary of UN Peacekeepers' Day. The first UN Peacekeeping Mission i.e. UN Truce Supervision Organisation (UNTSO) began operations on 29th May 1948 and is commemorated as the *UN Peacekeepers' Day* across the globe. Year 2023 marked the 75th anniversary of the UN Peacekeepers' Day. The commemoration ceremony included Wreath Laying Ceremony at National War Memorial on 29th May 2023 by COAS and an International Seminar under aegis of Centre for United Nations Peacekeeping (CUNPK) and Centre for Land Warfare Studies (CLAWS) on 13th June 2023.

Atmanirbhar Bharat : Promotion of Make In India Equipment. 161 vehicles and equipment including the latest Quick Reaction Force Vehicle are presently being deployed in UNISFA and similar indigenous procurement is underway for the UNIFIL.

Initiatives by Centre for UN Peacekeeping (CUNPK). CUNPK is the nodal agency for UN Peacekeeping training in the country and is being developed as a global centre of excellence for Peacekeeping training. The Centre excels in conducting valuable training for Indian and international peacekeepers.

(a) **Training and Capacity Building.**

- (i) **Conduct of National Courses.** 330 officers and 30 women peacekeepers (other ranks) were trained in six UN pre-deployment courses, one Female Engagement Team Capsule and a Capsule on Negotiation Skills and Techniques for Field Commanders.



- (ii) **Validation of Training Standards.** Major and minor contingents nominated for UN Mission, consisting of significant strength of Indian Army personnel were put through a rigorous training validation schedule oriented to their role and tasking in the UN Mission.

(b) **Memorandum of Understanding (MoU)/ Implementing Arrangements.** The Centre



has inked a number of MoUs and Implementing Arrangements on Peacekeeping training with various other Peacekeeping Training Institutes across the globe. Presently, it has Implementing Arrangements with the Peacekeeping Centres of Vietnam, Malaysia, Bangladesh and Argentina (last two were signed in the year 2023).

- (c) **CUNPK Newsletter.** CUNPK newsletter aims at reaching out to various Peacekeeping Training Centres, National and International alumni.

Automation, Digitisation and e-Governance

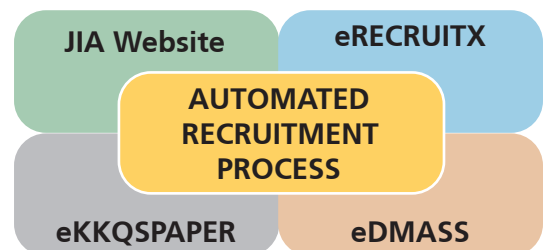
1. Automation Initiatives.

- (a) **Project 'SHAURYA SANKALAN'.** The Project involves creation of a digital repository of archival material covering 1948 J&K Conflict, 1961 Goa Liberation (Operation VIJAY), 1965 and 1971 Indo Pak Wars. Over 1,100 Units, Formations, Regimental Centres and Military Museums have contributed in the form of Battle Memoirs, After Action Reports and Audio-Visual content resulting in curation, digitisation and preservation of 10.5 lakh documents and 550 hours of audio video content available as a Digital Archive Kiosk at New Delhi.



- (b) **Dhanwantri Information System for Health Analytics (DISHA).** It is an analytics software for visualisation of real time health data for Commanders and Staff. The software facilitates better allocation of medical resources as well as analytics on health state of serving, Ex-servicemen as well as dependents. The application covers nationwide hospitals as well as carries out analysis of medical reports generated by Dhanwantari.
- (c) **Automation of Recruitment Process in Indian Army.** The recruitment process in Indian Army is now fully automated. The entire recruitment process is carried out through various tailor-made softwares.

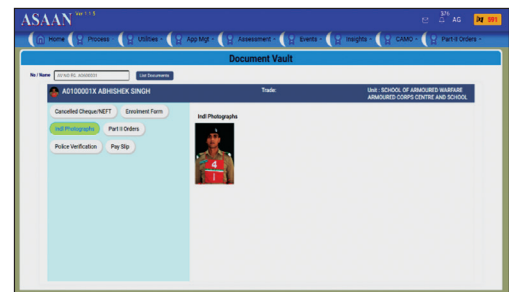
- (i) **Join Indian Army (JIA) Website.** JIA website is hosted on the internet, wherein, the candidates have to register themselves and apply for online Common Entrance Exam (CEE). After completion of online CEE the rally notification is published by Army Recruiting Offices (AROs).



The rally scheduling, answer to any queries and issue of admit cards with barcode for rallies is being carried on JIA website. The candidate's attendance is captured by scanning the barcode on the admit card at the Rally Site.

- (ii) **eDMASS.** The data of online CEE is imported to eDMASS software where call up merit is generated and the data is exported to eRECRUITX. Once the rally data is received from AROs, the final merit is prepared and allotment of arms and services is carried out by the software.
- (iii) **eRECRUITX.** The data of candidates who clear the 1.6 kilometer run is captured in eRECRUITX software, where his biometric data which is captured during online CEE is verified. The data of Physical Fitness Test (PFT), Physical Measurement Test (PMT) and Medicals are entered in the eRECRUITX. Once the recruitment process is completed, the despatch to respective Regimental Centres is carried out through this software.
- (iv) **eKKQSPAPER.** eKKQSPAPER software is a unique software, wherein, the CD containing encrypted question paper is forwarded to AROs where the question paper is decrypted and printed. In addition, seating plan is also generated from this software. This software is currently being used for recruitment of Unit Headquarter candidates (10%) only.

- (d) **Automation in Management of Agniveers.** Army Software for Agnipath Administration and Networking web application has been developed in-house for complete management and assessment of Agniveers i.e. from 'Recruitment to Retention'. The application also serves as an analytical tool for Commanders and Staff.



2. e-Governance Initiatives

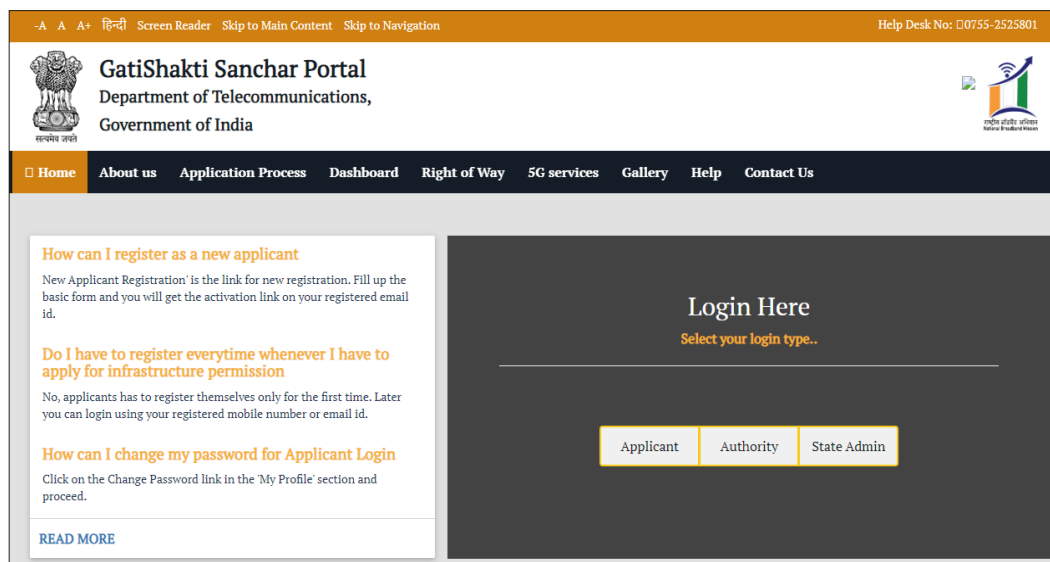
- (a) **Government e-Marketplace (GeM).** Indian Army was awarded 'Platinum Award' for being 'Top Organisation (Central)' amongst all Central procurement entities. The award was received by the VCOAS on 26th June 2023. Indian Army is poised for the highest procurement in FY 2023-24 with stipulated target of ₹ 10,000 crore on the Gross Monetary Value.



- (b) **Migration of Army Purchase Organisation (APO) to GeM.** APO has migrated to GeM from FY 2023-24 and all future procurements will be carried out on GeM. APO has successfully concluded contracts of approximately 1,43,800 metric tonnes of ration items amounting to approximately ₹ 1,500 crore for the FY 2023-24.

3. Digitisation Initiatives

- (a) **eOffice.** NIC eOffice has been implemented in all Branches down till Headquarter Commands with inter-instance transfer module, leading to greater efficiency.
- (b) **Gati Shakti 'Sanchar' Portal.** Army platform on the Gati Shakti 'Sanchar' Portal for installation of mobile towers and communication infrastructure on defence land has gone live on 22nd June 2023 wherein telecom service providers are now applying online on the portal.



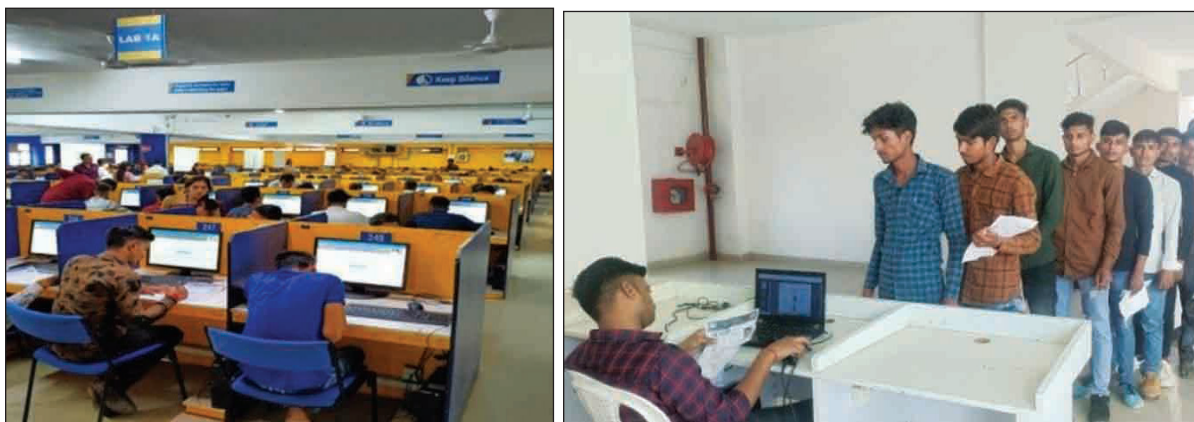
- (c) **Army Mobile Aadhaar Application Network (ARMAAN) 2.0.** Online access to administrative services and equitable access to amenities is being facilitated through upgraded ARMAAN 2.0, a web based application hosted on internet in October 2023.



- (d) **Online Entrance Exams**

- (i) **Software for Automation of Question Paper.** Development and use of software for automation of question paper for various exams of Army Education Corps personnel has resulted in reduction of officers for preparation and moderation of question papers/ evaluation of answer scripts which has contributed towards overall efficiency and saving ex-chequers money by reducing movement on temporary duty.
- (ii) **Common Entrance Exam.** In a major transformational change in the recruitment process of the Indian Army, Common Entrance Exam was conducted online for the first

time at 175 locations and 375 centres with effect from 17 to 26 April 2023. The conduct of the exam was monitored by a Central Command and Control Centre. In addition, observers from Local Military Authorities (LMA) monitored the conduct of the exam at all designated centres. 11,30,746 candidates registered for the exam. On similar lines, Territorial Army (TA) Entrance Exams shifted from offline to online exam format. The process for selection for TA has commenced with the first online exam conducted in December 2023.



(e) Implementation of Defence Travel System

- (i) Integration of Agniveers on Defence Travel System (DTS) Portal.
- (ii) Integration of Vande Bharat Express in DTS Portal.
- (iii) Premium Economy Class for Air Tickets.

Conservation of Ecology

Afforestation and Ecological Restoration by Ecological Task Forces (ETF). The ETF (TA) has played a pivotal role in the reclamation of deteriorated lands and in conservation of biodiversity. The units have jointly planted approximately 32.98 lakh saplings in approximately 3,298 hectares of land in the year 2023-24 across the country so far.



National Mission for Clean Ganga. Ganga Task Force is deployed along the banks of River Ganges in Kanpur, Varanasi and Prayagraj and is working closely with Ministry of Jal Shakti in National Mission for Clean Ganga (NMCG) by carrying out plantation of trees to check soil erosion, management of public awareness/ participation campaigns, patrolling of sensitive river areas, biodiversity protection, patrolling of ghats, monitoring of river pollution, assistance during floods/ natural calamity in the region.

Mission Amrit Sarovar. Mission Amrit Sarovar was launched on 24th April 2022 by Government of India with an objective to harvest and conserve water for future generations. Taking forward the initiative under the theme 'Mission Amrit Sarovar' Indian Army had aimed to revive 450 'Sarovers' in various parts of the country. The aim was achieved by 15th August 2023. Additional 51 ponds have been created/ resuscitated in conjunction with the civil administration and village panchayats.



Eco-Restoration of Delhi Ridge Area in Delhi Cantonment. Indian Army has collaborated with Bombay Natural History Society for Eco-Restoration of Delhi Ridge Area by replacing the invasive and toxic 'Vilayati Kikar' with native plant species.

Swachh Siachen Abhiyan : Solar Energy Project. Two solar power projects of One Mega Watt each were established in Siachen Region. Projects were conceptualised based on Hon'ble PM's vision of 'Atmanirbhar Bharat' and 'Sustainable Growth through Sustainable Energy Sources'. The project is also in line with PMO 'Go Green' initiative and a step towards 'De-dieselisation' and 'Kerosene Free Ladakh'.



Promoting Electric Vehicles (EV) and Hybrid Cars. Efforts are being made to popularize sale of EVs and hybrid cars models through Canteen Stores Department (CSD). To that end, 22 EVs and 43 Hybrid cars have been introduced in CSD canteen so far. In addition, for promoting hiring of EV, in place of Civil Hired Transport (CHT), a road map to achieve upto 15 percent EV hiring across all Metros/ other cities by FY 2024-2025 has been promulgated to the environment.

Green Building Norms. LED-isation and use of solar energy has immensely contributed in reducing carbon footprints and annual saving of approximately ₹ 276 crore. LED-isation of approximately 112.27 lakh light points have been completed till date.

Achievement In Sports

Indian Army has a long standing tradition of fostering sports and spirit of adventure. The achievements for the year 2023 are highlighted in succeeding paragraphs.

(a) National Awards

- (i) Subedar Mohammed Hussamuddin, Boxer from Indian Army, has been conferred with Arjuna Award. The boxer is a two-time bronze medal winner from Commonwealth Games. He has also won a bronze medal each at World Championship in 2023 and Asian Championship in 2022.



- (ii) Honorary Captain (Retired) Bhaskaran E has been conferred with prestigious Dronacharya Lifetime Award for his immense contribution in the field of Kabaddi.



- (b) **Paris Olympics 2024.** Five renowned sportspersons from Indian Army have secured direct qualification for the Paris Olympics 2024 on the basis of their spectacular performance:-

S.No.	Name	Node	Discipline
(i)	Subedar Avinash Sable, VSM	Army Sports Institute, Pune	3000 metre Steeple Chase
(ii)	Subedar Neeraj Chopra, PVSM, VSM	Army Sports Institute, Pune	Javelin Throw
(iii)	Lance Havildar Amir Ahmad Bhat	Army Marksman Unit, Mhow	Para Shooting (25 metre Pistol event)
(iv)	Subedar Soman Rana	Army Paralympic Node, Kirkee	Para Shooting Shot Put (F-57 Category)
(v)	Havildar Bomadevra Dheeraj	Army Sports Institute, Pune	Archery

- (c) **Performance in 19th Asian Games.** 19th Asian Games was held at Hangzhou, China from 23rd September to 08th October 2023. 661 strong Indian Contingent participated in the mega sporting event. 59 sportspersons represented Indian Army in the Indian contingent and brought glory to the Nation and the Indian Army by contributing 20 medals (three Gold, seven Silver and 10 Bronze) to the overall medal tally of 107 medals won by Indian Contingent.

Sports Discipline	Performance
Athletics	02 Gold, 02 Silver and 03 Bronze Medals
Kabbadi	Team Gold Medal
Archery	Team Silver Medal
Boxing	Bronze Medal
Wrestling	Silver Medal
Rowing	Two Silver and Three Bronze Medals
Sailing	Two Bronze Medals
Shooting	One Silver Medal
Kayaking and Canoeing	One Bronze Medal



(d) **4th Asian Para Games 2023.** 11 Para Sportspersons from Indian Army participated in 4th Asian Para Games 2023 held at Hangzhou, China from 22th October to 28th October 2023. The participants won one Gold, four Silver and two Bronze medals in different disciplines. Results are as under:-

Rank and Name	Event	Category	Performance
Sepoy Solairaj D	Long Jump	T-64	Gold
Subedar Soman Rana	Shot Put	F-57	Silver
Havildar Ajay Kumar	400 metre	T-64	Silver
Havildar K Narayana	Para Rowing	PR3	Silver
Guardaman Suraj Singh	Men Open Compound (Archery)	Open Category	Team Silver
Havildar H Hokato Sema	Shot Put	F-57	Bronze
Sepoy Unni Renu	High Jump	T-44	Bronze

Promoting Border Area Development through Tourism & Adventure Activities and Complementing Vibrant Village Programme

The programme entails convergence of all existing schemes with an additional budget allocation in order to develop border areas. Cabinet approval for the same was accorded in February 2023, wherein 662 villages have been identified across the Northern Borders to be developed. Indian Army

has identified and forwarded a list of 100 such villages out of 662 villages that need to be developed on priority.

Five adventure events have been organised in collaboration with civil agencies till date under the initiative. Two familiarisation trips along Eastern and Northern Borders have been undertaken by Adventure Tour Operators Association of India (ATOAI) and various stake holders. Four pilot projects on Border Area Tourism are planned to ascertain the circuits and look for additional avenues.

Military Civic Action Programme

Indian Army undertakes a large number of Military Civic Action Programmes sponsored and funded by the GoI aimed at 'Winning Hearts and Minds' of the people in the areas affected by terrorism and insurgency in J&K, Ladakh and North Eastern States under Operation SADBHAVANA and Operation SAMARITAN.

The focus of Operation SADBHAVANA in these regions has been towards development of core social indices of 'Quality Education, Women Empowerment, Community and Infrastructural Development, Health and Development of Backward Communities'. Some important initiatives being undertaken are as under :-

- (a) **Education.** Indian Army runs 43 Army Goodwill Schools in the UT of J&K and Ladakh, amongst which 28 schools are located in the Kashmir Valley. These schools are providing quality education to approximately 15,000 students, apart from employing approximately 1,000 teachers and staff.
- (b) **Youth Engagement.** 18 National Integration Tours have been conducted for approximately 450 students and youth of remote areas to visit National Capital Region and important historical and educational hubs of the country.



- (c) **Veterinary Assistance.** Remount and Veterinary units deployed in field locations with its outreach programmes, conduct veterinary aid camps for local populace under 'Operation SADHBHAVANA'. During the year a total of 15,410 civil animals of different categories were treated and free medicines for animals were distributed where veterinary facilities do not exist.

Aid to Civil Authority

Operation KAVERI (Sudan). Operation KAVERI was launched by Indian Armed Forces from 19th April 2023, utilising IAF and IN assets. A total of 2,171 Meals Ready to Eat were provided by Indian Army for provisioning to Indian diaspora. Evacuation operations were successfully conducted from Port Sudan to Jeddah and subsequently from Jeddah to India.

Operation DOST at Turkey. As part of national effort to provide relief to earthquake hit population of Turkey, Operation DOST was launched in 2023. Indian Army Field Hospital comprising of 99 various Specialist Medical Officers and Paramedics, established the hospital at Iskenderun in Hatay Province, Turkey. The hospital performed four major surgeries, 58 minor surgeries, 318 minor procedures, dental treatment to 236 patients, 271 precautionary X-rays on trauma victims and 1,129 laboratory investigations in a very short period.

Operation TEESTA. Due to the Glacial Lake Outburst Flood in Lonak Lake on the night of 03/04th October 2023, heavy damage to infrastructure in Sikkim along the Teesta River was caused, wherein roads and bridges were washed away. Indian Army along with State Government, undertook Search and Rescue operations and construction work on war footing to restore connectivity and provide succour to the affected people. Two Bailey Bridges of 150 feet span each on Teesta River were opened for



civilian traffic on 27th October 2023, road connectivity to Chungthang was restored by constructing a 200 feet Triple Double Reinforced Extra Wide Bailey Bridge over Teesta River on 16th November 2023, a 100 feet Triple Single Bailey Bridge was constructed at Zeema Chu on 28th November 23 and a 13.2 Kilometre foot track was constructed between Rangma Range to Chatten to facilitate supply of essentials. Engineer Bomb Disposal teams were deployed and they disposed off a large number of Unidentified Explosive Objects. Two Avalanche Rescue Operation dogs and one Search & Rescue dog were deployed followed by Explosive Detection and Mine Detection dogs. These army dogs successfully led to recovery of vehicles and other weapons, ammunition boxes besides, IT equipment, unit stores and personnel items buried underground.



Humanitarian Assistance and Disaster Relief (HADR) Operations. Based on the requisition received from civil administration, Indian Army deployed 110 columns (including 18 Engineer Task Forces) in 15 States of the country for HADR operations in 2023. A total of 8,841 individuals were rescued in such operations.

Rescue Operation on National Highways and Infrastructure Development Corporation Limited (NHIDCL) Tunnel Collapse in Uttarakhand. Engineer Column and expert officers including tunneling experts were promptly provided for successful rescue of 41 trapped workers due to collapse of under construction tunnel from Silkyara to Dandalgaon on 12th November 2023. The operations were called off on 29th November 2023 after the trapped workers were successfully rescued.



Flood Relief Operation in Chennai During Cyclone "MICHAUNG". On 04th December 2023, Cyclone Michaung along with heavy rains led to over flowing of River Adyar and Manapakkam Canal which further resulted in inundation of adjoining areas. 230 civilians were rescued and the operation was called off on 07th December 2023. In an another flood relief operation, two strong columns were deployed on 18th December 2023, in which 1,083 civilians were rescued.

Operation HIMRAHAT/ Sikkim. On 13 December 2023, Operation HIMRAHAT was launched to rescue stranded civilians in snowbound areas of Lachung and forward areas of East Sikkim. 1,247 tourists were evacuated to safe locations.



Welfare Initiatives

Inauguration of CSD Depot, Ambala. A state of the art facility created by Defence Freight Corridor Corporation of India Limited (DFCCIL) for CSD Depot Ambala was inaugurated by the Hon'ble RRM on 05th July 2023.

Online Portal for CSD Smart Cards. To reduce time taken in preparation and delivery of new CSD Smart Cards to the users, a web application (<https://csdsmartcard.co.in>) for submission of applications for preparation of CSD Smart Cards has been developed.



Initiatives for Efficient Service Delivery. Entitled users are now permitted to purchase one-month entitlements of both grocery and liquor in advance from January 2023. The requirement to process the application through Zila Sainik Welfare Office for the same have been done away with. The annual turnover limit of URCs has also been increased from 35 percent to 75 percent to ensure that adequate stocks are available in URCs.

Introduction of Gratis CSD Smart Cards for War Widows and Next of Kin (NoK) of Battle Casualty (Fatal). All Veer Naris/ NoK of Battle Casualties (Fatal) are now being issued with a unique Canteen Smart Card to enable their easy identification by the URC staff.

Project Kaushalveer. Project Kaushalveer is a transformative HR development initiative being undertaken towards skill empowerment of the soldiers of the Indian Army. The project leverages the provisions of newly promulgated National Credit Framework (NCrF): 2023 and National Education Policy (NEP): 2020 towards recognition of unique skill sets of the highly skilled, trained, disciplined and motivated manpower base of the Armed Forces and lays down modalities for certification of these skills as per the global industry standards.

Miscellaneous

Chanakya Defence Dialogue - 2023. The inaugural annual Indian Army seminar titled Chanakya Defence Dialogue - 2023 was conducted on 03rd and 04th November 2023 at Manekshaw Centre, New Delhi. The seminar which was based on the theme – ‘Collaborating for Enduring Peace and Security’ was inaugurated by the Hon’ble Vice President of India.



Project Udbhav. Indian Army and United Service Institution of India (USI) has launched ‘Project Udbhav’ with an aim to study the evolution of indigenous military system, examine ancient Indian strategic thought, develop and propagate a strategic vocabulary rooted in Indian culture and philosophy to promote Indian soft power. The public launch of the Project was done by Hon’ble RM on 21st October 2023 as part of ‘Indian Military Heritage Festival’ at New Delhi.

Honour Run : Indian Army Veterans Half Marathon (IAVHM). In commemoration of the historic military victory in the Kargil War, Indian Army conducted ‘Honour Run : IAVHM’ in Delhi on 10th December 2023. The event was aimed at strengthening the bond between the Indian Army, veterans and the masses, especially the youth. Over 14,000 serving personnel, veterans, cadets from National Cadet Corps, families of army personnel and enthusiastic citizens of different age profile participated in the event.

International Year of Millets (IYoM 2023).

- (a) **Millet Fortnight.** A concerted drive was undertaken pan Indian Army during the 'Millets Fortnight' from 01 to 14th December 2023 to promote 'Shree Anna'.
- (b) **Introduction of Millet Based Products in CSD.** 10 Millet based products are available in CSD while 69 products have been provisionally selected for introduction. Millet based products worth ₹ 1.82 crore have been sold to the URCs from January to November 2023. The monthly sales have more than doubled between January 2023 (₹13.82 lakh) and November 2023 (₹ 28.48 lakh).
- (c) **Millet March Seminar.** On 14th December 2023, the Indian Army conducted a seminar themed 'Millet March : Nourishing the Defenders of the Nation by Rebooting Rations with Millets' at Delhi. During the key note address, VCOAS highlighted how "Shree Anna" has the power to transform our food ecosystem, protect our environment and uplift the farming communities.

* * * * *

Indian Navy

India's quintessential maritime character and vital geo-strategic location are twin factors that have played an important role in her growth as a nation and evolution as a cosmopolitan civilisation.

66% of the world's oil, 33% of the world's bulk cargo and 50% of the world's container shipments pass through IOR. About **95%** of our trade **by volume** and **70% by value** flows through the seas.

Important Activities In 2023

Initial Operational Clearance of Indigenous Carrier, INS Vikrant. Successful maiden landing of LCA (Navy) and MIG-29K aircraft was achieved onboard INS Vikrant as part of Aviation Integration trials in Feb 23. Maiden day landing of indigenous LCA (Navy) demonstrated '**Atmanirbharta**' in India's capability to **design, develop, construct and operate** an indigenous Aircraft Carrier with indigenous Fighter Aircraft.



LCA Landing on INS Vikrant

Mission Based Deployments. IN undertook Mission Based Deployments in Areas of Interest in the Indian Ocean Region (IOR) to safeguard national maritime interests. These deployments were in consonance with the Hon'ble PM's vision of '**Security And Growth for All in the Region (SAGAR)**'. IN ships and aircraft were regularly deployed in the Gulf of Oman/ Persian Gulf, Gulf of Aden/ Red Sea, South and Central IOR, off Sunda Strait, Andaman Sea/ approaches to Malacca Strait and Northern Bay of Bengal.

Operation SANKALP. Maritime Security Operation in the Gulf Region, code-named Op Sankalp, commenced in 2019 to ensure safe passage of Indian Flagged Merchant Vessels (IFMV) transiting through the Strait of Hormuz. Since June 2019, IN has deployed 41 warships and escorted approximately 624 Lakh Tons of cargo onboard 503 IFMVs. Four warships were deployed in 2023.

Anti-Piracy Patrols. Sustained efforts by Indian Navy in the **Gulf of Aden region since 2008** have resulted in substantially reducing the menace of Piracy in the Western IOR. Since 2008, **112 ships** have been deployed in Gulf of Aden Patrol (eight ships in 2023). Further, Indian Navy recently completed its second Anti-Piracy patrol in **Gulf of Guinea (GoG)**, off the West coast of Africa, since its commencement in September 2022.

'MAHASAGAR' - Indian Navy's outreach Initiative between Maritime Heads. MAHASAGAR also another word for vast ocean, is the Indian Navy's outreach initiative for a high level virtual interaction between **Maritime Heads for Active Security And Growth for All** in the **Region (MAHASAGAR)**. The maiden edition of the high level virtual interaction MAHASAGAR was hosted by the Indian Navy on November 29, 2023, during which Admiral R Hari Kumar, Chief of the Naval Staff interacted with Heads of Navies/ Maritime Agencies and Senior Leadership from IOR littorals, viz., Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka and Tanzania. The interaction's theme was '**Collective Maritime Approach towards Countering Common Challenges**'.

Operation Kaveri (Non Combatant Evacuation Operations at Sudan). 'Operation Kaveri' was executed towards evacuating Indian nationals from Sudan owing to military clashes between Sudanese Armed Forces (SAF) and Rapid Support Force (RSF).



Operation Kaveri

Operation Karuna. In the aftermath of devastation caused by Severe Cyclonic Storm Mocha off Sittwe, Myanmar, on May 14, 2023, India launched Operation Karuna, as part of Mission SAGAR, to provide Humanitarian Assistance and Disaster Relief (HADR) material to Myanmar. Four IN ships namely *Shivalik*, *Kamorta*, *Savitri* and *Gharial*, were deployed to Yangon, Myanmar for transshipment of HADR items from May 18 to 20, 2023.



Operation Karuna

Assistance to Capsized Chinese Fishing Vessel. A Maritime Patrol aircraft was launched on a benign mission in May 2023 for search of Chinese Fishing Vessel (CFV) Lu Peng Yuan Yu 028. The aircraft sighted the capsized CFV Lu Peng Yuan Yu 028 and a life raft was dropped at the position. This position was relayed to PLA(N) 44th APEF operating in the area. This was the first occasion in which an *IN* aircraft provided SAR assistance to a Chinese vessel.

Ocean Ring of Yoga. For International Day of Yoga 2023, partnered with Ministry of AYUSH and Ministry of External Affairs, under the GoI initiative “Ocean Ring of Yoga” (symbolizing unity and solidarity) and Min of External Affairs, *IN* deployed nearly **3500 Naval personnel onboard 19 Indian Naval ships, who travelled over 35000 km as ambassadors of Yoga** in both National and International waters. This include over 2400 personnel on 11 *IN* ships in foreign ports/ international waters.



INSV Tarini. *IN* Sailing Vessel Tarini was deployed for Open Sea Sailing Expedition wef 22 Nov 22 with a crew of five (including **02 Women Officers**). Tarini successfully completed a 17,000 nm trans-ocean inter-continental voyage to South Africa and South America (Cape to Rio Race).

TV D1 Crew Module Recovery of Gaganyaan. The Test Vehicle Abort mission (TV-D1) was launched on October 21, 2023 from Satish Dhawan Space Centre (SDSC), Sriharikota. The aim of TV-D1 launch was to validate the efficiency of Crew Escape System (CES) during an emergency abort condition while the crew module is within atmospheric limits. Post launch and successful ejection, recovery of Crew Module and recording of the launch (as required by ISRO) was successfully undertaken by Indian Navy and the Crew Module was later disembarked at Chennai.

EXERCISES WITH FOREIGN NAVIES

Varuna-23. Two *IN* ships, along with two MPAs, Fighter Aircraft and helicopters participated in the 21st edition of Exercise Varuna - 23 with French Navy Carrier Strike Group (comprising Charles De Gaulle, Forbin, Provence and Marne), along with maritime patrol aircraft Atlantique 2 off Goa in January 2023. Subsequently, the FN ships Charles De Gaulle, Forbin and Provence entered Goa, while Marne entered Mumbai for the Harbour Phase of the Exercise. French aircraft Atlantique, A330 MRTT and A400M operated from INS Hansa, Goa.

IDEX and NAVDEX – 23. One *IN* ship participated in International Defence Exhibition (IDEX) and Naval Defence Exhibition (NAVDEX - 23) at Abu Dhabi, UAE, scheduled in February 2023.

Exercise La Perouse. Two *IN* ships participated in the 3rd edition of the Multilateral Exercise La Perouse conducted in Southern Bay of Bengal in March 2023. Eight warships from six countries (Australia, India, France, Japan, UK and USA) participated in the exercise.



Exercise La Perouse

Exercise Sea Dragon. *Sea Dragon* is a multilateral Air ASW exercise conducted by US Navy. *IN* Maritime Patrol Aircraft participated in the 5th edition of Anti-Submarine Warfare (ASW) Theatre Exercise *Sea Dragon 23* conducted at Guam, USA in March 2023.



Exercise Sea Dragon

Exercise Konkan 23. *IN* Ship one each and MPA aircraft participated in the annual bilateral maritime exercise *Konkan 23* with Royal Navy ship HMS Lancaster off Mumbai in March 2023.

International Maritime Exercise 23. One *IN* ship participated in the Sea Phase of International Maritime Exercise/ Cutlass Express 23 conducted in the Persian Gulf in March 2023. 13 warships from seven countries (India, USA, UK, Japan, Saudi Arabia, UAE and Bahrain) participated in the exercise.

SLINEX-23. Two *IN* Ships participated in India - Sri Lanka bilateral exercise SLINEX 23 with Sri Lankan Navy ships SLNS Vijaybahu and Samudura at/ off Colombo, Sri Lanka in April 2023.

MPA Deployment. *IN* MPA was deployed to Darwin, Australia, for coordinated surveillance with Royal Australian Air Force (RAAF) P8A in April 2023.

ASEAN India Maritime Exercise (AIME) 2023. Two *IN* ships along with a MPA participated in the maiden ASEAN India Maritime Exercise (AIME) and International Maritime Defence Exhibition (IMDEX) conducted at Singapore in May 2023.

AIME 2023

Samudra Shakti 23. One *IN* ship along with a MPA participated in the 4th edition of Exercise Samudra Shakti 23 conducted at Batam, Indonesia in May 2023.

Al-Mohed Al-Hindi. Two *IN* ships along with one MPA participated in bilateral exercise Al-Mohed Al-Hindi conducted at Al Jubail, Saudi Arabia, in May 2023. Royal Saudi Naval Forces (RSNF) ships Badr, Abdul Aziz and two HIS-32 FACs, one Maritime Patrol Aircraft (MPA), MH60R helicopter and Karayel UAV participated in the exercise.

LIMA 23. One *IN* ship participated in Langkawi International Aerospace Exhibition (LIMA) at Langkawi, Malaysia in May 2023.

India - France - UAE Maritime Exercise. One *IN* ship participated in the maiden India - France - UAE trilateral exercise with FS Surcouf and Maritime Patrol Aircraft ex-UAE in Gulf of Oman in June, 2023.

India - France - UAE Trilateral PASSEX. Maiden India - France - UAE trilateral PASSEX was conducted in June 2023, off Gulf of Oman. One *IN* ship, FS Surcouf and UAE Navy helicopter (Panther) participated in the exercise.

KOMODO 23. One *IN* ship participated in the fourth edition of Multilateral Naval Exercise KOMODO - 23 conducted at Makassar, Indonesia, in June 2023. The exercise saw the participation of navies from 36 countries and was conducted between Borneo and Sulawesi.

SALVEX-23. *IN* and USN have been participating in a combined Salvage exercise since 2005. Seventh edition of IN - USN Diving, Salvage and EOD exercise (SALVEX) was conducted in June/July 2023 at Kochi.

MPRA SMEE. One MPA aircraft participated in Subject Matter Expert Exchange (SMEE) with Australian P8A at INS Rajali, Chennai, June 30 to July 06, 2023.

CMF Operations

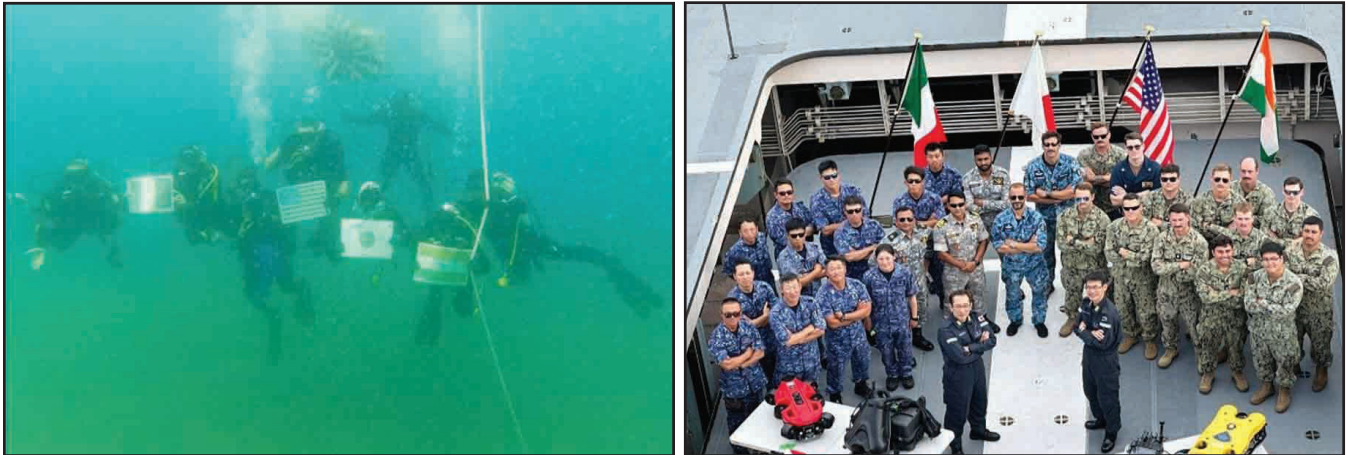
(a) Operation Southern Readiness. One *IN* Ship was deployed to Seychelles for participating in Op Southern Readiness in July 2023.



Operation Southern Readiness

- (b) *IN* aircraft commenced participation in CMF operations from November 2022. This has provided good operational gains through enhanced MDA off the Persian Gulf and Oman Coast. MPA was deployed for surveillance in support of CMF operations in Arabian Sea on three occasions in July 2023.

Exercise 2JA - Explosive Ordnance Disposal Exercise (EOD). *IN* divers participated in EOD/MCM exercise 'Ex 2JA' in July 2023 at Mutsu Bay, Japan. Teams from US Navy, JMSDF and Italian Navy also participated in the exercise.



Exercise 2JA

Malabar 23. Two *IN* ships and a Maritime Patrol Aircraft (MPA) participated in the 31st edition of Exercise MALABAR 23 scheduled at/off Sydney, Australia August in 2023, along with ships and aircraft from US Navy, JMSDF and RAN.



Exercise Malabar 23

AUSINDEX. The 5th edition of AUSINDEX was conducted in August 2023 at/ off Sydney, Australia. Two *IN* Ships participated in the exercise, along with HMAS Choules and HMAS Brisbane from RAN.

Exercise Bright Star 23. One *IN* Ship participated in Multilateral Tri-Services Exercise Bright Star 23 conducted in the Mediterranean Sea in September 2023.

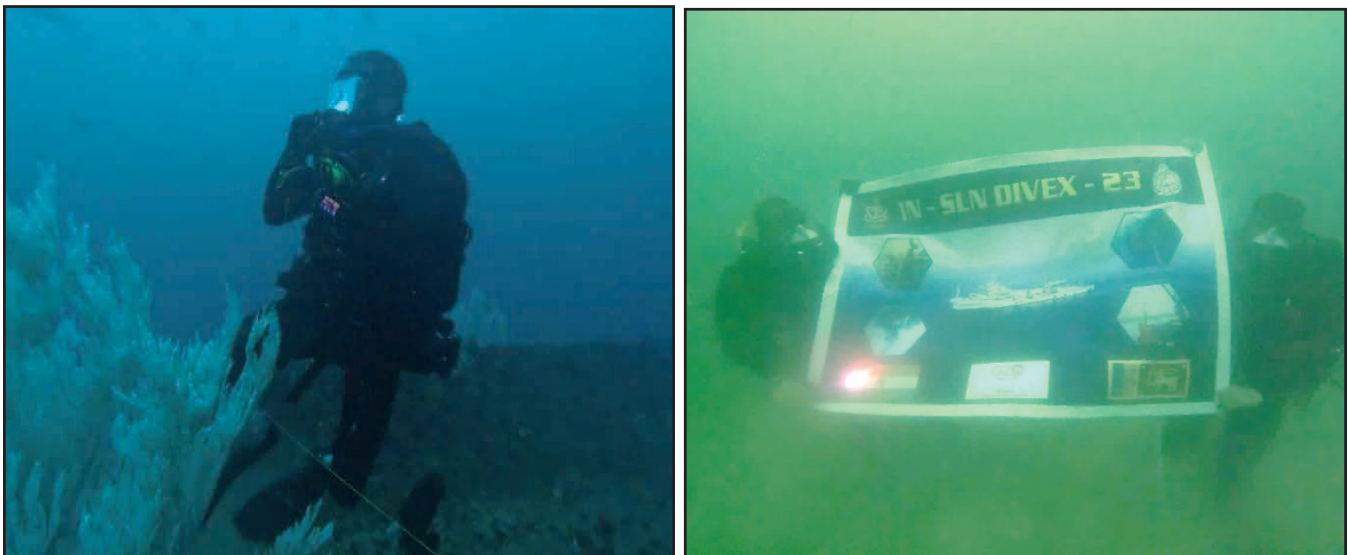


India - France - UAE Maritime Exercise

SIMBEX-23. Two *IN* ships, along with a submarine and a MPA, participated in the 30th edition of SIMBEX-23, with Singapore Navy ships *Stalwart*, *Valour*, submarine *Invincible* and Fokker aircraft at/ off Singapore in September 2023.

Deployment of *IN* Ship to West/ East coast of Africa. One *IN* Ship was deployed to Mediterranean and West/ East coast of Africa.

Deployment of Diving Support Ship to Trincomalee, Sri Lanka. *IN* Diving Support Ship was deployed to Trincomalee, Sri Lanka in September 2023 to conduct Mix Gas Diving Training for SLN. 17 SLN divers including eight officers progressed diving training on the wreck of ex-HMS *Hermes* located 60 Nm off Trincomalee at a depth of 54 meters.



Diving Training for SLN, Trincomalee, Sri Lanka

Coordinated Patrols (CORPAT). As part of maritime security cooperation with maritime neighbours, Coordinated Patrols along the IMLB are being conducted with littoral navies of the IOR as per established Memorandum of Understandings (MoUs) and Standard Operating Procedures (SOPs), as follows:-

- (a) **IN-Myanmar Navy (MN) Coordinated Patrol (IMCOR) 2023.** Two *IN* Ships along with a MPA participated in the 14th edition of IMCOR with Myanmar Navy ships UMS Tabinshweti, Fast Attack Craft 559 and ATR-42 aircraft in April 2023.
- (b) **35th INDO – THAI Coordinated Patrol (CORPAT).** One *IN* ship and a MPA participated in the 35th INDO - THAI CORPAT conducted in the Andaman Sea along with Royal Thai Navy ship Saiburi and one Dornier aircraft in May 2023.
- (c) **IND – INDO Coordinated Patrol (CORPAT).** One *IN* ship along with one MPA participated in the 40th edition of IND – INDO CORPAT, conducted in the Andaman Sea, with Indonesian Navy ship KRI Tauku Umar and aircraft CN 235-220.

Foreign Cooperation

Assistance to Sri Lanka. A five member *IN* Technical Team was deputed to Sri Lanka in February 2023 to assess the existing Trials Team infrastructure of Sri Lankan Navy (*SLN*) and indicate measures in setting-up of Trials Unit of *SLN* akin to *IN* units. As a follow-up of the visit, *IN* is conducting customised courses for *SLN* in India, as per the request of *SLN*. Further, spares worth ₹ 1.7 Cr were gifted to *SLN*, towards ensuring optimal availability of Gol gifted ships.



Gift of Spares to SLN



Classroom Training of SLN Officers

Deployment of 1st Training Squadron. *IN* ships Tir, Sujata and CGS Sarathi as part of 1st Training Squadron, whilst on overseas deployment, were utilised to provide assistance to foreign countries besides enhancing foreign cooperation.

Leasing of INS Tarmugli to Maldives. INS Tarmugli was handed over to Maldives on May 02, 2023 towards capability building. The ship was re-commissioned into Maldivian Navy



Spares Transfer to Seychelles

as MCGS Huravee. The handing over ceremony was attended by Hon'ble RM. Further one Landing Craft Assault (LCA) was also handed over to Maldives.



Handing Over of INS Tarmugli to Maldives

Delegation to Suriname. A Tri-Services Scoping Delegation was deputed to Suriname in Jul 23 to identify and evaluate the requirement of Surinamese Armed Forces. On the Naval front, technical assistance to undertake repairs of 06xPatrol Craft was highlighted by the Suriname side and accordingly, suitable technical team is planned to be deputed.



Tri Services Team at Suriname CG Headquarters

Handing Over of INS Kirpan to Vietnam. INS Kirpan was decommissioned and handed over to Vietnam People's Navy (VPN) on July 22, 2023 at Cam Ranh, Vietnam in the presence of CNS and RAdm Pham Manh Hung, Deputy C-in-C & Chief of Staff, VPN. CNS also visited VPN Headquarters at Hai Phong for bilateral interaction with Vice Adm Tran Thanh Nghiem, C-in-C, VPN.

Setting up of Met Observatory at Myanmar. A Surface Weather Observatory at Thanlyin, Myanmar, set up IN has been handed over to MN by H.E. Shri Vinay Kumar, Ambassador of India to Myanmar, during the ceremony held at Thanlyin on August 03, 2023. In addition, a dedicated 'Met Section' was also established and training was imparted to 29 MN personnel (09 officers and 20 sailors) on aspects pertinent to the Weather Observatory and its applications in Navy.

Refits of Foreign Ships. Towards providing assistance to friendly foreign nations, *IN* is undertaking refits of two foreign warships MCGS Victory from Mauritius and UMS Miye Theinkhatu (ex-*Sindhuvir*) from Myanmar.



INS Sharda Towing MCGS Victory



UMS Miye Theinkhatu at Vizag

Assistance to Myanmar. An *IN* Technical Team was deputed to Myanmar in September 2023 to provide technical assistance for installation of Ukrainian Gas Turbines onboard their under construction 135m Frigate. Further, spares amounting to ₹ 1.92 Cr were gifted to Myanmar in the last one year.

Maritime Information Sharing Workshop (MISW-23). IFC-IOR hosted the 2nd edition of MISW-23 themed on 'Advancing Maritime Security for a Sustainable Future' at Gurugram from September 14 to 16, 2023 which was a significant milestone in advancing maritime security in the Indian Ocean Region.

White Shipping Information Exchange (WSIE) Agreements. Indian Navy has progressed WSIE agreements with 25 countries and one multinational construct, till date. While such agreements with several other friendly foreign countries are being progressed, a WSIE agreement was concluded with Tanzania on October 09, 2023.

Hydrographic Cooperation. The successful completion of foreign co-operation surveys has once again proved Indian Navy's reach, capability and has contributed immensely towards strengthening the bilateral relations with recipient countries.

Survey of Myanmar. One *IN* survey ship conducted hydrographic survey and joint EEZ Surveillance off Myanmar coast including survey off Dawei Deep Sea Port Project area.

Survey of Mauritius. One *IN* survey ship will be on deployment to Mauritius from December 19, 2023 to February 16, 2024 for 60 days to undertake five (05) hydrographic surveys as part of survey season 2023-24.

Survey of Maldives. One *IN* survey ship was deployed to undertake Foreign Cooperation surveys jointly with Maldives in January 2023.

Hydrography Courses at National Institute of Hydrography (NIH), Goa. 25 personnel (04 Sri Lanka, 01 each from Nigeria, Indonesia, Australia, Guyan, Bangladesh, 02 each from Ghana, Malaysia, and 03 each from Vietnam, Namibia, Myanmar, Tanzania) are undergoing various Hydrographic Courses at NIH, Goa.

NAVY to NAVY Interaction

JWGACTC Meeting. The 6th meeting of Joint Working Group on Aircraft Carrier Technology Co-operation (JWGACTC), constituted under the aegis of Indo – US Defence Technology and Trade Initiative (DTTI), was organised in India from February 27 to March 03, 2023. An 11 member US delegation, headed by Rear Admiral James Downey, Programme Executive Officer (PEO), Carriers, visited various defence/ industrial installations in Delhi and Kochi including INS Vikrant.



JWGACTC Members onboard INS Vikrant

Interaction with Royal Navy. Exercise Konkan with the Royal Navy Ship HMS Lancaster was conducted by *IN* in March 2023. On completion, crew turnaround of HMS Lancaster was undertaken at Kochi. Indian Naval Work-up Team (INWT) reps embarked onboard HMS Lancaster for professional interactions and sharing best practices.



Interaction with Royal Navy

Visit by Royal Oman Navy. A delegation of the Royal Oman Navy visited Headquarters Sea Training (HQST) from May 06-11, 2023 for professional interactions. The visiting delegation witnessed various operational sea training activities onboard INS Tir.



Visit of Royal Oman Navy Delegation

Russian Navy Day Parade 2023. FOC-in-C, Western Naval Command, at the invitation of Russian Federation Navy (RuFN) visited Russia in July 2023 to participate in 327th RuFN Day parade at St. Petersburg and, to engage and strengthen Navy to Navy cooperation between IN and RuFN. The opportunity was also leveraged to progress the Staff Talks with the heads of delegation of Myanmar, Indonesia, Brazil, Iran and Vietnam.



Interaction with Chiefs of Russian and Vietnam Navy

Visit by Lebanese Armed Forces. A five-member Lebanese Armed Forces Training delegation led by Brigadier General Hussein Bazzi, Navy Commander Assistant, visited various training units at Kochi and Indian Naval Academy (INA) from July 02 to 09, 2023.



Visit to Training Schools



Visit to Indian Naval Academy

Visit of UAE SME Delegation to India. As an outcome of the 11th Meeting of Joint Defence Cooperation Committee (JDCC) between India and UAE, Hon'ble RM accorded 'In Principle' approval for the conduct of UAE SME visit to *IN* METOC facilities in India. Invite was extended to UAE Navy and accordingly, a three member delegation arrived in India in August 2023 for four day visit to specialized Meteorology, Oceanography and Weather Modelling units of Indian Navy at Kochi, Goa and New Delhi.

Scorpene Submarine Maintenance Co-operation. A Brazilian Navy delegation headed by Admiral Jose Augusto Vieira da Cunha de Menezes, Chief of General Staff, visited New Delhi in September 2023 and discussions were held on areas of mutual cooperation, with special focus on Scorpene Submarine Maintenance.

SHIPBUILDING PROJECTS

With 64 of the 66 warships planned to be inducted in the Navy being built in India, orders for 24 more ships and submarines being in the final stages of approval, and steadfast focus on achieving higher indigenisation content across weapons, sensors and equipment, the *IN* remains the key pillar that supports the growth of Indian Shipbuilding sector.

Shipbuilding Contracts in 2023. Five shipbuilding contracts (25 Ships) at a total value of ₹41,742.37 Cr have been concluded with Indian shipyards. Conclusion of five shipbuilding contracts within span of six months is testimony to the importance being accorded to the Indian Navy by the Govt of India. Construction of 25 ships will generate a total employment of 346.30 lakhs man-days over the next one decade and engage numerous MSMEs in the shipbuilding activity. With a multiplier effect of 1.82 in Shipbuilding sector (investment multiplier of 1.82 *iaw* Economic Survey 2022-23), the investment of ₹ 41,742.37 Cr would result in circulation of ₹ 77,200 Cr in the Indian economy.

Commissioning/ Delivery

Commissioning of INS Vagir. INS Vagir, fifth Submarine of Kalvari class, was commissioned on January 23, 2023 by the Chief of the Naval Staff.



Commissioning Ceremony of INS Vagir

Delivery of Sandhayak. Sandhayak (Yard 3025), the first of the four Survey Vessel (Large) ships was delivered to Indian Navy by M/s GRSE on December 04, 2023.

Re-commissioning of INS Tarmugli. Maldivian CG Ship Huravee, a Trinkat Class Fast Attack Craft was returned to India by Maldives post handing over INS 25 Tarmugli to Govt. of Maldives in May 2023. The ship, post refit, was re-commissioned into Indian Navy as INS Tarmugli on December 14, 2023.



Commissioning Ceremony – INS Tarmugli

Imphal (Y-12706). *Imphal*, the third Ship of Project-15B successfully completed her Sea Trials followed by Final Machinery Trials on August 25, 2023. The ship was delivered to the Indian Navy on October 20, 2023 by M/s MDL, Mumbai and commissioned on December 26, 2023. Hon'ble Raksha Mantri Shri Rajnath Singh was the Chief Guest for the occasion.



Commissioning Ceremony – INS Imphal

Launch of Ships

Launch of ASW SWC. Two ASW Shallow Water Craft (ASW SWC) namely Androth (Yard 3035) and Anjadip (Yard 3030) were launched on March 21 and June 13, 2023 respectively at GRSE, Kolkata. Three more ASW SWC namely Mahe (Yard 523), Malvan (Yard 524) and Magrol (Yard 525) were concurrently launched on November 30, 2023 at CSL, Kochi.



Launching Ceremony of Androth



Launching Ceremony of Anjadip

Launch of Sanshodhak. The fourth ship of Survey Vessel Large, i.e. *Sanshodhak* (Yard 3028) was launched on June 13, 2023 at M/s L&T Kattupalli by Chief Hydrographer to GoI.



Launching Ceremony of Sanshodhak

Launch of Vindhyagiri. The third GRSE ship of Project P17A Frigates, *Vindhyagiri* (Yard 3024), was launched on Aug 17, 2023 at GRSE, Kolkata, by the Hon'ble President of India Smt Droupadi Murmu.



Launch of Vindhyagiri by Hon'ble President of India

05 x Diving Support Craft. 1st Diving Support Craft A-20 (Yard-325) was launched on August 31, 2023 at M/s Titagarh Rail Systems Ltd, Kolkata.



Launching Ceremony of 1st DSC

Launch of Mahendragiri. The last of the seven P17A ships, i.e. *Mahendragiri* (Yard 12654) was launched on September 01, 2023 at M/s MDL, Mumbai. The Hon'ble Vice President of India was the Chief Guest for the event.



Launching Ceremony of Mahendragiri

Aviation

Besides ships and submarines, *IN* is also pursuing the indigenous development of its carrier-borne fighter, the **Twin Engine Deck Based Fighter Aircraft (TEDBF)**, in collaboration with Aeronautical Development Agency (ADA) and Hindustan Aeronautics Limited (HAL). Similarly, the indigenous **Deck Based Multi-Role Helicopters (DBMRH)** and the **Utility Helicopter – Maritime (UH-M)** are planned to equip future *IN* helicopter fleets.

ALH MK III Contract. *IN* has been operating the ALH Mk III aircraft, inducted from HAL, for Search & Rescue, Utility Role and Maritime Reconnaissance. The last, 16th helicopter has been accepted by *IN* on June 14, 2023.

Acceptance of MH 60 R Helicopters. The first tranche of MH 60R multi-role helicopters was delivered in September, 2022. Three more helicopters were inducted in 2023.

Recruitment and Training

IN undertakes recruitment of personnel to effectively and optimally man ships, submarines, aircraft and shore establishments.

Opportunity for Widows of Deceased Service Personnel. Widows of deceased service personnel, who die in harness are granted age relaxation up to 35 years of age for officer's entry schemes.

First Batch Agniveer – Passing Out. The maiden batch of Agniveers passed out from Chilka on March 28, 2023. A first of its kind Evening Passing out Parade was conducted highlighting the

significance of the occasion. It bears mention that 242 women Agniveers were trained by Chilka in the maiden batch. Thereafter they have completed 16 weeks Basic Professional Training at 21 Training schools across Southern Naval Command in August, 2023.



Second Batch – Agniveers. The second batch of Agniveers were inducted for ab-initio training at Chilka on June 12, 2023 and the Passing Out Parade (POP) was conducted on September 26, 2023. The number of women Agniveers in the second batch were 453, surpassing the previous batch.

Ab-Initio Training for Officers

Indian Naval Academy (INA), Ezhimala. Indian Naval Academy, Ezhimala is the premier ab-initio officer training establishment of the Indian Navy and was established on 08 Jan 2009. A National Knowledge Network Studio (NKN) has been set up for live streaming and interactive classes through the National Program on Technology Enabled Learning (NPTEL). In addition, the Academy has a state-of-the-art Watermanship Training Centre as well as a seamanship simulator 'CATSPAW'.

Ab-Initio Training for Sailors

INS Chilka. INS Chilka is the premiere *ab-initio* Training Establishment of the Indian Navy. The base was commissioned on 21 Feb 80. Over the years, Chilka has witnessed significant growth; starting with a modest annual throughput of 1,235 trainees, the training capacity has now expanded to over 6,000 trainees annually.

Infrastructure at Chilka. Chilka has an extensive training infrastructure, which is constantly upgraded to meet emergent challenges. Spread over 1,540 acres, the base has two swimming pools, an obstacle course, multiple football/ hockey fields, basketball/ volleyball courts, a drill nursery, a damage Control/ Fire Fighting training hard, a Seamanship training area, a full-fledged Firing Range, a Small Arms firing simulator, a well-equipped Watermanship Training Centre, a well-stocked Library, Computer Literacy Centres, Linguistic Centres and Model Rooms, in addition to support infrastructure in terms of accommodation and dining.

Inauguration of Submarine Damage Control and Fire Fighting Training Facility (SDCFFTF).

The Submarine Damage Control and Fire Fighting Training Facility (SDCFFTF) was inaugurated on May 02, 2023. The facility is first of its kind in India, simulating actual submarine conditions and environment.



Inauguration of SDCFFTF

Overseas Training

In 2023, 35 *IN* officers have been deputed abroad for training courses. These courses include 03 NDC, 07 Higher Command courses, 15 Staff courses and 10 niche domain courses.

Training Diplomacy

Training of Foreign Naval Personnel in India. The Indian Navy has been instrumental in projecting its 'soft power' across the Indo-Pacific region through training of more than **19,000** personnel from over **46** Friendly Foreign Countries (FFCs) over the past few decades. Over the past five years, India has been the most preferred destination for training of foreign personnel from IOR littoral countries and beyond, with an average of 1000 foreign personnel undergoing training in India every year.



Foreign Students at IN Training

In consonance with our foreign cooperation policies, the Ministry of External Affairs provides assistance for training of naval personnel from a large number of countries under the Indian Technical and Economic Cooperation (ITEC) Scheme I and II. Under this scheme, the airfare, tuition, boarding and lodging are fully funded by the Government of India (except in the case of ITEC II Scheme wherein the parent country bears the cost of airfare).

The number of training slots allocated to foreign trainees since 2010 is tabulated below:-

Ser	Year	No of Training Slots Allocated
(a)	2010-11	792
(b)	2011-12	853
(c)	2012-13	653
(e)	2013-14	917
(f)	2014-15	858
(g)	2015-16	857
(h)	2016-17	1013
(j)	2017 -18	957
(k)	2018-19	1126
(l)	2019-20	1016
(m)	2020-21	717
(n)	2021-22	1119
(p)	2022-23	1033
(q)	2023-24	1101

Deputation of Indian Navy Mobile Training Teams (I/N MTTs). To address the growing training load of international training, one of the important measures being undertaken is the conduct of customised training courses overseas to meet country-specific requirements. So far, we have deputed I/N MTTs to Sri Lanka, Oman, Myanmar, Kenya, Vietnam, Mauritius, Bangladesh and Nigeria. I/N MTT comprising 13 personnel was deployed for training of Myanmar personnel from 30 Jan 23 to 23 Apr 23.

Cooperation Between Armed Forces and Civil Authorities

Op Dover – Diving Assistance to ONGC. The request by ONGC, aps all commercial agencies had expressed their inability to conduct net clearance operations, IN executed Op Dover and deployed two ships (with 16 divers).

Op Yamuna – Civil Diving Assistance (14 Jul – 14 Aug 23). As Yamuna River flooded several regions in Delhi NCR owing to excessive rain and release of water from barrages located upstream, I/N assistance was sought by civil administration in July 2023 for lifting of five gates of ITO barrage jammed due to silting.

Diving Assistant for Ganga Sagar Mela. On request from the Govt. of West Bengal, Indian Navy provided two diving teams from January 08 to 17, 2023 for Rescue and Relief operations to meet any eventuality during the Ganga Sagar Mela. In addition, SAR Cover on the Hooghly was also provided during Chatth Puja and Durga Puja immersion period.



Diving Assistant for Ganga Sagar Mela by IN

Diving Assistance in J&K. Diving operations in River Jhelum were undertaken in February and June 2023 to search for a drowned girl and a boy, on two different occasions, at Sonwar and Shalteng respectively. The body of the girl was successfully recovered.

SAR/ HADR/ Salvage Operations within India

Fire Fighting Efforts at Brahmapuram, Kochi. On March 02, 2023, a major fire broke out at the solid waste dumping yard in Brahmapuram, Kochi (21 Km from Naval Base, INS Venduruthy), which left residents suffocated due to toxic fumes. Based on the request from civil administration, *IN* assisted the local authorities in firefighting effort from March 02 to 14, 2023 by positioning *IN* firefighting teams, use of helicopters for Large Area Aerial Liquid Dispersal (LAALDE) operations and aerial surveillance.



IN Firefighting Teams in Action

Fire Fighting Efforts at Mhadei Reserve Forest, Goa. Naval aircraft were deputed at INS Hansa as 'first responders' to the fire at Mhadei Reserve Forest on March 08, 2023. Within 36 hours of deployment, aircraft dropped over 20 tons of water, dousing the fire at six locations and containing spread of fire at another four locations.



Sea King Helicopter in Action

Cyclone Biparjoy. *IN* Kolkata (with Seaking Helo) was deployed towards Gujarat on June 15, 2023 during landfall of Cyclone Biparjoy to render HADR assistance, as required.

Recovery of Missing Fisherman. Based on a request from civil authorities, diving assistance was provided for search and recovery of fishermen in a sunken boat off Kanyakumari in October 2023. One *IN* survey ship was deployed to undertake a search with her integral equipment and after extensive search the fishing vessel was detected. In a coordinated operation, *IN* Diving Support Ship conducted diving operations at a depth of 60 m and recovered mortal remains of one fisherman from the sunken boat, which were handed over to the locals.

SAR of Indian Fishing Vessel. In July 2023, based on request from District Administration, *IN* team of five divers was deployed for rendering SAR assistance off Muthala Pozhi Bridge, Trivandrum (approximately 190 Km South of Kochi), where a fishing vessel (with 04 personnel onboard) was reported sunk. The *IN* divers recovered mortal remains of two personnel from the river. Further, in July 2023, an *IN* unit mission- deployed in the Bay of Bengal rescued and towed 03 Fishing Vessels (**36 fishermen**) from approximately 100 nm East of Chennai. The FVs were also taken under tow by the *IN* unit.

SAR Missions in Tamil Nadu. Four live Search and Rescue missions were undertaken off the coast of Tamil Nadu in 2023. The details of SAR missions are as tabulated: -

Ser	Date	Remarks
(a)	January 06, 2023	SAR for fisherman off Mandapam
(b)	January 10, 2023	SAR near Appa Island off Keelakarai
(c)	March 21, 2023	SAR for missing fisherman off South Pamban
(d)	March 23, 2023	SAR for missing fisherman off South Pamban

Balasore Train Accident. Post Coromandel Express accident in Balasore district of Odisha on June 02, 2023, INS Chilka and INHS Nivaranani immediately formed a 46-member Medical relief team. Non-stop Medical Relief Operations were undertaken for 30 hours commencing the night of June 03, 2023.



Balasore Train Accident Medical Relief Camp

In March 2023, IN Ship on deployment received distress message regarding extensive damage and consequent flooding in the Engine Room compartment of Indian Fishing Vessel (IFV) Nilkanth. The ship responded swiftly to the distress call and arrived at the scene. Technical assistance was rendered by the ship to arrest the flooding and make the boat seaworthy and the distressed boat was later towed safely to harbour by another fishing vessel.

MEDEVAC

MEDEVAC from MV Saipem Endeavour by IN SK Helicopter. On July 14, 2023, assistance was sought by a Panama flagged MV Saipem Endeavour, operating off Mumbai towards rescue of a crew member reportedly suffering acute appendicitis. The patient was evacuated by SK helicopter ex- Shikra to INHS Asvini AM July 15, 2023.



Sea King Helicopter onboard MV Saipem Endeavour

MEDEVAC from Lakshadweep by IN Dornier aircraft. In February, 2023, Airport Authority of India (AAI) cleared night air operations from Agatti for medical/ casualty evacuation and military requirements. This facilitated night medical evacuation of critically ill/ injured islanders from Lakshadweep by Indian Navy's Dornier aircraft on various occasions. Since January 2023, A total 34 inter island MEDEVACs that included ten civilians, twenty one service personnel and three MEDEVACs to hospitals in mainland from L&M Islands.



MEDEVAC Operations

Hydrographic Cooperation

Hydrographic Survey and Navigational Products. During the year 2022-23, a total of 43 Hydrographic surveys (Defence, Tidal, Foreign co-operation and Navigation safety) were undertaken by the department. During the same period, 10 new Paper Charts, 08 new edition paper charts, 13 new Electronic Navigational charts (ENCs) and 39 new edition ENCs were produced and released. In the field of Maritime safety services, the department have issued 912 NAVAREA warnings and 165 Notices to Mariners.

Survey at Yamuna River, New Delhi. A Hydrographic Survey Team was deputed to undertake the Survey on 11 km stretch in the Yamuna River to establish a safe navigable route. The survey has been undertaken in two phases between from May 30 –September 05, 2023.

Sports/ Awards

Asian Games 2023. 15 IN sportsmen and two officials, the largest IN contingent in Asian Games ever, represented the country in Asian Games 2023 held from September 23 to October 08, 2023 at Hangzhou, China. The details of medal winners are as follows:-

Ser	Name, Rank & P.No	Discipline	Remarks
(a)	MD Anas, CPO (RP), 242454-H	Athletics	1 Gold & 1 Silver Medal
(b)	MD Ajmal, AG PO (GW), 256514-N	Athletics	1 Gold & 1 Silver Medal
(c)	TPS Toor, CPO (PT), 195225-W	Athletics	Gold Medal
(d)	Parminder Singh, AG PO (PT), 195244-N	Rowing	Bronze Medal
(e)	Satnam Singh, AG PO (UW), 256518-Y		Bronze Medal

Tent Pegging. Mohit, PO(GW) of the IN Polo & Equestrian Contingent, Delhi, was the Team Captain of the Indian Tent Pegging team, which won the Bronze (among nine participating countries) in the World Championship in August 2023, organised in South Africa under the aegis of International Tent Pegging Federation (ITPF). The sailor had also participated in the pre-cursor championship held in Moscow in July 2023 under the aegis of ITPF and was declared the 'Best Individual Tent Pegger'.

Medal Tally. The overall medal tally of Naval sportsmen in International and National events for the year 2023 is as follows: -

Event	Players Participated	Gold	Silver	Bronze
International	83	12	06	10
National	117	25	09	17

Anti-Narcotics Operations. In 2023, Indian Navy, has intercepted huge heroin shipments in the Arabian Sea. On May 10, 2023 an Anti-Narcotics Operation (ANO) lead to seizure of 2500 kg of contraband worth ₹ 12,000 Cr. Since April 2021, 12 such operations have been undertaken by the IN. Narcotics worth ₹ 29000 Cr (approx. 3.5 Bn Dollars) has been seized over six operations in last three years.



Anti-Narcotics Operations

Initiatives Towards Indigenisation/ Atmanirbhar Bharat Enhancing the Ease of Doing Business

At present, 139 projects are being progressed under these schemes. Of these, 27 projects are at the 'Trial Stage'. More than 100 new start-ups and MSMEs are now engaged with the Navy towards indigenous development of novel technologies and products, many of them potential 'global firsts'.

Indigenous Shipbuilding. With over 132 ships/ submarines having been built and commissioned in India, the Indian Navy continues to propel the domestic shipbuilding industry's growth to strategic horizons by supporting self-reliance in defence manufacturing. With **64** of the **66** warships planned to be inducted in the Navy being built in India, orders for **24** more ships and submarines being in

the final stages of approval, and steadfast focus on achieving higher indigenisation content across weapons, sensors and equipment, the *IN* remains the key pillar that supports the growth of Indian Shipbuilding and ancillary sector.

Shipbuilding Contracts in 2023. Five shipbuilding contracts (25 Ships) at a total value of ₹ 41,742.37 Cr have been concluded with Indian shipyards. Conclusion of five shipbuilding contracts within span of six months is testimony to the importance being accorded to the Indian Navy by the Govt of India. Construction of 25 ships will generate a total employment of 346.30 lakhs man-days over the next one decade and engage numerous MSMEs in the shipbuilding activity.

Startup India – Engagement With Industry

In line with the provisions available for indigenisation, the *IN* is actively pursuing various Indigenisation activities under the following schemes:-

Revenue Scheme. *IN* is presently pursuing 17 projects as per DPM guidelines. Contracts have been concluded for 13 projects and four projects are at various stages of contract conclusion.

Make Scheme. *IN* is pursuing a total of 38 Make projects iaw Chapter III of DAP 2020. Presently, 26 projects are being steered under Make-II category, 10 projects under Make I category and two projects under Make III Category.

Technology Development Fund (TDF) Scheme. In order to introduce cutting-edge technology on board *IN* platforms, 25 projects are being pursued under the 'Technology Development Fund' scheme. Contracts have been concluded for 10 projects at a cost of ₹ 34.92 Cr.

Joint iDEX Challenges (INDUS – X). Exchange of various iDEX proposals by both India and US startups under 'India-US Defence Acceleration Ecosystem (INDUS-X)' initiative commenced in July 2023.

iDEX Scheme. *IN* is progressing 41 problem statements under Defence India Startup Challenge (DISC) and Open Challenge (OC) categories through 59 startups.

iDEX (SPRINT). In July 2022, the Hon'ble Prime Minister Shri Narendra Modi had launched 75 challenges for the start-ups/ MSMEs as a part of the "SPRINT" initiative during the NIIO Seminar 'Swavlamban- 2022'. The Navy is committed to developing at least 75 technologies/ product as part of the 'Azadi Ka Amrit Mahotsav'. Conclusion of over 100 developmental agreements between iDEX and industry was achieved, with active engagement of the Indian Navy, iDEX and start-ups/ MSMEs.

Digital India. In consonance with Digital India initiative, various measures have been undertaken by *IN* to leverage technology towards ease of doing business.

- (a) Samuha
- (b) Indian Naval Entrance Test (INET)
- (c) Naval Health Information Management System (NHIMS)
- (b) Indian Navy Online Examination System (INOES 2.0)
- (e) HawkSecure.

Indian Air Force

Introduction

The IAF as an aerospace power, is a potent instrument of national power capable of deterring conflict and maintaining peace. In any conflict in present times, the objectives would be to isolate enemy's command and control structures and carry out precision strikes on the critical vulnerabilities deep inside enemy territory.

IAF has maintained pace with the Military technology advancement through Indigenisation, Integration and Procurement:-

- (a) **Indigenisation.** IAF has renewed its focus on attaining self-reliance in defence manufacturing and helping the industry in building indigenous systems. As part of Atmanirbhar Bharat, IAF is pursuing indigenous production of fighters, transport, helicopters and trainer aircraft along with air to air weapons, air to ground weapons, surface to air guided weapons, unmanned aerial vehicles and radars.
- (b) **Integration.** Integration of existing weapons on new platforms like the Tejas aircraft and new weapons on existing platform like the BrahMos and Astra Missiles on the Su-30MKI has been successfully achieved.
- (c) **Procurement.** IAF has kept pace with developments in air power with induction of aircraft and weapon systems over the years (S-400, Rafale, Apache, Chinook, C-17, C-130J, C-295, etc).

IAF has a strong and robust operational network in the form of Air Force Network (AFNET).

Modernization of Air Force

Fighter Fleet

Light Combat Aircraft. The first LCA Squadron was formed on Jul 01, 2016. Presently, IAF has two operational LCA squadrons. IAF had signed a contract for 83 LCA Mk-1A on Jan 25, 2021 with HAL. LCA Mk-1A will have better capabilities such as Active Electronically Scanned Array (AESA) Radar, Integrated Electronic Warfare (EW) Suite, Long Range Beyond Visual Range (BVR) missile capability and better avionics with maintenance and obsolescence related improvements. Integration of Indigenous Air to Air Missile and other weapons on LCA is under progress. MoD has accorded AoN for another 97 Tejas Mk-1A on Nov 30, 2023. First LCA Tejas Mk-1 Twin Seater aircraft LT-5201 was released to IAF in a ceremony held at HAL Tejas Division in presence of Hon'ble Raksha Rajya Mantri on Oct 04, 2023. On Nov 25, 2023, Hon'ble Prime Minister undertook a maiden sortie on LCA Tejas Twin Seater ac.



Hon'ble PMs maiden sortie on LCA Tejas Aircraft

AMCA Program. DRDO is working towards indigenous development of a 5th generation fighter aircraft program called the Advanced Medium Combat Aircraft (AMCA) and IAF is providing active support to DRDO.

Procurement of Additional Su-30MKI Aircraft with Associated Equipment. IAF had moved a case to procure additional Su-30 MKI aircraft from Hindustan Aeronautical Limited (HAL). After deliberations with HAL, the indigenous content of the proposal was enhanced to 62% from the earlier 50%.



Su-30 MKI Aircraft

Procurement of AL-31FP Aero Engines for Su-30 MKI Aircraft. Su-30MKI aircraft is operational in Indian Air Force since 2002. The ac is powered with two AL-31FP aero engines. In view of the life of the aero-engines, replacement for unhindered operations and effective exploitation of the aircraft during its life-cycle was considered necessary.

BrahMos Extended Range (ER) Missile on Su-30 MKI Aircraft. The contract for BrahMos-ER was signed on Apr 06, 2021 and live firing was successfully undertaken on two occasions against a land and a sea target, respectively.



BrahMos Extended Range (ER) Missile on Su-30 MKI Aircraft

Procurement of RD-33 Engines. MiG-29 aircraft is powered by two RD-33 aero engines which are being manufactured by HAL (Kpt) i.e. DPSU under license production as per IGA 2007 placed from Russia. Each aero engine has a Total Technical Life (TTL) of 2000 hours. To make good deficiencies arising out of Total Technical Life Expiry (TTLE) of the engines in the coming years, a case was progressed to procure 80 aero engines for Mig-29 ac. AoN was granted by Defence Acquisition Council (DAC) meeting held on Jul 26, 2022.

Transport Aircraft

Procurement of C-295. To enhance the tactical load lift capability of IAF, a contract was signed with M/s Airbus Defence and Space, Spain for procurement of C-295 aircraft as replacement of the ageing Avro fleet. The first aircraft was received by IAF on Sep 20, 2023. 15 additional aircraft will be delivered in fly-away condition and other aircraft will be manufactured in India by TATA consortium.



C-295 aircraft

Dornier-228 Aircraft. Dornier-228 is a light weight transport aircraft utilized by IAF for communication, route transport, casualty evacuation and training roles. It is manufactured locally by HAL. A contract was signed on Mar 10, 2023 for supply of additional Dornier-228 aircraft and associated equipment. One aircraft has already been delivered to IAF.



Dornier-228 Aircraft

Avionics Upgrade of Dornier aircraft. A Request for Proposal (RFP) has been issued to HAL (TD) for upgrade including Cockpit Instrumentation, Autopilot, Navigation systems, Intercom, Solid State Flt Data Recorder (SSFDR)/ Cockpit Voice Recorder (CVR), SEL-CAL & Radio Altimeter.

IL-76/ IL-78 Aircraft. Joint Venture has been signed by an Indian firm with Russian OEM for manufacturing and supply of brake assemblies for IL-76/ IL-78 ac. Also, EOIs were floated for soliciting response of Indian vendors for undertaking Repair and Overhaul (ROH) of IL-series aircraft aggregates. Responses were received from six Indian firms. Encouraged by the response, a case for ROH of IL-76/ IL-78 aircraft aggregates through indigenous route is being progressed.

Trainer

HTT-40. HTT-40 is a basic trainer aircraft used for training of ab-initio pilots. The aircraft is indigenously designed and developed by HAL. A contract has been signed on Mar 06, 2023 for supply of HTT-40 aircraft with associated equipment to IAF. The deliveries of the aircraft will start from Sep 2025 and will be concluded by Mar 2029.

Helicopter Fleet

Prachand Light Combat Helicopter. A contract for procurement of Prachand LCH Limited Series Production (LSP) aircraft was signed with HAL on Mar 30, 2022. The deliveries are under progress and will be completed by July 24. Additionally, AoN for Prachand LCH SP has been accorded by the Defence Acquisition Council (DAC) on Jan 15, 2024.

Light Utility Helicopter. A case is under progress with IA as the lead service for procurement of helicopters for Indian Army and Indian Air Force. AoN was accorded on Nov 23, 2021. Commercial negotiations and finalisation of the contract document is under progress.

Life Extension (LE). Three Life Extension (LE) studies have been undertaken to enhance life of Mi-17 series heptrs. Total Technical Life (TTL) of Mi-17 heptr has been enhanced from 35 to 40 years. A study is in progress to enhance it further to 45 years. First TBO of Mi-17 V5 heptrs has been enhanced from nine years/ 2000 Hr to 13 years/ 2400 Hr. Second Calendar TBO of Mi-17 1V heptrs has been enhanced to 12 years from 10 years.

RPAs, UAVs and Drones

HALE RPA. Case for procurement of HALE RPAs has been approved by Defence Acquisition Council (DAC) on Jun 15, 2023. LoR has been issued by Indian Navy on Aug 29, 2023. RFP for Performance Based Logistics (PBL) through Depot level MRO in India for sustenance of MQ-9B Sea/ Sky Guardian HALE RPAs has been issued to M/s General Atomics Global Corporation (GAGC), India Pvt Limited on Nov 09, 2023. Response from US Govt is awaited.

Counter Drone Systems. Delivery of all the systems has been completed and presently installation and commissioning is under progress. Apart from this, additional cases are being progressed through iDEX route for the Soft Kill option as counter drone measures.

Weapons/ Weapon Systems

Astra Mk-I. Contract for procurement of ASTRA Mk-I missiles for IAF and Indian Navy was signed with M/s BDL on May 31, 2022. Aging test is under progress to grant production clearance for the missile and launcher. Deliveries of the missiles have begun.



Astra Mk-I

Shaurya MRSAM. MRSAM is being jointly developed by IAI, Israel and DRDO. The MRSAM contract for development and delivery of Firing Units (FUs) by DRDO in collaboration with IAI, Israel was signed between DRDO and IAI, Israel on Feb 27, 2009.

Additional Squadrons of Akash Missile System. A contract for procurement of additional Sqns of Akash Missile System and specialist infrastructure was signed with Bharat Electronics Limited on Sep 13, 2019 and the delivery has been completed.



Akash Missile System

Sudarshan (S-400). Contract was signed with M/s Rosoboronexport, Russia on Oct 05, 2018 for supply of FUs of S-400. Deliveries are ongoing as per the mutually agreed schedule.



Sudarshan (S-400)

Close in Weapons System (CIWS). CIWS is a Buy & Make (Indian) project. Defence Acquisition Council (DAC) accorded AoN on Mar 11, 2016 as per DPP-2013. Draft Cabinet Committee on Security (CCS) note was approved by Hon'ble RM on Jan 13, 2024. Final CCS note forwarded to MoD for approval. Once inducted, it shall increase the safety and security of our VAVPs against conventional and unconventional threats.



Close in Weapons System (CIWS)

Nirbhaya Long Range Land Attack Cruise Missile (LRLACM). IAF has collaborated with Indian Navy for design, development and procurement of Long Range Land Attack Cruise Missile (LRLACM) systems with and associated equipment, with *Indian Navy* as lead Service. AoN has been accorded by Defence Acquisition Council (DAC) on Jul 02, 2020. Project sanction in mission mode was obtained by DRDO on Oct 26, 2021. Preliminary Joint Services Qualitative Requirements is under progress.

New Generation Anti-Radiation Missile (NGARM). Carriage and release trials are under progress since 2016. Seeker performance trials in multi-emitter environment are under progress. AoN was accorded by Defence Acquisition Council (DAC) on Dec 22, 2022. CFT/RFT of NGARM is planned in Jan-Feb 24 at Jodhpur. Additional Su-30 aircraft are under consideration for modification in mean time.

New Generation Close Combat Missile (NGCCM) Firing. Successful NGCCM firing was undertaken by 5 Sqn of Ambala at 33 Wg on Nov 01, 2023. The NGCCM was fired on Manoeuvrable Expendable Aerial Target Jet 80 Plus along with western coast over the Kathiawar range.

Dhruvastra. Dhruvastra is a short range air to surface PGM to be integrated with ALH MK IV and LCH. The AoN was accorded on Sep 15, 2023. DRDL has conducted 18 successful firing of Dhruvastra Missiles. The weapon will greatly enhance the ability of our helicopters to neutralize enemy tanks and other targets.

Modernisation of Air Field Infrastructure Phase-II (MAFI-II). A contract for MAFI Phase II was signed with M/S Tata Advanced System Ltd on May 08, 2020. MAFI Phase II is a follow-on program based on MAFI Phase-I which included upgradation of 30 airfields of IAF which was completed in Dec 19. MAFI Phase-II includes 37 airfields out of which 24 are of IAF, nine of Indian Navy and 02 each of Aviation Research Centre (ARC) and Indian Coast Guard (ICG).

Development of Airfield at Nyoma (UT of Ladakh) for IAF Operations. In Principle Approval for setting up of an IAF airbase at Nyoma was accorded by Hon'ble Raksha Mantri. Work services for development of basic infrastructure at Nyoma was sanctioned by MoD/DMA on Mar 31, 2023 at a cost of ₹219.39 Crore.

Development of IAF Airfield at Deesa. Hon'ble Prime Minister had laid the foundation stone for a new airfield at Deesa in Gujarat in Oct 2022. CCS accorded sanction for creation of airfield at Deesa at a cost of ₹ 935 Crore. Phase-I of the project at a cost of ₹ 393.64 Crore, is nearing completion. While Phase-II of the project costing ₹ 489.21 Crore is at approval stage.

Atmanirbhar Bharat

- (a) **'Make' Procedure.** Under the 'Make' procedure, IAF has been accorded AIP for 52 cases. Out of these, Project Sanction Orders for design & development have been accorded to 07 cases. These cases include Chaffs & Flares, Infrared Search & Track (IRST) System for Su-30, Foldable Fibre Glass Mats, 125 Kg Bomb, Fuse for Aerial Bomb, Inflatable Decoys and Wind Profilers. These have been awarded to Indian vendors. These cases have generated business opportunity of ₹ 3729.22 Crore for the Indian Industry.

- (b) **Indigenisation of Solid State Weapon Control System (SSWCS).** A new SSWCS has been developed by the HAL. The SSWCS has been successfully tested on the Jaguar ac and the final weapon release trials are planned in Jan 24.
- (c) **Indigenisation of Transformer Rectifier Unit (TRU) and Air Generator.** An indigenous TRU has been successfully developed and has been flight tested. This will obviate Foreign OEM dependency. Similarly, Air Generator being sourced from M/s Turbomecca, has been indigenized and flight tested on Jaguar aircraft.
- (d) **Indigenisation of Mk804 Turbine Gas Temperature (TGT) Amplifier.** The item has been indigenized and a digital version of erstwhile analogue TGT Amplifier has been successfully developed. 50 items have been locally fabricated and presently are in use.

Indigenisation for Import Substitution: Aatmanirbhar Bharat. The impetus on indigenisation over the last decade has resulted in indigenisation of close to 70000 lines of spares. The year on year enhancement of saving has risen progressively from ₹ 48 Crore a decade ago to ₹ 691 Crore (approx) currently. For the year 2023-24, 1763 lines have been identified for indigenisation by IAF and 575 lines have been indigenised so far resulting in cost saving of approx ₹ 28.79 Crore.

Indigenisation of Russian Spares under Inter Governmental Agreement with Russia. An Inter-Governmental Agreement between India and Russia was signed on Sep 19, 2019 for enabling manufacture of Russian Origin Spares in India. A delegation headed by Special Secretary MoD along with Industry reps visited Moscow on Apr 12-13, 2023 to impress upon FSMTC for faster implementation of IGA protocol.

Indigenisation of Complex Spares through NTC. In order to widen the scope of indigenisation activities a total of 11 Nodal Technology Centres (NTCs) have been set up at major BRDs and 28 ED. The NTCs function in collaboration with leading Academic institutions like IITs and NIITs, CSIR and DRDO labs and are supported by Regulatory and Certification authorities; DGAQA and CEMILAC. For PY 2023-24, 234 projects have been fielded under NTC project. Out of the 234 projects, 37 projects have been completed and work is in progress for 197 projects.

Indigenisation of EAX, Power Carts and Parachutes. Efforts are on for indigenisation of many armament stores used on aircraft through DRDO labs and private industry. Presently, eight out of 10 types of parachutes used by IAF have been indigenised and 61 out of 183 Escape Aid Explosives/ Power Carts/ Chaff & Flares have been successfully indigenised.

Development of UXB Ordnance Handling Robot (UXOR). Project on development of UXOR for disposal of unexploded bombs up to the calibre of 1000 Kgs with the technique of water cutting jet has been indigenously developed by IAF through R&DE (Engg), Pune. Three prototypes have been developed. Licensing Agreement for Transfer of Technology (LATOT) for bulk manufacturing has been accorded to three Indian firms.

SAMAR I (Surface to Air Missile for Assured Retaliation). Intending to utilise R-73 Air to Air Missile in Surface to Air Missile (SAM) mode, a launch platform has been indigenously developed by 7 BRD and 11 BRD, AF. Three SAMAR-I system have been inducted in field units.

Full Mission Full Motion Simulator (FMFMS) for DO-228 Aircraft. An FMFMS for Do-228 ac has been supplied by HAL in partnership with VRM Pvt Ltd, Slovakia. The simulator was commissioned on Nov 24, 2023 for training of IAF pilots.

Vayulink. IAF is encouraging and providing complete support to an 'in-house' Research and Development project which provides Unified Situational Awareness System for helicopters. Vayulink incorporates terrain display and obstacle information over a moving map display, own formation/cooperative ac position overlay, weather information and troop position information/ awareness to indicate forward line of own troops.

Real Time Aircraft Tracking System (RTATS). The feasibility of Real Time Aircraft Tracking System (RTATS) with the help of equipment provided by ISRO, using navigation with Indian Constellation (NavIC) satellites is reaching fructification. Series modification on An-32 will start soon. While trials on MLH are underway later to be followed by AVRO and Do-228 in due course.

Bharat Drone Shakti 2023. In order to showcase the technical prowess of the Indian drone industry, 'Bharat Drone Shakti 2023' was hosted by Indian Air Force in collaboration with Drone Federation of India at Air Force Station Hindan on 25 and 26 Sep 23. The event featured 50+ aerial demonstrations and 75+ static exhibitors across applications such as survey, precision farming, fire-fighting, emergency response, healthcare delivery, military-grade surveillance, and heavy cargo logistics.

Aero India 23. The 14th edition of Aero India was held at AFS Yelahanka from 13 to 17 Feb 23. IAF was tasked with provision of venue, conduct of Flying Display, Static Display, Security, Disaster Management within the Station, Medical Services and the fire prevention measures in coordination with State Govt. Air display by 13 formations of IAF and indigenous aircraft (except P-8I) flown by IAF, Indian Army, Indian Coast Guard and Indian Navy was the signature event on the inaugural day. The multi directional air display added to the visual appeal and thrill of the event. Air display was conducted only once during the business days and twice during public days.



Dedication of e-MMS during Aero India - 2023

Enhancing the Ease of Doing Business

Engagement with Defence Industrial Corridors and MSMEs. A comprehensive self-reliance plan to engage the Defence Industrial Corridors at Tamil Nadu and Uttar Pradesh has been chalked out. Regular interaction has been established to identify domain specialists, academia and MSMEs/ Industry partners. A meeting with Tier-I industries of TIDCO was conducted on Sep 12, 2023 at Chennai to highlight the indigenisation projects under self-reliance initiative by the IAF team. The industries were appraised in detail of the indigenisation requirements of IAF. The team visited Research Park at IIT Chennai on Sep 13, 2023 and interacted with the potential Industry partners who could take on the task.

MoU with R&D centres. IAF has signed a total of 21 MoUs with Academia, Institutes and DRDO labs for cooperation and promotion of Research and Development in areas of mutual interest.

Srijandefence Web portal. The portal launched by the Ministry of Defence viz. 'www.srijandefence.gov.in' provides better visibility to IAF's indigenisation requirements to the Indian Industry. A list of 630 spares has been uploaded on the website for evaluating the feasibility for indigenous development of the spare. Post hosting of indigenisation requirements, 78 companies have shown interest in indigenisation.

Digital Initiatives

E-Ballot Project. Air Force Central Accounts Office (AFCAO) was entrusted with the task of implementing e-Ballot Project. Software has been developed as per the revised specification of Election Commission of India to register all service personnel as service voters for transferring the data to Election Commission of India through DPS. Presently, the e-portal is made available on the AFCAO website for postal ballot.

Digital Library Platform (IAF e-reading portal). In order to enhance reading habits amongst personnel of IAF, a cloud based Digital Library Platform (DLP) namely IAF e-reading portal has been launched. This platform is available on civil internet domain under a secure cloud infrastructure, which can be accessed from personal computer and mobile platforms after due authentication process. It provides open source e-content relevant to various users of IAF including newspapers, e-books, ejournals, videos, lectures, expert talks, biographies, documentaries, literature, thesis, periodicals of various nature.

Sparsh Facilitation Centres. Sparsh is a comprehensive web based interactive Centralised Pension Disbursement System (CPDS) introduced by CGDA for all the three services. Currently, processing of pension documents for IAF personnel is being done through SPARSH.

Ceremonial and related Activities

Participation by Indian Air Force Agniveervayu Women in Tri-Services Contingent in RDP 2024. A Tri-Services contingent of Agniveer (Women) also participated in the Republic Day Parade 2024. A total of 48 Agniveer Vayu (Women) were part of this Contingent. Flt Lt Srishty Verma was the supernumerary Officer of the contingent.



Tri-Services Women Marching Contingent

Air Force Day Parade. Air Force Day Parade was conducted at AF Station Prayagraj. The event was open to civilian population in order to show case IAF prowess and motivate the youth of India, including prospective Agniveer, to join the IAF. A flight consisting of Agniveervayu Women also participated in the parade.

IAF Ensign. The new IAF Ensign was unveiled by the CAS during Air Force Day Parade 2023.

Humanitarian Aid and Disaster Relief (HADR)

Domestic Ops. Details of some major HADR ops undertaken during 2023 are as given below:-

- (a) **Goa and Tamilnadu Forest Fire.** In the month of Mar and Apr 23 IAF carried out Bambi Bucket Ops at Goa and Tamilnadu respectively. In Goa, IAF heptrs flew a total of 20 sorties, 41:30 hrs and dispensing 1, 38,400 L water. In Coimbatore, Tamil Nadu, IAF heptrs flew 04 sorties and dispensed 22,450 L of water.
- (b) **Flood relief at Himachal Pradesh in Jul-Sep 2023.** In response to damages caused by monsoon triggered cloud bursts, flash floods and landslides in Himachal, IAF deployed Mi-17 V5 and Cheetah heptrs. Rescue ops were carried out in Chandratall and Samundar Tapu axis. IAF also flew the CM of Himachal and inter-ministerial teams for reccee and assessment of the scale of disaster. The HADR Ops started on Jul 11, 2023 and continued till Sep 30, 2023. 68 T of relief material and 1,355 citizens were airlifted in 275 sorties.

- (c) **Disaster Relief Ops (Flood Relief) at Ambala.** From 14 to Jul 17, 2023, Mi-17 heptr was tasked towards disaster relief operations, which carried out airdrop of critical sustenance ration to the affected citizens. 10 T of relief material and 14 personnel were airlifted.
- (d) **Op Teesta Oct 23 (Flood Relief at Sikkim).** Several districts of Sikkim were severely affected by the flash floods on Oct 04, 2023. HADR Operations Centre was formed at Bagdogra. Heptrs were positioned as per the requirement projected by the State Govt. The IAF heptrs undertook 287 sorties (125 hrs), airlifting 205 T of load. 3,027 personnel were evacuated by the heptrs, which included foreign nationals.
- (e) **Rescue Ops for Tunnel Evacuation.** On Nov 15, 2023, IAF launched three C-130 aircraft to undertake the airlift of Border Road Organisation (BRO) load towards the extrication of construction workers stuck inside the collapsed tunnel near Dharasu, Uttarakhand. Intensive operations including simultaneous ops by two C-130 on ground at the ALG were undertaken. 27.5 T of rescue load and six personnel were airlifted in three sorties for Dharasu ALG.

International Relief Missions

Op Dost (HADR to Turkiye and Syria). The Middle East nations of Turkiye and Syria were struck by a catastrophic earthquake on the morning of Feb 06, 2023. The IAF immediately launched prompt aid and assistance under 'Operation Dost'. IAF transport fleet flew a total of 28 sorties towards this and carried 307 tons of load including 510 passengers.

Op Kaveri (HADR to Sudan) (Apr 19- May 03, 2023). IAF C-17 and C-130 were deployed for the evacuation of Indian diaspora from Sudan from Apr 19 to May 03, 2023. The C-130 aircraft flew a total of 64:05 hrs, airlifting personnel and 8.29 tonnes of load, while C-17 aircraft flew 50:40 hrs, airlifting personnel and 26 tonnes of load.

Op Ajay (Israel – Hamas Conflict). Towards Op Ajay, one IAF C-17 aircraft was launched on Oct 22, 2023 in support of Palestinian citizens affected by the ongoing IsraelHamas conflict. IAF C-17 airlifted 6.5 T of medical relief items and 32 T of disaster relief material including essential life-saving medicines, surgical items, tents, sleeping bags, tarpaulins, sanitary utilities and water purification tablets among other necessary items. The medical relief was delivered at Al-Arish, Egypt to the Red Crescent, for onward distribution in Gaza. On Nov 19, 2023, again one C-17 undertook the airlift of 33 T of relief load for the same. C-17 flew 29 hrs in two missions and airlifted 72 T relief load.

HADR Ops - Nepal. On Nov 03, 2023, a devastating earthquake struck Nepal, resulting in heavy loss of life and property. Relief aid was planned to be inducted close to the affected areas in Nepal, resulting in operations on short runway airfields like Nepalganj. On Nov 05 and 06, 2023, IAF C-130J ac inducted NDRF relief equipment and HLL medicinal payload at Nepalganj. The IAF C-130J aircraft undertook day/ night operations at Nepalganj, and flew 07:55 Hr, airlifting 21 T of relief load.

Exercises with Friendly Foreign Forces

- (a) **Ex Veer Guardian-23.** Held in the period Jan 12-27, 2023 in Japan. This was the first air exercise between India and Japan.
- (b) **Ex PASSEX with France.** On Jan 29, 2023, the IAF conducted 'Ex PASSEX' with French fighter aircraft sailing onboard the aircraft carrier 'Charles De Gaulle' in the IOR.
- (c) **Ex Desert Flag-8 in UAE.** IAF participated in 'Ex Desert Flag-8' in Al-Dhafra, UAE from Feb 24 to Mar 20, 2023. This was the first ever participation by the Tejas in an international air exercise.
- (d) **Ex Cobra Warrior-23.** IAF participated in multinational Air Exercise 'Ex Cobra Warrior-23' in UK from Mar 06 to 24, 2023. This exercise saw IAF aircraft staging through Saudi Arabia for the first time.



IAF Contingent in Ex – Cobra Warrior 2023

- (e) **Ex Cope India-23.** The USAF and the IAF participated in 'Ex Cope India-23' at AFS Kalaikunda (fighters) and AFS Panagarh (transport aircraft) from Apr 10 to 21, 2023. The Japan Air & Self Defence Force also participated as observer.
- (f) **Ex Orion-23.** IAF participated in multinational exercise 'Ex Orion-23' in France from Apr 17 to May 05, 2023. The exercise saw IAF's Rafale aircraft ferrying directly from France to India.



IAF Contingent in Ex Orion-23

- (g) **Ex INIOCHOS-23.** IAF participated in a multinational exercise 'Ex Iniochos23' in Greece from Apr 24 to May 05, 2023. This was the first Air Exercise between India and Greece.
- (h) **Ex Bright Star-23.** IAF took part in Ex Bright Star-23 with Egypt from Aug 27 to Sep 16, 2023. The IAF's MiG-29 fighters ferried directly from India to Egypt.
- (i) **Ex-Shinyyu Maitri-23.** IAF C-17 crew participated in SMEE with JASDF for Ex-Shinyyu Maitri-23 joint exercise at Komatsu, Japan on the sidelines of Indian Army Ex- Dharma Guardian from Mar 01 to 03, 2023.



IAF C-17 crew in Ex-Shinyyu Maitri-23 in Japan

Airlift of Light Utility Helicopter (LUH) to Malasiya for LIMA-2023. On May 23, one IAF C-17 aircraft was utilised for the airlift of LUH of HAL to Langkawi, Malaysia for display in Langkawi International Maritime and Aerospace Exhibition-2023.

Gifting two ambulances and High Altitude Clothing items to Mongolia. During the visit of Hon'ble RM to Mongolia from Sep 05 to 07, 2022, it was announced to gift two medium ambulances and 200 sets of High Altitude Area (HAA) winter clothing to Mongolia. One C-17 aircraft of IAF was utilized for the task. Same aircraft was utilised for induction of 45 member IA contingent participating in Joint Exercise Nomadic Elephant at Mongolia from Jul 17 to 30, 2023.

Green Initiatives

Solar Power. 40 works services have been sanctioned for generation of 36.63 MW of power. 34 projects have been successfully completed and are presently generating approximate 29.38 MW of Solar Power. The Solar Power Works at remaining six locations are at various stages of execution. Further, six more work services to generate solar power, at a cost of ₹ 22.95 Crore, have been included in AMWP 24-25.

Rain Water Harvesting (RWH). Till date, 58 IAF stations have RWH facility with a total storage capacity of more than 10,000 Kilo litres of water harvested from rains. This is being used as an alternative water resource. Further, seven works services for RWH (with an estimated storage capacity of 9 lakh litres) are being executed at various stations, at an estimated amount of ₹ 8.20 Crore.

Skilling of Agniveervayus. The training provided by IAF to Agniveervayu and their assessment processes have been recognised by National Council for Vocational Education and Training (NCVET) and accordingly, IAF has been given Dual Recognition as Awarding Body and Assessment Agency for award of 'Kaushal Pramanpatra' to Agniveervayu.

MoU has been inked between IAF and IGNOU for facilitating award of Skill based Certificate/ Diploma/ UG Degree based on the NSQF level and subject to clearing IGNOU academic examinations. Agniveervayu Non Combatant will be facilitated for award of Class 12th certificate from National Institute of Open Schooling (NIOS).

HQ Integrated Defence Staff

Introduction

HQ Integrated Defence Staff (HQ IDS) was raised on 01st Oct 2001 based on the recommendations of Group of Minister (GoM) on the Kargil Review Committee (KRC) report. The HQ was raised under the command & control of Chairman Chiefs of Staff Committee (COSC) to foster jointness and synergy amongst the three Services. Since its inception, IDS has achieved notable milestones in joint and integrated planning, coordination of intelligence, joint conduct of Humanitarian Assistance & Disaster Relief (HADR) Operations and prioritising/ streamlining procurements.

Operations & Exercise

Annual Joint HADR Exercise (AJHE) Ex Chakravat – 2023. Based on the directives of the Hon'ble Prime Minister, Annual Joint HADR Exercises are conducted by Indian Armed Forces since 2016, involving all stakeholders and civil administration. The 2023 edition named Ex Chakravat was conducted at Goa from 09-11th Oct, 2023. In addition to all national stakeholders, observers from Sri Lanka, Maldives, Comoros, Madagascar, Seychelles, Mauritius, Tanzania & Mozambique also attended.



Foreign Cooperation

ASEAN Defence Senior Officials Meeting (ADSOM) Plus Working Group (WG). ADMM Plus (ASEAN Defence Ministers Meeting) is a multi-lateral grouping of 10 ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam) with eight Dialogue Partners (Australia, China, India, Japan, New Zealand, Russia, South Korea and US). It is the highest consultative body on defence matters in the ASEAN organizational structure, attended

by Defence Ministers of all countries. Counter Terrorism, Cyber Security, HADR, Humanitarian, Mine Action, Maritime Security, Military Medicine and Peace Keeping Ops have been identified as seven areas of practical cooperations by ADDM Plus. ASEAN Defence Senior Officials Meeting (ADSOM) – Plus Working Group (WG) was held on 15-16th Feb 2023 in Jakarta, Indonesia.

SCO Chairmanship-Workshop on HADR, Risk Mitigation and Disaster Resilient Infrastructure. As part of India's chairmanship of Shanghai Cooperation Organization (SCO), a one day workshop on HADR, Risk mitigation and DRI was organised by HQ IDS (Op Lgs Dte) on 14th Mar, 2023 in New Delhi, wherein participants from member nations participated, both physically and in virtual mode.



3rd India Bangladesh Tri-Services Staff Talks. 3rd India-Bangladesh Tri-Service Staff Talks (TSST), Co-Chaired by Air Vice Marshal Ashish Vohra from Indian side was conducted on 29th Aug 2023 in Dhaka, Bangladesh.



20th India-US Military Cooperation Group (MCG) Meeting. India-US MCG is a forum established to progress defence cooperation through regular talks between Headquarters, Integrated Defence Staff and the US Indo-Pacific Command. The 20th India-US MCG Meeting was held from 30th to 31st Aug 23 at Oahu, Hawaii (United State) and Co-chaired from the Indian side by CISC, HQ IDS and from the US side by Deputy Commander, of the US Indo-Pacific Command.

Maiden Joint Service Staff Talks (JSST) Japan. The Maiden Joint Service Staff Talks (JSST) between Japan Self Defence Forces and HQ Integrated Defence Staff was conducted between HQ IDS and Japan Joint Staff (JJS) from 11-12th Sep 23 in Tokyo, Japan. The meeting was Co-chaired by Assistant Chief of Integrated Defence Staff, Int-C (Mil Coop) HQ IDS and Director General, Defence Plans and Policy Department JJS.



21st India - France Joint Staff Talks (MSC) Meeting. India-France MSC is a forum established to progress defence cooperation, between both nations through regular talks. The 21st MSC, conducted from 16-17th Oct 23 at New Delhi and Co-chaired from the Indian side by Assistant Chief of Integrated Defence Staff, Int-C (Military Cooperation) HQ IDS and Head of Department Military International Relations, Joint Staff HQ from the French side.



16th India-Germany Military Cooperation Sub Group Meeting. 16th India Germany Military Cooperation Sub Group Meeting was conducted on 05-06th Dec 23 at New Delhi.

Events Conducted

Combined Operational Review and Evaluation (CORE) Programme 2023 was conducted by the Directorate of IDU of HQ IDS from 08-12th May 23 at USI, New Delhi. 20 officers from the three Services and MoD participated in the final development programme for senior officers. The key focus areas of the programme were Jointmanship, Integration and Theaterisation, Non-Kinetic aspects of National Security, Changing Nature of Warfare & Emerging Threats, Acquisition Management and Strategic Leadership.



The maiden **"Joint Doctrine Review Conference - 2023" (JDRC-2023)** aimed to synergise and bridge gaps in understanding between HQ IDS and the three Services in formulation of Doctrines was conducted at the Manekshaw Centre on 22nd Sep 23.

A book titled **'75 Initiatives Towards Nation Building'** was designed and published by HQ IDS in Sep 23. Book highlights the contribution of Indian Armed Forces towards Nation Building in the last decade.

Combined Leadership Conclave 2023 was conducted by the Dte of IDU from 06-08th Dec 23 at USI, New Delhi. 27 officers from the three Services participated in the conclave. The conclave was designed to serve as a final development programme for Maj Gen/ Brigs equivalent rank officers focused on aspects pertaining to National Security & Defence, higher defence organisation, integration & jointness, Atmanirbharta and other contemporary issues with an aim to enhance comprehension of macro issues & propagate synergy at strategic and operational levels within the Armed Forces.



A Special Campaign 3.0 was also conducted at HQ IDS and all JSOs from 02nd-31st Oct 23 which saw exceeding of the initial projected targets in terms of cleanliness sites, files to be reviewed and weeded out, simplification of rules, cyber swachhata drive, media coverage & public awareness and disposal of scrap.

HUMANITARIAN ASSISTANCE AND DISASTER RELIEF (HADR)

S No	Date	Incident	Rescue / Relief Details
1	Feb 2023	Operation Dost	- A 30 bedded hospital was set up at the Vocational and Technical High School at Iskenderun, Hatay. 3655 patients treated from Feb 08, 2023 to Feb 18, 2023.
2	Apr 25,- May 05, 2023	Operation Kaveri	3862 personnel evacuated from Sudan. 3725 personnel moved from Jeddah to India. - Five sorties of IN ships carried out. 18 sorties carried out by IAF a/c. - Relief material delivered to Sudan.

S No	Date	Incident	Rescue / Relief Details
3.	May 14-20, 2023	Operation Karuna (Cyclone Mocha)	HADR material handed over by HE Mr Vinay Kumar, Ambassador of India to Mr U Soe Thin, Chief Minister of Yangon on May 18, 2023.
4.	Jun 02, 2023	Balasore Train Accident	Contingencies plan and Medical support carried out.
5.	Jun 15, 2023	Cyclone Biparjoy	Assets of the three services were kept on standby for deployment on short notice.
6.	Jul 2023	Flood Relief Delhi, Amarnath, Telangana, Punjab & HP	In response to incessant rains in the country IA & IAF were deployed for relief and rescue operations.
7.	Jul 31, 2023	Move of CAPF Coy for Nuh, Haryana	CAPF moved to Nuh, Haryana from various locations
8.	Oct 03, 2023	Relief Operation Effort: Teesta (Sikkim)	Oct 26, 2023 Indian Air Force and Army Aviation helicopters (Chinook, MI-17, ALH & Cheetah) and Remotely Piloted Aircraft System (RPAS) undertook rescue and surveillance operations on Glacial burst over Goma Chhu in North Sikkim and subsequent collapse of Dam at Chungthang. Humanitarian Aid and Disaster Relief (HADR) assistance in the aftermath of flash floods in Sikkim was carried out.
9.	Oct 07, 2023	Evacuation from Israel / Palestine-Operation 'AJAY'	- Evacuation efforts post the Hamas attack on Israel carried out for Indian nationals - Relief material at Egypt delivered by air assists.
10.	Nov 03, 2023	Nepal Ops (earthquake in Nepal)	IAF sorties to Kathmandu to deliver medicines and other essential relief supplies carried out.
11.	Nov 29, 2023	HADR relief in Silkyara Tunnel-IA	Tri services assets and army engineers employed for the rescue ops.
12.	Dec 01, 2023	Cyclone Michaung alert for low pressure area over Southeast Bay of Bengal & South Andaman Sea	Consequent to issuance of warning by NERC, all SHQs were alerted and a number of tri services assests were deployed.

Cyber Security : Indian Army, Indian Navy, Indian Air Force & HQIDS

The Indian Army and IDS have an exclusive air gapped network. The cyber security Indian Army network is being continuously strengthened through technological and procedural measures to prevent its inadvertent/ unauthorised access by malicious actors. A robust cyber security structure is in place and all cyber security guidelines are being complied with, to safeguard the Indian Army networks.

ACHIEVEMENTS OF AFCG IN THE DOMAIN OF CYBER SECURITY FOR THE YEAR 2023

1. First Wednesday of every month was observed as 'Cyber Jaagrookta Diwas (CJD)', pan-IAF. In addition, activities undertaken to observe National Cyber Security Awareness Month (NCSAM) in Oct 2023 had a theme of "Cyber Swachhta Abhiyaan" and focus was to 'Make Cyber as Social Responsibility'. The activities undertaken as part of these events are enumerated in the succeeding paragraphs.
2. Cyber Security Awareness. Cyber Security awareness lectures were conducted for air warriors, NCs(E), civilian staff, DSC personnel and family members. Apart from the awareness lectures conducted centrally by AFCG, Command HQ's, Stations and Units also conducted similar lectures within their AoR. Cyber security lectures were also conducted for children of Kendriya Vidyalaya and Air Force Schools. The following topics were covered during the awareness lectures:-
 - a) Use of strong passwords and password manager
 - b) Importance of Multi-Factor Authentication (MFA)
 - c) Need for updating software
 - d) Recognize and reporting Phishing attacks
 - e) Cyber Hygiene
 - f) Safeguarding digital devices from online attacks
 - g) Boot camp towards Cyber bullying and online violence of children and ladies

DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION



GOVERNMENT OF INDIA
MINISTRY OF
DEFENCE

DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

Background

Defence Research and Development Organisation (DRDO) has created sufficient expertise in the development of strategic systems, military aircrafts, missiles, radars, sonars, torpedoes, rockets launchers, artillery guns and tanks. These systems are highly technology intensive and many DRDO laboratories have contributed along with industries and Defence PSUs in building them.

The policies of the government encouraging indigenous systems development by the Indian industry as well as creation of the two defence corridors have opened the doors to the industries to venture into defence sector.

Budget

During the financial year 2023-24, DDR&D was allocated ₹ 23,263.89 Cr, about 3.96% of the total Defence Services Estimates Budget of India. ₹ 12,850 Cr were allocated under Capital head and ₹ 10,413.89 Cr under Revenue head.

Programmes and Projects

During financial year 2023-24, 36 new projects were sanctioned at a total cost of ₹ 4,365.50Cr. DRDO currently has 333 ongoing projects (excluding strategic projects) amounting to ₹ 1,01,254.83 Cr (DRDO share: ₹ 58,058.50 Cr, approx 57%).

Acceptance of Necessity (AoN)

During financial year 2023-24, AoN was accorded by Defence Procurement Board (DPB) and Defence Acquisition Council (DAC) for induction of 20 DRDO developed products worth ₹ 1,51,326.86 crore.

Development cum Production Partners (DcPP)/ Production Agencies (PA)

During 2023, 20 Industry (06 Development cum Production Partners (DcPPs) and 14 Production Agencies (PAs) have been identified for the development and / or production of DRDO developed systems.

Major Systems Under Induction/ Handed over to Users

BrahMos

During Mar 2024, a contract was signed between MoD and BrahMos Aerospace Private Limited (BAPL) for procurement of BrahMos missiles for Indian Navy. A contract was also signed with BAPL for procurement of shipborne BrahMos system for Indian Navy.



Beyond Visual Range Air-to-Air Missile 'Astra'

Development of Beyond Visual Range Air-to-Air Missile (BVRAAM) 'Astra' with modern guidance and navigation techniques has been completed. MoD had signed a contract worth ₹ 2,971 Cr with industry partner for procurement of Astra Mk-I missile system & associated equipment for Indian Air Force & Indian Navy.

Third Generation Helicopter Launch Anti-Tank Guided Missile ('HeliNa'/Dhruvastra)

HeliNa is a 3rd generation helicopter-launched Anti-Tank Guided Missile (ATGM) with Lock-on-Before-Launch (LOBL) capability with IIR seeker for integration on Advance Light Helicopter (ALH). The system has all-weather day and night capability and can defeat battle tanks with conventional armour as well as with explosive reactive armour. During 2023, EMI-EMC test of Helina sub-systems and Hazards of Electromagnetic Radiation to Ordnance (HERO) test on integrated missile was carried out.



LCA Mk-1A fighter aircraft

DRDO has successfully designed & developed Light Combat Aircraft (LCA) - Tejas, which has been inducted into Services. The improved version of this fighter aircraft i.e. LCA Mk-1A is under production at Hindustan Aeronautics Ltd (HAL). During Apr 2024, making a significant leap towards self-reliance in aeronautical technologies, DRDO has handed over the first batch of indigenous leading edge actuators and airbrake control module to HAL.

NETRA 3

DRDO has take-up a project for delivery of third AEW&C aircraft system to Indian Air Force (IAF) i.e. Netra-3 with all mission systems with the same SOP as the previous two AEW&C system delivered to IAF. During 2023, integration of all mission systems in IOC configuration, additionally SDRs, indigenous ESM/RWR, flight trials and acceptance were completed and delivered to IAF.



SDR Integration on AEW&C and GES (SIAG)

The project 'SIAG' was sanctioned to carry out Software Define Radio (SDR) integration in AEW&C with customer furnished SDR sets. Flight trials of SDR along with all subsystems of AEW&C were carried out. During Aug 2023, the project was successfully completed meeting all the objectives.

Akash Weapon System

Akash is the first state-of-the-art indigenous surface to air missile system which is successfully developed, produced and delivered to Indian Air Force (IAF) and Indian Army (IA) by DRDO. Currently, Akash is deployed in combat areas by IAF and IA for national security. Indian Air Force has test fired a number of missiles as part of Astrashakti – 2023 and demonstrated the potency of Akash weapon system in realistic operational conditions (multiple aerial targets, low altitude, near boundary and crossing, maneuvering, off bore engagement, extended kill zone engagement). Contract for two regiments of Akash weapon system was signed with Indian Army in Mar 2023.



Advanced Towed Artillery Gun System (ATAGS)

ATAGS is an all-electric drive four wheeled advanced gun system. It meets futuristic requirements such as better accuracy, advanced fire control, extended range and multiple round simultaneous impact capability with surveillance and sighting systems onboard. The system is capable of firing existing 155mm ammunitions held with Indian Army with higher range, accuracy and consistency.

Heavy Weight Torpedo - Varunastra

Varunastra is a ship launched, heavy weight, electrically propelled anti-submarine torpedo, capable of targeting quiet submarines both in deep and shallow waters in an intense countermeasures environment. It can be fired from all Anti-Submarine Warfare (ASW) ships capable of firing heavy weight torpedoes.



Command Carrier Post Tracked (CCPT)

During Oct 2023, Joint Receipt Inspection (JRI) was carried out and CCPT rolled out. Bulk Production Clearance for remaining Qty of CCPT vehicles has been obtained and is under progress.

Mechanical Mine Layer – Self Propelled (MML-SP)

DRDO has developed self-propelled (SP) and fully automated Mechanical Munition Laying (MML) equipment for laying anti-tank bar mines into soil and camouflage it. It is designed for laying bar munitions in soil at variable depth and spacing with effective munition laying rate in plains, desert and semi-desert terrains. During Jul 2023, GS evaluation was completed successfully. Cost negotiation has been completed and contract agreement finalisation is under progress for production order.

Machine Pistol

It is a compact, lightweight Personal Defence Weapon firing 9×19 mm ammunition and gives higher accuracy and effective range than normal pistol due to incorporation of longer barrel and collapsible buttstock or arm brace. During Feb 2023, User trials were successfully completed with Indian Army. Manufacturing and supply of weapons through Development cum Production Partner (DcPP) is under progress.

46 Military Load Class (MLC-70) Modular Bridge

DRDO has developed a mechanically launched single span 46 m MLC-70 modular bridge with variable bridge length in step of 6.5m. The bridge superstructure, launching nose and bank seat beams have been tested and all user evaluation trials have been completed.



Air Independent Propulsion (AIP) System

DRDO has developed a full-scale Land Based Prototype (LBP) for demonstration of hydrogen fuel cell-based AIP system to enhance underwater endurance of diesel-electric submarines. The main objective of the project is to realise energy modules for AIP for P-75 class submarines along with detailed design of AIP plug. During Jan 2023, DRDO and Naval Group France signed a contract for vetting the design of DRDO developed Fuel Cell-based Air Independent Propulsion (AIP) for Kalvari-class (P-75) submarines. During Jun 2023, DRDO signed one more contract with industry partner for manufacturing of energy modules for the Air Independent Propulsion (AIP) system. System functional reviews of AIP and whole warship were completed.



Drone: Detect, Deter and Destroy (D4)

D4 System is capable of real time search, detection, tracking and neutralization of micro & small UAVs, flying in the area of responsibility, and will provide object details (optical / thermal) and RF spectrum display on a Graphical User Interface (GUI). Services have placed production order on industry partner. The systems have been delivered and are under induction. During 2023, the system was deployed during various national events viz. Independence Day, G-20 summit and Republic Day parade at New Delhi.



Border Surveillance System (BOSS)

BOSS provides all weather remote surveillance of Border areas using Radar, electro-optical and geo-location sensors powered with hybrid energy source. The system facilitates monitoring & surveillance by automatically detecting the intrusion in harsh high-altitude and sub-zero temperature areas with remote operation capability. During Oct 2023, First of Production Model (FOPM) field trials were successfully completed at High Altitude Area (HAA) and DGQA evaluation is under progress.



Ground Based Integrated EW Systems (DHARASHAKTI)

Dharashakthi is an Integrated EW system comprising of entities for COM and Non-COM segments for evaluation in deserts and plain sectors (Samaghat & Shatrughat) with radios and EO suite. The system has participated in Tri Shakti Prahaar Exercise in Nov 2023. DAC has accorded approval for production order worth ₹ 5150 Cr.



Low Level Transportable Radar (LLTR) Ashwini

LLTR is a ground based, vehicle mounted, 4D active phased array radar for air space surveillance to detect and track air targets, under hostile EW operational environments. During Jun 2023, LAToT has been signed with industry partners. AoN has been obtained from the DAC by IAF and Draft RFP for procurement of the radars has been released.

Driver Night Sight (DNS) for BMP

DNS for Armoured fighting vehicle (AFVs) have been developed that enable driver to drive the tank in dark with headlights switched OFF in form fit configuration to replace existing tube based driver night sights. During 2023, User Evaluation Trials (UETs) were completed and a production order was placed on industry partner.

Military Combat Parachute System (MCPS)

MCPS is a mode of insertion of special forces to penetrate with combat load into designated area of operations. MCPS allows paratroopers to jump from an aircraft and deploy their parachutes at pre-determined altitude, navigate and land safely. During 2023, more than 200 Jumps are carried out to qualify the system and the system is ready for induction.

Remote Background Gamma Surveillance System - Third Eye

DRDO has developed Third Eye sensor network for Indian Navy for continuous remote monitoring of environmental radioactivity levels at naval bases. The network of radiation sensor is suitable for early detection of any nuclear eventuality due to mishap from Indian nuclear powered vessels. Third Eye system was installed at various naval bases. DRDO also established several remote radiation monitoring stations at various locations. During Jul 2023, the whole set-up was handed over to Indian Navy.

Explosive Reactive Armour (ERA) Mk-II

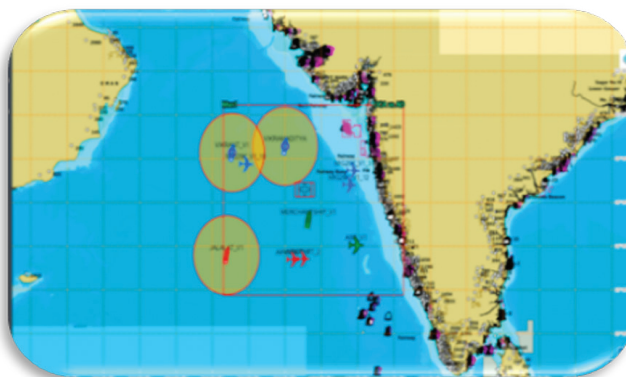
DRDO has developed ERA Mk-II for protection of tanks against various anti-tank threats. During Mar 2023, User trials of ERA Mk-II for tank T-90 were conducted and the performance was trial evaluated against designated HEAT and Kinetic Energy ammunition. ERA Mk-II has met all the QRs as per the trial directive. During Sep 2023, Indian Army has accorded Bulk Production Clearance (BPC) to ERA Mk-II for T-90 tanks.

Stabilization & Decontamination Material for Radioactive Materials

DRDO has developed Stabilization & Decontamination Material (Mark-I) which has undergone successful lab-level and field trials at Delhi and Mumbai. The material is being developed for the purpose of stabilization and subsequently decontamination of different surfaces contaminated with radioactive materials during on-board conditions inside submarines. During May 2023, material was recommended by IN for its use as a suitable Stabilization & Decontamination material.

Air Direction and Helicopter Control Simulator (ADHCS)

State-of-art simulation based software has been developed by DRDO for training of air director Officers of Indian Navy (IN) for Air Direction & Helicopter Control (ADHC). During Jun 2023, the system was demonstrated to Hon'ble Raksha Mantri.



Army Wargaming Simulation System (SAMAR)

SAMAR 2.0 is a computerised divisional level wargaming system developed by DRDO that facilitates training of Commanders and Staff at Division, Brigade and Battalion level in planning and conduct of offensive & defensive operations in Corps canvas specified area of plains, semi-desert and desert terrain. During Sep 2023, SAMAR 2.0 was handed over to Wargaming Development Centre (WARDEC), Indian Army.



ARNAV- Operational Level Naval War-gaming (OLWG)

ARNAV is an Operational Level Naval War-gaming software developed by DRDO for training of Higher level command teams in understanding planning and execution of operational directives. During Jan 2023, ARNAV-OLWG software was installed at Naval War College, Goa and Wargame Exercise (SANGRAM-35) was conducted on ARNAV- OLWG at User location. During Sep 2023, the wargaming software was handed over to Indian Navy.

Computerized Psychological Screening System (COPSYSS)

DRDO has developed a Computerised Psychological Screening System (COPSYSS) for Central Police Reserve Force (CRPF). Main features of the test COPSYS are creation and management of batches for examinees, session control of psychological testing, automated testing report generation in the prescribed format and live monitoring of the examinees. During Aug 2023, the system was handed over to CRPF.



Optronic Explosive Trace Detector (OPX Revilator)

DRDO has developed OPX-Revilator for detection and identification of pure explosives as well as trace explosive in mixtures, IEDs, contaminants like mud, sand, sugar, salt, diesel oil etc based on the principle of optical image processing. During Aug 2023, it was trial evaluated by MHA and approved for induction in Central Armed Police Forces (CAPFs).

Technologies Developed/ Demonstrated

Gallium Nitride (GaN) based TR Chips

DRDO has designed and developed Ku Band TR front end chip as per target specifications. The chip has successfully fabricated & characterised in both the, on-wafer and test zig modes. Performance has been successfully demonstrated to users during Nov 2022. During May 2023, a number of TR chips were delivered to RCI, Hyderabad.

Fiber Coupled Laser Diode (FCLD)

Fiber Coupled Laser Diode, delivering output power of 100W in continuous wave mode, has been developed for initiation of explosives. A prototype with 110 watt output power was realised. During Sep 2023, a number of 10 W Fiber coupled laser diode modules were delivered for laser initiation of explosives.

Security Evaluation of Crypto Products

Crypto products are mandatorily to be evaluated for their security strength before their induction into Armed Forces, Para-military Forces, law enforcement agencies and other sensitive Govt. agencies. The evaluated crypto products are taken up for grading by competent authority, after getting recommendation from DRDO. During 2023, a number of Crypto products have been evaluated.

Transport cum Tilting Vehicle (TCT)

The TCT vehicle has been designed for transportation and launching operation of canister based missile. It consists of a tractor, trailer and launching mechanism & combined power pack viz. electrical & hydraulic. During 2023, a number of TCT Mk-II launchers were handed over to Users.

Multi-channel DEW using 6 beams Combination

Multi-channel beam combination technology, for neutralization of drone target, has been developed as a test bed. The same has been demonstrated to User (Indian Army). LAToT for this technology has been awarded to industry partner in Feb 2023 during Aero India. Demonstration to Indian Army was carried out during August 2023.

Major Systems under User Evaluation

BrahMos

BrahMos, a two stage precision strike supersonic cruise missile, operating on fire and forget principle, can be launched from multiple platforms (at air, sea and ground) against land and sea targets. During Mar 2023, Indian Navy successfully flight tested Ship Launched BrahMos missile with DRDO designed indigenous Seeker & Booster in the Arabian Sea. During Oct 2023, Indian Army has test fired land attack version of extended range BrahMos supersonic cruise missile. Indian Navy with DRDO has again test fired two consecutive Sea attack version of extended range BrahMos supersonic cruise missile during Nov 2023.

Agni Prime Ballistic Missile

Next Generation Ballistic Missile 'Agni Prime' is a two-stage canisterised solid propellant ballistic missile with dual redundant navigation and guidance system. During Jun 2023, the missile was successfully flight tested from Dr. APJ Abdul Kalam Island.

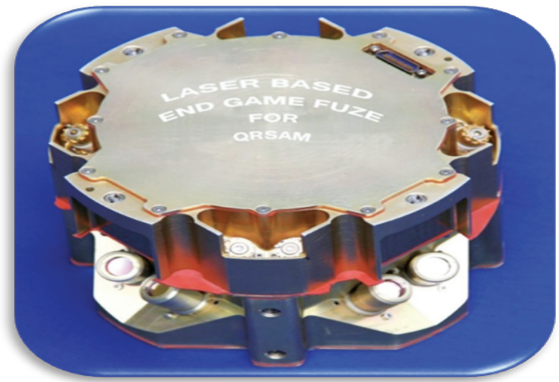


Quick Reaction Surface-to-Air Missile (QRSAM)

The QRSAM is a land-based on-the-move air defence system developed for Indian Army. The system is capable of engaging multi directional targets with search and track on move capability and firing on short halts. During Apr 2023, limited User validation trials of QRSAM were conducted at PFFR, Chandan Ranges at Pokhran. QRSAM weapon system was also displayed during Republic Day parade 2023.

Laser based End Game Fuze (LBEGF)

This system detects air-borne targets in the proximity of missile and detonates the warhead. During 2022-23, User trials have been completed. The process of production has been initiated. A number of units have been developed and handed over to nodal lab for exploitation.



Guided Pinaka Rocket System

Pinaka is a free flight artillery rocket system, launched from a multi-barrel rocket launcher which has a capability to launch salvo of rockets. Design and development of guided Pinaka rocket along with upgraded launcher system have been successfully completed as per Users (PSQR) requirement. During Jul-Aug 2023, DGQA technical evaluation trials were completed. Extensive integrated re-testing of missile & launchers was carried out in Nov 2023.

Advanced Light Weight Torpedo (ALWT)

ALWT is high speed, long range, anti-submarine torpedo which can be launched from ships and aerial platforms. Technical Trials (TTs) and User Associated Trials (UATs) have been conducted and demonstrated all the parameters of the torpedo. During 2023, four User Evaluation Trials (UETs) were successfully conducted.



Parachute System for Gaganyaan

Gaganyaan Programme of ISRO is proposed for sending Astronauts to Low Earth Orbit (LEO) to conduct space experiments and bring them back safely to the earth after completion of the mission. Safe landing of crew carrying re-entry module (~ 5000 kg) on earth surface will be achieved by a parachute system. During 2023, seven Rail Track Rocket Sled (RTRS) tests were conducted on pilot and drogue parachutes at various simulated conditions. Shock survivability test and vibration tests of crew module with parachute system were conducted successfully. First test vehicle demonstration flight was successfully conducted from Sriharikota during Oct 2023.

Active Electronically Scanned Array Radar (AESAR) (Uttam)

Active Electronically Scanned Array Radar is a multi-function, multi-mode radar, adaptable to various fighter class of airborne platforms. The Radar is successfully flight tested for all modes and flight evaluation of radar on LCA Mk-1 has been completed. During 2023, upgraded radar to meet the requirements of LCA Mk 1A configuration was realised and installed on LCA LSP aircraft. During Jul 2023, AESAR 'Uttam' radar was flight tested in Air to Air mode of operation for max range after being upgraded with Active Array Antenna Unit (AAAU).



Air Defence Fire Control Radar (ADFCR) – Atulya

ADFCR, in conjunction with Anti-Aircraft Guns, forms a Ground Based Air Defence (GBAD) system whose main purpose is effective point defence against all air threats (fighter aircraft, helicopters and UAVs) at short and very short ranges during day and night, under all weather conditions and also in the presence of enemy jamming. During Aug 2023, EMI/EMC trials have been completed.

Smart Hybrid Energy Management System (SHEMS)

DRDO has developed a fully automatic, smart system for drawing energy from any available energy source like solar, wind, fuel cell, generator or grid. Intelligent decision making is to switch on or off a particular source or multiple sources simultaneously based on the power demand. It has plug and play solution for both indoor and outdoor use. It can transmit DC power upto 100 m. During 2023, User Assisted Technical Trials (UATTs) were carried.

Individual Under Water Breathing Apparatus (IUWBA) for T-90 Tank Crew

The IUWBA is a closed circuit based Individual Breathing Apparatus, capable of providing breathing support under water. It regenerates oxygen from exhaled carbon-dioxide and supports two modes breathing i.e. from atmosphere and from apparatus. It is a lightweight and modular system to be used for T-90 tank crew of Indian Army during deep fording. During Aug 2023, first phase of confirmatory User trials was completed. DGQA evaluation is under progress.

Integrated Life Support System (ILSS) on Tejas

DRDO has designed and developed the Integrated Life Support System (ILSS) with industry partner. The ILSS consists of eleven Line Replaceable Units (LRUs), pneumatic hoses and electrical cable harness. All the LRUs have been designed, developed and realized for Tejas as the basic platform for flight evaluation and use. The ILSS technology will further be implemented on LCA Mk-II, AMCA, TEDBF and other fighter aircrafts. During 2023, development trials on Tejas PV-3 aircraft were initiated and several long endurance sorties and aerobatics were completed.

Bio-vest

A Wearable Health Monitoring System (Biovest) comprising of the subsystems like wearable textile belt, Biovest electronics and Avionics Interface Unit (AIU) has been developed by DRDO for Gaganyaan program. Wearable textile belt houses two sets of ECG electrode leads, temperature sensors and Photo Plethysmography (PPG) sensors. During 2023, four numbers of Bio-vest for crew training were delivered to ISRO.

Indigenous Geographical Information System (GIS) for Tri Services (IGIST)

DRDO has developed a Geographical Information System (GIS) for Tri-Services. IGIST is a suite of indigenously developed GIS components, a set of GIS libraries, which are customisable, scalable, and data centric, and cater to specific GIS requirements of a collaborative defence environment. During 2023, the system was trial evaluated successfully by Users from Advanced Digital Mapping Centre (ADMC).

Major Systems under Developmental Trial stage

AGNI-5 MISSILE (DIVYASTRA)

The first successful flight test of indigenously developed Agni-5 missile with Multiple Independently Targetable Re-Entry Vehicle (MIRV) technology was conducted. The flight test named 'Mission Divyastra' was carried out from Dr APJ Abdul Kalam Island in Odisha during Mar 2024. Various telemetry and radar stations tracked and monitored multiple re-entry vehicles. The mission accomplished the designed parameters. Hon'ble Prime Minister lauded the efforts of the DRDO scientists for successful conduct of the complex mission.



Akash-New Generation (NG)

Akash-NG, surface-to-air weapon system, is being designed and developed for providing air defence cover against fighter aircrafts, helicopters, UAVs and sub-sonic cruise missiles. It is required to defeat anti-radiation missile and stealth aircrafts from short to medium ranges. During Jan, Feb & Nov 2023, Akash-NG was successfully flight evaluated against Banshee target from the Integrated Test Range, Balasore. DRDO also conducted a successful flight test of Akash NG missile, against a high speed unmanned aerial target of low altitude, from ITR, Chandipur off the coast of Odisha on 12 Jan 2024.

Multi-Function Radar for Akash New Generation (Akash NG) Weapon System

The Multi-Function Radar is a Surveillance and Fire Control Radar for the Akash New Generation (Akash – NG) Surface to Air Missile system. The Radar is used to counter threats posed by aircraft, helicopters, Air-to-Surface missiles, sub-sonic cruise missiles and remotely piloted aircraft. During 2023, firing trials of the weapon system were conducted by the User at ITR, Balasore.



Very Short Range Air Defence System (VSHORADS)

VSHORADS is a fourth generation system compared to contemporary Man Portable Air Defence System (MANPADS) 3rd generation systems. The indigenously developed VSHORADS weapon is technically superior to existing MANPADS as it employs state-of-art uncooled imaging infrared seeker. During Jan 2023, DAC has accorded AoN. During Aug & Nov 2023, warhead flight tests in full and final configuration were conducted successfully.



Naval Anti-ship Missile (NASM-SR)

Short Range Naval Anti-ship Missile (NASM-SR) to be launched from Sea-King helicopter against ship targets is being developed. It is the first indigenous air launched anti-ship missile system being developed for the Indian Navy. The missile is powered by two stage solid propulsion system with an in-line ejectable booster and a long-burn



sustainer. During Nov 2023, DRDO successfully flight tested the missile from Integrated Test Range (ITR) off the coast of Odisha with an objective to demonstrate the missile against ship targets, launched from Seaking Helicopter.

Pralay

Pralay is an indigenously developed low cost conventional surface-to-surface quasi ballistic missile powered with solid propellant rocket motor and many new technologies. The missile guidance system includes state-of-art navigation system and integrated avionics. During Nov 2023, the 3rd development trial was conducted successfully from Abdul Kalam Island off the coast of Odisha. AoN from both the Indian Air Force and Indian Army has been received.



Akash Prime

Akash weapon system is a surface to air weapon system. In comparison to existing Akash weapon system, the 'Akash Prime' is equipped with indigenous active Radio Frequency (RF) seeker for improved accuracy. It is potent weapon having unique guidance scheme with combination of Command Guidance (CG) and Seeker based terminal Guidance (SG) as both guidance schemes complements each other. During 2023, Akash-Prime configuration was finalised along with User and configuration document released.



Man Portable Anti-Tank Guided Missile (MPATGM)

MPATGM is a 3rd generation ATGM with 'Fire & Forget' and 'Top Attack' capabilities and the missile can be used by day and night. Technology demonstration trials are completed for both minimum and maximum ranges. During 2023, flight trials of MPTAGM were successfully conducted.



Vertical Launch Short Range Surface to Air Missile (VL-SRSAM)

VL-SRSAM, a ship borne weapon system being developed for Indian Navy, is a vertical launch short range surface to air missile against fighter aircrafts, helicopter, UAVs etc. The missile has been developed for neutralizing various aerial threats at close ranges including sea-skimming targets. During Jul 2023, the missile was flight tested from ITR, Chandipur off the coast of Odisha.



Long Range Glide Bomb (LRGB)

Long Range Glide Bomb is being developed in two different class of 1000 kg & 500 kg with different warheads called Pre-Fragmented blast (PF) and Penetration Cum Blast (PCB) war heads. The stores are designed for integration at different stations of Su-30 MKI. The lethality of war heads were proven through Static test and Rail track Rocket Slide (RTRS) dynamic

test. During 2023, testing of store and aircraft MC were completed for Su-30 station. Teams from DcPP underwent training and completed integration of stores.

EO-SAAW

EO-SAAW is a long range, stand-off autonomous air to surface guided bomb with IIR seeker for terminal guidance. During Aug 2023, release trials with cooled IIR seeker Mk-I were conducted. During trials, handing over of guidance from INS-GPS to seeker in Lock-On-After-Launch, performance of scene matching algorithm and correction of target location error was successfully demonstrated and the target structure was accurately hit by the weapon from a high altitude release.



Extended Range Anti-Submarine Rocket (ER-ASR)

DRDO has taken-up the project 'ERASR' with the objective to design, develop and manufacture ERASR rocket propulsion system. During Apr 2023, ship trials of ERASR were successfully conducted from INS Chennai. Range table data generation trials were also carried out at ITR Chandipur during May 2023. Accuracy and consistency of the rockets were found within specified limits.



Mounted Gun System (MGS)

Mounted Gun System (MGS) is an indigenous truck mounted artillery gun system (based on 155mm/52 cal ATAGS) developed by DRDO along with Industry partners and academia. MGS has high mobility and can be rapidly deployed matching the mobility of the mechanized forces to destroy the targets and move out before retaliatory fire occurs. MGS has excellent shoot and scoot capability and highest firing range

in its class. The indigenously developed MGS is at par with the contemporary systems available worldwide. Development of MGS has been completed. During Sep 2023, firing trials & DRDO Internal trials were carried out.



Medium Altitude Long Endurance (MALE) UAV: TAPAS-BH

TAPAS-BH, a multi-mission UAV is being developed with an endurance of 24 hours to carry out intelligence, surveillance and reconnaissance roles for the Armed Forces. During 2023, a number of milestones were achieved along with testing of the various systems and sub-systems. During Aero India - 2023, TAPAS participated in the event and provided continuous aerial coverage of the event with both the static and flying displays during the three business days.



Stealth Wing Flying Testbed (SWiFT)

DRDO is developing a flying wing test bed to demonstrate the capabilities & technologies and maximum re-use of systems from other UAVs. During 2023, a number of fully autonomous flight trials of SWiFT were conducted in two airframes. The technologies such as controllability of flying wing configuration, stealth by shaping, high speed automatic take-off and landing and fully autonomous flying with pilot on standby for emergency only were demonstrated. Structural health monitoring system is integrated and flight evaluation was completed. India has joined the elite club of countries to have mastered the controls for the flying wing technology.



High-Speed Expendable Aerial Target (HEAT) 'Abhyas'

HEAT 'Abhyas' is an expendable high-speed unmanned aerial target for surface to air missiles. ABHYAS offers a realistic threat target / scenario for the practice of weapon systems. Two DcPPs have been identified. During Feb 2024, four flight trials of ABHYAS were successfully carried out from the Integrated Test Range (ITR), Chandipur.



Armed Reconnaissance UAV (ARCHER)

DRDO has taken up design and development of Armed Reconnaissance Unmanned Aerial Vehicle (UAV). Software development and testing has been completed for autonomous take-off and landing of Archer UAV. Upgradation of systems architecture with TAPAS avionics has been completed. During Apr 2023, flight trials were carried out for updated avionic architecture. During Dec 2023, captive flight trials (with training missile) towards data collection for missile seeker evaluation were carried out.

Integrated Intrusion Detection and Active Response System

It is a seismic streamer-based vehicle mounted system, capable of detecting dormant tunnels up to a certain depth. Prototype system has been developed. Field evaluation trials and demonstration to BSF has been completed. The system has achieved an accuracy of 70% in detecting preexisting tunnel upto a defined depth. During 2023, the prototype system has been developed and User demonstration trials were completed.



Evaluation of Ground response to Locomotive Efforts of Vehicles (EAGLE)

An improved aid for evaluating terrain-vehicle interaction behavior and quantitatively map the trafficability potential of specific areas is being developed. During 2023, trials were conducted in both the static & dynamic condition. System capability to measure a minimum rut height was successfully demonstrated.

Kaveri 'Dry' Engine (KDE)

The altitude testing of the engine was carried out during Oct- Dec 2022 at CIAM, Moscow. During 2023, the engine was brought back to GTRE/DRDO and the complete disassembly of the engine has been carried out. No major distress on any of the part was observed during the disassembly inspection. A total of 38 ASMET cycles has been completed on the second prototype engine at GTRE test bed. The problems encountered during the altitude testing have also been resolved and the ground testing at GTRE on engine has been carried out to prove that the solutions are working in the engine condition.

Surveillance Using Multilayer Intelligent Tracking, Response & Analysis (SUMITRA)

SUMITRA is an intelligent perimeter surveillance system aimed at augmenting the existing perimeter security apparatus with enhanced sensors, automated alarm generation and better situational awareness to reduce operator fatigue and false alarms. The system is further augmented with fully automated real-time intruder tracking using Unmanned Aerial Vehicles (UAVs). The system has been designed in such a way that it can directly be scaled up from perimeter intrusion detection to border surveillance. System realisation has been completed. During Jun 2023, the system was recommended for induction.

Automatic Weather Stations (AWS)

DRDO has installed two Automatic Weather Stations (AWS) near Maitri research station (Antarctica) to monitor snow-meteorological parameters during 2023. The data collected through these installed AWS sensors is being utilised to estimate the energy and mass balance over Antarctica Ice Sheet to monitor its dynamics. Further, a geospatial network of Automatic Weather Stations in mountainous regions is being created by installing these AWS in all over the Himalayan region.

High Resolution Weather Prediction System

DRDO has developed a high resolution Weather Prediction System (WPS) for prediction of weather condition over Indian Himalayan region. During 2023, the system consisting of microwave radiometer and Doppler weather radar, was installed at NIT Sikkim.

Unexploded Ordnance handling Robot (UXOR)

UXOR is a remotely operated platform capable to handle and defuse Unexploded Ordnance (UXO) weighing up-to 1000 kg from a long distance. Three prototypes of UXOR system have been realised.

Each system includes skid steer mobile platform and vehicle based master control station cum carrier vehicle. System is under in-house technical trials and evaluations. During Sep 2023, Indian Air Force (IAF) has signed a contract for production of a number of UXOR system.

Supersonic Missile Assisted Release of Torpedo (SMART)

SMART is missile-assisted release of lightweight anti-submarine torpedo for Anti-Submarine Warfare (ASW) operations far beyond torpedo range. The system is a next generation missile-based standoff torpedo delivery system. The system has been designed to enhance ASW capability far beyond the conventional range of the torpedo. During 2023, two field trials were completed and multiple parameters viz. missile nose opening, torpedo ejection, parachute deployment were achieved.

High Endurance Autonomous Underwater Vehicle (HEAUV)

HEAUV is like a mini submarine with capabilities of long endurance, autonomous Intelligence, Surveillance and Reconnaissance (ISR) mission and limited combat capability. This multi-mission underwater vehicle can be used for detection of submarines, mines, intelligence, surveillance & reconnaissance, bathymetry & oceanography and detection of emergency beacons. Development partner has been identified and static trials of the prototype vehicle have been initiated. During Aug - Sep 2023, trial for launching & handling of HEAUV and static trials were conducted. Free surface dynamic run were also conducted at lab facility during Nov 2023. During Mar 2024, DRDO has conducted a maiden surface run of HEAUV at Cochin shipyard.

EW Suite for LCA-MK1A (Swayam Raksha Kavach)

The EW suite consists of state of the art Radar Warning Receiver (RWR) and Advanced Self-Protection Jammer (ASPJ). The RWR contains four channel wide band receivers and provides improved probability of detection and direction finding accuracy both for airborne and ground based radars. EW Suite for LCA Mk1A was tested on the LCA-LSP3 configuration for integrated mode of functioning of Internal RWR and pod based ASPJ system. Jamming of ground radars and airborne radars in the limited multi-emitter scenario was carried out. During 2023, integration of EW system with radar was tested and several sorties were carried out.

Navigation, Avalanche Warning & Tracking via Satellite (NATSAT)

DRDO has realized Navigation, Avalanche warning & Tracking via SATellite (NATSAT)-M satcom terminal. DRDO with industry partner jointly performed the trial of NATSAT-M at DGRE during Sep 2023. NATSAT-M with mounted Automatic Weather Station (AWS) was integrated with MET sensors and data logger. Sensor data was successfully received at Web Client through SATCOM HUB and NATSAT server. The terminal can be utilized in disaster management such as landslide prediction, preventing forest fire etc.

Smart Hybrid Off-Grid Energy System (SHOGES)

The system integrates and manages DG Set with renewable and other energy sources. Supply and demand side management controller is included providing a limited micro grid functionality.

The system includes solar and wind charge controllers, battery bank, smart inverter charger, power distribution element and intelligent power management system. During Aug - Dec 2023, development trials were carried out.

Indigenous Nuclear Radiation cum Chemical Agent Detector (INCD)

INCD is combination of nuclear radiation detection and Chemical Warfare Agent (CWA) detection technologies. Fitment and integration trials were successfully carried out inside T-90 Tank. Lead integrator (industry) has been nominated for INCD system. During Dec 2023, first engineering prototype was fabricated by industry partner. Lab level testing is under progress.

Vertical Shaft based Underground Explosive Storage Structure

DRDO has designed and developed a Vertical Shaft based Underground Ammunition Storage Facility. It enables upward vertical dissipation of blast effects considerably reducing the blast effect on surrounding utilities. During Apr 2023, Design Validation Trials (DVTs) of this Underground Ammunition Storage Structure were successfully conducted. The instrumented blast trial was carried out in presence of the Armed Forces. Based on the results of the trial, Critical Design Review (CDR) and Detailed Design Review (DDR) for structures of different categories were conducted.

Major Systems under Design & Development

Long Range Surface to Air Missile (LRSAM) for IN & IAF

Long Range Surface to Air Missile (LRSAM), being developed for Indian Navy and Indian Air Force, will be capable to neutralize the air-borne threats upto long ranges. The weapon system will also be capable of engaging sea-skimming, anti-ship missiles and anti-ship ballistic missiles.

Tactical Advanced Range Augmentation (TARA)

Tactical Advanced Range Augmentation' (TARA) kit is a long range precision guidance kit to convert existing unguided into a long range precision guided weapons. It is capable of attacking & destruction of high value ground targets. During 2023, Ground Fitment Trial (GFT) were conducted for Indian Air Force by integrating TARA to Jaguar Darin II and for Indian Navy at INS Hansa (NFTS), Goa wherein TARA was integrated to MIG29K.



Naval Anti-ship Missile -Medium Range (NASM-MR)

NASM-MR is MiG-29K aircraft launched 'Air to Ship' weapon of medium range, which has been configured to meet the anti-surface war requirements of Indian Navy. The missile is capable of Sea Skimming trajectory and follows given way points as per mission requirement. During 2023, weapon integration to launch platform has been finalised and AoN has been accorded.

RudraM-III

RudraM-III, is an indigenous long range air launched anti-radiation missile from Su-30 MKI. The missile is capable of carrying different type of warheads for different type of ground targets. During 2023, several sub-systems were realised. Electrical & mechanical adaptation trials with aircraft were completed. DcPP have been identified.



Light Tank

DRDO has taken-up design & development of a light weight versatile weapon platform with enhanced tactical, operational, strategic mobility with greater option for deployment in High Altitude Areas (HAA) and for amphibious operations. The tank will have weapon systems and protection of adequate capacity with suitability to operate in current and futuristic threat spectrum.

Active Protection Systems (APS)

DRDO has taken-up design & development of APS for Armoured Fighting Vehicles (AFVs) including MBT Arjun to enhance survivability of AFVs and the crew by minimising the vulnerability of being hit. APS is fully autonomous, quick and decisive hit avoidance system that detects in-bound anti-armour threats, compute intercept parameters and launches suitable counter-munition to neutralize the incoming threat before it hits the vehicle. During 2023, in-house manufacturing of launch tube, propellant, blast warhead were completed and various trials conducted. Realization of first prototype of other subsystems is in progress.

Unmanned Ground Combat Vehicle (UGCV)

DRDO has taken up the project for the development of technologies and systems for Unmanned Ground Combat Vehicle on MBT Arjun as the base platform. During 2023, development contract for realization of UGCV Hardware including design & development of autoloader was placed on industry partner. Realization of in-house design of UGCV Hardware for Hull and turret electronics including development of internal and external Crew Console for Interoperability mode, Teleoperation and Autonomous are under progress.

Advanced Armoured Platform (Wheeled & Tracked)

DRDO has taken up design & development of tracked and wheeled advanced armoured vehicles, incorporating state-of-the-art technologies in the area of hull, power pack, running gear drive line, turret including armament, ammunition, sighting system, amphibian capability, protection and ergonomics. During 2023, development contract was placed on industry partners for development of Advanced Armoured Platform (AAP-Wheeled) & (AAP-Tracked) and development of 30mm turret. During Nov 2023, Detailed Design Review (DDR) was completed.

1000kg General Purpose Bomb

Indian Air Force (IAF) has projected a requirement for the development of a 1000kg Class General Purpose Bomb along with suitable initiation mechanism. The bomb has provision to be carried on Su-30MK-I and Mirage-2000 aircrafts. The feasibility study and the Preliminary Design Review (PDR) of the bomb have been completed. Preparation of drawings and Quality Assurance Plan (QAP) has been completed and RFP for the development of Bomb through DcPP mode is under progress.

Design Technologies for Futuristic Unmanned Fighter Aircraft (DT-FUFA)

DRDO is developing design technologies for futuristic unmanned fighter aircrafts. During 2023, configuration has been finalised & PDR completed. Wind tunnel models have been manufactured for most of the test configurations and testing has started. Integrated Flight Control Computer (IFCC) design and manufacturing at industry partner is in advanced stage. Turn-key contract for detailed design and manufacturing of airframe has been released and detailed design activity has been initiated by industry partner.

Airborne Early Warning & Control (AEW&C) Mk-II

DRDO has taken-up a programme with the objective to design, develop and deliver six numbers of AEW&C Mk-II systems on airbus-321 aircraft to Indian Air Force. The system will be equipped with superior intelligence suite and the system will have a longer endurance. This will enhance the surveillance and controls providing a force multiplier to Indian Air Force. Six A321 aircraft from Air India have already been acquired. The system is under development.

Universal Communication Suite for Submarines (UCS-SM)

DRDO is working on development of Universal Communication Suite (UCS) to meet the internal and external communication requirement of submarines of Indian Navy. The project requires integration of various sub systems of communication suite from different vendors on a Sea-shore test facility under development by NPOL Kochi. The system is under advanced stage of development with industry partner.

Cloud LIDAR

Cloud LIDAR (Light Detection And Ranging) is an optical remote sensing system used to get highly accurate height of clouds, number of layers, etc. in the atmosphere. This system is being developed for cloud ceiling measurements at civilian and military airports. Two variants, i.e. MS-3 and MS-10 are being developed. Testing of cloud LIDAR and aerosol LIDAR has been completed and design & development is under progress.

Digital Active Phased Array Radar (DAPA-Radar)

It is an S-band active phased array with digital TR modules enabling digital beam forming in Transmit and Receive. It is a multi-function 4D radar capable of automatic detection and tracking of aerial targets ranging from fighter aircraft to slow moving targets. Most subsystems of the radar have been realised and their testing is under progress.

Surface Wave Over-The-Horizon Radar (SWOTH-Radar)

SWOTHR in a Bi-static configuration can detect and track targets over the sea surface, beyond the horizon, (LoS) using High Frequency (HF) signals. Subsystems of the Radar have been realised and infrastructure development for installation of antennas is under progress.

Methanol based Fuel Cell

DRDO has undertaken design & development of modular, containerized, portable, direct methanol fuel cell integrated 30 kVA power supply system with other renewable energy sources and high power density energy storage devices for use as power supply system for various Defence applications. During Apr 2023, realisation of the system was completed and during Jun 2023 FATs were successfully completed.

Text and Voice Communication

DDRDO has designed & developed a text and voice communication system using blue green laser for underwater applications. The system has been successfully tested. Underwater Laser communication was demonstrated for a long range in NSTL Visakhapatnam test facility. During May 2023, system was demonstrated to Hon'ble Prime Minister during National Technology Week.



Major Infrastructure & Unique test facilities created

Center for Advanced Detonators and switches (CADS)

A state-of-the-art center for production of precision detonators and switches was established at TBRL, Chandigarh. It is equipped with vacuum brazing facility of hermetic brazing of different assemblies of switches, micro-spot bonding machines, explosive characterization facility, In-situ surface polisher along with surface inspection system etc. During 2023, the desired production capacity was achieved.



Water Proofing Test Facility for Launchers and Extra-long Weapon Platforms

During Aug 2023, a water proofing test facility was installed at VRDE, Ahmednagar for conducting the water proofing test as per IS 11865:2006 standard for automotive vehicle to simulate the rainy conditions. It consists of set of nozzles is 400 mm, flow rate 15 lpm & 2 bar pressure. It has provision of height & width adjustment for different class of vehicle.



Control System Test Facilities for Small Engines

The facility created at GTRE, Bengaluru, provides integration and testing platform for the safety critical engine control system of expendable engines & their validation for UAV flight test clearance. The test facilities comprise of following two test systems. (a) Hardware in the Loop Simulation (HILS) System – which is a real time automated test rig configured for system level functional and performance verification during the entire

test cycle process of Hardware-Software Integration, control law validation testing and Hardware-In Loop Simulation testing and (b) Ground Check Out System (GCS) – which is a real time system configured for integration and testing of engine control system with the avionic subsystems of missile. This is a mobile rig deployed in various field locations during the missile integration testing and cleared for flight.

Mission Systems Integration Rig (MSyIR)

MSyIR is a generic airborne mission systems rig at CABS, Bengaluru which facilitates in development, integration, testing and evaluation of Mission Payloads of Airborne Surveillance System prior to actual flight test in a controlled environment. MSyIR can integrate multiple sensors of an airborne or a ground-based platform, perform functional tests on individual sensors and evaluate the overall performance of the integrated system with simulated mission scenarios. The facility shall mimic the flight profile and also helps in acquiring repeatable external parameters and getting statistically significant results which help in ascertaining the behavior of sensors under different scenarios. During Dec 2023, the project was successfully completed meeting all mission objectives.

Electrical Rig for Aircraft Systems (ERAS)

DRDO has successfully designed, developed and realised an Aircraft Generator & Electrical System Test (AGEST) Rig at CABS, Bengaluru. During 2023, the Rig functionality was verified by ADA & CEMILAC and cleared. AGEST Rig is a state-of-the-art test facility and one of its kind in India, which aids in effective designing, development & validation of the complete electrical system of any twin-engine aircraft, with generator ratings upto 120kVA.



ANUNAAD HANGAR facility

The submarine towed array system is one of the critical technologies being developed for a strategic project by DRDO. The towed arrays used for the project is one of the largest array configuration in terms of length and smallest in terms of diameter. The assembly, integration and testing of these towed array modules are undertaken in a specialised facility known as towed array integration hanger. An under-water towed array is required to run in this facility similar to the layout of the platform along with all accessories. The towed array integration hanger consists of the winch assembly, testing facility, towed array assembly and testing facility exclusively for submarine application. The facility was inaugurated in Oct 2023.

Radome Development Centre

'Radome Development Centre' was established at RCI, Hyderabad. The objective of the centre is to unify all the different technologies involved in development of ceramic Radome starting from designing stage to flight worthy radomes for ongoing and future missile requirements to achieve self- reliance and put DRDO at par with international Radome development scenario. Radome Development Center (RDC) is responsible for development of ceramic radomes to meet the requirements of RF seeker ceramic radomes till development flight trials.

Shore Integration Facility (SIF)

The foundation stone for the 'Shore Integration Facility (SIF)' of Programme 'Integrated Combat Suite (ICS)' for Submarines was laid on 05th February 2024. SIF is a unique facility being established in NPOL technical campus where all sub-systems of ICS being developed by DRDO Labs will get installed, integrated, and the functionality of the ICS will be proved.

Defence Technology & Test Centre (DTTC)

The Defence Technology & Test Centre (DTTC), Lucknow, was inaugurated by Hon'ble RM in the august presence of Hon'ble Chief Minister of Uttar Pradesh on 11th Mar 2024. DTTC is part of the Uttar Pradesh Defence Industrial Corridor (UP DIC) and will assist industries with S&T consultancy, skill development, testing, and incubation of new technologies. The corridor has been established to achieve Atmanirbharta and to realise the goal of 'Make in India'.

Virtual Reality-based (Chaff) Applications for Naval Ship

A new 'Virtual Reality-based (Chaff) Applications for Naval Ship' (ViRANSh) centre was established on 04th Mar 2024 at Defence Laboratory, Jodhpur (DLJ) for simulating real warfare scenarios by dispensing various chaff rockets for confusing and distracting the hostile RF seeker missiles and safeguarding the naval ships.

Corporate Initiatives

Enabling Industry and Academia

DRDO works closely with start-ups, large scale industries; Micro, Small & Medium Enterprises (MSMEs); and academia to develop products and systems enabling DRDO developed systems to be inducted into the Services. Major initiatives undertaken by DRDO to enabling industry & academia are:-

- DRDO conducted series of sessions on Anusandhan Chintan Shivir during May- Jul 2023. The sessions were attended by participants from Industry, Academia and Armed Forces. Subsequent to Chintan Shivir event, 1295 development tasks identified to be pursued by academia were uploaded on DRDO website.
- During Directors conclave in Jul 2023, Chief of Defence Staff (CDS) released the 2nd list of 75 items with the objective of capitalizing the capabilities of Indian Industry for design & development of Defence System, in addition to the previous list of 108 system/ subsystem which will not be taken up for design and development by DRDO.
- DRDO established a network of DRDO Industry Academia-Centres of Excellence (DIA-CoEs) for collaborative directed research in developing critical and futuristic technologies for defence and security applications. So far 15 DIA-CoEs have been established at various IITs, IISc, Central and State Universities. Six of them have been operationalized in the year 2023. A total of 47 projects were sanctioned during the financial year 2023-24. Total 39 academic institutes, 400 faculties, 716 researchers and 267 DRDO scientists have been engaged at these DIA-CoEs.
- DRDO-Academia Conclave was organized in May 2023 to have cross pollination of ideas and to share the expectations, issues and challenges of DRDO and academia related to Grant-in-Aid funding. Total 553 people from academia including the Principal investigators (PI's) from all over the country participated in the conclave. During 2023-24, 140 Grant-in-Aid projects costing ₹ 139.184 Cr were sanctioned to 121 institutions across the country through ER & Research Boards. 113 patents were also filed during the financial year 2023-2024.
- During 2023, 150 Licensing Agreements for Transfer of Technology (LAToTs) were signed with Indian Industries for DRDO products. Around 1800 LAToTs have been signed with industry till date.

- Since 2019, 114 Industries have been engaged as Development Cum Production Partners/ Production Agencies for various complex defence technologies and systems. During 2023, 20 Industry (06 Development cum Production Partners (DcPPs) and 14 Production Agencies (PAs) have been identified for the development and / or production of DRDO systems.
- Technology Development Fund Scheme (TDF Scheme) is also being executed by DRDO to encourage participation of public/private industries especially Micro, Small and Medium Enterprises (MSMEs)/startups and to promote self-reliance in Defence Technology as part of make-in-India initiative. Currently, 5447 Indian Industries, 1316 Indian Academia and 2023 experts across academia and industries have registered with the DRDO TDF Scheme. Currently 70 projects worth ₹ 290 Cr are under progress under this scheme. A green propulsion system developed under TDF scheme was successfully demonstrated in orbit functionality on a payload launched by the PSLV C-58 mission on 01 February 2024.
- DRDO -Industry Meet was organised during Maharashtra MSME 'Defence Expo-2024' at Pune on 25 Feb 2024 to apprise and update the participants about industry-friendly initiatives and policies of DRDO.
- DRDO in collaboration with QCI, has developed the 'System for Advanced manufacturing Assessment and Rating (SAMAR)' to measure the maturity level of defence manufacturing enterprises and as a benchmark for the competency of defence industry enterprises and to strengthen the manufacturing ecosystem in the country. So far nearly 105 large, medium, small and micro industries have registered on the SAMAR portal.
- DRDO Quality Conclave was conducted in Nov 2023 with the Theme – Quality Odyssey for Self-Reliance in Defence Products at DRDO Bhawan.
- Over the past year, more than 500 Indian industries have utilized DRDO's test facilities on a payment basis, adhering to the SOP available on the DRDO website.

DRDO MHA Collaboration

DRDO and MHA including the CAPFs and State Police Forces are working towards technological modernization through provision of DRDO developed products and technologies. Recently, AoN was accorded for development of indigenous Digital Hand Held Radio sets (akin to Motorola DMR) based on requirement of Delhi police and other CAPFs. Various security related products such as Anti Drone systems, optical target Locators, laser Dazzlers etc. were also provided for events of National importance such as Independence Day & Republic day. The collaboration is steered through annual Apex council and bi annual Technology council meetings to review the progress of various initiatives involving induction of DRDO products/technologies towards Police Modernisation.

Defence Technology Collaboration with friendly foreign countries

- DRDO pursues defence technology collaboration with Friendly Foreign Countries (FFCs) in advanced technology areas of mutual interest including joint R&D and co-development of systems.
- The Defence technology cooperation with friendly countries is facilitated through Government to Government (G2G) frameworks/arrangements. In January 2024, DRDO signed a Letter of arrangement (LoA) with UK, for bilateral collaboration in defence R&D.
- Bilateral engagements were held with many countries including USA, Russia France, Israel, Japan etc and discussions were held for review of ongoing collaborations and to identify new opportunities

DEPARTMENT OF EX-SERVICEMEN WELFARE



GOVERNMENT OF INDIA
MINISTRY OF
DEFENCE

DEPARTMENT OF EX-SERVICEMEN WELFARE

Introduction

The Department of Ex-Servicemen Welfare (DESW) formulates various policies and programmes for the welfare and resettlement of Ex-Servicemen (ESM) in the country. The Department has two Divisions viz. Resettlement and Pension, and it has 3 attached offices namely- Kendriya Sainik Board (KSB), Directorate General Resettlement (DGR) and Central Organisation, Ex-Servicemen Contributory Health Scheme (CO, ECHS).

Pension Reforms

The Government order and the detailed instructions relating to implementation of One Rank One Pension (OROP) along with tables indicating revised pension for each rank and each category, has been issued on January 04, 2023 and January 20, 2023 respectively. The Union Cabinet had given approval of the revision of pension of Armed Forces Pensioners/family pensioners under OROP w.e.f. July 01, 2019. More than 25.13 lakh (including over 4.52 lakh new beneficiaries) Armed Forces Pensioners/family pensioners will be benefitted. Estimated additional annual expenditure for implementation of the revision calculated as approx. ₹ 8,450 crore @ 31% Dearness Relief.

Grievance Redressal System

DESW makes concerted efforts to reduce grievances, bring down the disposal time, and promote dialogue and interaction with our Ex-servicemen as also to sensitize the Rajya Sainik Boards (RSBs)/ Zila Sainik Boards (ZSBs) for resolving the grievances of Ex servicemen. Throughout the calendar year i.e. January 1, 2023 to December 31, 2023, a total of 36660 online/offline grievances related to Ex-servicemen/ Pensioners grievances were received, out of which 34124 (93%) grievances were successfully disposed of with an average disposal time of 28 days.

Welfare

Financial Assistance to States. KSB Secretariat is the apex body of the Government of India responsible for welfare of war-widows/disabled soldiers, ex-servicemen and their dependents. Financial assistance to States as Central share is given by the Department through KSB towards the establishment expenses of Rajya Sainik Boards/Zila Sainik Boards (RSBs/ZSBs). Funding pattern is 75:25 in respect of special category States/UTs, namely, Arunachal Pradesh, Assam, Jammu and Kashmir, Ladakh, Meghalaya, Mizoram, Manipur, Nagaland, Sikkim, Tripura, Himachal Pradesh and Uttarakhand, and 60:40 in the case of other States/UTs. Govt of India also shares 50% cost of

construction of Sainik Rest Houses (SRHs) out of the Defence Services Estimates (DSE) Budget. A sum of ₹319.28 crores has been disbursed to the States through KSB as Central share during FY 2023 24.

Armed Force Flag Day Fund. Armed Forces Flag Day Fund (AFFDF) is meant for running schemes for welfare of Ex-Servicemen and their dependents. The fund is administered by KSB and donations to the fund are eligible for exemptions under section 80G of the Income Tax Act, 1961. The fund receives contributions from the Tri-Services, corporates, PSUs and individual donors. The fund has a corpus of ₹ 341.23 crore and a portion of the usable income accruing on the Corpus of the AFFDF is earmarked for the Raksha Mantri Ex-Servicemen Welfare Fund (RMEWF) Schemes.

Raksha Mantri Ex-Servicemen Welfare Fund (RMEWF) Schemes. Financial assistance under RMEWF is provided from AFFDF for identified personal needs ESM/ their dependents e.g. Penury Grant, Children Education and Marriage Grant, Medical Grant etc. During the financial year 2023-24, financial assistance of ₹ 364.42 crore to 1,71,893 beneficiaries have been disbursed in favour of the Ex Servicemen/ their dependents. Besides these, an amount of ₹ 2.07 crore as financial grants to War Memorial Hostels and Paraplegic Rehabilitation Centre at Kirkee and Mohali have also been given. The periodic review of all the welfare scheme is being done and grant under the following schemes were enhanced :-

- (a) Enhancement of Vocational Trg Grant for Widows from ₹ 20,000/- to ₹ 50,000/-
- (b) Enhancement of Serious Diseases Grant from ₹ 1.25 lac to ₹ 1.50 Lac.
- (c) Enhancement of Medical Treatment Grant from ₹ 30,000/- to ₹ 50,000/-

Gaurav Maah. Armed Forces Flag Day is celebrated on 7th December every year across the country to commemorate the sacrifices made by the armed forces. During the month long campaign celebrated as **"Gaurav Maah"** from December 1 to 31, 2023 various activities were undertaken e.g. use of print/ social media and radio interviews of ESM and Veer Naris for creating awareness about the significance of the Flag Day.



Secy KSB pinning AFFD flag to Hon'ble Prime Minister on December 7, 2023



Secy (ESW) with officials of KSB during the pinning AFFD flag to His Excellency the President of India on December 7, 2023

CSR Conclave. A CSR conclave was conducted on 29 Nov 2023 at Manekshaw Centre, New Delhi. During the conclave, major contributors of AFFD were felicitated by Hon'ble RM for their generous contributions to various welfare schemes for ESM and their dependents. The increase in CSR contribution in last three years is as under :-

Sr No.	Financial Year	CSR Contribution (in ₹)
(a)	2021-22	29.85 Cr
(b)	2022-23	23.64 Cr
(c)	2023-24	41.68 Cr (All time high)



Hon'ble RM presiding over Armed Forces Flag Day - CSR Conclave at Manekshaw Centre, Delhi Cantt on November 29, 2023



Armed Forces Flag Day - CSR Conclave on November 29, 2023

Prime Minister's Scholarship Scheme (PMSS). A total of 5500 scholarships are awarded annually under this scheme to the wards and widows of Ex-Servicemen out of National Defence Fund which is administered by Prime Minister's Office. An amount of ₹ 50.55 crore has been disbursed to 15,115 beneficiaries during the FY 2023-24.

Veterans Day. The eighth Armed Forces Veterans' Day was observed on January 14, 2024. This year, the celebrations were up-scaled and major events were held at ten locations with Raksha Mantri Shri Rajnath Singh presiding over the main function in Kanpur. The Veterans' Day event at Secunderabad was presided over by Raksha Rajya Mantri, Shri Ajay Bhatt. The officers of the Armed Forces, Next of Kin, Veterans and representatives of various Ex-servicemen organisations were honoured at these events.



Hon'ble Raksha Mantri Shri Rajnath Singh visiting the DGR exhibition stall at 8th Armed Forces Veterans Day, Air Force Station Kanpur on January 14, 2024.

Settling of New Zila Sainik Boards (ZSBs). Five new ZSBs have been established in the districts of Sambhal in UP, Porbandhar and Surendera Nagar in Gujarat, Kalimpong in WB and Rajsamand (Bhim) in Rajasthan.

Board Meeting of Kendriya Sainik Board. The Board Meeting of Kendriya Sainik Board (KSB) was held on April 11, 2023 at Vigyan Bhawan, New Delhi under the chairmanship of Hon'ble Raksha Mantri. Post Lunch the meeting of Directors of Rajya Sainik Board (RSBs) was chaired by Secretary (ESW).

Celebration of International Yoga Day. International Day of Yoga was celebrated on June 21, 2023 with the theme **"Yoga for Humanity"**. Apart from practicing common yoga protocol, yoga related activities were also conducted and participated by DESW & its attached offices i.e. Kendriya Sainik Board (KSB), Directorate General of Resettlement (DGR) & Central Organisation, Ex Servicemen Contributory Health Scheme (CO, ECHS) including their field establishments.

Azadi ka Amrit Mahotsav. As part of Azadi ka Amrit Mahotsav, 'Har Ghar Tiranga' and 'Meri Maati Mera Desh' Campaign was conducted by all the attached offices and their field establishments from August 11, 2023 to August 15, 2023. Kendriya Sainik Board (KSB) & Zila Sainik Boards (ZSBs) actively participated in "Veero Ka Vandan" program for honouring ESMs by village community and youth.

Swachhata Campaign. Special Campaign was organized for swachhata and disposal of pending matters from October 2 to October 31, 2023, with focus on reduction of pendency, overall cleanliness of office complex and efficient office space management. Monitoring and disposal of grievance, review of reference cases and special outreach programme at RSB/ ZSB level were organized.

Resettlement

Directorate General Resettlement (DGR). DGR is mandated for re-settlement and rehabilitation of the Ex-servicemen (ESM), Disabled Soldiers, Widows and their Dependents. Due to operational and administrative reasons, nearly 60,000 to 70,000 armed forces personnel retire/ are released from active service every year, most of them being in the comparatively younger age bracket of 35 to 45 years and need a 'second career' to support their families. Towards this, DGR is operating re-settlement schemes for these ESM/ Dependents.

Pre-Release/ Skill Development Course. DGR is mandated to organize and conduct Re-settlement Training / Skill Development Courses for retiring / retired Armed Forces personnel of all the three Services. These courses are aimed at enhancing their employability in civil/ corporate sector.

Pre-Release Course for Officers. For officers, courses are conducted at IIMs/similar premier management institutes. The duration of these courses varies from 02 weeks to 24 weeks. The fee for officers' courses is shared by the Government and the individual officers in the ratio of 60:40. Efforts are being made to widen the scope and reach of these courses by empanelling new institutes and evolving courses which meet the requirement of the industry and aspirations of the ESMs.

Skill Development Courses for JCOs/OR and their Equivalents in IN & IAF. Skill Development and entrepreneurship development courses for JCOs / OR and their equivalents in IN and IAF are conducted in various Government Institutes pan India for a maximum duration of up to one year. Entire expenditure of the course fee for the ibid courses is borne by Govt of India/ MoD.

Training During the FY 2023-24. A total of 382 Courses (including 25 Officers' Courses) have been scheduled to be conducted during the current FY 2023-24. A total of 1007 Officers and 8128 JCOs/OR and their equivalents in IN and IAF were imparted Resettlement/Skill development training during the FY 2023-24.

Employment Opportunities in Central Government for ESM. Central Government has provided following reservations quota in Government jobs for ESM towards their Re settlement (Case has been taken-up to rationalize ESM reservation quota due to merger/ up gradation of some Group 'D' posts to Group 'C' and some from Group 'C' to Group 'B'):-

- a) 10% of the vacancies in the posts up to the level of the Assistant Commandant in all Para-Military Forces (CAPF).
- b) 10% of the vacancies in Group 'C' Direct Recruitment posts and 20% of the vacancies in Group 'D' Direct Recruitment posts in Central Government Departments.c) 14.5% vacancies in Group 'C' posts and 24.5% vacancies in Group 'D' posts (including 4.5% for disabled ESM/dependents of servicemen killed in action) are reserved in Central Public Sector Undertakings.
- c) 14.5% vacancies in Group 'C' posts and 24.5% vacancies in Group 'D' posts (including 4.5% for disabled ESM/dependents of servicemen killed in action) are reserved in Central Public Sector Undertakings.
- d) 14.5% vacancies in Group 'C' posts and 24.5% vacancies in Group 'D' posts (including 4.5% for disabled ESM/dependents of servicemen killed in action) are reserved in Public Sector Banks.
- e) 100% in Defence Security Corps (DSC).

ESM Sponsored for Employment. A total 3091 (01 Apr 2023 to 31 Mar 2024) Ex Servicemen were sponsored to the various organizations (Govt./Pvt/ PSUs) for permanent/ contractual jobs (except self-employment schemes) through DGR and RSB/ZSBs.

DGR Security Agency Scheme. This is a 'Flagship' project of DGR that offers maximum employment to ESM. ESM (officers) are the proprietors of the ibid scheme with JCOs/OR and their equivalent in IN/ IAF as Security Supervisor/ Guard. A total of 750 Security Agencies have been empanelled during the year 2023-24 and 33,172 ESM were provided employment under the scheme.

Schemes for Self Employment

Employment Opportunities through DGR. DGR operates re-settlement schemes for retired Officers, JCOs/OR and their equivalent in IN/ IAF. Disabled Soldiers, Widows and their Dependents for their employment and welfare. The major schemes and the number of beneficiaries through them in the year 2023-24 are tabulated below:-

Sl. No.	Scheme	No of Beneficiaries
(a)	Mother Dairy Milk Booth and Fruit & Vegetable (Safal) Shop	498
(b)	Management of CNG Station by ESM(Officer) in Delhi/NCR and Pune	43
(c)	Issue of DGR Eligibility Certificate for Allotment of LPG/Retail Outlet (Petrol/Diesel) against 8% Reservation Quota	52
(d)	Management of Company Owned Company Operated (COCO) Retail Outlets	238
(e)	Management of Pradhan Mantri Jan Aushadhi Kendra	02

Ex-Servicemen Seminars/ Job Fairs. Eight ESM Employment Seminars/Job Fairs were conducted Pan-India during the FY 2023-24. 258 Companies participated in the Seminar/ Job Fair and 12198 Ex-servicemen registered for seeking employment.



DGR Job Fair at Lucknow on February 12, 2024.

Pradhan Mantri Bhartiya Jan Aushadhi Pariyojna (PMBJP). PMBJP for Ex Servicemen with grant of special incentive (a one-time grant of ₹ 2 lakh, in addition to normal incentives) has been implemented in collaboration with Pharmaceuticals & Medical Bureau of India (PMBI) w.e.f. Jun 2023.

Health Care

Ex-Servicemen Contributory Health Scheme (ECHS) was launched with effect from April 1, 2003. ECHS aims to provide quality healthcare to ESM and their dependents through a network of ECHS Polyclinics, Service medical facilities and civil empanelled/ Government hospitals spread across the country. The scheme has been structured on the lines of Central Government Health Scheme (CGHS) and is financed by the Government of India. Endeavour is to ensure cashless treatment, as far as possible, by utilizing the empaneled hospitals for the veterans and their dependents. The total beneficiaries of the Scheme are approximately 55 lakh. The scheme has also been extended to Gorkha Domiciles with six Polyclinics in Nepal.

Empanelment of Hospitals. A total of 3297 hospitals are currently empanelled under ECHS. With an aim to empanel quality hospitals, empanelment of Tata Memorial Hospital (TMH) at Mumbai, Vizag, Varanasi, Guwahati and Sangrur has been completed. MoU for empanelment of Government Medical Colleges and Hospitals is also undertaken. AIIMS Bhopal, Raipur and Hyderabad have also been empanelled.

Video Consultation. The SeHAT OPD platform which was launched by the Hon'ble Raksha Mantri as a video consultation platform for serving and retired personnel is now being connected to ECHS database and software to facilitate seamless services and provide consultation from the comfort of the home for the ECHS beneficiaries. The Integration is in progress.

ECHS Management System. A team of IT consultants have been hired to initiate the process of development of an ECHS Management System and implement the services through a dedicated Project Management Unit (IT).

ECHS Beneficiaries Mobile App. ECHS mobile app both Android and IOS version has been updated on 26.06.2023 with new features like booking appointment sitting at home, checking application and Card status and certain information of all Regional Centres. The ECHS beneficiaries search their medical records and information about their Polyclinic.

Budget allocation for ECHS. During the Financial Year 2023-24, an amount of ₹ 9880.98 crore has been allotted for the ECHS. This is the highest budget allocation so far for the ECHS in any FY. This higher allocation has helped clear major pendency of the bills of empanelled hospitals and individual claims.

Compendium. Compendium-I of Govt of India letters on ECHS and Compendium-II of Central Org ECHS letters were issued for the wider dissemination to Veterans and their dependents.

EMPOWERMENT AND WELFARE OF WOMEN

The Ministry of Defence and its associated organizations remain deeply committed to fostering gender inclusivity, empowerment, and welfare of women across all branches of the Armed Forces and Defence establishments. Over the years, women have broken barriers and achieved historic milestones in diverse fields ranging from combat roles, aviation, adventure sports, and overseas missions to leadership in critical administrative, technical, and operational domains.

This Chapter highlights the concerted efforts undertaken by the Indian Army, Navy, Air Force, Coast Guard, and the Department of Defence Production to create a more enabling environment for women, ensuring their representation, participation, and professional growth in every sphere of national defence and service to the nation.

The following sections present, organisation-wise, the major initiatives and achievements undertaken towards the empowerment and welfare of women.

Indian Army

Key Highlights

- Permanent Commission in 13 Arms and Services.
- Special Selection Board for WOs.
- Training in NDA.
- RMS & RIMC open to Girl Cadets.
- Increase in SSC vacancies for women.
- Induction of Women Veterinary Graduates for the first time in RVC.
- 22% of SO/MILOBs in UN Mission are women.
- Deployment of Female Engagement Team (FET) in UNISFA.
- Growing participation of Women Soldiers in Multinational Exercise.
- Promoting Women Entrepreneurship in CSD.
- Better opportunities in Sports and Adventure.
- Escalation of Women Cadet Training amongst FFCs.
- Female Military Officers Course for Women Military Officers of ASEAN Countries.

Women in Adventure Sports of Indian Army.

- (a) **Tri Service All Women Around the World Sailing Expedition (TSAWAWSE).** Indian Army is planning a Tri-Services All Women Around the World Sailing Expedition 'TSAWAWSE' 2024-25. 12 WOs (seven from Indian Army) have been shortlisted for the expedition. The team is training rigorously for the challenge and has undergone four training expeditions so far.
- (b) **Microlight Expedition.** Microlight Expedition from Udhampur-Kanyakumari-Pune as part of National Expedition to celebrate 25th Year of Kargil War Victory and Centenary Celebration of Bombay Sappers 2023-24 was conducted from 20 November 2023 to 31 January 2024. Three women Microlight Flyers, Major Garima Puniani, Captain Priyadarsini K and Captain Sanghmitra Rai have emerged as trailblazers in the prestigious expedition epitomizing the essence of women empowerment.
- (c) **Accuracy Paragliding Pre World Cup-2023.** Major Swapna Kumari Malo (MNS Officer) represented Indian Army in Paragliding Accuracy Pre World Cup-2023 at Narwana, Himachal Pradesh from 13 to 17 November 2023 and secured second position in Women's category.

Various Firsts of Year 2023. Following women of Indian Army made their mark in history, thus taking the vision of gender inclusivity to a new height.

S No	Name	Achievement	Arm/ Service
(a)	Captain Shiva Chouhan	First WO to get deployed at world's highest battlefield in Siachen	Engineers
(b)	Colonel Sunita	First woman to command the Armed Forces Transfusion Centre	Army Medical Corps
(c)	Captain Surbhi Jakhmola	First WO to be posted on foreign assignment in Border Roads Organisation (BRO)	Engineers
(d)	• Lieutenant Mehak Saini • Lieutenant Sakshi Dubey • Lieutenant Aditi Yadav • Lieutenant Pious Mudgil • Lieutenant Akansha	First batch of five WOs to be inducted into Regiment of Artillery	Regiment of Artillery
(e)	Colonel Suchita Shekhar	First WO to assume command of Communication Zone Mechanical Transport Battalion	Army Service Corps
(f)	Colonel Geeta Rana	First WO to take over command of an independent field workshop in a forward & remote location in Eastern Ladakh	Corps of Electronics and Mechanical Engineers

Indian Navy

- (a) **Induction of Women.** *IN* has commenced induction of women into all branches wef June 2023. With regards to NDA, entry of women cadets was commenced wef June 2022 and three vacancies were allocated to *IN*. Commencing Jan 24 batch, the **number of vacancies for women cadets at NDA have been increased from three to 12.** At Indian Naval Academy (INA), women cadets are now eligible to join through '10+2 B Tech' entry scheme. Applications for the same have been received and their training would commence wef January 2024. Also, women induction through 'UPSC/ NDA Entry' into INA would commence wef June 2024. SSC women officers in the Indian Navy are eligible for consideration for **grant of Permanent Commission.** As on date, 73 women officers (excluding Medical and Dental officers) have been granted PC.
- (b) **Women Agniveers.** The first batch of *Agniveers* comprising 272 women candidates have completed their basic training at *INS* Chilka. Further, the interest of women candidates towards joining Indian Navy as *Agniveers* has been growing and a total of 454 women have been recruited in the second batch, who are presently undergoing training at *INS* Chilka.
- (c) **Appointment to Frontline Combat Platforms.** In a historic move, *IN* has allowed women in the Navy to opt for MARCOS in a step towards opening all cadres in the *IN* for women. One Women Officer has also been appointed as the Commanding Officer, for the first time, of warship *INS* Trinkat.
- (d) **Provost Specialisation.** Commencing 2020, Provost Specialisation has been opened up for women officers and the first woman Provost Officer has joined the specialisation in March 2021 after successful completion of At- Arms course.
- (e) **Overseas Assignments.** Woman NAO officer are being deputed overseas to Maldives since September 2020, as part of Dornier aircrew.

Open Sea Sailing Expedition. *IN* Sailing Vessel *Tarini* was deployed for Open Sea Sailing Expedition wef 22 Nov 22 with a crew of five (including 02 Women Officers). *Tarini* successfully completed a 17,000 Nm trans-ocean inter-continental voyage to South Africa and South America (Cape to Rio Race). A grand Flag-in ceremony for the crew of *INSV* *Tarini* was conducted at *INS* Mandovi on May 23, 2023, with Shri Pramod Sawant, Hon'ble Chief Minister of Goa, as the Chief Guest. Smt Smriti Irani, the Union Minister of Women and Child Welfare, accompanied by CNS, also graced the occasion.



Flag-in Ceremony of *INSV* *Tarini*

All Women Car Rally. An all women car rally from New Delhi to Longewala War Memorial for women officers and Naval ladies was organised from February 14 to 25, 2023. The rally was flagged-off by CNS from National War Memorial and covered a total distance of 2400 km. 12 women Naval Officers and 25 Naval ladies participated in the event.

Indian Air Force

Safe Working Environment for Women at IAF Workplaces. IAF follows the 'zero tolerance' policy of Government in cases of any misdemeanor by any person against women or children. The IAF has issued various policies in this regard to ensure that offenders are punished as per law in such cases. A duly constituted 'Internal Committee' (IC) has been put in place at all workplaces in the IAF. A woman officer of the rank of Gp Capt has been appointed as a Nodal Officer to ensure that all changes are updated in the ICs on quarterly basis and that the IC is constituted strictly in accordance with the provisions of the Prevention of Sexual Harassment Act (POSH Act). In last two years following policy letters were issued in this regard: -

- (a) Constitution and Composition of Internal Committee dated Nov 02, 2021.
- (b) Non-reporting of POCSO Offences: A Serious Crime dated Nov 04, 2022.
- (c) All necessary actions have been taken in terms of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 to provide safe working environment to women at all IAF workplaces. AFO 03/23 has been issued to give effect to the provisions of the said Act.

Indian Coast Guard

Indian Coast Guard has been inducting women officers since 1997 and is committed to representation of women in all field. Presently the service has 88 women officers who are being effectively utilized in the domain of general administration, logistics, IT services and aviation. One woman officer has been promoted to the rank of Deputy Inspector General in 2020 which is an inspiration and motivation for all.

ICG has also deployed women officers in operational roles onboard ACVs, that patrol country's maritime zone near the borders with Pakistan and Bangladesh including Jakhau in Gujarat and Haldia in West Bengal. Eight women officers have successfully completed the Air Cushion Vehicles (ACVs)/Hovercraft operator training till date and were subsequently appointed as **captain of craft (CoC)**.



Women officers are being posted at remote stations like Jakhau, Campbell Bay etc. for specialized logistics duties and are also deployed for 24x7 manning of Remote Operating Stations (ROSs)/ Remote Operating Centres (ROCs) at various remote units, which plays a vital role in the Coastal Security mechanism. Two women officer were deployed onboard ship ICGS Sujay for Overseas Deployment to Jakarta, Indonesia, Incheon, (Korea) and Bali. Five women officers were conferred with awards for extraordinary contribution to women empowerment by Delhi Commission of Women. Four women officers are also part of the ICG mountaineering expedition team scheduled for scaling Mount Everest in 2027 and are presently undergoing training for the same. Further, One women officer has participated in sailing expedition undertaken by INSV Neelkanth, from Kochi to Chennai.

Department of Defence Production

The Department and its PSUs have strict compliances towards various guidelines promulgated for Women workforce for achieving safer working environment. An 'Internal Complaints Committee' for Prevention of Sexual Harassment at Workplace is in place. Women cells have been also created which acts as a responsive platform for women employees to nurture growth and development amidst themselves. Regular awareness and training programs are also organized for women employees across all cadres for their holistic development.

Way Forward

The initiatives and achievements outlined reaffirm the unwavering resolve of the Armed Forces and Defence organizations to advance women's empowerment and welfare as a matter of institutional priority. From the induction of women in new roles and combat platforms to providing safe workplaces, skill development opportunities, and recognition of their pioneering contributions, each step taken reflects a progressive shift towards inclusivity and equal opportunity. These collective endeavours not only strengthen the operational capability of the services but also set a powerful example of empowerment for the larger society. The continued commitment to nurture, support, and celebrate women in defence will remain central to building a modern, resilient, and inclusive force for the future.



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