Annual Report • 2013-14

सत्यमेव जयते

MINISTRY OF DEFENCE
Government of India

C-130J landing at an Airfield

User trial of Surface to Air Missile Akash

Front Cover: (Clockwise)	C-17 Globemaster operating in the Northern Sector MiG-29K taking off from INS Vikramaditya India-Russia Joint Army Exercise at Pokhran Soldiers on Prowl at Siachen

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2013-14

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Government of India

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1

SECURITY ENVIRONMENT

India's security environment is defined by a complex interplay of regional and global imperatives and challenges. The size and the strategic location of the country places us at the centre of a security dynamic, impacted concurrently by the positive forces of regional and global connectivity on the one side and by the consequences arising from unpredictability, instability and volatility in parts of immediate and extended neighbourhood, on the other.

1.1 India's security environment is defined by a complex interplay of regional and global imperatives and challenges. The size and the strategic location of the country places us at the centre of a security dynamic, impacted concurrently by the positive forces of regional and global connectivity on the one side and by the consequences arising from unpredictability, instability and volatility in parts of immediate and extended neighbourhood, on the other.

1.2 As India seeks to achieve transformative national growth and development internally, we pursue a robust defence strategy and policies which aim to address the wide spectrum of conventional and non-conventional security challenges faced by the country. Guided by the principle of building strength through the principles of strategic autonomy and self reliance, India seeks to enhance her own capabilities and also to pursue a constructive engagement with neighbours and partner countries in the regional and global community to promote peace and stability.

Global Security Environment

1.3 India's geo-strategic location makes it sensitive to developments beyond its immediate neighbourhood, in the Asia Pacific, West Asia, Central Asia, and in the Indian Ocean Region. Major geo-political and geo-economic developments are currently transforming the global security scenario into one of uncertainty and volatility.

1.4 Since the end of the Cold War, the global security environment has seen major changes. On the one hand, the world has witnessed a spurt of globalisation and deepening economic interdependence, which has enhanced the growth of countries like India, China, Brazil and South Africa. On the other, large parts of the world continue to be affected by conflict and violence. The global balance of power has witnessed new adjustments and dynamics, generating new

strategic uncertainties, reflected often in competition and contestations.

1.5 Even as the probability of a full scale conventional war is thought to have receded since the end of the Cold War, a number of drivers have catalysed new challenges in the regional and global security landscape. The intense competition for natural resources adds another layer of volatility to existing faultlines of territorial disputes between nations and poses a challenge to the norms of international law and accepted standards of international behaviour.

1.6. The transnational threats posed by the activities of terrorist organizations have been exacerbated by the dynamics of intra and inter State conflicts and pose a danger to regions beyond the primary theatres. The transnational mobilization of foot-soldiers and logistics support for terrorist activities poses a serious internal security challenge for countries around the world. Technological advances in telecommunications and the cyber domain have provided force multipliers to boost the capabilities and impact of terrorist activities. There is continuing concern over terrorist threats emanating from India's neighbourhood and the transnational and other linkages through which such groups are being sustained.

1.7 The prospect of peace and stability in various regions of the world is also marred by the proliferation of weapons of mass destruction and it continues to be major international security concerns, notwithstanding international efforts to strengthen nuclear security and to prevent non-State actors from acquiring nuclear materials. Piracy and other challenges to maritime security remain major challenges to regional and global peace and security.

1.8 The shift of the global balance of power from Europe to the Asia-Pacific region has brought a complex and dynamic interplay of economic, military and diplomatic factors, and it is reflected in escalation of maritime territorial disputes, military postures and power rivalries, all of which have added to the uncertainties in the security situation in the region. The contesting claims over island territories in the Asia Pacific have created tensions in the region and threaten to polarise the Asia Pacific community. The situation on the Korean peninsula is also fraught with tension between North and South Korea with North Korea conducting its third nuclear test. In view of these

developments the global powers are getting to play a prominent role in regional affairs which is affecting the military balance and impacting economic cooperation between countries in the region. Non-traditional challenges such as trans-national crime, terrorism, natural disasters, pandemics, cyber security and food and energy security, also pose serious challenges to the region.

1.9 India has important political, economic, commercial and social interests in the Asia Pacific and has a stake in continued peace and stability in the region. India supports freedom of navigation in international waters and the right of passage, in accordance with international law. India's view is that all countries must exercise restraint and resolve bilateral issues diplomatically, according to principles to International law and without recourse to the use or threat to use of force. India is of the view that in the current regional security landscape there is a need to promote a cooperative approach. Hence, we remain actively engaged with the Asia Pacific community through a web of bilateral as well as multilateral fora like the East Asia Summit, ADMM – Plus and ASEAN Regional Forum (ARF), so as to contribute to peace and stability in the region.

1.10 The **Central Asian** region has gained salience in recent times due to the presence of hydrocarbon and mineral resources. The increasing strategic competition in this region has implications for India's security. To further its large geo-strategic interests in the region, India has focused on developing strong politico-economic and security partnerships with the Central Asian Republics.

1.11 The situation in Ukraine has brought to the forefront a fresh challenge to peace and stability in the region and a prolonged stand-off could have an adverse impact on international security and the global economy. India believes that there is scope for a political and diplomatic solution to the current problem.

1.12 The **West Asian** region continues to face volatility and instability in the wake of the changes brought about by the Arab Spring. These changes have ushered in fundamental political and socio-economic transformation, in many parts of the region. As a consequence a number of non-state actors have mushroomed in the region. Sectarian fault-lines have also deepened,

thereby disturbing the stability and internal cohesion of various countries in the region. India has not only vital stakes, but also has long standing relations with the countries and people of this region. Continuing unrest and uncertainty in West Asia has a major impact on India's diverse interests in the region, which include the safety and security of nearly seven million Indians who live and work in the region, as well as the uninterrupted flow of India's energy imports from the region. Therefore, India remains engaged with countries in the region on defence and security issues of common concern.

1.13 The evolving situation in **Syria** and **Iraq** is of growing concern in terms of the impact of ongoing developments on the stability of these countries and repercussions for other countries within and beyond the region. The extension of the Syrian conflict into Iraq has serious ramifications for the region, with heightened extremist and sectarian overtones. India has expressed deep concern at the violence and loss of human lives in Syria and has consistently called for an inclusive and comprehensive political solution which will take into account the legitimate aspirations of the Syrian people. India has also expressed firm support to Iraq in its fight against international terrorism and in its efforts to preserve its unity and territorial integrity.

1.14 The escalation of violence between Israel and Palestine is a matter of concern and further threatens the peace and security of the region.

1.15 Iran occupies an important place in the economic and security calculus of India. India has welcomed the interim nuclear agreement between E-3 + 3 and Iran and supports resolving all issues related to Iran's nuclear programme through a comprehensive dialogue between the parties.

1.16 Many regions in **Africa** are witnessing upheaval, as uprisings and insurgencies have been sweeping across a number of North and West African countries. Of particular concern is the growing influence of terrorist organizations in the region. While, the threat from piracy in the Western Indian Ocean has diminished, the same has assumed serious proportions in the Gulf of Guinea. A number of Indian seafarers have been affected in acts of piracy in the Gulf of Guinea. The activities of terrorist outfits in Nigeria and other countries is a threat to the internal stability of these countries and the linkages between these and other terrorist organisations outside the region is a matter of serious concern. India has historic ties with several African nations and seeks to deepen its bonds with them through the strategic initiative of the India-Africa Forum Summit (IAFS) that seeks to

promote bilateral, regional and continent-level political, economic development and strategic cooperation with African countries.

1.17 The **Indian Ocean Region (IOR)** is vital to India's security and prosperity. As a maritime nation by historical traditions and by its geo-physical configuration and geo-political circumstances, India is dependent on the oceans surrounding it. India's peninsular dimension in the Indian Ocean Region, places it adjacent to the most vital sea-lanes of the world, stretching from the Suez Canal and the Persian Gulf to the Malacca Straits. India's security and prosperity is dependent on these sea lanes and its ability to engage freely in maritime trade and commerce.

1.18 The IOR is emerging as a source of multiple security concerns arising out of piracy, terrorism, human trafficking, WMD proliferation and competition over maritime resources. This has resulted in growing presence of extra-regional powers in the Indian Ocean, increasing the prospect of geo-strategic competition between them. As maritime security issues gain greater urgency and relevance, power rivalries in the IOR will need to be closely monitored, as India's strategic stakes in this region are of critical significance to its security calculus.

1.19 India remains actively engaged in various regional fora that are based in or border the IOR region, so as to build a network of cooperative structures which would bring together all stakeholders based on mutuality of interests. The initiative to establish an expanded maritime security cooperation framework between India and various island countries in the Indian Ocean, namely, Sri Lanka, Maldives, Mauritius and Seychelles has been born out of a mutual acknowledgement of the commonality of the sea-borne security challenges and the need for cooperative approaches.

The Regional Security Environment

1.20 A secure, stable, peaceful and prosperous neighbourhood is central to India's security perspective. The regional security environment in South Asia continues to be dynamic, with terrorism, insurgency and sectarian conflict emerging from our immediate neighbourhood, increasingly threatening the stability of our region. Amidst the ongoing efforts to impart fresh vigour and dynamism to strengthening relations

with neighbours in a comprehensive manner, the need to enhance a cooperative security construct is of immediate relevance in this period of strategic uncertainty. India is committed to build an open and dialogue based security cooperation with all partners in the neighbourhood on the basis of equality and mutual benefit and respect.

1.21 As the international military forces in **Afghanistan** approach the phase of drawdown, the security situation in Afghanistan requires close monitoring. With the Afghan National Security Forces (ANSF) taking full responsibility for the security of the country, the international community must ensure sustained support to the equipping and capability building requirements of the ANSF, to enable them to deal with the entire spectrum of security challenges that they may be required to face. The present political transition in the country is a significant milestone for Afghanistan, with renewed opportunities for an Afghan-led and Afghan-owned national reconciliation process. The Strategic Partnership Agreement between India and Afghanistan provides the framework for the commitment of both countries to build bilateral relationship in all spheres, including though defence and security cooperation aimed at enhancing mutual capacity in the fight against terrorism and other security challenges.

1.22 India wishes to develop peaceful, friendly and cooperative ties with **Pakistan**. However, security concerns vis-à-vis Pakistan have remained due to the continued activities of terrorist organisations functioning from territories under its control. India has clearly indicated that we are willing to resolve all outstanding issues through a peaceful, bilateral dialogue process. However, for this dialogue to be meaningful, an environment free from terror and violence is required. During the recent meeting of the DGMOs of both countries at Wagah in December 2013, Pakistan has expressed its commitment to ensuring ceasefire and peace and tranquility on the Line of Control. However, the existence of terrorist camps across the India-Pak border and Line of Control and continued infiltrations and incidents on and across the LoC, demonstrate the challenges in this regard. India's view is that a selective approach by Pakistan in tackling terrorist groups operating on its territory will not serve the interests of the region, nor indeed, those of Pakistan, particularly since these organisations pose a danger to Pakistan's own internal security.

1.23 Although the unresolved boundary dispute between India and **China** is a major factor in India's security calculus, India has engaged with China on the principles of mutual trust and respect for each other's interests and concerns. Both countries are

agreed on the need to maintain peace and tranquility on the border and a number of measures are being pursued to promote interactions and confidence building measures between the Armed Forces of both sides. The conclusion of the Border Defence Cooperation Agreement with China in 2013 is a significant step in the direction of promoting confidence building measures between both countries, and is expected to contribute to maintenance of peace and tranquility along the LAC. India also remains conscious and watchful of the implication of China's increasing military profile in our immediate and extended neighbourhood, as well as the development of strategic infrastructure by China in the border areas. India is also taking necessary measures to develop the requisite capabilities to counter any adverse impact on our own security.

1.24 India and **Bhutan** have traditional and unique bilateral relationship, characterized by utmost trust and deep mutual understanding which has matured over the years. India and Bhutan have been privileged socio-economic partners since 1961. Today, there is extensive cooperation between the two countries in all areas including in the area of trade and economy including hydropower, defence and security as also people-to-people linkages.

1.25 As close neighbours, India and **Nepal** share a unique relationship of friendship and cooperation, which is characterized by open borders and deep-rooted people-to-people contacts of kinship and culture. There has been a long tradition of free movement of people across the borders. The misuse of the open borders by some elements inimical to Indian interests is a challenge that both countries are addressing jointly. As the security and economic interests of both countries are intertwined, India is determined, as a close friend and neighbour, to partner with the Government and people of Nepal in all areas of national endeavour, based on the principles of mutual respect and equality.

1.26 India's relations with **Myanmar** are rooted in shared historical, ethnic, cultural and religious ties that have stood the test of time. An MOU on Border Cooperation, concluded between India and Myanmar in May 2014, provides a strong framework for security cooperation and intelligence exchange between Indian and Myanmar security agencies in areas of coordinated patrolling, intelligence sharing, counter-insurgency, arms-smuggling, drug, human and wildlife trafficking. Under an MOU on Border Area Development concluded in 2012, projects pertaining to school, hospital and bridge construction in Myanmar are being supported by the Government.

1.27 Cooperative relations between India and **Bangladesh** remain a positive factor in

the regional security scenario. There is a high degree of convergence in the concerns and views of both countries on security issues and on managing border security concerns. India continues to emphasize its security concerns to Bangladesh, especially the use of Bangladeshi territory by Indian Insurgent Groups (IIGs) and terrorists of other nationalities.

1.28 A Coordinated Border Management Plan (CBMP), signed between the two countries in July 2011, synergizes the efforts of the Border Guarding Forces of both countries, for more effective control over cross border illegal activities and crimes, as well as for maintenance of peace and harmony along the India-Bangladesh border. A system of institutionalized interactions for discussion on border management through meetings at all levels, addresses all such concerns.

1.29 Relations between India and **Sri Lanka** are based on shared cultural, religious, linguistic and historical ties and remain cooperative and constructive. Maritime security challenges and the maintenance of peace and stability in the Indian Ocean region are common concerns which provide for a convergence of strategic interests between both countries and the underpinning to ongoing cooperation in the field of defence. India has been supportive of the process of reconciliation in Sri Lanka and supports a lasting political settlement within the framework of a united Sri Lanka which would meet the aspirations of the Tamil community for equality, justice, peace and dignity.

1.30 Security cooperation between India and **Maldives** is a highly significant dimension of bilateral cooperation, as the security interests of both countries are interlinked. Bilateral relations are being nurtured and strengthened through regular contacts at the highest levels and at various levels of the defence forces of both countries.

1.31 The commonality of regional maritime security challenges is the foundation for the trilateral defence and security cooperation framework through which India, Sri Lanka and Maldives are working to develop joint capabilities to respond to a variety of maritime challenges. The initiative enables the defence and security establishments of all three countries to pursue dialogue and practical cooperation on a regular basis. It is expected that the initiative will contribute to the development of a cooperative vision of security in the region.

1.32 The challenge posed by non-traditional threats such as WMD proliferation, terrorism, drugs, human trafficking, etc continue to remain high on India's security agenda. New challenges have emerged in the domains of Cyber and Space, with

the demonstration of offensive capabilities by certain countries. These are likely to shape the security situation, in the future. Hence they are being addressed through an across-Government, multi-agency approach, of which the Armed Forces are an important and intrinsic part.

In a global and regional security environment characterized by unpredictability and volatility, India's defence forces remain prepared to tackle the full spectrum of security challenges.

Internal Security Environment

1.33 India faces multifaceted internal security challenges which include left wing extremism, an ongoing proxy war in Jammu and Kashmir and insurgencies in some states in the North East.

1.34 The separatists and anti-national elements continue in their efforts to disrupt the prevailing calm in J&K. However, the security situation in the State has substantially improved, on account of the effective operations of the Army, the CAPF and the State government. Effective counter terrorism operations by the Army and other security forces have resulted in the successful elimination of a number of hardcore terrorists in 2013 and 2014. Various factors, including the likely effects of the drawdown of international forces in Afghanistan may have an impact on the future security situation in J&K.

1.35 The security situation in the North East is stable and violence levels have declined substantially over the last year. Over 47 militant groups are presently in ceasefire/ suspension of operations and talks, creating a conducive atmosphere for implementation of conflict resolution measures.

1.36 In a global and regional security environment characterized by unpredictability and volatility, India's defence forces remain prepared to tackle the full spectrum of security challenges. Concurrently, India remains engaged with the regional and global community through a network of cooperative, constructive and mutually beneficial relationships, in a manner which would serve national interests and also contribute to the larger interests of global peace and stability.

2

ORGANISATION AND FUNCTIONS OF THE MINISTRY OF DEFENCE

South Block

The principal task of the Ministry is to frame policy directions on defence and security related matters and communicate them for implementation to the Services Headquarters, Inter-Service Organisations, Production Establishments and Research & Development Organisations.

ORGANISATIONAL SET-UP AND FUNCTIONS

2.1 After Independence, the 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, the name of Department of Defence Production and Supplies was changed to Department of Defence Production. In 1980, the Department of Defence Research and Development was created. In 2004, the Department of Ex-Servicemen Welfare was created.

2.2 The Defence Secretary functions as head of the Department of Defence and is additionally responsible for co-ordinating the activities of the four Departments in the Ministry.

THE MINISTRY AND ITS DEPARTMENTS

2.3 The principal task of the Ministry is to frame policy directions on defence and security related matters and communicate them for implementation to the Services Headquarters, Inter-Service Organisations, Production Establishments and Research & Development Organisations. It is required to ensure effective implementation of the Government's policy directions and the execution of approved programmes within the allocated resources.

2.4 The principal functions of the Departments are as follows:

(i) The Department of Defence deals with the Integrated Defence Staff (IDS) and three Services and various Inter Service Organisations. It is also responsible

for the Defence Budget, establishment matters, defence policy, matters relating to Parliament, defence co-operation with foreign countries and co-ordination of all defence related activities.

(ii) The Department of Defence Production is headed by a Secretary and deals with matters pertaining to defence production, indigenisation of imported stores, equipment and spares, planning and control of departmental production units of the Ordnance Factory Board and Defence Public Sector Undertakings (DPSUs).

(iii) The Department of Defence Research and Development is headed by a Secretary, who is the Scientific Adviser to the Raksha Mantri. Its function is to advise the Government on scientific aspects of military equipment and logistics and the formulation of research, design and development plans for equipment required by the Services.

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

2.5 A list of subjects dealt with by various Departments and Finance Division of the Ministry of Defence is given in **Appendix-I** to this report.

2.6 Information regarding the Ministers in the Ministry of Defence, the Chiefs of Staff, the Secretaries in the Departments of the Ministry and the Secretary (Defence Finance)/Financial Advisor (Defence Services) who held positions during the period of this report is given in **Appendix- II** to this report.

HEADQUARTERS INTEGRATED DEFENCE STAFF (HQ IDS)

2.7 HQ IDS was raised on October 1, 2001 based on the recommendations of Group of Ministers to review 'Higher Defence Management'. Under the aegis of Chairman Chiefs of Staff Committee, the organisation has been working towards achievement of Jointness and synergy amongst the Services.

2.8 **Humanitarian Assistance and Disaster Relief (HADR):** HQ IDS continues to play a pivotal role in coordinating the Armed Forces response during Humanitarian Assistance and Disaster Relief (HADR) operations, both within and outside the country. HQ IDS carries out regular interaction with the various agencies involved in HADR operations viz National Disaster Management Authority (NDMA), National Institute of Disaster Management (NIDM), NGOs and Corporate Sector.

2.9 During the year, HQ IDS coordinated for various HADR operations which include Uttarakhand Disaster Relief Operation, Cyclone PHAILIN, Cyclone LEHAR, Forest Fire in Tirumala (Sheshachalam Forests) near Tirupati Temple, Typhoon HAIYAN

in Philippines and OP 'SEARCHLIGHT' - SAR of Malaysian Airliner MH 370.

MILAN is a congregation of littoral navies conducted biennially by the Indian Navy at the Andaman and Nicobar Command in Port Blair.

2.10 MILAN is a congregation of littoral navies conducted biennially by the Indian Navy at the Andaman and Nicobar Command in Port Blair. This was conducted at Port Blair from February 4-9, 2014 with the theme of 'Friendship across of Seas'. A total of 17 countries participated in MILAN 2014. Port Blair also witnessed an impressive city parade by the participating Nations. The visiting foreign ships were also kept open for visits by school children and local public. MILAN 2014 culminated with a PASSEX or Passage Exercise of naval manoeuvres at sea by all participating naval ships.

2.11 **Coordinated Patrol (CORPAT):** The Ships and aircraft of Andaman and Nicobar Command participated in coordinated Patrols 'CORPAT' alongwith Navies of Indonesia, Thailand and Myanmar. The aim is to enhance mutual understanding and inter-operability between the Navies.

2.12 **Indian National Defence University (INDU):** Prime Minister laid the foundation stone for setting up of INDU on May 23, 2013 at Binola & Bilaspur, Gurgaon in presence of Defence Minister, Minister of Social Justice & Empowerment, Raksha Rajya Mantri, Minister of External Affairs, Governor & Chief Minister of Haryana, NSA, MP Gurgaon and three Service Chiefs.

2.13 **Joint Doctrine Promulgation:** A total of 10 Joints Doctrines (including a Capstone Joint Doctrine for Indian Armed Forces) on important operational subjects have been promulgated. These have given a strong momentum towards enhancing jointness in the Indian Armed Forces. Based upon the experiences of the exercises and humanitarian relief operations conducted in the past year, relevant procedures and practices were further updated and evolved.

2.14 **Military Cooperation:** The International Defence Cooperation Directorate was instrumental and proactively involved in fostering numerous defence engagements with friendly foreign countries, at the level of HQ IDS, in conformity with the overall foreign policy of the Government. The primary focus of these efforts were directed at security, nation's strategic interests through engagements with our neighbours and partnering the ASEAN states, apart from strengthening existing bonds with critical partners in other parts of the world.

2.15 **Tri-Service ICT Roadmap:** The Tri-Services ICT Roadmap was initially promulgated in year 2008 for integration of IT and Communication systems in the Services, to enhance interoperability and streamline processes for standardization and procurement. The Roadmap has been reviewed/ revised to incorporate contemporary transformations in ICT domain and include various ongoing projects relating to three Services. The Tri-Services ICT Roadmap is in final stages of finalization and approval.

2.16 **Medical Branch:** On the recommendations of the Medical Services Advisory Committee (MSAC), charter of duties, organogram and manpower were approved by the COSC. The medical branch has made significant achievements during the period of report in the field of automation of medical stores and supply chain management, telemedicine and standardisation of Joint medical training. Projects in hand include, resurrection of Armed Forces Sports Medicine Centre and Accreditation of Military Hospital.

ARMED FORCES TRIBUNAL

2.17 The Government has established an Armed Forces Tribunal (AFT) for the adjudication of complaints and disputes regarding service matters and appeals arising out of the verdicts of the Courts Martial of the members of the three Services (Army, Navy and Air Force) to provide for speedy justice to the members of the Armed Forces.

2.18 At present, the Principal Bench at Delhi and Regional Benches at Chennai, Jaipur, Lucknow, Chandigarh, Kolkata, Kochi, Guwahati and Mumbai are functional. Recently, the Cabinet has approved a proposal for setting up of permanent regional benches of AFT with single court each at Srinagar and Jabalpur.

DEFENCE (FINANCE)

2.19 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) and is fully integrated with the Ministry. It performs an advisory role.

2.20 The Ministry of Defence enjoys enhanced delegated financial powers to facilitate quicker decision making. These powers are exercised with the concurrence of the Finance Division. With a view to ensuring transparency in exercise of these powers in respect of defence procurement matters and compliance with the laid down policy guidelines, the Defence Procurement Procedure and Defence Procurement Manual are updated from time to time.

2.21 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 years 2011-12, 2012-13 and 2013-14 and Budget Estimates for 2014-15 in respect of Defence Services Estimates are given in Table No. 2.1 and the relevant graph/chart at the end of this Chapter.

2.22 A summary of the latest report of the Comptroller & Auditor General of India on the working of the Ministry of Defence, as furnished by the C&AG, is given in **Appendix-III** to this Annual Report.

2.23 The position of Action Taken Notes (ATNs) as on 31.12.2013 in respect of observations made in the C&AG Reports/ PAC Reports is given as **Appendix IV** to this Annual Report.

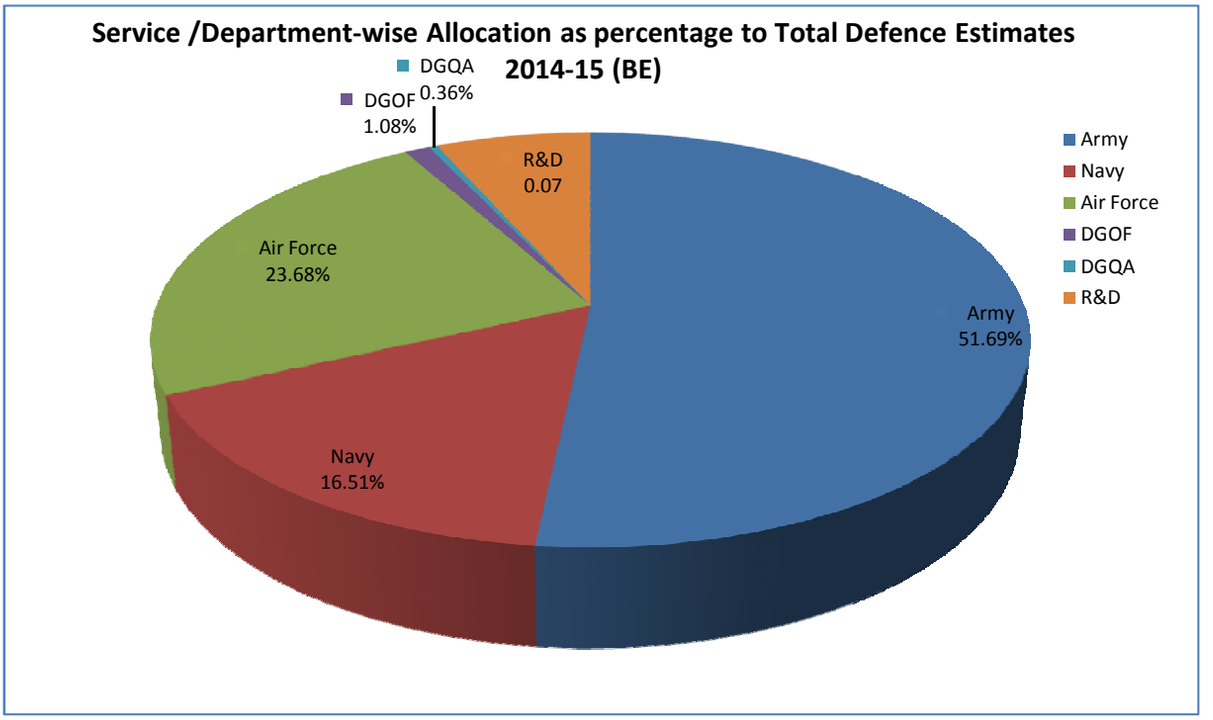
Table 2.1

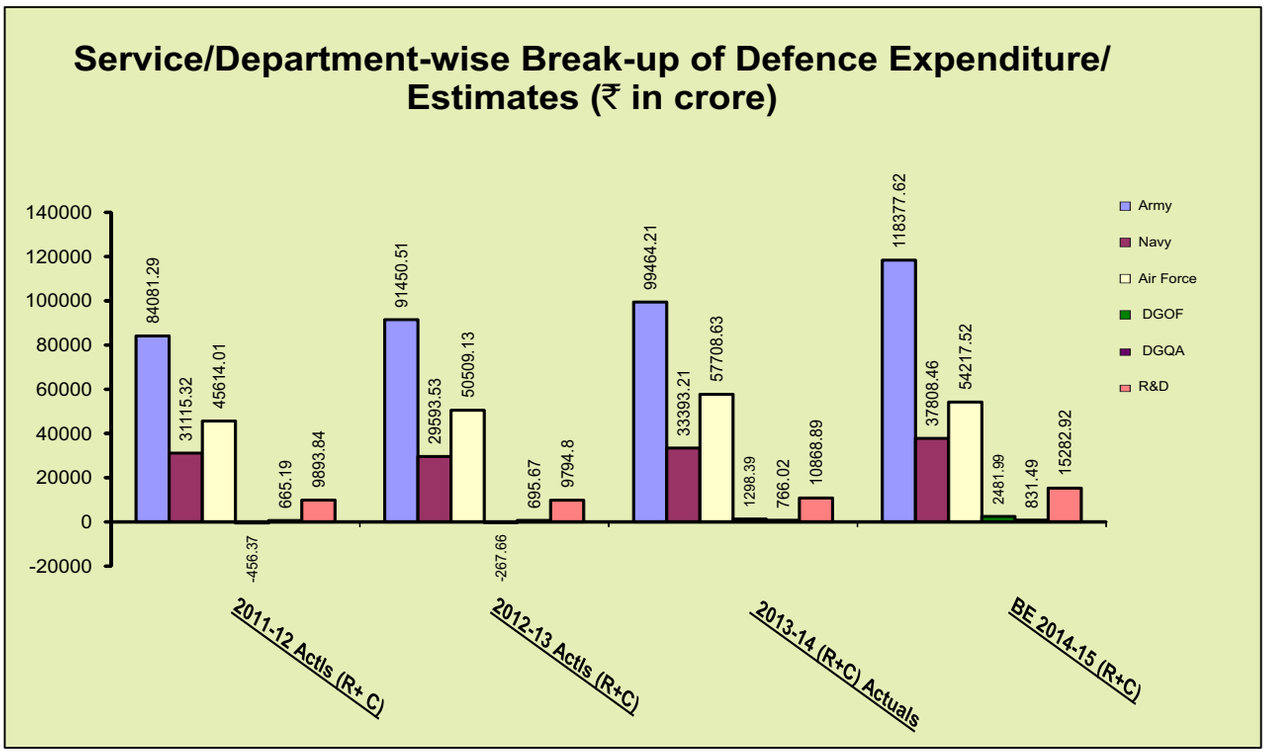
Service / Department-wise break up of Defence Expenditure/ Estimates

(₹ in crore)

	2011-12 Actuals (Rev + Cap)	2012-13 Actuals (Rev + Cap)	2013-14 Actuals (Rev + Cap)	BE 2014-15 (Rev + Cap)
Army	84081.29	91450.51	99464.21	118377.62
Navy	31115.32	29593.53	33393.21	37808.46
Air Force	45614.01	50509.13	57708.63	54217.52
DDP – DGOF	(-) 456.37	(-) 267.86	1298.39	2481.99
- DGQA	665.19	695.67	766.02	831.49
R&D	9893.84	9794.80	10868.89	15282.92
Total	170913.28	181775.78	203499.35	229000.00

DDP – Department of Defence Production
DGOF – Directorate General of Ordnance Factories
DGQA- Director General of Quality Assurance
R&D- Research & Development


Service /Department-wise Allocation as percentage to Total Defence Estimates 2014-15 (BE)
DGQA 0.36%
DGOF 1.08%
R&D 0.07
Air Force 23.68%
Army 51.69%
Navy 16.51%
Army
Navy
Air Force
DGOF
DGQA
R&D


Service/Department-wise Break-up of Defence Expenditure/ Estimates (₹ in crore)
140000
120000
100000
80000
60000
40000
20000
0
-20000
84081.29
31115.32
45614.01
-456.37
665.19
9893.84
91450.51
29593.53
50509.13
-267.66
695.67
9794.8
99464.21
33393.21
57708.63
1298.39
766.02
10868.89
118377.62
37808.46
54217.52
2481.99
831.49
15282.92
2011-12 Actls (R+ C)
2012-13 Actls (R+C)
2013-14 (R+C) Actuals
BE 2014-15 (R+C)
Army
Navy
Air Force
DGOF
DGQA
R&D

3

INDIAN ARMY

T-90 Tanks Contingent during Army Day Parade

The Indian Army is committed to the defence of the country from external and internal threats across the entire spectrum of warfare.

SECURITY OVERVIEW

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

JAMMU AND KASHMIR

3.2 The security situation in J&K is stable but fragile. The terror infrastructure across the border remains intact and Pakistan's support to the proxy war being waged in the State continues unabated. The Pakistan –Terrorists–Separatist nexus continues its attempts to undermine the democratic process in the State.

3.3 A large number of tourists visiting J&K and an incident free Amarnath Yatra are some positive indicators which need to be built upon. However, the situation in J&K is at crossroads and needs consolidation by synergised efforts of the Security Forces and the Civil Administration.

3.4 **Situation along the border**: The ceasefire along the Actual Ground Position Line (AGPL), Line of Control (LC) and International Border (IB) Sector in Jammu and Kashmir has generally held, barring a few aberrations which has been restricted to certain sectors along the LC and IB Sector. However, there has been an increase in the number of Cease Fire Violations (CFVs) during 2013 as compared to the previous two years. In this context, a meeting of DGs MO of India and Pakistan was held after a long gap on December 24, 2013 to address the issue of ceasefire violations. Pursuant to these talks, the number of CFVs has come down in 2014.

3.5 Relentless Counter Terrorism operations by the Army have resulted in

attrition and neutralisation of terrorists and their leadership.

NORTH EAST

3.6 The prevailing security situation in the North East excluding Manipur has stabilized due to the concerted efforts of Army, Assam Rifles and other security forces under the overall aegis of the Central and State Governments. Violence levels have subsided significantly as compared to previous years. Presently, talks/ Suspension of Operation (SoO)/ Cease Fire (CF) are underway with 17 major groups. State-wise security situation in the North –East is detailed as under:

3.7 **Assam:** The security situation in the State is peaceful and under control. Calibrated operations by the Security Forces have significantly reduced violent activities of terrorist groups in the State. The Security Forces have established moral ascendancy over them.

3.8 **Nagaland:** Overall violence levels in the State have declined but inter-factional clashes between NSCN (K) and NSCN (K/K), which emerged after the split in NSCN (K), are continuing unabated as both these factions are trying to enhance their respective areas of influence. The Army and Assam Rifles are keeping the Under Ground groups under check and ensuring adherence of Ceasefire Ground Rules. Process for finding a permanent solution to the Naga issue is underway.

3.9 **Manipur:** The security situation in Manipur, despite reduction in violence levels, continues to remain tense.Operations by the Army and Assam Rifles (AR) are continuing. The de-notified area of Imphal Valley has emerged as the hub of violent activities in the state. SoO with Kuki and Zomi Under Grounds Groups has ushered peace in the Kuki and Zomi inhabited areas and they have been impressed upon to adhere to the SoO ground rules.

3.10 **Arunachal Pradesh:** The situation, though under control, remains dynamic as a result of the turf war presently underway between NSCN (IM) and NSCN (K). Intelligence reports indicate that the region is being exploited by insurgent groups for movement of cadres and arms/ ammunition from/ to Myanmar and proactive operations are being conducted by the Security Forces.

3.11 **Tripura and Mizoram:** The security situation is under control. The assembly elections have been conducted peacefully in both the states.

Situation Along the Border

3.12 **Bilateral relations with China:** Relations between the two nations have improved over the past few years. Constructive engagement at the political, diplomatic and military level is continuing with regular military exchanges from time to time. The visit of Chinese Premier to India

in May 2013 and Indian Prime Minister's visit to China in October 2013 were hallmark events of the year 2013. This is the first time in 50 years that Chinese Premier and Indian Prime Minister have visited each other's nation in the same calendar year. In addition to the above, Defence Ministers of both countries visited each other's country as part of increased bilateral exchanges.

An important development in the India - China relations was the signing of the 'Border Defence Co-operation Agreement (BDCA)' during our Prime Minister's visit to China in October, 2013.

3.13 India desires peaceful and cordial relations with all neighbours, including China. Towards this end, a policy of constructive engagement and of maintaining peace and tranquility along the LAC is ensured. Concurrently, necessary development of infrastructure and improved military preparedness including force modernisation, continues to meet the present and future security challenges.

3.14 **Situation along the Line of Actual Control (LAC):** The situation along India-China border continues to be peaceful. There are a few areas along the border where India and China have differing perception of the LAC. Both sides patrol up to their respective perceptions of LAC. Specific cases of transgressions by Chinese patrols into such areas across LAC are taken up with Chinese authorities through the established mechanism of Hot Lines, Flag Meetings and Border Personnel Meetings.

3.15 **Border Defence Co-operation Agreement (BDCA):** An important development in the India - China relations was the signing of the 'Border Defence Co-operation Agreement (BDCA)' during our Prime Minister's visit to China in October, 2013. The agreement reflects recognition by both countries of the necessity to maintain peace, stability and tranquility along the line of actual control in the India-China border areas. This Agreement is an important step for preventing escalation of the situation along the LAC.

3.16 **Joint Training Exercise 'Hand – in – Hand 2013':** During this year, a Joint Training Exercise on Counter Terrorism was successfully conducted by both countries at Chengdu, China. The joint exercise was resumed after a gap of five years. The exercise has won the Indian Army admiration of the PLA and both Armies have also mutually benefitted.

3.17 **Nepal:** The focus on enhancing military to military relations as part of ongoing defence cooperation between India and Nepal has been further strengthened in various fields. The fifth Battalion level exercise (Surya Kiran-V) was conducted in India in September

2013. Regular visits by medical teams, trekking teams and visit of senior officers, are being undertaken. The tenth Indo-Nepal Bilateral Consultative Group on Security (INBCGS) meeting was held in Bengaluru, India from April 8-12, 2013, wherein defence and security issues of mutual interest were discussed.

3.18 **Bhutan:** In keeping with the traditional close ties with Bhutan, the Indian Military Training Team has been actively pursuing defence cooperation. 450 vacancies were assigned to Royal Bhutan Army and Royal Bhutan Guards personnel in our training institutions in the year 2013-14.

3.19 **Myanmar:** Myanmar has opened up to democratic norms with an unique model of military control. Our defence cooperation has been strengthened in the last one year. We have provided road construction equipment and war gaming software to Myanmar as part of defence cooperation.

COMBINED EXERCISES WITH FREINDLY FOREIGN COUNTRIES (FFCs)

3.20 Combined Military exercises with FFCs are an important part of defence cooperation. These involve sharing of experiences, understanding the changing dynamics of military operations, developing inter-operability and streamlining the procedures for combined operations including Humanitarian Assistance and Disaster Relief.

3.21 Indian Army is continuously engaged in combined training/ exercise with FFCs. The following combined training/ exercises have been conducted since January 2013:

- Training of 20 personnel of Seychelles SF at Special Forces Training School (SFTS), Nahan between February 1 to March 29, 2013.
- The ninth India-Mongolia Training/ Exercise (Nomadic Elephant) was conducted in Mongolia between June 11- 23, 2013.

Reflex Shooting

- Training of 20 personnel of Nigerian Special Forces at SFTS, Nahan from September 9 to October 5, 2013.

- The fifth India-Nepal Training/ Exercise (Surya Kiran) was conducted at Pithoragarh between September 23 to October 6, 2013.
- The sixth India-Nepal Training/ Exercise (Surya Kiran) was conducted at Salijhandi, Nepal form March 5-18, 2014
- A mechanized exercise called Ex Bold Kurukshetra at combat Group level of Singapore was conducted at Babina, India to include live firing form March 1-31, 2014.

Witnessing Activities on Disaster Management/ Response Training

- The India - Polish SF exercise was conducted at HAWS Sonamarg between September 30 to October 19, 2013.
- The India - Tajikistan SF exercise was conducted at Agra between October 26 to November 8, 2013.
- In addition, the sixth India - Seychelles training/ exercise Limitiye was conducted at Mahe between December 2-14, 2013.

MODERNISATION AND EQUIPMENT

3.22 The major Army acquisitions are focused on building new capabilities as well as making up deficiencies in the inventory. With Defence Procurement Procedure-2013 coming into effect, indigenization will get due impetus. The Army also carried out alignment of the acquisition structures by streamlining the evolution of General Staff Qualitative Requirements (GSQRs), establishment of a Contracts Negotiation Committee (CNC) Cell and inclusion of Integrated Financial Adviser (IFA) Capital for delegated financial powers and strengthening of the Request for Proposal (RFP) Cell. All these measures have made the system more robust and efficient.

3.23 During the Financial Year 2012-13, a total of 29 contracts (including three of OFB contracts) were concluded. The total value of procurement contracted was ₹6332.20 Crore (including ₹ 6132.17 Crore of OFB procurement) and the total cash outgo was ₹ 764.41 Crore.

3.24 During the current Financial Year, i.e. 2013-14, a total of 18 contracts (including two OFB contracts) have been concluded amounting to ₹ 11781.13 Crore (including ₹ 1632.17 Crore of OFB contracts) and total cash outgo was ₹1265.26 Crore as on December 31, 2013.

3.25 **Mechanised Forces:** Modernisation of the mechanized forces is underway to meet the requirements of the future battle field. Towards this end, upgradation of aspects of in-service equipment like night fighting capability, modern fire control systems and better power packs has been the thrust area. Concurrently, the indigenous development of future combat vehicle platforms is also being progressed.

3.26 **Artillery:** Procurement of Artillery equipment is focused on conversion of equipment to 155 mm caliber, enhancing surveillance capabilities and acquisition of long range vectors. In a major step towards self reliance in Defence equipment, the indent for electronically upgraded 155 mm Guns has been placed on the Ordnance Factory Board.

3.27 **Infantry:** Modernisation of the infantry soldier is aimed at enhancing lethality and providing individual protection. To this end, procurement of modern Assault Rifles, Carbines and LMGs is concurrently underway, alongwith Bullet Proof Jackets and Ballistic Helmets. Specialized equipment of the Special Forces is also being acquired.

3.28 **Army Air Defense:** The Corps of Army Air Defence is taking major strides in upgrading its gun and missile systems. A number of quality upgrades and inductions which are in the pipeline would replace the existing vintage equipment. The project for automation of Air Defence Command and Reporting system is also progressing apace.

3.29 **Common Equipment:** In addition to acquisitions specific to different arms, induction of High Mobility Vehicles, Materials Handling Equipment and critical Rolling Stock for rail movement are in the pipeline. Modernisation of logistics installations with state of the art warehousing facilities, retrieval and accounting systems is also underway.

3.30 **Synergy with the DRDO:** Army has enhanced its interactions with Defence Research Development Organisation (DRDO). Projects addressing ammunition needs are being given priority so that we can move towards self reliance.

RASHTRIYA RIFLES (RR)

3.31 Undaunted by the inhospitable terrain, vagaries of nature and challenges of CI/ CT environment, the Rashtriya Rifles force continues to be the cutting edge of the Indian Army in J&K.

Synergy between the security forces, intelligence agencies, police, local civil administration and the public has facilitated operations and assisted in ushering of near normalcy in the State of Jammu and Kashmir.

Synergy between the security forces, intelligence agencies, police, local civil administration and the public has facilitated operations and assisted in ushering of near normalcy in the State of Jammu and Kashmir. A number of successful tactical military operations based on specific intelligence were conducted resulting in neutralization of a large number of terrorists and recovery of huge quantities of warlike and logistic stores. This operational success with zero collateral damage is a manifestation of the professional excellence of the Force.

3.32 Given the impending exit of extra regional powers from Afghanistan in 2014, along with the National and State Assembly elections scheduled in 2014, there exists a need for RR to constantly keep its guard up and maintain utmost vigil.

3.33 Over the years, RR has excelled in all spheres and has now woven itself inextricably into the fabric of J&K. This year was no different, when this force not only kept terrorism at highly reduced levels, but provided yeoman service to the people of J&K in the form of civic action/ programmes aimed at integration of the locals in the national mainstream. It will be the endeavour of the Force to completely eliminate terrorism from the State and continue to guide the populace, particularly the youth, to join the national mainstream. In doing so the aspirations of the people and complete avoidance of human rights violations, as done in the past, will be the important guiding parameters.

TERRITORIAL ARMY (TA)

3.34 **Prime Minister's TA Day Parade:** On the occasion of Territorial Army Day, a Parade was reviewed by the Raksha Rajya Mantri, at Army Parade Ground, Delhi Cantt on October 9, 2013. Ten marching contingents comprising of Inf (TA) units and Home & Hearth (TA) units and three tableaus participated in the parade.

3.35 **Calling on President of India by TA Fraternity:** As part of TA Day Celebration, Officers, JCOs, OR and families of the Territorial Army, called on the President of India, at Rashtrapati Bhawan on October 10, 2013.

Calling on President of India by TA Fraternity

3.36 **"My Earth, My Duty" Campaign:** "My Earth, My Duty" campaign a "Zee News Media" initiative on environment awareness was conducted from August 15-21, 2013. During the campaign, all the eight Ecological Task Force Battalions participated and carried out an enhanced plantation drive and awareness program.

UN MISSIONS

3.37 India has been contributing to UN peacekeeping missions since 1950 and is one of the largest troop contributors. Till date India has contributed approximately 1,91,000 troops in various peacekeeping missions. Presently, we have 6886 persons in six UN missions. Our major contributions are given in the succeeding paras.

3.38 **MONUSCO: Congo (1999 – Till Date):** Democratic Republic of Congo (DRC) is the second largest country in the African Continent and has faced protracted period of unrest and instability since its independence in 1960, a period characterized by two civil wars and ethnic conflicts. With increased demands for troops contribution, India has deployed an Infantry Brigade Group with four Infantry Battalion Groups, Brigade Signal Company and a Level III hospital in Congo since November 2004. An Army Aviation Flight has also been deployed in the mission area since 2009. The Indian Brigade is deployed in North Kivu Province of DRC, which is most conflict-ridden and rebel infested territory. The operating conditions for the Indian Brigade in Congo are challenging, replete with inhospitable terrain and adverse climatic conditions. The Brigade has contributed significantly towards implementation of the MONUSCO Mandate and is regarded extremely favorably by the international community.

The Indian Brigade has contributed significantly towards implementation of the MONUSCO Mandate and is regarded extremely favorably by the international community.

3.39 **UNIFIL: Lebanon (1998 – Till Date):** The Indian Army's contribution to UNIFIL includes one Infantry Battalion Group, Level I Hospital and Staff Officers. The Indian Battalion is deployed in mountainous terrain of approximately 100 square kms and carries out intense operational activities in its area of responsibility by holding number of UN positions and Temporary Observation Posts along the Blue Line. The contingent regularly organizes large number of humanitarian activities to include medical, dental and veterinary camps, so as to provide succor and solace to the local population.

3.40 **UNMISS: South Sudan (July 2011 – Till Date):** On July 9, 2011, the independent State of Republic of South Sudan (RoSS) was formed in a complex and fragile

regional environment. The Indian Army contingents (two Infantry Battalions, one Force Signal Company and a Hospital) are presently conducting operations in support of the UN Security Council mandate for UNMISS. Timely intervention of Indian contingents has resulted in saving numerous lives during inter-tribal clashes and resolution of disputes between army of South Sudan and Rebel Militia Groups (RMGs). Seven Indian Peace Keeping personnel made the supreme sacrifice to uphold international peace. The operational capacity of the mission is being enhanced.

3.41 **UNDOF: Golan Heights – Israel (January 2006 – Till Date):** India has deployed a logistic contingent as part of UNDOF in Golan Heights. During the civil unrest in Syria, many foreign contingents i.e. Croatia, Canada, Philippines etc. withdrew. However, the Indian contingent continued to work even during the peak of unrest in the mission area. The mission has an Indian General Officer as Force Commander and Head of Mission.

CENTRE FOR UNITED NATIONS PEACEKEEPING (CUNPK)

3.42 **International Seminar on Women in Peace Building:** CUNPK in collaboration with UN Women conducted an International Seminar on Women in peace building on February 6-7, 2013. Chief of Army Staff presided over the inaugural session and delivered the keynote address on February 6, 2013.

3.43 **Table Top Exercise: IBSA:** Table Top Exercise with Brazil & Republic of South Africa (RSA) were conducted from November 26-29, 2013. 13 officers from Brazil and 15 officers from RSA besides 15 Indian officers attended the exercise.

3.44 **Training Team to Cambodia:** A four member training team was deputed to Cambodia from October 7-19, 2013 to impart Peacekeeping training to members of RCAF (Royal Cambodian Armed Forces).

3.45 Total 19 Delegations visited this Centre till date and amongst them CUNPK had the privilege of hosting Chiefs of the Army Staff of Nepal, Bhutan, Singapore and Japan and Defence Minister of Kyrgyzstan.

3.46 **Certification of United Nations Military Observers Course (UNMOC) by ITS, UNDPKO:** The United Nations Military Observers Course (UNMOC) run by the Centre has been accredited by Integrated Training Service, United Nations Department of Peacekeeping Operations (ITS, UNDPKO), New York for a period of four years.

4

INDIAN NAVY

INS Vikrant

The objective of the Navy's military role is deterrence/ dissuasion against any intervention or act which is against our National interests, and the ability to inflict a crushing defeat on the adversary in the event of hostilities.

4.1 The Indian Navy (IN) is the prime enabler and guarantor of the country's maritime sovereignty and myriad use-of-sea activities. This is discharged by the Indian Navy through its four roles – military, diplomatic, constabulary and benign. The objective of the Navy's military role is deterrence/ dissuasion against any intervention or act which is against our National interests, and the ability to inflict a crushing defeat on the adversary in the event of hostilities. Indian Navy's deployments for coercion, as demonstrated during Operation VIJAY and Operation PARAKRAM, will also remain key missions of the Indian Navy. A major objective of the Navy's Constabulary role is to ensure coastal security and implement anti-piracy measures.

4.2 India is a maritime nation and our economy is critically dependent on the seas for conduct of trade. More than 90% of our trade by volume, and 77% by value, is transported over the seas. For a rapidly growing economy seeking new markets worldwide, these trade figures will only spiral upwards in the future. This would result in the enhanced use of the seas for economic development including shipping, fishing, natural and energy resource extraction, and security of our offshore and coastal assets, etc.

4.3 A key objective of the Indian Navy is to use India's maritime power in support of the national foreign policy. The Navy discharges this role by shaping perceptions, building partnerships, showing presence, building trust with other friendly navies and participating in Combined/ Joint operations. The use of the Indian Navy for disaster relief operations, both within the country and abroad, as part of the Navy's benign role, would continue to provide options to the national leadership.

4.4 The IN is being increasingly called upon to address issues pertaining to safety, security and stability in the region. As a responsible nation and a benign maritime neighbour, enforcement of international laws, humanitarian assistance and disaster relief in the Indian Ocean Region (IOR)

would continue to remain at the forefront of our international commitments. The complex maritime security environment in the IOR requires the IN to maintain a high level of operational tempo and readiness at all times. Besides a large number of operational deployments, the IN has successfully undertaken exercises with the navies of a number of friendly foreign countries. These exercises have helped in strengthening bilateral relationships, cementing our professional ties and streamlining inter-operability issues.

So far over 2671 merchant ships of varying nationalities, including 311 Indian flagged vessels, have been escorted safely by Indian warships.

4.5 Piracy continues to remain a major area of concern in the IOR and specifically in the Horn of Africa. During its anti-piracy patrols the IN has been successful in thwarting 40 attacks on Indian and foreign merchant ships since October 23, 2008. Our continued presence in the piracy infested areas off the Gulf of Aden has demonstrated our commitment and resolve to deal with this threat. The role and responsibility of the IN to protect our maritime interests will continue to grow with the requirement to safeguard our expanding economic interests as also the leadership responsibilities associated with being a mature and responsible regional maritime power. Indian warships have been carrying out patrol in the Gulf of Aden along the Internationally Recognised Transit Corridor (IRTC). So far over 2671 merchant ships of varying nationalities, including 311 Indian flagged vessels, have been escorted safely by Indian warships. To optimise the escort operations, the Indian Navy coordinates patrol by the IN warship with that of the other navies.

4.6 The IN has wholeheartedly supported indigenisation programmes, in consonance with our overall national vision of sustained growth and self-reliance. It is a matter of significant achievement that the modernisation programme of the IN is focused towards indigenous warship construction. Our preferred choice is to induct ships and submarines through the indigenous route. Currently, all the 45 ships and submarines presently on order are being built in Indian Public and Private shipyards

OVERSEAS OPERATIONS

4.7 **Overseas Deployment (OSD):** Overseas Deployments (OSD) are undertaken by ships of the Indian Navy for the purposes of Flag showing, fostering relations with friendly countries, and enhancing foreign cooperation. Important overseas deployments in 2013 included the following:

(a) **Eastern Fleet OSD:** Eastern Fleet ships Satpura, Ranvijay, Shakti and Kirch were deployed to the South China Sea and Western Pacific from May to June, 2013. These ships visited ports in Singapore, Vietnam (Danang), Philippines (Manila) and Malaysia (Port Klang).

(b) **Western Fleet OSD:** Western fleet Ships Mysore, Aditya, Tarkash and Tabar were deployed to the Persian Gulf in September, 2013. During the deployment, the ships visited As-Shuwaikh (Kuwait), Port Maiseed (Qatar), Doha (Qatar), Mina Rashid (Dubai) and Port Sultan Qaboos (Muscat). During the OSD, the Indian Naval ships also participated in 'Exercise Naseem-Al-Bahar' with the Royal Navy of Oman and undertook Passage Exercises (PASSEX) with Kuwaiti, Qatiri and UAE Navies.

(c) **ASEAN Sailing Expedition:** Sail Training Ship INS Sudarshini undertook the widely acclaimed 192 day ASEAN Sailing Expedition from September, 2012 to March, 2013 and visited 13 ports in nine ASEAN countries.

(d) **Indian Naval Sailing Vessel (INSV) Mhadei:** Lt Cdr Abhilash Tomy became the first ever Indian to complete solo circumnavigation of the world onboard INSV Mhadei in March, 2013. On completion of this solo circumnavigation, INSV Mhadei was ceremoniously received at the Gateway of India by the President of India on April 6, 2013. The Officer has been awarded the Kirti Chakra by the President of India for accomplishment of this unique feat.

(e) **OSD of Training Squadron:** Ships of the First Training Squadron comprising Gharial, Sharda, Tarangini and CGS Varuna were deployed for OSD to Mauritius and Seychelles from September to October, 2013.

(f) **Overseas Survey:** INS Jamuna was deployed for survey operations off Kenya and Tanzania from November, 2012 to February, 2013 and INS Sarvekshak was deployed for survey operations off Mauritus from January to March, 2013.

(g) **International Fleet Review at Sydney:** INS Sahyadri represented India at the International Fleet Review at Sydney (Australia) in September, 2013.

4.8 **EEZ Surveillance and Anti-Piracy Deployment off Seychelles, Mauritius and Maldives:** With increased incidents of piracy near the East African Coast, Mauritius, Maldives and Seychelles, IN Ships and aircraft were also being deployed for surveillance in their Exclusive Economic Zones (EEZ) at the request of respective host governments.

4.9 **Contact Group on Piracy off the Coast of Somalia (CGPCS):** Contact Group on Piracy off Coast off Somalia (CGPCS) is the forum dealing with piracy issues emanating from Somalia, and makes recommendations to IMO on the matter. India took over the Chairmanship of CGPCS in September, 2012. The 13th Plenary Session of the CGPCS was held under India's Chairmanship on December 11-12, 2012 at the UN Headquarters, New York. Subsequently, India handed over the Chairmanship to USA in January, 2013.

MAJOR EXERCISES

4.10 **TROPEX-13:** The annual theatre-level Operational Readiness Exercise (TROPEX) was conducted from end January, 2013 to early March, 2013 on the Western seaboard. The exercise included Weapon firings, amphibious operations, and tactical operations comprising both the Western and the Eastern Fleets.

4.11 **AMPHEX-13:** Amphibious Exercise (AMPHEX) was conducted from mid January, 2013 to early February, 2013 off the West Coast of India. The exercise included a Training Phase and a Tactical Phase. It saw the deployment of over 2000 Army alongwith associated tanks/ troop/ arms and assets of Infantry Brigade.

4.12 **DGX-13:** The annual Defence of Gujarat Exercise (DGX) was conducted in October, 2013 in the North Arabian Sea with active participation by the Indian Coast Guard, Indian Air Force and Indian Army.

EXERCISES WITH FOREIGN NAVIES

4.13 **Indo-Singapore Exercise (SIMBEX –13):** Singapore India Maritime Bilateral Exercise (SIMBEX) is held annually in Bay of Bengal or South China Sea. SIMBEX - 13 was conducted in the South China Sea from May 16 to 23, 2013. The phases included various maritime operations including surface engagements, Visit Board Search and Seizure procedures, tactical exercises, anti-submarine exercises, interactive presentations, etc. IN Ships Satpura and Kirch represented the Indian Navy. RSS Steadfast and Valiant (including integral helicopters), RSS Conqueror (submarine) and MR aircraft Fokker 50 represented the Singapore Navy.

4.14 **Indo-Sri Lanka Exercise (SLINEX – 13):** The inaugural IN-SLN (Sri Lankan navy) Bilateral Exercise (SLINEX) was conducted from December 12 to 16, 2005. This year the exercise was conducted from November 4 to 7, 2013 in the Bay of Bengal. IN Ship Talwar (with integral helicopter) and SLNS Sagara participated in the exercise.

4.15 **Indo-UK Naval Exercise (KONKAN – 13):** The Indian and the Royal Navies have established operational linkages in terms of bilateral exercise (KONKAN) since 2004. KONKAN-13 was conducted off the West Coast of India from October 14 to 19, 2013. IN Ship Delhi participated in the exercise. The Royal Navy was represented by HMS Westminster.

4.16 **Indo-US Naval Exercise (MALABAR – 13):** Indian Navy (IN) and US Navy (USN) have conducted the bilateral exercise named 'MALABAR' since 1992. The 17th edition of MALABAR was held off the East Coast of India from November 5 to 11, 2013. The USN was represented by USS McCampbell and one shore-based P3C Orion Maritime Reconnaissance aircraft. IN ships Shivalik, Ranvijay and TU 142 M maritime reconnaissance aircraft participated from the Indian Navy.

4.17 **Indo-Japan Exercise (JIMEX) – 13:** The first India - Japan bilateral exercise, JIMEX, was conducted in 2012 in Uraga Strait off Yokosuka, Japan. JIMEX-13 was planned off Chennai from December 19 to 23, 2013. JMSDF Ariarke and Setogiri and IN ships Ranvijay, Satpura and Kuthar participated in the exercise.

Coordinated Patrol with Indian Ocean Region Littorals Navies

4.18 **Coordinated Patrol (CORPAT) with Myanmar Navy (MN):** The maiden IN-MN Coordinate Patrol exercise was conducted from March 17 to 21, 2013 off the Great Coco Islands, Myanmar. IN ships Baratang and Battimalv and Myanmar Navy ships MN Aungzeya and Bayintnaung participated in the exercise.

4.19 **Coordinated Patrol (CORPAT) with Thailand:** The 16th - 17th Cycle of Indo-Thai CORPAT was held in April and November, 2013. INS Bitra and one IN Dornier participated from the IN side while the Royal Thai Navy was represented by HTMS Phuket/ HTMS Sriracha and one Dornier aircraft for these CORPATs.

4.20 **Coordinated Patrol (CORPAT) with Indonesia:** IN and Indonesian Navy undertook a bi-annual coordinated patrol along their International Maritime Boundary Line (IMBL). The 21st cycle of IND-INDO CORPAT was conducted from May 6 to 26, 2013. IN ships Mahish and Bangaram along with one IN Dornier participated in the CORPAT. The Indonesian side was represented by KRI Pattinunas and one CASA-50 aircraft. The 22nd IND-INDO CORPAT was conducted from September 6 to 27, 2013. IN ships Kumbhir along with one IN Dornier participated in the CORPAT. The Indonesian side was represented by KRI Teiku Umar and one CASA-50 aircraft.

TRAINING TO FOREIGN NAVIES

4.21 **Training/Consultancy-South African Navy (SAN):** SAN operates Type 209 submarines which are similar to Indian Naval Shishumar class of submarines. IN had imparted Basic Submarine Training to SAN submarine personnel in 2005-06. Based upon a request from SAN for training of SAN submarine arm, two Indian Naval officers have been deputed to South Africa in July, 2013 for a period of six months.

4.22 **Submarine Training for Vietnamese People's Navy (VPN):** Vietnam is inducting submarines for its Navy. VPN had requested IN assistance for imparting Basic Submarine training to their personnel. After almost three years of detailed negotiations with the VPN, training for the first batch of 54 personnel commenced at INS Satavahana from October, 2013. The training is for duration of 12 months.

4.23 **Diving Assistance to Mauritius:** Diving teams have been involved in capacity building of Indian Ocean Region (IOR) littoral navies in aspects pertaining to special operations and diving. An IN team was deputed to conduct refresher Commando and Diving training for the Mauritian Coast Guard and Police Divers from September 30 to October 14, 2013.

Coastal Security

4.24 In 2009, IN was designated as the authority responsible for overall maritime security, which included coastal security and offshore security of the country. A coordinated effort has been made to strengthen necessary linkages with all Ministries/ agencies and coastal States/ Union Territories (UTs) to achieve synergy for effective coastal security management.

4.25 The coast and offshore areas are under regular surveillance by naval ships and aircrafts. IN has commenced induction of Fast Interceptor Craft (FICs) and Immediate Support Vessels (ISVs) for strengthening Coastal and Offshore security. A total of 95 FICs would be inducted towards the requirement for coastal security and 23 ISVs by ONGC for protection of the Oilfield Development Areas off the West and East Coast of India. The National Command Control Communication and Intelligence Network (NC^3I) for developing Maritime Domain Awareness (MDA), is likely to be fully functional by January, 2014. Further, capacity and infrastructural development projects are also being considered for strengthening Coastal Security.

4.26 Coastal Security exercises are being conducted regularly in all Coastal States and Union Territories. The level of complexity of these exercises has increased by having conjoined exercises between States. In addition, all stakeholders have been cohesively enmeshed in various monitoring mechanisms to streamline the functioning of the Coastal Security construct. Coastal Security exercises and the increased interaction between agencies has contributed towards improving interagency coordination amongst the multiple stakeholders in the domain of Coastal Security. This has resulted in successful joint operations and investigation of a number of illegal vessels off our coastline. Further, the IN has also actively engaged in the conduct of Community Interaction Programmes and training of Central Industrial Security Force (CISF) & Marine Police.

4.27 **Surveillance Efforts by the Indian Navy:** Patrols by the Indian Navy along the coastline and off our island territories are being undertaken for enhancing coastal and maritime security. In addition, surveillance of the Offshore Development Areas (ODAs) has also been enhanced. Large number of coastal security operations and coastal security exercises for the States of Gujarat, Maharashtra, Goa and Karnataka were conducted on the West Coast. This has been instrumental in developing co-operation, coordination, and synergy between all stakeholders towards enhancing coastal security. In addition, coastal surveillance operations were also conducted from mid-June to end-September, 2013 by both IN and ICG units with an aim to provide seamless coastal surveillance during monsoon.

FOREIGN COOPERATION

4.28 **Product Support to MCGS Huravee:** In pursuance of the Indian Navy's drive towards capacity-building of our maritime neighbours, refit and product support to MCGS Huravee was provided by Naval Dockyard (Visakhapatnam) in 2013.

4.29 **Product Support to Patrol Ship Topaz:**. Product support is being provided by the Indian Navy on as required basis to Patrol Ship Topaz of the Govt of Seychelles since 2005.

4.30 **Hydrographic Assistance:** The Indian Navy's pre-eminent status in the domain of hydrography has seen survey ships undertaking regular hydrographic surveys in various countries in the region. During 2013, hydrographic surveys were undertaken at/ off Mauritius, Tanzania and Kenya.

Navy-to-Navy Interaction

4.31 **Staff Talks:** Navy-to-Navy level interaction in the form of Staff Talks provides an effective forum to develop and implement bilateral cooperation initiatives. Staff Talks were held with USA, Israel, Singapore, Australia, Bangladesh, Japan, Malaysia, Thailand, Indonesia, South Africa, Sri Lanka, UAE, Myanmar, France and UK in 2013.

4.32 **Indian Ocean Naval Symposium (IONS):** The inaugural symposium of the IONS was conducted at New Delhi from February 14 to 16, 2008 which was attended by 22 of the 35 Chiefs of the IOR navies. Five other navies were represented by their deputies. The wide participation by the navies at its apex level signified the collective need for such a construct in the IOR region. The IONS Operational Seminar and Preparatory Workshop – 2013 was held at Mumbai from September 10-12, 2013. The theme of the Seminar was, 'Role and Expectations of Emerging Navies in Cooperative Engagement for Peace and Stability in IOR'. The event was attended by 39 overseas delegates from 21 nations.

Gifting of Assets to Foreign Countries

4.33 **ALH to Maldives:** Consequent to Raksha Mantri's visit to Maldives in September, 2012, it was decided to position a new ALH at Hanimadhoo, Maldives to provide EEZ surveillance cover for the Northern group of Islands. The ALH has been inducted into the Indian Navy and would be positioned at Maldives by January, 2014.

4.34 **Supply of Landing Craft to Maldives:** One Landing Craft Assault (LCA) would be delivered to Maldives in early 2014.

4.35 **Survey Motor Boat to Mauritius:** A Survey Motor Boat was presented to the Government of Mauritius by the Chief of the Naval Staff on February 6, 2013 at Port Louis, Mauritius.

Commissioning and Decommissioning

4.36 **Commissioning of New Ships and Submarines:** The ships commissioned into the Indian Navy during the year were INS Saryu (Offshore Patrol Vessel), Trikand (Frigate), Sunayna (Offshore Patrol Vessel), INS Sumedha (Offshore Patrol Vessel) and the aircraft carrier Vikramaditya.

4.37 INS Vikramaditya was commissioned into the Indian Navy at Severodvinsk, Russia on November 16, 2013. With the span of Indian Maritime interests extending across the Indian Ocean, integral air power provided by INS Vikramaditya is expected to be a substantial contributor for credible naval capability.

4.38 **Commissioning of Indian Naval Air Squadron (INAS) 303:** The Indian Navy's first MiG 29K squadron, INAS 303 was commissioned into the Indian Navy on May 11, 2013 at INS Hansa, Goa. The aircraft would operate from INS Vikramaditya and significantly enhance Indian Navy's combat potential.

4.39 **Commissioning of INAS 322:** Indian Navy commissioned its first Advanced Light Helicopter (ALH) squadron, INAS 322 on November 12, 2013 at INS Garuda, Kochi. The Naval ALH is being employed for a variety of missions including long range search and rescue missions, special heli-borne operations, and armed patrol sniper operations for coastal security.

4.40 **Decommissioning of Ships:** INS Taragiri, the last of the Leander class ship was decommissioned in 2013 after approximately 30 years of service to the nation.

India's first Indigenous Aircraft Carrier IAC-1 (Vikrant) was launched at CSL on August 12, 2013. The launch of Vikrant has been a 'watershed milestone' in India's shipbuilding endeavour.

Launch of Indigenous Aircraft Carrier IAC (Vikrant)

4.41 India's first Indigenous Aircraft Carrier IAC-1 (Vikrant)

'Watershed Milestone' - Launch of IAC 1 (Vikrant) at Kochi

was launched at CSL on August 12, 2013. The launch of Vikrant has been a 'watershed milestone' in India's shipbuilding endeavour. India is the fifth country in the world to build aircraft carriers of around 40,000 tonnes. The ship is likely to be delivered to the Indian Navy by 2018.

Criticality of Nuclear Reactor on Arihant

4.42 In August, 2013, a major boost to our nuclear deterrence capability was achieved with the miniaturized nuclear reactor onboard Arihant having achieved criticality. The achievement of next milestone is the commencement of sea trials of the submarine which would make India only sixth country to build and operate nuclear powered submarines in the world. This is a big step towards making our long awaited dream of achieving "nuclear triad capability" an operational reality.

'Eyes in The Sky' - P-8 I Aircraft

Induction of P 8-I & Advanced Jet Trainer Aircraft into IN

4.43 **Long Range Maritime Reconnaissance and Anti-Submarine Warfare (LRMR ASW) - P-8I Aircraft:** Indian Naval Aviation received a major fillip with the arrival of the first of eight Boeing P-8I Long Range Maritime Reconnaissance and Anti Submarine Warfare aircraft on May 15, 2013. The second and third P-8I aircraft have also been delivered to the Indian Navy in November, 2013. The remaining five aircraft would be delivered over the next two years. The aircraft is equipped with sensors for Maritime Reconnaissance, Anti Submarine operations and Electronic Intelligence missions. The aircraft is fully integrated with state-of-the-art sensors and highly potent Anti Surface & Anti Submarine weapons.

4.44 **HAWK Advanced Jet Trainer Aircraft (AJT):** The contract for supply of 17 Hawk Mk 132 Advanced Jet Trainers

(AJTs) was signed between IN and Hindustan Aeronautics Limited (HAL), Bangalore on July 23, 2010. The contract envisaged delivery of 17 aircraft starting from July, 2013 till June, 2016. Five Hawk Mk 132 aircraft have been inducted into the Indian Navy as replacement for the Kiran aircraft to meet the training requirements of IN pilots.

4.45 **Geo-Stationary Satellite (GSAT-7):** The launch of GSAT-7 satellite ('Rukmini') on August 30, 2013, was a significant event for the Indian Navy and the Nation. With the launch of 'Rukmini', it would provide the Indian Navy a large foot print across the Indian Ocean Region (IOR) and enable efficient conduct of net centric operations and real-time communication.

4.46 **NAMEXPO-13:** The first ever Naval and Maritime Exposition was conducted at Cochin Port Trust, Kochi from September 23 to 27, 2013. During the Exposition, IN Ships Satpura, Sudarshini and Kabra were berthed at Cochin Port Trust to showcase advances in the field of indigenous shipbuilding. An Operational Demo by the Marine Commandoes of IN, along with a Fly Past by Naval aircraft, was also conducted besides a Seminar on Naval and Maritime topics.

विक्रान्त
VIKRANT

5

INDIAN AIR FORCE

Two Su-30MKI escorting Airborne Warning and Control System (AWACS)

Indian Air Force's vision envisages a multi-spectrum force capable of addressing India's future security challenges. The application of aerospace power would prove decisive in winning the short and intense wars of the future.

5.1 Indian Air Force today is transforming itself into a formidable aerospace force with long reach and superior striking capabilities well supported by technological advancements. Indian Air Force's vision envisages a multi-spectrum force capable of addressing India's future security challenges. The application of aerospace power would prove decisive in winning the short and intense wars of the future. The upgradation of existing fleets, as well as induction of new platforms and weapon systems would enable IAF to tackle threats across the spectrum of conflict and project power in India's area of interest. Considerable progress has been made in IAF's modernisation plans. Induction of the C-17 Globemaster and C-130 J aircraft has significantly bolstered IAF's strategic reach capability. The induction of Mi-17 V5 helicopters has significantly enhanced the medium heli-lift capability. The induction of Pilatus Basic Training Aircraft (BTA) has given a major impetus to the basic flying training.

5.2 The induction of state-of-the-art ground and air borne air defence sensors and systems, has enabled IAF to achieve comprehensive situational awareness over entire Indian air space using Integrated Air Command & Control System (IACCS). Modernisation of the operational and technical infrastructure is being undertaken to provide requisite combat enabling operations. Besides this, emphasis is also being laid on enhancement of the quality of training through increased utilisation of modern simulators. As IAF celebrates 81 glorious years of service to the nation, it is firmly on course to transform itself and provide the nation with a host of sovereign options to tackle the security challenges of the future.

ACQUISITION AND AIRCRAFT UPGRADES

5.3 **Fighters:** Operationalisation of additional SU-30MKI aircraft with state-of-the art software has enhanced the combat effectiveness of the fleet. MiG-29 and Mirage-2000 upgrade programs achieved major milestones with completion of Design & Development (D&D) phase for MiG-29 fleet and first flight of upgraded Mirage 2000

aircraft towards Intermediate Operational Clearance. Light Combat Aircraft (LCA) and Medium Multi-Role Combat Aircraft (MMRCA) are on the right trajectory for induction into IAF in near future.

5.4 **Su-30MKI Aircraft:** Delivery of additional Su-30MKI has commenced. A contract to integrate BrahMos Missile on Su-30MKI along with procurement of missiles has also been signed.

5.5 **Jaguar Upgrade:** Avionics and Engine upgrade of Jaguar aircraft is being undertaken.

TRANSPORT AIRCRAFT

5.6 The transport fleet is also on course for major transformation by way of upgrade of AN-32 fleet and inductions of C-130J Special Operations aircraft and Strategic Very Heavy Transport C-17 aircraft.

5.7 **C-17:** The first aircraft arrived in India on June 18, 2013. Induction of C-17 has enhanced the IAF's airlift and air mobility potential in a conflict scenario. This capability would also boost peacetime air logistics, air maintenance and Humanitarian Assistance and Disaster Relief (HADR)/ Out of Area Contingency (OOAC) potential.

5.8 **Additional C-130J:** The first C-130J Squadron has been fully operationalised. A contract for additional aircraft was signed in December, 2013. Procurement of these additional aircraft would give a boost to special operations, airborne assault and air mobility potential of the IAF. The aircraft is also extremely versatile for HADR operations.

5.9 **Operational Readiness of the Transport Fleet:** IAF conducted Ex-Livewire in two phases during March/ April, 2013. A major element of the exercise was Operational Air Mobilisation of IAF's combat assets. This task was effectively executed by the transport fleet, reinforcing

Induction of C-17 has enhanced the IAF's airlift and air mobility potential in a conflict scenario. This capability would also boost peacetime air logistics, air maintenance and Humanitarian Assistance and Disaster Relief (HADR)/ Out of Area Contingency (OOAC) potential.

IAF's capability for rapid operational mobilisation. The Transport Fleet was also utilised for Search And Rescue Operations related to Malaysian Airlines MH 370.

5.10 The rotary wing capabilities of the IAF are poised to undergo a paradigm shift. The induction of Mi-17 V5 helicopters has significantly enhanced the medium heli-lift capability of the IAF especially in terms of avionics, weapon system and high altitude performance. In addition, IAF is processing a case for upgrading the existing helicopters viz. Mi-17s and Mi-17 1Vs. Apart from these, the Advanced Light Helicopter (ALH) Mark III is already in the process of induction along with the Weapon System Integrated version.

5.11 With regard to indigenous development of military hardware, Hindustan Aeronautics Limited has shown significant capability towards the successful design and development of the ALH (Dhruv). Presently, IAF has Light Combat Helicopter (LCH) which is an entirely new design. The Light Utility Helicopter (LUH) is another project which has progressed well and IAF is looking forward to induct these helicopters by 2020.

The Air Defence system is being made more robust with the induction of Short Range Surface to Air Missile (SAM), Medium Range SAM, Low Level Quick Reaction Missiles and integration of these weapons with modern sensors.

5.12 **Trainer Aircraft:** The basic flying training of the IAF got a major boost, with commencement of deliveries from April, 2013 and accelerated induction of PC-7 Mk-II from M/s Pilatus, Switzerland.

AIR DEFENCE NETWORK

5.13 The Air Defence system is being made more robust with the induction of Short Range Surface to Air Missile (SAM), Medium Range SAM, Low Level Quick Reaction Missiles and integration of these weapons with modern sensors. All IAF platforms and ground sensors are planned for upgradation so as to make them capable of Network Centric Operations in a phased manner.

5.14 **Akash Missile System:** Akash Air Defence Weapon System is an all-weather AD weapon system for defending Vital Areas/Vital Points (VA/VP) against aircraft penetrating from low, medium and high altitudes. A contract for Akash Systems was signed with M/s Bharat Electronics Limited, Bangalore and the Squadrons are ready for commissioning.

5.15 **SPYDER LLQRM System:** IAF is procuring SPYDER Low Level Quick Reaction Missile System for the protection of High Value Assets (HVAs). The Contract

for purchase was signed with M/s Rafael, Israel.

5.16 **Medium Range Surface to Air Missile System:** IAF is procuring Medium Range Surface to Air Missile System for defending VA/VPs against aircraft penetrating from low, medium and high altitudes. Delivery of the system is likely to commence in 2014.

AEROSPACE SAFETY

5.17 **Accident Statistics:** IAF has recorded Cat-I accident rate of 0.25 (per 10,000 hrs of flying) as on March 31, 2014. With a combination of focused strategy and determined efforts, the accident rate has been brought down from a high of 1.84 in the early 70s to the present figure. The major contributory factors towards these accidents have been Technical Defects (TD) and Human Error (Aircrew).

5.18 **Air Force System on Error Management (AFSEM):** AFSEM is being utilised to record, analyse and address unreported and unsafe incidents. This helps to build a predictive capability and formulate preventive measures to reduce accidents/ incidents. The implementation of AFSEM Version 2.0 enables on-line viewing of AFSEM reports and action taken by various agencies. The voice mail system is also active for exclusive recording of AFSEM reports.

5.19 **Ornithology:** IAF has been using DNA bar coding technology to identify bird species involved in strikes with aircraft. Recently, an initiative has been undertaken to get these services from Defence Institute of Physiology and Allied Sciences (DIPAS), a lab under the aegis of DRDO.

EXERCISES

5.20 **Exercise Iron Fist:** IAF Air Power Demonstration named 'Exercise Iron Fist' was conducted through day, dusk and night on February 22, 2013 at Pokhran. This event was witnessed by Hon'ble President, Prime Minister and Defence Minister along with the Service Chiefs. The IAF demonstrated its war preparedness and combat capabilities during the exercise; wherein, various fighter aircraft accurately delivered air-ground and air-air weapons onto an entire range of realistic battle field targets. National Security Guard (NSG) commandos also participated alongside IAF Special Forces Garuds in joint operations to showcase our capability in Military Operations in Urban Terrain.

5.21 **Exercise Livewire:** An Air Force level exercise called 'Exercise Livewire' was conducted during March – April 2013 in a pan-India scenario. During this exercise IAF simulated various contingencies and practised its war fighting concepts in a highly networked environment. IAF was able to

validate and demonstrate that the present combat assets are fully capable of thwarting any misadventure by our adversaries.

INTERNATIONAL TRAINING/ EXERCISE

5.22 **Exercise Eastern Bridge- III (2013):** Jaguar aircraft of Indian Air Force (IAF) participated in Exercise Eastern Bridge 2013 with the Royal Air Force of Oman (RAFO) at Masirah, Oman from October 3-11, 2013. RAFO forces included Jaguar, Hawk 203 and F-16 (C&D) aircraft. The exercise provided major learning value to both the participating forces towards understanding each other's concept of operations, procedures and strike tactics.

5.23 **Joint Planning and Operations:** Joint operations are the key to success in any future conflict, and thus form an important part of the training/ exercises for all the three Services so as to understand each other better for interoperability. Annual Training Programme 'Yojna' caters for synergised training of three Services, with IAF providing the air effort.

5.24 Indo-UK Combined Exercise "Ajeya Warrior", Indo-Nigeria Joint Special Forces (SF) Training/ Exercise, Indo-Nepal Joint Exercise "Suryakiran-V", Indo-Poland Joint SF Training, Indo-Russia Joint Exercise "INDRA-13" and Indo-Tajikstan Joint SF Training are the joint exercises which were conducted with Friendly Foreign Countries. MLH and Attack helicopters of IAF were extensively used in these exercises.

5.25 IAF-IN joint exercise, Defence of Gujarat Exercise (DGX) and TROPEX are conducted annually. IAF assets are extensively tasked to carry out maritime air operations towards the defence of both the seaboards of our country. DGX-13 was conducted off Western Seaboard in October 2013, while TROPEX-14 was conducted in January – February, 2014.

INFRASTRUCTURE

5.26 **Development of Airbase at Nyoma:** As a step towards enhancement of the

operational capabilities in eastern Ladakh, Indian Air Force has proposed the creation of a new airbase at Nyoma. The purpose of development is to make the Advanced Landing Ground (ALG) fit for operations of all kinds of aircraft, held in the inventory of Indian Air Force.

5.27 **Development of Infrastructure in North-East:** The decision to go ahead with the development of infrastructure in Eastern Air Command Area of Responsibility (AOR) was announced by the Prime Minister in 2008. Consequently, an empowered committee to oversee the progress of works was constituted and detailed project reports for various infrastructure development works including development of ALGs in Arunachal Pradesh were accorded approval. The works at ALGs and few other Air Force Stations in EAC AOR has commenced. This would enhance the operational capabilities of Indian Air Force and will definitely give a boost to civil aviation and Tourism in the state of Arunachal Pradesh.

6

INDIAN COAST GUARD

Indian Coast Guard (ICG) came into being on February 1, 1977 on approval of the Cabinet Committee on Political Affairs to set up an interim Coast Guard Organization. The service was formally established as an independent organization on August 19, 1978 with the enactment of Coast Guard Act, 1978.

6.1 Indian Coast Guard (ICG) came into being on February 1, 1977 on approval of the Cabinet Committee on Political Affairs to set up an interim Coast Guard Organization. The service was formally established as an independent organization on August 19, 1978 with the enactment of Coast Guard Act, 1978. The Coast Guard began in 1978 with two frigates seconded from the Indian Navy and five patrol boats from the Department of Customs. Since inception, the service has acquired a wide range of capabilities both surface and airborne to undertake the assigned tasks during peace time and to supplement the efforts of Indian Navy during war.

6.2 **Organization:** The Command and Control of the Coast Guard lies with the Director General of Indian Coast Guard, at New Delhi. The Organisation has five Regional Headquarters located at Gandhinagar, Mumbai, Chennai, Kolkata and Port Blair. These Regional Headquarters exercise command and control in the waters adjoining the entire coastline of India through thirteen Coast Guard District Headquarters located along the coastal states of India. In addition, there are 41 Stations, 2 Air Stations, 6 Air Enclaves and 1 independent Air Squadron at various strategic locations for undertaking effective deployment of ships and aircraft for Search & Rescue and maritime surveillance.

6.3 **Duties and Functions:** The duties of Coast Guard are as follows :

(a) Ensuring the safety and protection of artificial islands, offshore terminals, installations and other structures and devices in Maritime Zones.

(b) Providing protection to fishermen including assistance to them at sea while in distress.

(c) Taking such measures as are necessary to preserve and protect the maritime environment and to prevent and control marine pollution.

(d) Assisting the customs and other authorities in anti-smuggling operations.

(e) Enforcing the provisions of such enactments as are for the time being in force in the maritime zones.

(f) Such other matters, including measures for the safety of life and property at sea and collection of scientific data, as may be prescribed.

(g) During the course of time since institution, additional duties have been assigned to the Indian Coast Guard as follows:

(i) National Maritime Search and Rescue Coordination Authority.

(ii) Coordinating Authority for National Oil Spill Disasters.

(iii) Coordination for security in the offshore oil-fields.

(iv) Focal point in India for information sharing under the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia.

(v) Lead Intelligence Agency for maritime borders.

6.4 **Existing Force Level:** At present, the Indian Coast Guard has a force level of 46 Ships, 45 Boats /Hovercraft, 28 Non-commissioned craft and 64 Aircraft to carry out regular surveillance of the Maritime zones of India. One Offshore Patrol Vessel (OPV), 5 Fast Patrol Vessels (FPVs), 6 Inshore Patrol Vessels (IPVs), 6 Air Cushion Vehicles (ACVs), 9 Interceptor Boats (IBs), 4 Interceptor Craft (ICs) and 7 Dornier aircraft have joined the fleet of Indian Coast Guard in 2013-14 (January 1, 2013 to March 31, 2014).

COASTAL SECURITY

6.5 Post 26/11, Indian Coast Guard has been additionally designated as the authority responsible for Coastal Security in territorial waters including waters to be patrolled by Coastal Police. The Director General, Indian Coast Guard has also been designated as Commander, Coastal command and is responsible for overall coordination between Central and State agencies in all matters relating to Coastal security.

6.6 Coast Guard, in coordination with Navy, has been undertaking patrol and surveillance of the entire coastline. 16 Coastal Security Exercises were conducted from January 1, 2013 to March 31, 2014 for ensuring effectiveness of the coordinated patrolling.

6.7 The deployment of Coast Guard Ships and Aircraft has been increased for Coastal Security in addition to the normal Exclusive Economic Zone patrolling. In addition to coastal security exercises, 38 Coastal Security Operations have been

16 Coastal Security Exercises were conducted from January 1, 2013 to March 31, 2014 for ensuring effectiveness of the coordinated patrolling.

conducted by Coast Guard from January 1, 2013 to March 31, 2014, in coordination with stake holders. Coast Guard conducts regular interaction with fisher folks through Community Interaction Programmes. During the period from January 1, 2013 to March 31, 2014 a total of 659 Community Interaction Programmes have been conducted to create awareness about usage of lifesaving equipments like Distress Alert Transmitters, Lifebuoys and to serve as 'Eyes & Ears' for early warning of seaward threat.

SIGNIFICANT MILESTONE AND ACHIEVEMENTS

6.8 **Establishment of Coast Guard District Headquarters No. 14 at Port Blair:** Coast Guard District Headquarters No. 14 at Port Blair has been established on December 18, 2013.

6.9 **Commissioning of Coast Guard Stations:** Three Indian Coast Guard Stations at Gopalpur (Odisha), Pipavav (Gujarat) and Kamorta (Andaman and Nicobar Islands) have been commissioned on February 26, 2013, July 12, 2013 and November 7, 2013 respectively.

6.10 **Activation of Coast Guard Station:** One Indian Coast Guard Station at Nizampatnam (Andhra Pradesh) has been activated on February 27, 2013 and is slated for commissioning by early 2014.

6.11 **Commissioning of Offshore Patrol Vessel (OPV)**: One Offshore Patrol Vessel, Indian Coast Guard Ship Vaibhav has been commissioned on May 21, 2013.

Commissioning of ICGS Vaibhav by Director General Indian Coast Guard on May 21, 2013

6.12 **Commissioning of Fast Patrol Vessels (FPVs):** Three Fast Patrol Vessels, namely Indian Coast Guard Ship Aadesh, Indian Coast Guard Ship Abheek and Indian Coast Guard Ship Abhinav have been commissioned on December 13, 2013, December 31, 2013 and January 15, 2014 respectively.

6.13 **Induction of Fast Patrol Vessels (FPV):** Two Fast Patrol Vessels namely Indian Coast Guard Ship Abhiraj and Indian Coast Guard Ship Achook have been inducted on March 4, 2014 and March 28, 2014 respectively and are due to be commissioned shortly.

6.14 **Commissioning of Inshore Patrol Vessels (IPVs):** Six Inshore Patrol Vessels, namely Indian Coast Guard Ship Rajkamal,

Indian Coast Guard Ship Rajratan, Indian Coast Guard Ship Rajdoot, Indian Coast Guard Ship Rani Avantibai, Indian Coast Guard Ship Rajveer and Indian Coast Guard Ship Rajdhwaj have been commissioned on January 8, 2013, February 11, 2013, April 22, 2013, May 9, 2013, August 10, 2013 and December 11, 2013 respectively.

6.15 **Commissioning of Air Cushion Vehicles (ACVs):** Five Air Cushion Vehicles, namely H-190, H-191, H-192, H-194 and H-193 have been commissioned on February 19, 2013, April 9, 2013, December 23, 2013 and February 13, 2014 respectively.

6.16 **Induction of Air Cushion Vehicle (ACV):** One Air Cushion Vehicle namely H-195 has been inducted on March 21, 2014 and is due to be commissioned shortly.

6.17 **Commissioning of Interceptor Boats (IBs):** Eight Interceptor Boats(IBs) namely, C-154, C-402, C-425, C-403, C-426, C-404, C-405 and C-406 have been commissioned on February 22, 2013, April 12, 2013, April 27, 2013, August 11, 2013, September 19, 2013, December 6, 2013 and February 17, 2014 respectively.

6.18 **Induction of Interceptor Boat (IB):** One Interceptor Boat, namely Indian Coast Guard Ship C-427 has been inducted on February 19, 2014 and is due to be commissioned shortly.

6.19 **Induction of Interceptor Craft (ICs):** Four Interceptor Craft (IC-307 to IC-310) have been inducted during the year 2013.

6.20 **Induction of Aircraft:** Six Dornier aircraft, namely CG 785, CG 786, CG 787, CG 788, CG 789 and CG 790 have been inducted during the year 2013 and one Dornier aircraft has joined the fleet of Indian Coast Guard in February 2014.

INTERNATIONAL COOPERATION

6.21 **XIIth ICG-JCG High Level Meeting**: A high level delegation led by the Director General Indian Coast Guard visited Japan from January 20-24, 2013 for the XIIth High Level Meeting with the Japan Coast Guard (JCG) to discuss maritime issues of mutual concerns and to formulate a cooperative approach to address these issues.

6.22 **Seventh Governing Council Annual Meeting of ReCAAP ISC, Singapore:** Indian Coast Guard continued to support and actively participate in the Regional Cooperation Agreement on Piracy and Armed Robbery at Sea in Asia Information Sharing Center (ReCAAP ISC). Deputy Director General (Operations & Coastal Security) led Indian Coast Guard

delegation to attend the 7th Annual Meeting of ReCAAP ISC from March 5-7, 2013 at Singapore.

6.23 **High Level Meeting between ICG and SLCG:** A high level delegation led by Director General Indian Coast Guard visited Colombo, Sri Lanka from June 9 - 14, 2013 for discussions on maritime issues of mutual concerns to formulate a cooperative approach.

HLM with ICG-SLCG at Colombo, Sri Lanka

6.24 **High Level Meeting between ICG and PMSA:** A high level delegation led by Director General Indian Coast Guard visited Karachi from June 23 – 26, 2013 for the High Level Meeting with the Pakistan Maritime Security Agency (PMSA).

HLM with ICG-PMSA at Karachi, Pakistan

6.25 **9th HACGAM at Pattaya, Thailand:** A delegation led by Director General Indian Coast Guard visited Pattaya, Thailand from October 28-30, 2013 to participate in the 9th Heads of Asian Coast Guard Agencies Meeting (HACGAM). HACGAM is an apex level forum facilitating congregation of all the major Coast Guard Agencies of Asian region.

6.26 **Trilateral INDO-Maldives-Sri Lanka Cooperation Programme for Strengthening Marine Pollution Response:** The Indian Coast Guard conducted the International Maritime Organisation (IMO) Oil Pollution Preparedness, Response and Cooperation (OPRC) level 1 and level 2 courses at Mumbai under the Indo-Maldives-Sri Lanka trilateral cooperation programme from November 25, 2013 to December 6, 2013. Five participants each from Maldives and Sri Lanka participated in the training. Post completion of IMO level 1 and level 2 courses, trained foreign officers participated as observers in the fifth edition of National Level Pollution Response Exercise at sea off Mumbai on December 10, 2013. The successful completion of the IMO OPRC level 1 and

level 2 training has enhanced the position of our country as an international player in oil spill response.

Trilateral INDO-Maldives-Sri Lanka Cooperation Programme

6.27 **ICG-JCG Annual HLM and Combined Exercise:** A high level delegation led by Admiral Yuji Sato, the Commandant, Japan Coast Guard (JCG), visited to India from January 12-15, 2014 for the High Level Meeting and Combined Exercises with the Indian Coast Guard (ICG). The Indian delegation in this interaction was headed by Director General Indian Coast Guard. During the high level meeting held at Coast Guard Headquarters in Delhi on January 13, 2014, both Coast Guard heads reviewed progress on bilateral issues. This high level meeting was followed by a joint ICG-JCG exercise at Kochi on January 14, 2014.

Delegates of the ICG-JCG High Level Meeting

6.28 The details of Major Operations are as follows:

Sl No.	Subject	Since Inception	From January 1, 2013 to March 31, 2014
(i)	Contraband Seized	₹ 510.244 crore	₹ 6.5 crore
(ii)	Poaching Trawler Apprehension	1441 Boats 12570 Crew	87 Boats 523 Crew
(iii)	Smuggling vessel apprehension	123 Boats 761 Crew	03 Boats 29 Crew
(iv)	Total Search and Rescue (SAR) Mission	2770	485
(v)	Search and Rescue (SAR) Sortie	3600	400
(vi)	Lives Saved	6330	672
(vii)	Medical Evacuation	167	14
(viii)	Oil Spills Incidents Responded	86	01
(ix)	Oil Spills Incidents out of country	01	–

6.29 **Search and Rescue**

(a) **XII NMSAR Board Meeting, Mumbai:** The XII Meeting of the National Maritime Search and Rescue (NMSAR) Board was held at Coast Guard Regional Headquarters (West), Mumbai on August 8, 2013. The meeting was chaired by DGICG and various issues related with improvement of Search and Rescue (SAR) system in Indian Search and Rescue Region (SRR) were discussed.

(b) **Rescue of Stranded Passengers:** On January 8, 2013, Coast Guard District Headquarters No.-8, Haldia received a request from 'Digha Mohana' Marine Police Station for assistance to rescue stranded passengers from ferry launch "Basanta Moyee" which had grounded in position 4.6 nautical miles South East of Dariapur Light. On receipt of information, Air Cushion Vehicle (ACV) H-188 was deployed to the area for rescue of stranded passengers. The ICG ACV rescued 125 passengers (majority of them were ladies and Children).

(c) **Fire Onboard Fishing Boat 'Shri Raj':** On March 25, 2013, Coast Guard Dornier aircraft on surveillance sortie noticed fire onboard fishing boat 'Shri Raj' in position 86 nautical miles North West of Okha. The aircraft diverted ICGS Meera Behn which was operating in the area for EEZ patrol. ICG ship rescued 6 fishermen from the boat.

(d) **Assistance to FB 'Banadurga':** On June 19, 2013, ICGS Rajkiran whilst on Exclusive Economic Zone (EEZ) patrol received a Very High Frequency (VHF) call from fishing boat 'Banadurga', adrift due to engine breakdown across provisional Indo-Bangladesh International Maritime Boundary Line (IMBL). The disabled boat was brought to Indian water and thereafter the ship's technical team rectified the defect of the boat engine.

(e) **Rescue of Crew: 'MV Asian Express':** On June 12, 2013, Coast Guard Headquarters received an information from IHQ/MoD(Navy) about a vessel 'MV Asian Express', which was adrift in position 82 nautical miles South of Kavaratti Island on June 11, 2013 due to engine failure. On receipt of information ICGS Varuna and a Dornier aircraft was launched from Kochi for rescue operation and saved 22 Crew from the vessel.

(f) **6th National Maritime Search and Rescue Workshop and Exercise (SAREX-14):** Indian Coast Guard conducted the 6th Search and Rescue workshop and Exercise- 2014 (SAREX-14) on March 19-

20, 2014 at / off Mumbai. A total of 18 International observers from 9 Maritime Nations witnessed the exercise. Besides this, members from National Maritime Search and Rescue (NMSAR) Board, various Central and State departments, Rescue agencies and other maritime stake holders also participated in the exercise.

6th National Maritime Search and Rescue Exercise (SAREX-14)

(g) **Rescue of Disabled Fishing Boat off Ponnani:** On January 1, 2014, ICGS Beypore (Kerala) received information that a fishing boat with 3 crew onboard was missing. On receipt of the information ICGS C-404 which was on close coast patrol was directed to locate the missing boat. The disabled fishing boat was located by the ship and brought to Ponnani and handed over to another fishing boat for towing to the fishing harbour.

(h) **Assistance to 'MFB Sahitya':** On February 2, 2014, Maritime Rescue Sub Centre Goa received information about flooding onboard 'MFB Sahitya' with fourteen crew onboard. On receipt of the information ICGS C-148 was deployed from Goa to locate the distressed boat. On arrival the ICG ship gave necessary technical assistance to the distressed boat and the boat was towed till Marmugao harbour and handed over to another fishing boat for further towing till fishing harbour.

7

DEFENCE PRODUCTION

ICGS Rani Avantibai commissioned on May 9, 2013

Over the years, the Department has established wide ranging production facilities for various defence equipments through the Ordnance Factories and Defence Public Sector Undertakings (DPSUs).

7.1 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/ equipments required for defence. Over the years, the Department has established wide ranging production facilities for various defence equipments through the Ordnance Factories and Defence Public Sector Undertakings (DPSUs). The products manufactured include arms and ammunition, tanks, armoured vehicles, heavy vehicles, fighter aircrafts and helicopters, warships, submarines, missiles, ammunition, electronic equipment, earth moving equipment, special alloys and special purpose steels.

7.2 The following are the main organizations under the Department of Defence Production:

- Ordnance Factory Board (OFB)
- Hindustan Aeronautics Limited (HAL)
- Bharat Electronics Limited (BEL)
- Bharat Dynamics Limited (BDL)
- BEML Limited (BEML)
- Mishra Dhatu Nigam Limited (MIDHANI)
- Mazagon Dock Limited (MDL)
- Garden Reach Shipbuilders & Engineers Limited (GRSE)
- Goa Shipyard Limited (GSL)
- Hindustan Shipyard Limited (HSL)
- Directorate General of Quality Assurance (DGQA)
- Directorate General of Aeronautical Quality Assurance (DGAQA)
- Directorate of Standardisation (DOS)
- Directorate of Planning & Coordination (Dte. of P&C)
- Defence Exhibition Organisation (DEO)
- National Institute for Research & Development in Defence Shipbuilding (NIRDESH)

7.3 With the objective of achieving self-reliance in defence production, the

Ordnance Factories and DPSUs have been continuously modernizing and upgrading their capabilities and widening their product range. A large number of major products have been developed through in-house research and development initiatives apart from producing a number of products and equipment through transfer of technology.

7.4 The production and turnover of Ordnance Factories and Defence PSUs along with Profit after Tax are indicated in Table No. 7.1 and Table No. 7.2 respectively.

7.5 DPSUs and Ordnance Factories have, as a policy, been outsourcing many of their requirements and have over the years developed a wide vendor base which includes a large number of medium and small scale enterprises apart from large scale industries. In addition, the DPSUs and OFB are also striving to increase the indigenous content in equipment and products, manufactured by them.

PRIVATE SECTOR PARTICIPATION

7.6 To achieve the goal of self-reliance in the Defence Sector, continuous efforts are being made to increase indigenization, wherever technologically feasible and economically viable. In May 2001, the Defence Industry sector, which was hitherto reserved for the public sector, was opened upto 100% for Indian private sector participation, with Foreign Direct Investment (FDI) upto 26%, both subject to licensing. However, wherever FDI beyond 26% is likely to result in access to modern and state-of-art technology into the country, decisions can be taken to allow higher FDI on a case-to-case basis with the approval of the Cabinet Committee on Security. The Department of Industrial Policy and Promotion (DIPP) has notified detailed guidelines for licensing production of arms and ammunition vide its Press Note 2 (2002 Series) dated January 4, 2002.

7.7 A Standing Committee has been constituted in the Department of Defence Production to consider all applications received from Department of Industrial Policy and Promotion (DIPP) for grant of Industrial Licenses and FDI Proposals from FIPB Unit of the Department of Economic Affairs (DEA) for the manufacture of arms and armaments and make recommendations on the proposals to the respective Departments. It also considers all matters relating to production of Defence equipment by licensed companies viz. applications for self-certification, permission for export of products manufactured under license as well as cases for cancellation of license on account of breach of licensing conditions or security provisions etc. The Joint Secretary (DIP) is presently the Chairman of the Standing Committee with members from diverse fields viz. Naval HQrs, Air HQrs,

Army HQrs, DGQA, DGAQA, DoD, OFB, DRDO and BEL.

Ordnance factories have been continuously upgrading their infrastructure with induction of state-of-art technologies to meet futuristic requirements of users.

7.8 Department of Industrial Policy and Promotion (DIPP) has, so far, issued 210 Letters of Intents (LOIs)/ Industrial Licenses (ILs) till March 31, 2014 for manufacture of a wide range of defence items to 126 private companies. 43 licensed companies have so far reported commencement of production. Consequent to opening up of the Defence Industry Sector for Indian Private Sector Participation with Foreign Direct Investment (FDI) as per the existing policies, 30 FDI proposals/ Joint Ventures have been approved in defence sector for manufacture of various defence equipments, both in public and private sector as on March 31, 2014.

7.9 The Department of Defence Production has finalized the Defence Products List for licensing purpose which has been uploaded in the website of the Department of Industrial Policy & Promotion (DIPP), which is the nodal department for industrial licensing. The Defence Products List can be accessed at www.dipp.nic.in under the heading 'For Investors' followed by link 'Investor Guidance.'

7.10 **Export Profile of Indian Defence Industry:** As per No Objection Certificates issued by DDP, the value of exports of Indian Defence industry including the 9 DPSUs and OFB for 2012-13 was ₹ 460.97 crore and in 2013-14 it is ₹ 635.45 crore (provisional). The trend in exports shows very good growth by the industry. Some of the major export destinations for defence products have been Italy, Israel, Ecuador, Russia, USA, UAE, Namibia, Srilanka, Malaysia, Seychelles, France, Germany, Romania, UK, Indonesia, Mauritius, Netherlands, Surinam, Kenya, Nepal, Botswana and Oman. Some of the defence items exported were DG sets, spares for radars, sensors, radar warning receivers, helicopter spares, Jaguar spares, MIG spares, Dornier Aircraft spares, forgings etc. Export by private defence industry has shown accelerated growth. About 10-12 companies in the private sector have contributed to defence exports. The Department has finalized a Standard Operating Procedure (SOP) for issuing NOC to private companies for export of Military stores.

ORDNANCE FACTORIES ORGANISATION

7.11 Ordnance Factory Board (OFB) has 39 existing factories. Two new ordnance factories are coming up at Nalanda in Bihar and Korwa in UP. OFB has about 93519 personnel at present. Ordnance factories have been continuously upgrading their

infrastructure with induction of state-of-art technologies to meet futuristic requirements of users. The turnover of OFB during the financial year for 2013-14 is ₹11234 Crore (Provisional).

7.12 OFB has taken up a number of projects to provide state of the art battle field equipment to the Services. OFB along with DRDO has initiated a number of R&D projects to improve self-reliance in some important arms and ammunitions required by forces. OFB is formulating proposal for amending its Procurement Manual to make it more effective.

7.13 On the basis of Long Term Integrated Procurement Policy (LTIPP) of the Users, OFB has broadly identified technology areas for future acquisition and absorption in Ordnance Factories. The Technology Perspective and Capability Road Map (TPCR) document of the Ministry of Defence has been studied and certain technologies have been identified for future R&D projects. Action has been initiated for Advanced Artillery Guided Shell Systems with research assistance from IIT kanpur and Future Combat System i.e. FICV with DRDO, Defence PSUs and Indian Industry technology partners.

7.14 OFB has taken initiative and achieved 85.3% of indigenization in terms of Value of Production in financial year 2013-14. Important achievements are indigenization of Commander Hatch control Unit, a critical unit of T-90 tank, indigenous production of 50 types of critical optical components of T-90 tank, indigenously developed 5 types of cable harness for T-90 tank and set of cables for bridge laying tank (BLT), indigenous development of Rocket practice through reverse engineering. Other achievements of OFB include:

(i) OFB Gun 'Dhanush' was positioned in January, 2014 for trials by the User. The trials have been successfully completed.

(ii) T-72 modified chemistry barrel manufactured by OFB has successfully completed the life cycle test conducted at Armoured Corps Centre & School Ahmednagar.

(iii) Engine Factory Avadi has successfully repaired the first engine of MBT Arjun in association with CVRDE (DRDO).

(iv) Ordnance Factory, Dum Dum is the first Government organization in India to be recommended for award of ENMS:ISO:51000 (Energy Management System).

7.15 **Modernisation:** OFB has a number of ongoing sanctioned projects for augmentation of capacity for meeting Army's requirements. The total sanctioned cost of such ongoing projects is ₹ 4571 crore.

7.16 The value of issue (turnover) per employee in OFB has gone up from 6.4 in 2007-08 to 11.9 in 2013-14 i.e. an increase of 86% over a period of six years. Overall, production is being increased by associating private sector industries as vendors. As on March 31, 2014, about 5603 vendors were registered with OFB.

OFB has a number of ongoing sanctioned projects for augmentation of capacity for meeting Army's requirements. The total sanctioned cost of such ongoing projects is ₹ 4571 crore.

7.17 **Environment Protection:** 37 out of 39 Ordnance Factories have already obtained the Certification for EMS 14001:2014 from various certifying Bodies like BIS, NQAQSR, NORSKE VERTAS. The 2 remaining factories are in the process of obtaining similar Certification.

DEFENCE PUBLIC SECTOR UNDERTAKINGS (DPSUs)

Hindustan Aeronautics Limited (HAL)

7.18 Hindustan Aeronautics Limited (HAL) is the largest DPSU under the Department of Defence Production. It has positioned itself as a comprehensive solution provider to the Indian Defence Services in the field of aviation with products consisting of fighter aircrafts, trainer aircrafts and helicopters. Around 90% of the sales of HAL is on account of sales to the Indian Defence Services. HAL has 19 Production Divisions, 10 R&D Centres and one Facility Management Division spread across the country. Major aircrafts/ helicopters in the current production range are:- SU-30MKI multirole fighter, Hawk – Advanced Jet Trainer, Light Combat Aircraft (LCA), Intermediate Jet Trainer (IJT), Dornier 228 – Light Transport Aircraft, Dhruv (Advanced Light Helicopter), Chetak, Cheetah and Cheetal helicopters. The Company has achieved a turnover of ₹15180 crore in 2013-14.

7.19 Major achievements of HAL in 2013-14 included:

(i) The indigenously designed and developed frontline fighter aircraft. Light Combat Aircraft (LCA), achieved an important milestone on December 20, 2013 by getting Initial Operational Clearance and entered the stage of induction into IAF.

(ii) The Indian Navy inducted the first fully Indian manufactured Hawk Advanced Jet Trainer produced by HAL at INS Dega, Vishakhapatnam on November 6, 2013.

(iii) Mars Orbiter Mission spacecraft was launched on November 5, 2013 by the ISRO. HAL has contributed to this mission by supplying seven types of riveted structural assemblies and four

types of welded propellant tankages for the Polar Satellite Launch Vehicle (PSLV-C25). The Company had also delivered bare satellite structure and deck panel to ISRO.

(iv) HAL has won Prestigious 'SCOPE' award for excellence and outstanding contribution to Public Sector Management. HAL, Hyderabad also received Raksha Mantri's award for excellence for the year 2011-12.

7.20 **Future Challenges:** HAL being committed to meet future requirement of defence services, is participating in the acquisitions planned by IAF and other Defence Services, like Medium Multi-role Combat Aircraft (MMRCA), Multi-role Transport Aircraft (MTA), Fifth Generation Fighter Aircraft (FGFA), Indian Multi Role Helicopters (IMRH) and Naval Multi-role Helicopter (NMRH), etc. One of the major challenges for HAL would be to strengthen its Research and Development efforts for which following steps have been taken:

(i) HAL has decided to set up a corpus for important R&D initiatives over and above its normal activities. HAL is participating in a joint effort launched to develop aero-engines in the country, with DRDO and BHEL.

(ii) The state-of-the-art Manned Chamber Welding (MCW) shop was inaugurated at HAL's Koraput (Sunabeda) facility in Odisha on May 9, 2013. India and Russia are the only two countries with this facility.

(iii) Preliminary Design Phase of Fifth Generation Fighter Aircraft (FGFA) has been completed.

(iv) Preliminary Design Phase of Multi-Role Transport Aircraft (MTA) has been completed and all reports (except book on Finance) in both languages have been submitted at UAC-TA for acceptance by customer.

(v) Sea level trials have been completed on Light Combat Helicopter (LCH)

(vi) 189 patent applications have been filed in 2013-14.

7.21 HAL intends to gradually shift from being the main manufacturer to being a system integrator by outsourcing about 50% of its workload in terms of Standard Manhours by 2030. HAL has participated in 15 vendor development programmes in the country in the year 2013-14. E-Procurement system has been implemented by HAL for all tenders above ₹5 lakh.

HAL intends to gradually shift its role as system integrator from being the main manufacturer to being a system integrator by outsourcing about 50% of its workload in terms of Standard Manhours by 2030.

7.22 HAL has taken up the Design and Development of Light Combat Helicopter (LCH), Light Utility Helicopter (LUH), Upgrade of Jaguar Darin-III and Mirage 2000 aircraft. The Design and Development of LCH and LUH along with the already supplied Chetak, Cheetah, Cheetal and ALH will place HAL as a total Indigenous Solution Provider in the Light helicopter category, to the Indian Defence Forces. HAL has so far produced 15 types of aircrafts from in-house R&D and 14 types under license.

7.23 **Environment Protection:** All the norms of Pollution Control Board are being followed meticulously. Effluent treatment plants (ETPs) are being used for treating industrial effluents. Two units of Biogas Plants with a capacity of 500kg/day and 1000kg/day each are installed at the Central Test House (CTH) area by Facilities Management Division of HAL, Bangalore. Every year the Company is planting saplings in and around the factory premises, and has implemented several energy conservation measures as a follow up to the energy audits which has resulted in a reduction in consumptiom of around 10 Lakh units of electrical energy during 2013-14. A 25 KW roof top solar power plant has been commissioned at the Nasik unit and a 100 KW plant is planned in Bangalore in 2014-15.

Bharat Electronics Limited (BEL)

7.24 Bharat Electronics Limited (BEL) is a Navratna company established in 1964 under the Ministry of Defence with 9 Strategic Business Units (SBUs) spread over the country. The turnover for FY2013-14 is ₹ 6180 crore. The company's core competencies in defence sector are Radars & Weapon Systems, Sonars, Communication, Electronic Warfare Systems, Electro Optics and Tank Electronics, etc. For 2013-14 supplies to defence contributed to around 82% of turnover. In the non-defence sector BEL's product range include electronic voting machines, tablet PCs, integrated circuits, solar cells and semiconductor devices.

7.25 During 2013-14 the 'YEAR OF QUALITY CONTROL', BEL bagged 12 Gold Medals for Six Sigma Projects in the competition conducted by Quality Circle Forum of India (QCFI). BEL achieved 100% on-time delivery to the Services in all three parameters of the Results-Framework Document (RFD) viz. ULSB Mk II for Army, Passive Night Vision Devices (PNVD) and RADARS & Fire Control Systems during 2013-14.

7.26 **Future Challenges:** The Indian market scenario for defence in the area of strategic electronics is rapidly changing. With the opening of the Defence Electronics market to private participation, the competition has further intensified. Besides, the customer requirements have also changed from mere standalone products to Systems/Mobile Platforms. This has posed a challenge to BEL with regard to maintaining

a sustained growth and retaining the Defence market share through a proactive research and development strategy. BEL is a technology driven company with a well-established R&D structure, on which it spends 6 to 8% of its annual turnover. The company has a long association with Defence Research and Development Organisation (DRDO) Laboratories, National Laboratories and reputed academic institutions like IITs, IISc etc., to adapt various indigenous technologies into its products or jointly develop products for the Defence Forces. BEL is introducing around 10 new products on an average, every year. BEL ranks 69th among top 100 companies in the world in defence revenue as published by Defence News, USA. To improve outsourcing activity the Company has well established procedures for procurement (Production & non-production items), sub-contracting and services. The same is updated periodically in line with government guidelines. The company has also implemented e-procurement as part of SAP, across all its Units/SBUs to facilitate outsourcing. For FY 2013-14, the total outsourcing was ₹2368 crore.

7.27 Another important feature of BEL's product basket is that about 85% of its turnover consists of indigenously developed products. The company has formulated a comprehensive 5-year plan for indigenization in line with Technology Perspective & Capability Roadmap (TPCR).

7.28 **Modernization:** BEL is involved in the manufacture of sophisticated Strategic Electronic equipment wherein the technology of both products and processes change rapidly. Some of the major modernization programs include Expansion of RF/MW Super Components facility, Test facility for Stabilizer and Automatic Loading Gear for T90 Tanks, Near Field Antenna Development Test Range Facility etc. For FY 2013-14, modernisation expenditure was ₹ 258 crore.

7.29 BEL is trying to expand its production base through suitable development of quality vendors. During FY 2013-14 BEL increased its vendor base by 6.5% over the previous year. The company is maintaining an Approved Vendor Directory (AVD) which is updated periodically. It has undertaken initiatives like outsourcing and joint development of products, assistance to vendors through nominated Industry Promotion Officers, Annual Vendors' Meet, thrust on procurement from MSMEs and implementation of e-Procurement, etc.

7.30 **Environment Protection:** All the norms of Pollution Control Board are being followed meticulously. All the Divisions of BEL are maintaining ISO-9001-2000 QMS Certification. Every year the Company is

planting saplings in and around Factory premises in order to enhance environmental protection.

Bharat Dynamics Ltd. (BDL)

7.31 Bharat Dynamics Limited (BDL), a Mini-Ratna Category-I company was incorporated in the year 1970 under the Ministry of Defence. A pioneer in the manufacture of Anti-Tank Guided Missiles (ATGM), BDL has evolved as a conglomerate manufacturing ATGMs of new generations, Surface-to-Air weapon systems, strategic weapons, launchers, underwater weapons, decoys and test equipment. A Contract worth about ₹3000 crore for delivery of Invar missiles was signed by BDL on August 19, 2013. BDL's present order book position is around ₹19,000 crore.

7.32 BDL has in-house Design & Engineering (D&E) Division for upgradation of products and development of related test equipment for Indian Armed Forces. BDL has also initiated the process of establishing a structured R & D Centre at BDL to enable it to face future challenges arising out of technological strides taking place in the related fields of business.

7.33 BDL has taken steps for indigenization of ATGMs being manufactured by it. Indigenization of products like Konkurs-M, Invar ATGM and Milan-2T upto 90%, 65% and 71% respectively has been achieved. During 2013-14, BDL's vendor base increased by about 12.4% over the previous year.

7.34 **Modernization:** A key modernisation project of BDL is the establishment of a new assembly building for Akash missile. ₹ 78.44 crore were spent during 2013-14 towards modernisation of BDL. Some of the technologies being introduced under modernization programme are: Robotic Welding of Motors, Automatic loading and Progression of jobs in electro plating production line, Unification/ Automation of Cold and Hot conditioning of missiles/ sub-systems including Thermal Shock capability etc.

BEML Limited (BEML)

7.35 BEML, established in 1964, is a Mini-Ratna company listed in NSE and BSE. The company has 4 manufacturing complexes with 9 production units located in Bangalore, Mysore, Kolar Gold Fields and Palakkad engaged in the design, manufacturing, marketing and after sales service of Mining & Construction equipment, Defence & Aerospace products and Rail & Metro products.

7.36 BEML achieved a Turnover of ₹3254 crore during FY 2013-14. The Company's International Business covers over 58 countries in Asia, Africa, and Latin America. Exports during 2013-14 was ₹ 81

crore. BEML's Defence business is mainly in production and supply of High Mobility Vehicles (HMV) and Armoured Recovery Vehicles (ARV) for requirements of Armed forces.

7.37 The challenges in Mining & Construction sector can be met by development of new and innovative products and aligning with best global practices. BEML is increasing its production capacity and R&D capabilities to meet the growing demand in domestic Rail & Metro sector. Through indigenization and in-house R&D efforts BEML is working towards meeting the requirements of import-dependent HMV and ARVs.

7.38 **R&D initiatives:** The major activities of R&D include design and development of new products and aggregates for products such as Dozers, Dumpers, Excavators, Loaders, Graders& other Defence and Railway Products. It also includes technology absorption and indigenization, while continuously working on up-gradation of existing products. R&D of Defence equipment is taken up at KGF and Bangalore Complexes. The Company spends around 3% of its turnover towards R&D, which has resulted in development of new products. The new/ upgraded products have contributed an average of over 25% of the total turnover in the last 5 years. A 3 year R&D plan has been drawn in line with the changing technology trends to match global standards and customer needs covering all 3 verticals.

7.39 **Indigenization:** The indigenization level in respect of Mining & Construction products and Rail & Metro products in BEML is over 90%. For Metro Cars all inputs in respect of DMRC RS-6 & RS-8 (Metro projects) are by BEML and there are no supplies from Collaborator. The indigenization level in case of Defence products, viz., PMS Bridge, ATT, Aircraft weapon loader, 50T trailer, etc., is 100% & High Mobility Vehicle is about 75%. Efforts are on for further Indigenisation.

7.40 BEML is continuously modernizing its production facilities with the latest state-of-the-art technology to deliver quality products within the scheduled time. The Modernization Programme ensures enhancement in productivity by up-gradation of technology, quality, reduction in cost, reduction in rework by improvement in process, adherence to environment and safety norms, expansion of manufacturing capacity, and de-bottlenecking to ensure continuous production.

7.41 BEML has been given Raksha Mantri Award for 'Design Effort' for design and development of country's first Stainless Steel Electric Multiple Unit (SSEMU) for Indian Railways for suburban commuting.

Mishra Dhatu Nigam Limited (MIDHANI)

7.42 MIDHANI was established in 1973 as a Public Sector Undertaking under the administrative control of Department of Defence Production & Supplies, Ministry of Defence to achieve self reliance in the manufacture of a wide range of Superalloys, Titanium alloys, Special Purpose Steels etc. for the critical sectors, with technical knowhow from foreign collaborators. Thereafter, MIDHANI has developed, manufactured and supplied more than 105 grades of high performance alloys in different shapes, sizes, forms towards programmes of national importance in the Defence, Space and Atomic Energy sectors. Midhani was accorded the "Mini Ratna Category –I "status in November, 2008.

7.43 MIDHANI achieved the highest ever sales turnover of ₹563.63 crore during the year 2013-14 compared to ₹558.59 crore during the previous year. The Value of production achieved during financial year 2013-14 is ₹ 555.04 crore compared to ₹ 537.37 crore during the previous year. Midhani has successfully manufactured and dispatched 2 sets of Composite Armour Panels (Ceramic-titanium bonded encapsulated

panels) to Air Force 3BRD, Chandigarh for armouring of MI-17 Helicopters. Each set comprises 28 different shapes and sizes of panels. Technology for manufacturing these panels was developed by DMRL, Hyderabad.

7.44 **R&D Initiatives:** Various initiatives have been taken to develop new grades for strategic applications as per the MoU 2013-14. The development activities of new grades are in different stages of processing and testing. The amount spent during 2013-14 is ₹ 9.90 crore as against the target of ₹ 6.5 crore for the year. In order to enhance the capacity, higher capacity critical equipments are being installed under phase-wise modernisation plan. The capital expenditure (CAPEX) towards modernisation during the year 2013-14 was ₹128.38 crore against the target of ₹ 60.00 crore for the year.

7.45 MIDHANI gives emphasis on achieving higher level of indigenization. While processing of its products, it is necessary to use many imported raw materials viz. pure nickel, chromium, molybdenum, cobalt etc as these are not available in Indian market. The indigenous content in value of production during the year is ₹388.53 crore which is about 70%. With a view to discharge its long term goals

and to fulfil its corporate mission, company is continuing its efforts to reach the targeted capacity level of about 7000-8000 MT/ year, from its existing level of 4000 MT/year in about a time frame of 3 years.

Mazagon Dock Limited is the leading Shipyard amongst all Defence PSU shipyards engaged in construction of Warships and Submarines for the Indian Navy.

Mazagon Dock Limited (MDL)

7.46 Mazagon Dock Limited is the leading Shipyard amongst all Defence PSU shipyards engaged in construction of Warships and Submarines for the Indian Navy. The shipyard has all the capabilities and strengths to navigate through the challenges presented by the complexities of building frontline warships and submarines. The Company was incorporated as a Defence PSU on 14 May 1960. The Value of Production for the year 2013-14 is ₹ 2790 crore as compared to ₹ 2290.64 crore in 2012-13.

7.47 To survive in a highly competitive environment, MDL is taking steps like standardization of some of the equipment and items, evolving a procurement strategy that meshes with the build period of Ships & Submarines, higher block level, pre-out fittings to reduce the build period, improvising the level of automation to improve productivity and also to ensure quality at par with international standards. MDL is drawing up a 5 year R&D plan depicting the R&D activities that the yard intends to take up during the period. MDL intends to tie-up with reputed academic institutions like IITs, Welding Research Institute, etc. for carrying out participatory R&D projects.

7.48 MDL has been perpetually endeavouring to increase the indigenisation content of the ships and submarines that are built by the shipyard. Over the years, a large quantum of shipboard machinery, equipment and materials have been indigenised. In recent years, shipboard equipment like Stabilizers, Steering Gear, Sewage Treatment Plants, Fresh Water Generators, Helicopter landing Grid, Shafting, Stem Bosses have been indigenised. Steel, as per GOST % NES 791 Part I & Part III specifications hitherto imported has also been indigenised. As regards the P-15 B Destroyers which are under construction, it has been planned to have indigenous component upto 73%.

7.49 **Modernisation:** The shipbuilding and submarine building infrastructure has been gradually ramped up to enhance output and improve productivity. The Mazdock Modernisation Project (MMP) is nearing completion. With the commissioning

of the new wet basin and the 300 ton heavy duty goliath crane, the shipyard has achieved two major milestones under the project. The module shop in combination with the goliath crane will enable MDL to adopt integrated concept of modular construction and effectively reduce build period of warships and submarines.

Garden Reach Shipbuilders and Engineers Ltd. (GRSE)

7.50 Garden Reach Shipbuilders and Engineers Ltd (GRSE), a Mini Ratna Category I Public Sector Company since September, 2006 has kept pace with India's expanding maritime interests and is recognised as a leading Shipbuilding yard. GRSE is presently constructing four Anti Submarine Warfare Corvettes (P 28class), eight Landing Craft Utility, Offshore Patrol Vessels and four Water Jet Fast Attack Crafts. GRSE also bagged the prestigious export order for supplying Offshore Patrol Vessel to Mauritius. The vessel has been launched on August 2, 2013 and will be delivered in September, 2014. Two Inshore Patrol Vessels (IPVs) were delivered to Indian Coast Guard during this year. GRSE has achieved the all-time highest turnover (VOP) (Provisional) of ₹1550.83 crore in the Financial Year 2013-14.

7.51 **R&D initiatives:** GRSE has a R&D Policy duly approved by Board. Indigenous content of Value of Production for the period April 1, 2013 to Mar 2014 is about 75.10% compared to 72.30% in previous year. The major projects undertaken were Development of Hull Form for 100 m OPV and Load Testing of Indigenously developed Single Lane Portable Steel Bridge IRC-6.

7.52 **Modernisation:** The modernisation plan of GRSE, which aims to augment infrastructure to enable modular construction concept, has been completed in May 2013. Integrated Shipbuilding Facility under phase II Modernisation programme enables GRSE to construct ships using latest Modular Shipbuilding Technology where 200 Ton Mega Hull-blocks with pre-outfitting can be used. This would lead to significant reduction in 'Build Period.'

7.53 **Major Achievements during the year 2013-14 were as follows:**

(a) Two (2) Warships named ICGS RAJVEER & ICGS RAJDHWAJ were delivered on July 16, 2013 & October 30, 2013 respectively.

(b) Keel Laying of Yard No. 2092 and 2093 was carried out on April 24, 2013, Yard No. 2094 and 2095 on August 30, 2013 and Yard No. 2109 on March 31, 2014.

7.54 **Environment Protection:** Electrical Consumption at Main Yard for the year 13-14 was reduced by 15.43 % as compared to the year 2012-13. Afforestation activity in the shipyard is vigorously followed. There is a lush green belt in and around factory together with presence of nursery, gardens and plants. Rain water harvesting and the concept of Green Building has been adopted for new corporate office.

Goa Shipyard Ltd. (GSL)

7.55 From a humble beginning as a small barge repair and construction yard in 1957, GSL has grown to a competitive Shipyard capable of indigenously designing and building sophisticated high technology ships for the Indian Navy and Coast Guard. The VOP for GSL for the year 2013-14 is ₹ 512.24 crore. During the calendar year 2013, GSL delivered the second OPV to Indian Navy in September 2013 (the first was delivered in December 2012) and the third is also ready for delivery. One OPV was delivered to Indian Coast Guard. GSL has also delivered one Fishing Research Vessel to Central Marine Fisheries Research Institute, Kochi in July 2013. GSL also delivered four ship berthing pontoons to Indian Navy.

7.56 GSL undertakes R&D of its product range and new shipbuilding projects are based on the in-house design. GSL's indigenously developed designs of Patrol Vessels have saved the country considerable amount of foreign exchange by avoiding import of ship designs. In order to meet the country's defence requirements as well as anticipated demand in the international market, in-house R&D for new platforms, OPV, ASW Shallow Water Craft & Interceptor Craft is in progress. GSL has diversified its business activities. Some of the projects undertaken by GSL are : Shore Based Test Facility for Indian Navy, GRP Survey Motor Boats for Indian Navy, Supply, installation and service support for Stern Gear Systems.

7.57 **Modernisation:** GSL's modernisation program with the objective of doubling its shipbuilding capability and for construction of Mine Counter Measure Vessels(MCMVs) is being executed in four phases at an estimated outlay of ₹ 800 crore. Phases 1 and 2 of the modernisation project have been completed and construction work for next phase is in progress.

Hindustan Shipyard Ltd. (HSL)

7.58 'Scindia Shipyard Limited' was setup in the year 1941. In 1952 two thirds of its holdings were acquired by Government of India and the yard was renamed as Hindustan Shipyard Limited. In 1961, Hindustan Shipyard became a fully owned Government Enterprise under Ministry of Shipping and Transport. Strategically located on the East Coast of the Indian Peninsula, at Visakhapatnam, Andhra Pradesh, HSL is the

Nation's Premier Shipbuilding organisation to cater to the needs of Indian Maritime, Defence and Oil Sectors in shipbuilding, ship & submarine repairs and onshore and offshore structures. The yard was brought under administrative control of Ministry of Defence in February 2010.

7.59 During the last 5 years, 19 vessels have been delivered by HSL. These include two 150 Passenger Vessels to A & N Administration, one 700 Passenger Vessel to Union Territory of Lakshadweep, four 30,000 DWT Trader series and four 53,000 DWT Diamond series Bulk Carriers to M/s Goodearth Maritime Limited, one Oil Recovery & Pollution Control Vessel & two 50-Ton Bollard Pull Tugs for Visakhapatnam Port Trust, three 50-Ton Bollard Pull Tugs for Indian Navy, one 32-Ton Bollard Pull Tug for New Mangalore Port Trust and two Inshore Patrol Vessel for Indian Coast Guard. The yard has successfully repaired 8 Hi-tech Oil Rigs (five for ONGC, one for Portugal, one for Malta and one for Aban Offshore Ltd) and one Submarine for Indian Navy.

Birds eye view of facilities

7.60 **R&D initiatives:** The Yard has developed in-house designs for Tugs, Cargo vessels 14,000 DWT to 27,000 DWT under standard flexible design and concept design for Survey vessels, etc. Recently the design department has been revamped with 40 licenses of Aveva and 35 licenses of Autocad-14. During the period under consideration, training for these state-of-the art software has been progressed satisfactorily and the licenses are being used.

7.61 **Modernisation:** In December 2011, MoD has sanctioned ₹ 457.36 crore for Refurbishment and Replacement of Machinery and Infrastructure (RRMI) under the LPD Project. The present status of activities pertaining to RRMI project till date is as follows:-

(i) Orders placed - ₹ 40.66 crore

(ii) Under tendering process - ₹ 106.86 crore

7.62 **Major Achievements and Awards during 2013-14 were as follows:**

(i) ICGS Rani Avantibai for Indian Coast Guard: The second of the series of five Inshore Patrol Vessels (IPVs), ICGS Rani Avantibai was handed over to the

Indian Coast Guard on May 8, 2013. The vessel was commissioned on May 9, 2013.

MV Good Day for M/s GML

(ii) M V Good Day for M/s Goodearth Maritime Limited: MV Good Day, VC 11139, fourth of the series of five 53,000 DWT Bulk Carriers, was delivered to M/s Goodearth Maritime Limited, Chennai on July 29, 2013.

(iii) 50 Ton Bollard Pull Tugs: Two of three 50 Ton Bollard Pull Tugs, VC 11163 (Dhiraj) and VC11164 (Sahas) for Indian Navy were delivered on December 24, 2013. The third Tug, VC 11162 (Himmat) sailed out from HSL on March 23, 2014 and reached Karwar on March 30, 2014.

(iv) HSL was awarded New Ink Legend PSU shining awards 2013 for employee welfare and women empowerment initiatives on January 31, 2014.

50T BP Tugs for Indian Navy

Directorate General of Quality Assurance (DGQA)

7.63 Directorate General of Quality Assurance (DGQA) is a Quality Assurance Organisation functioning under the Department of Defence Production in the Ministry of Defence. DGQA is responsible for second party Quality Assurance of all defence stores and equipment, both imported as well as indigenous, for the Army, Navy (excluding Naval Armaments) and common user items for the Air Force procured from Private Sector, Public Sector Undertakings and Ordnance Factories. It has, therefore, a vital role to play in defence preparedness of the country.

7.64 **Organisational Structure and Functions:** DGQA Organisation is structured into eleven Technical Directorates, each responsible for a distinct range of equipment. The Technical Directorates are structured in two tiers for functional purposes, comprising of Controllerates and Field Quality Assurance Establishments. In addition, there are Proof Establishments in Armament Discipline for carrying out proof of weapons and ammunition.

7.65 **Achievements:**

(i) **Quality Assurance of Stores:** The value of stores quality assured during the year 2013-14 is ₹ 20743 crore.

(ii) **NABL Accreditation:** 34 identified Testing Laboratories of DGQA have been granted NABL accreditation.

(iii) **Modernisation:** Test Equipment of state-of-art technology have been procured and commissioned in the Proof Establishments and test laboratories

(iv) **Training Initiatives:** The Defence Institute of Quality Assurance (DIQA) carries out training of DGQA officers and officers of other organizations in the field of Quality Assurance, Management/ Human Resource Development and Information Technology. During the 'Year of Quality 2013-14' being observed in the Department of Defence Production, three DGQA officers have been sent to Cranfield University, UK for PG Programme.

Directorate General of Aeronautical Quality Assurance (DGAQA)

7.66 The Directorate General of Aeronautical Quality Assurance (DGAQA) is a regulatory authority under Department of Defence Production for Quality Assurance and final acceptance of military aircraft, associated accessories/ stores including Air Armament & Unmanned Aerial Vehicle (UAV) during design/development/ production/repair and overhaul/up gradation. DGAQA also has an important role in providing technical consultation to Ministry of Defence, Service HQrs, and the Main contractor during various stages of procurement and in-house manufacture of Defence Aero stores. It ensures conformance of the product/services to the laid down

specifications/standards thereof and effective Quality Management Systems at the premises of suppliers of such products, enhancing the safety of military aircraft/ airborne systems. DGAQA functions from its HQ at New Delhi through a network of 34 Field Establishments/ Detachments spread across the country.

7.67 DGAQA is also the nodal agency for Missile Systems Quality Assurance Agency (MSQAA) and Strategic Systems Quality Assurance Group (SSQAG). These are Tri-service (DGAQA, DGQA & DGNAI) organizations for ensuring quality and reliability during design, development and production of indigenous missiles.

7.68 **Quality Assurance Stores Achievements:** Value of stores provided with QA coverage by DGAQA during the current year and previous three years is given below:

Year	2010-11	2011-12	2012-13	2013-14
₹ in crore	14296	14898	14022	21803

7.69 **MAJOR PROJECTS UNDER QA COVERAGE OF DGAQA:**

(i) SU-30 (MKI) & Advanced Jet Trainer (HAWK): Manufacture under licence from Original Equipment Manufacturer (OEM).

(ii) Advanced Light Helicopter (ALH): Manufacture

(iii) Light Combat Helicopter (LCH): Development

(iv) Light Combat Aircraft (LCA): Manufacture

(v) Intermediate Jet Trainer (IJT), Light Combat Helicopter (LCH) and Light Utility Helicopter (LUH): Development/ Manufacture

(v) Air Armament Stores : Manufacture

(vii) Indigenous Missiles : Development/ Manufacture

(viii) Airborne Early Warning Radar & Control System (AEW&C): Development

(ix) Ground Radar Systems for Airborne applications: Development/Manufacture

(x) Arrester Barrier Systems for aircraft : Manufacture

(xi) Flying Clothing for Air Crew: Development/Manufacture.

(xii) Tyres/Tubes for use in Military Aircraft: Development/Manufacture

(xiii) Batteries for use in Military Aircraft: Development/Manufacture.

7.70 Some of the initiatives taken by DGAQA include:

(i) Computerization of Inspection Note: After satisfactory QA checks, hitherto printed forms of Inspection Note were used by DGAQA for clearance of the stores. The activity has since been computerized and suitable guidelines

have been circulated amongst various Field Establishments of DGAQA in this regard.

(ii) Performance Audit of Field Establishments: For the first time, performance audit of Field Establishments of DGAQA has been carried out by cross-functional teams formed within DGAQA and recommendations will be implemented for enhancing the professional efficiency.

(iii) ISO 9001 Certification of DGAQA: Action has been initiated towards getting ISO-9001 certification of DGAQA.

Directorate of Standardisation (DoS)

7.71 Directorate of Standardisation (DoS) was established in 1962 with an aim to control item proliferation within Defence Services. Foremost objective of DoS towards establishing commonality in equipment and components among the three Services to ensure that the overall inventory of the Defence Services is reduced to the minimum, is being progressively realised through:

(a) Preparation of various Standardisation documents.

(b) Codification of Defence Inventory.

(c) Entry Control.

Directorate of Standardisation (DoS) was established in 1962 with an aim to control item proliferation within Defence Services.

7.72 As per Five Year Roll on Plan approved by the Directorate, 305 New standard documents and 1121 Revision documents were required to be issued for the year 2013-14. Against these targets, 165 New Standard documents and 764 Revision documents have been prepared till March 31, 2014. The Directorate has set a target to codify 39,733 items against which 22306 items have been codified till March 31, 2014 thereby making the total number of items codified till date to be 5,56,008.

Directorate of Planning & Coordination

7.73 The International Cooperation Division in the Directorate of Planning & Coordination under Department of Defence Production is the nodal point for activities relating to International Cooperation in Defence Production. The International Cooperation Divisions handles all matters relating to defence industry cooperation with various countries with which India has cooperation agreements in defence production.

Defence Exhibition Organisation (DEO)

7.74 The main function of DEO is to organise and co-ordinate Defence exhibitions in India and abroad, primarily with a view to promote

the export potential of defence oriented products and services, developed and manufactured by the Indian Defence Industry. DEO maintains a permanent Defence Exhibition at the Defence Pavilion, Pragati Maidan, New Delhi. The Defence Public Sector Undertakings (DPSUs), the Ordnance Factory Board (OFB), the Defence Research and Development Organisation (DRDO), the Directorate General of Quality Assurance (DGQA) and the Directorate General of Aeronautical Quality Assurance (DGAQA) are displaying their products, innovations and services in this Exhibition.

7.75 **India International Trade Fair (IITF):** The Defence Pavilion participates in IITF held every year in Pragati Maidan, New Delhi from November 14 to 27. In IITF, Defence Pavilion was awarded 8 Gold, 4 Silver, 3 Bronze and one special Appreciation during the last 27 years.

7.76 **Aero India:** The ninth edition of Aero India was organized from February 6-10, 2013 at the Air Force Station, Yelahanka, Bengaluru. 650 exhibitors including 352 foreign participants from 27 countries and 305 domestic exhibitors participated in the Aero Show.

7.77 **Defexpo India 2014:** The 8th edition of Defexpo India was held in Pragati Maidan, New Delhi from February 6-9, 2014 in which 624 Companies had participated, out of which 368 were foreign companies.

7.78 **International Exhibition Abroad:** With a view to provide an impetus to export potential of Indian Defence Industry, DEO organizes "India Pavilion" in major defence international exhibitions abroad to develop market for defence products being manufactured by them. During the period India participated in Latin America Aero & Defence Exhibition (LAAD-2013), MAKS-2013, International Aviation & Space Salon, Defence & Security Equipment International Exhibition (DSEi-2013), Aerospace Industry Exhibition (ASET) 2013 at Tokyo International Exhibition Centre, Tokyo & Seoul International Aerospace and Defence Exhibition (ADEX) - 2013.

National Institute for Research and Development in Defence Shipbuilding (NIRDESH)

7.79 NIRDESH Institute has been set up at Chaliyam, Kozhikode, Kerala with the objective of achieving self-reliance in Ship building. The Institute has been envisaged as the nerve centre for India's futuristic Ship Building programmes. The thrust areas of NIRDESH would be R&D, ship design, technology development, industry interfacing, training and project management. NIRDESH would have active participation from the MoD, Indian Navy, Indian Coast Guard, DPSU Shipyards, DRDO, leading technical organizations/ Institutes etc. Raksha Mantri heads the Board of Governors of NIRDESH as the

President, with representations from the MoD, Indian, Navy, Coast Guard and CMDs of Public Sector Shipyards as members. The Master Plan of the infrastructure at the site measuring 40.52 acres has been approved by the Board of Governors.

Table No. 7.1

WORKING RESULTS

VALUE OF PRODUCTION AND SALES OF DEFENCE PSUs and OFB

(₹ in crore)

Name of the PSUs	2011-12		2012-13		2013-14 (Provisional)	
	Value of Production	Value of Sales	Value of Production	Value of Sales	Value of Production	Value of Sales
HAL	12693.19	14204.21	14201.82	14324.00	15296.00	15180.00
BEL	5793.58	5703.63	6290.00	6012.00	6140.00	6180.00
BEML	4077.19	3648.37	3359.70	3289.77	3201.32	3254.81
MDL	2523.69	2262.87	2290.64	2404.69	2709.00	112.00
GRSE	1293.80	546.33	1529.37	464.34	1550.83	1550.83
GSL	676.40	269.70	506.62	844.13	512.24	1095.89
BDL	992.94	959.12	1177.00	1074.71	1793.43	1829.86
MIDHANI	496.00	509.01	537.37	558.59	555.04	563.63
HSL	564.04	564.04	483.84	483.84	403.22	403.22
OFB	12390.72	12390.72	11984.00	11984.00	11234.00	11234.00
TOTAL	**41501.55**	**41058.00**	**42360.36**	**41440.07**	**43395.08**	**41404.24**

Table No. 7.2

Profit After Tax

(₹ in crore)

Name of the PSUs	2011-12	2012-13	2013-2014 (Provisional)
HAL	2539.43	2997.00	2735.00
BEL	829.90	890.00	853.00
BEML	57.25	79.87	0.00
MDL	494.31	412.72	332.50
GRSE	108.03	131.54	119.12
GSL	82.80	15.57	-35.63
BDL	234.96	288.40	308.18
MIDHANI	68.45	82.52	72.58
HSL	(-) 85.98	(-)55.17	(-)85.00
TOTAL	**4329.15**	**4842.45**	**4299.75**

8

DEFENCE RESEARCH AND DEVELOPMENT

Initial Operational Clearance for LCA Tejas
A Defining Moment in DRDO and India's History

DRDO has maintained a constant focus on incorporating latest technologies so as to keep systems contemporary and comparable with the best in the world.

BACKGROUND

8.1 Defence Research and Development Organisation (DRDO) is the Research and Development arm of the Ministry of Defence, created with the mandate of providing technological solutions for India's Armed Forces. DRDO was created in 1958 when Technical Development Establishments (TDEs) of the Indian Army and the Directorate of Technical Development and Production (DTDP) were amalgamated with the Defence Science Organisation (DSO). During the eighties DRDO emerged as a system developer when it took up design of India's first Main Battle Tank (MBT) and the Integrated Guided Missile Development Programme (IGMDP). In the nineties, DRDO initiated development of the Light Combat Aircraft (LCA) and Electronic Warfare (EW) systems, while Radar and Sonar development was continued. In the early 2000s, DRDO launched next generation systems and its activities have touched virtually every area of defence requirement from life support systems for soldiers to the sophisticated ballistic missile defence program. DRDO has maintained a constant focus on incorporating latest technologies so as to keep systems contemporary and comparable with the best in the world. All this has been achieved with a committed workforce of approximately 7,600 Scientists supported by about 10,000 technical staff, who have worked tirelessly to overcome the challenges of developing cutting edge technologies and systems.

8.2 DRDO's mandate covers the following broad activities:

- Design and development of products, systems and technologies for India's Armed Forces
- Providing advice to Raksha Mantri on matters of technology with respect to acquisitions and production
- Creating a strong Science and Technology base in the country in coordination with Indian academia

- Building infrastructure as required for projects and programmes

ORGANISATIONAL STRUCTURE

8.3 DRDO is headed by the Scientific Adviser to Raksha Mantri (SA to RM) who is also the Secretary, Department of Defence Research and Development and Director General DRDO (DG DRDO).

8.4 In September 2013, DRDO started implementing the approved recommendations of the Rama Rao Committee. Accordingly, decentralization of DRDO into seven technology clusters was carried out, each headed by an empowered Director General (DG). At present, DG DRDO is assisted by seven DGs (Clusters) and five Chief Controllers R&D (CCs R&D). The seven DGs (Clusters) are: DG Armament & Combat Engineering Systems (ACE), Pune; DG Aeronautical Systems (Aero), Bengaluru; DG Missiles & Strategic Systems (MSS), Hyderabad; DG Naval Systems & Materials (NS & M), Vishakhapatnam; DG Electronics & Communication Systems (ECS), Bengaluru; DG Micro Electronics, Devices & Computational Systems (MED & CoS), Delhi and DG Life Sciences (LS), Delhi.

8.5 Forty Six (46) labs are clustered under the various DGs. Table No. 8.1 gives the labs under each DG (Clusters).

DRDO HEADQUARTERS

8.6 DRDO HQ at New Delhi, which coordinates the overall functioning of the Organisation, is the interface between the Government and the Laboratories. The HQ

Table No. 8.1

Technology Domain Based Clusters with constituent laboratories

SA to RM, Secretary DDR&D and DG DRDO

Armament & Combat Engineering Systems	Aeronautical Systems	Missiles & Strategic Systems	Naval Systems & Materials	Electronics & Communications Systems	Micro Electronic Devices & Computational Systems	Life Sciences
ARDE	ADE	ASL	NMRL	DARE	ANURAG	DEBEL
CFEES	ADRDE	DRDL		DEAL	CAIR	DFRL
DTRL	CABS	ITR	NPOL	DLRL	MTRDC	DIBER
HEMRL	GTRE	RCI	NSTL	IRDE	SAG	DIHAR
PXE		TBRL	DLJ	LASTEC	SSPL	DIPAS
CVRDE		CHESS	DMRL	LRDE	JCB	DIPR
R&DE(E)			DMSRDE			DRDE
SASE						DRL
VRDE						INMAS

consists of Corporate Directorates viz. Budget, Finance & Accounts (BF&A), Extramural Research & Intellectual Property Rights (ER&IPR), Human Resource Development (HRD), Personnel, Planning & Coordination (P&C), Public Interface, Rajbhasha etc. There are also some corporate Directorates which oversee specific functions with partner organizations. These are Directorate of Interaction with Services for Business (DISB), Directorate of Industry Interface & Technology Management and Directorate of International Cooperation.

8.7 As part of re-organisation, some corporate Directorates have been merged and their functions streamlined. IT initiatives will now be handled by P&C, while a separate Directorate has been created to deal with Parliament functioning (Directorate of Parliamentary Affairs, DPA). Three new groups have been created viz. Futuristic Technology Management (FTM) group, Technical Coordination group (TCG) and Simulation & Modeling Centre (SAMC) - each with a specific role to assist/guide labs in specified areas.

8.8 There are five Chief Controllers R&D (CC R&D) to oversee the activities of the Corporate Directorates. They are: CC R&D Production Coordination and Services Interaction (PC & SI); CC R&D Human Resources (HR); CC R&D Technology Management (TM); CC R&D Resources & Management and Implementation (R&M and Imp) and CC R&D Systems Analysis & Modeling (SAM).

HUMAN RESOURCES

8.9 DRDO follows a dynamic system of human resource management. The manpower requirement of all categories for various projects/programmes is reviewed periodically by a Manpower Planning Board (MPB). As on March 31, 2014, DRDO has a total strength of 25,642 employees, out of which 7,574 are in Defence Research and Development Service (DRDS), 9,696 in Defence Research and Technical Cadre (DRTC) and 8,372 are in Admin & Allied Cadre. The Organisation has been observing guidelines for recruitment, promotion and welfare of Scheduled Castes (SC), Scheduled Tribes (ST) & Other Backward Classes (OBC). In DRDO, scientists and engineers are recruited through various induction modes. Talent is also tapped by conducting campus interview in institutes of repute like IITs, NITs, IISc, IIT (BHU), ISM Dhanbad and Central Universities. Direct recruitment through lateral induction is also done in higher grades.

BUDGET

8.10 DRDO works with a financial allocation of approximately 5.5% of the country's defence budget. About 80% of the financial resources are committed to Mission

Mode (MM) and Staff projects, output of which directly goes to the Services.

8.11 The expenditure during the XI Five Year Plan (FYP) Period (2007-2012) has been ₹ 42,322 crore. During the XII FYP period (2012-2017), for financial year 2012-13, Defence (R&D) was allocated a total of ₹ 9,884.94 crore of which ₹ 5,201.93 crore was under Revenue Head and ₹ 4,683.01 crore was under Capital Heads. For the financial year 2013-14, a total of ₹ 10,934.17 crore has been allocated of which ₹ 5,672.57 crore is under Revenue Head and ₹ 5,261.60 crore is under Capital Head.

PROGRAMMES AND PROJECTS

8.12 DRDO projects are classified into four main categories-Mission Mode (MM) based on Services immediate requirements, Technology Demonstration (TD) projects which are DRDO initiatives, S&T projects which address futuristic technologies and Infrastructure (IF) projects for specific customized requirement. In addition, a new category i.e. Product Support (PS) has been added to cater to the need for extending production/ToT support to our production partners.

8.13 As on March 31, 2014, DRDO has 339 ongoing projects costing approximately ₹ 45,554.73 crore. Twenty Six (26) per cent of the this project cost is shared by the User. 223 projects are in the final stage of completion and are under technical/ administrative closure. Out of the 339 active projects, 37 large projects (cost ≥ ₹ 100 crore) account for a total cost of ₹ 38,613.89 crore which is approximately 85% of the total cost of these active projects. In the period January 1, 2013 to March 31, 2014, 52 new projects were sanctioned at a total cost of ₹ 1,651.59 crore. Besides, 13 projects costing ₹ 134.08 crore were completed/ closed in 2013-2014.

8.14 There are currently 12 major programmes approved by the Government amounting to ₹ 32,019 crore. Out of these, four projects are related to design and development of *Missiles:* Long Range Surface-to-Air Missiles (LRSAM), Medium Range Surface-to-Air Missiles (MRSAM), Beyond Visual Range Air-to-Air Missile (BVRAAM) 'Astra' and PJ-10 (BrahMos). The flagship projects in the field of *Aeronautics* are: Light Combat Aircraft (LCA) Ph 2, LCA AF Mk-II, LCA Navy Ph 1, LCA Navy Mk-II, Air-borne Early Warning & Control (AEW&C), Kaveri Engine, Unmanned Aerial Vehicle (UAV) 'Rustom-II', and Electronic Warfare Suite for Fighter Aircraft (EWSFA).

8.15 Brief description of achievements in some of the DRDO projects is mentioned hereafter:

Agni-5

Agni-5 (A5): India's Intercontinental surface-to-surface ballistic missile A5, capable of delivering required warheads with high precision was successfully tested on 15 September 2013 in a repeat of the maiden launch last year. The missile, powered by three stage solid rocket motors had a flawless launch in auto launch mode and followed its entire trajectory in textbook manner. All the systems and sub-systems of the missile system performed well. This second launch of A5 was conducted to prove the consistency of performance of all sub-systems from open rail mobile launcher. Following this success, the first Missile Ejection Test was successfully conducted from full scale canister which proved cold launch capability from actual Road Mobile Launcher (RML). The test met all mission requirements. Agni-1, Agni-2 and Agni-3 are already in the arsenal of the Armed Forces, giving them a reach of over 3000 km, and India an effective deterrence capability.

Agni-4 (A4): Agni 4, India's 4000 km range missile was successfully launched from the wheeler island on January 20, 2014. A4 is equipped with state-of-the-art avionics, fifth generation onboard computer and distributed architecture. This was the third successive trial and the last one in the series of development launches. The missile is now ready for induction and its serial production will begin shortly.

Agni 4, India's 4000 km range missile was successfully launched from the wheeler island on January 20, 2014. This was the third successive trial and the last one in the series of development launches. The missile is now ready for induction and its serial production will begin shortly.

Programme AD: Interceptor missiles are being developed by DRDO as a strategic weapon against ballistic missile attacks. Programme AD conducted six endo-atmospheric interceptor

Programme AD

trials and two exo-atmospheric interceptor flight trials successfully. The interceptors and C4I systems developed have undergone real-time evaluation during the flight trials. The deliverable configuration of the interceptor missiles are under development. Prithvi Defence Vehicle (PDV) booster qualification test has been completed and a booster is ready for PDV flight. All major sub-systems of the vehicle have been qualified, integrated and are ready for flight test.

Surface-to-Surface Missile 'PRAHAR': As a spin off from the AD programme, a Surface to Surface Missile (SSM) was flight tested. The users have shown their willingness to induct this missile after flight trial evaluations. Flight trials along with users are planned in the near future.

Supersonic Cruise Missile BrahMos: This is a universal missile capable of being launched from multiple platforms based on land, sea, sub-sea and air against both sea and land targets. BrahMos has a range of 290 km with a speed of more than 2.8 Mach. Different versions of BrahMos missiles have been deployed on naval warships and mobile complexes for the Navy and the Army. The weapon systems have already been installed on four ships and are progressively being installed on six more ships. Indian Army has carried out regular practice firing for operationalising the second regiment.

Akash Missile System (AMS): Akash, a medium range (25 km) Surface-to-Air Missile (SAM) system developed by DRDO is under production and is being inducted into IAF and Indian Army. DRDO is engaged in giving support to the production agencies BEL (for IAF) and BDL (for Indian Army). Two squadrons of Akash Missile System (AMS) have been delivered and inducted in IAF. The system is fully operational and

Akash, a medium range (25 km) Surface-to-Air Missile (SAM) system developed by DRDO is under production and is being inducted into IAF and Indian Army.

Astra

being used by IAF in different internal exercises. The performance and functionality of AMS under intense Electronic Warfare (EW) environment has also been verified in trials. Deliverable version mobile telemetry system has been successfully realised for the first time. All these equipments have undergone rigorous quality checks and successfully completed road mobility trials. Weapon system integration trials of 'Akash' Army AMS were also conducted through helicopters sorties and the system is ready for firing trials. These equipments will be delivered to the Indian Army after validation flight trials.

Beyond Visual Range Air-to-Air Missile 'Astra': Astra is a Beyond Visual Range Air-to-Air Missile (BVRAAM) being developed to engage and destroy supersonic aerial targets. This weapon system is intended for platforms like Su-30 MKI, Mirage 2000 of the Indian Air Force (IAF) and Light Combat Aircrafts (LCAs) developed by DRDO. Successful completion of Captive Flight Trials (CFT-II) in April-May, 2013 proved the avionics interfacing of Astra with Su-30 MKI. A total of 17 sorties with the missile using 2 Su-30 MKI aircraft were conducted up to January 31, 2014. A total of 20 successful simulated launches were carried out to evaluate various technologies and Radar accuracies. A new Astra launcher has been designed and developed to suit blast-tube configuration of Astra for use on Su-30 MKI aircraft. Two Astra metric missiles for CFT-III trials were realised, along with airworthy On-Board-Computer (OBC), Power Supply & Regulation Unit (PSRU) and data link receiver. Mk-II propulsion system is under development. The project is on course for first air launch trials of missiles in April, 2014.

Long Range Surface-to-Air Missile (LRSAM): LRSAM is a joint development programme of DRDO, Indian Navy and Israel Aerospace Industries (IAI), Israel. It has a range of 70 km using dual-pulse rocket motor and active Radar seeker in terminal phase and inertial/ mid-course update for guidance. The weapon system would provide a point and area defence for three ships of Indian Navy against a vast variety of aerial threats. Weapon control system, Radar and vertical

launch unit have been delivered for two ships. Installation on board the first ship has been completed. Home-On-Target (HOT) flight tests were conducted during August 2013.

LCA Tejas is India's first indigenous multi-role fighter aircraft designed and developed to meet requirements of the IAF. Initial Operational Clearance (IOC II) for the aircraft was achieved on December 20 which is a major milestone in DRDO history.

Medium Range Surface-to-Air Missile (MRSAM): Medium Range Surface-to-Air Missile (MRSAM) is one of the major mission mode programmes taken up by DRDO as a joint development programme with IAI, Israel. Design of various sub-systems and major elements has been completed.

HELINA: HELINA is a 7 plus km third generation Anti-Tank Guided Missile (ATGM) for Advanced Light Helicopter (ALH). Critical sub-systems have been realised for the missile system and flight performance has been evaluated through ground flight trials. The autonomous ballistic test has also been conducted from ALH. The land-to-land preliminary trials of HELINA were carried out in September 2013. Helicopter trials of HELINA Fire Control System (FCS) were conducted in December 2013. Propulsion systems have also been tested for HELINA. Flight trials with the reconfigured missile system were conducted which proved the redesigned propulsion, aerodynamic and control performances. The repeat control performance and Lock On Before Launch (LOBL) guided performance at 7 km have been established. HELINA separation flight trials from ALH both from outboard and inboard stations have been successfully conducted ensuring suitability of the modified Propulsion Configuration for Helicopter Launch.

New Generation Anti-Radiation Missile (NGARM): A project has been initiated for development of an air launched missile designed for destroying a variety of radar targets on ground. It is planned to have an interception range of 15-100 km from launch altitudes of 100 m to 15 km from Su-30 MKI aircraft. Preliminary Design Review (PDR) of sub-systems and mission review have been completed. Hardware fabrication including rocket motor fabrication is in progress.

Light Combat Aircraft (LCA), **Tejas:** The LCA Tejas is India's first indigenous multi-role fighter aircraft designed and developed to meet requirements of the IAF. Initial Operational Clearance (IOC II) for the aircraft was achieved on December 20 which is a major milestone in DRDO history. Tejas attained another milestone on December 27, 2013, by flying the 500th

sortie in the year 2013, the height achieved in a calendar year so far.

The last of the Limited Series Production aircraft i.e. LSP 8, took its maiden flight on March 31, 2013. A total of 2519 flight tests have been completed on LCA by March 31, 2014. Envelope expansion and weapon release tests have also been successfully carried out. 25 lbs practice bombs and 1000 lbs bombs were released in different modes of delivery, thus completing IOC requirements. Tejas participated in Iron Fist-2013 at Pokhran, comprehensively demonstrating swing role capability i.e. Laser Guided Bomb (LGB) firing followed by R73E missile firing in the same mission. Three Tejas aircraft participated in Aero India 2013 with commendable success.

LCA Navy: Testing of LCA Naval Prototype (NPI) was resumed from October 2013. LCA NP2 is under system integration. The Shore Based Test Facility (SBTF) meant for testing of LCA Navy is nearing completion.

AEW&C Programme: The indigenous Airborne Early Warning and Control (AEW&C) system programme encompasses design and development of a number of systems viz. long range surveillance electronically scanned array radar for detection and tracking of targets, secondary surveillance radar for identification of friend and foe, LOS & SATCOM Data link and systems for

AEW&C System

signal intelligence. These systems developed by various labs of DRDO have been ground tested, flight qualified and integrated on the AEW&C aircraft which has been modified specifically for the purpose. The mission system was functionally interfaced with the aircraft and all the systems were tested. More than 100 sorties using two aircrafts have been completed. The project is on course and system verification and validation trials are progressing satisfactorily.

Medium Altitude Long Endurance UAV Rustom-II: Rustom-II is being designed to operate at 30000 ft altitude with an endurance of 24 hrs carrying Electronic Warfare, Electro-Optic and Synthetic Aperture Radar (EO & SAR) payloads. It can carry a variety of other payloads weighing up to 350 kg. Ground Control Station (GCS) and other sub-systems are also being developed. Rustom-II is a platform designed to perform intelligence, surveillance and reconnaissance missions for Army, Navy and IAF. Its mission requirements are to

MALE UAV Rustom-II

provide continuous wide area coverage and yet be able to identify small targets. The first airframe is under system integration. Engine integration has been completed and the ground runs were held in November 2013. Rustom Flight Control Computer (RFCC) software has been coded and landing gear is being integrated. Low speed taxi trials were conducted in March 2014 and the first flight is slated for July 2014.

Abhyas: High-Speed Expendable Aerial Target (HEAT) offers a low cost, realistic threat scenario for practice of weapon systems. HEAT – ABHYAS is an expendable high speed unmanned aerial target, being developed by DRDO. The first experimental flight successfully demonstrated the launch and configuration capabilities. With an endurance of 25-30 min, Abhyas will be fitted with sensors and is GPS-enabled. It will have onboard actuators, a flight control computer and a miss-distance indicator. All the three services have indicated their requirement for Maneuverable Expendable Aerial Target (MEAT). Simulation has been completed by integrating engine, actuators and GCS to autopilot and performing a real time mission analysis. All Line Replaceable Units (LRUs) have been integrated. CG, MI and booster thrust alignment has also been carried out. Two targets are ready for launch in the closed loop, of which flight test of one target was completed in October 2013.

Aerostats: Following the successful demonstration of Akashdeep, a new aerostat system, Nakshatra is being developed to track a 450 km radius that is approximately four times the present 110 km radius surveillance track of Akashdeep. The surveillance system which is 17,000 cubic metres volume can rise up to 4.5 km with a payload capacity of IT.

Main Battle Tank 'ARJUN': The development and production of ARJUN MBT Mk-II was planned in continuation of Mk-I, incorporating a number of upgraded features and system improvements. Improvements have been carried out on Chassis and Automotive System, Advanced Running Gear System and Turret Weapon System. Some of these have been integrated on Arjun MBT Mk-II prototype and trial validated by Users. First phase of Missile firing trials has been completed.

MBT Arjun

Catapult Gun System: DRDO has been entrusted by the Artillery Directorate of the Indian Army with the responsibility of developing a 130 mm Catapult Gun System on Arjun Mk-I Chassis. Milestones achieved by DRDO in this direction include modification of Arjun MBT tank based on the feasibility study and trial evaluation, developmental trials evaluation after improvements in Mk-II.

Multi Barrel Rocket Launcher (MBRL) System – PINAKA Mk-II: Pinaka weapon system developed by DRDO is an all weather, indirect fire free flight artillery rocket system, capable of neutralizing a variety of area targets. Production for two regiments is ongoing at different agencies namely Ammunition at Ordnance Factories; Loader and Replenishment Vehicle at M/s BEML, Bengaluru; and Launcher and Battery Command Post at M/s Tata Power and M/s L&T. Production of launchers and other ground support systems of first two regiments have been completed. To enhance the range of the existing Pinaka rockets from 39 km to 60 km, development of Pinaka Mk-II rocket has been taken up. Structural and ground resonance test and lining of motor tubes have been completed. Static trials have been conducted for batch proof of cast motors. Three numbers of stabilizer assembly have qualified for integration. Seven numbers of flight hardware were prepared for conduct of 3rd dynamic trial which were held in November 2013.

Catapult Gun System

Advanced Towed Artillery Gun System (ATAGS): DRDO has taken up the task of design and development of 155m/52 Cal Advanced Towed Artillery Gun System for Indian Army. The sub-system level design, documentation and review of the gun structure, automation and control system have been completed. Predictive ballistic solutions have been worked out, design and review of all components of ordinance and recoil system has been completed.

Manufacturing contract for gun barrel has been placed.

DRDO has undertaken a project to design and develop a tele-operated and autonomous unmanned tracked vehicle for NBC Recee, mine detection and surveillance payloads.

Unmanned Ground Vehicles: DRDO has undertaken a project to design and develop a tele-operated and autonomous unmanned tracked vehicle for NBC Recee, mine detection and surveillance payloads. Technologies used in this project are vehicle dynamics, power management, mission payload, manipulator, path planning, localisation, drive by wire, perception, Human Machine Mechanical Interface/ Operator Console Unit (HMMI/OCU). The vehicle has demonstrated teleoperation of tracked BMP for 5 km range. Drive-by-wire capability for operating MUNTRA-S at a maximum speed of 20 kmph has also been demonstrated. Unmanned operation of surveillance payload mission has been done. NBC sensors have been modified for remote operation and NBC payload integration has been completed. Development of real time mine detection algorithm using Ground Penetrating Radar (GPR) sensor, autonomous navigation module have been developed and tested.

46m Military Load Class (MLC) 70 Modular Bridge: The aim of the project is to develop a 46m MLC-70 modular bridge to be laid in single span for gaps varying from 14 m to 46 m. 46m MLC-70 modular bridge will be based on high mobility in-service vehicles. Till date, one prototype has been realised. User Assisted Technical Trial (UATT) and live load test with MBT Arjun has also been carried out. One more prototype of the system is under realisation to enhance performance.

Flight Rotary Engine (FRE): Flight Rotary Engine (for UAV) development has been undertaken with an aim to develop/ manufacture 15 rotary engines for flight trials on Nishant UAV. The following are the achievements of project: First two engines i.e. FRE-1 and FRE-2 have completed endurance testing of more than 150 hrs. Two flight trials (total 05 hours) were carried out after provisional flight clearance from CEMILAC. Improvements in performance were carried out in FRE-1 and FRE-2. Ground testing of FRE-3 and FRE-4 engines was also carried out and all manufacturing and testing documents have been handed over to CEMILAC for acceptance. 55 hp Wankle type engine is being indigenously designed and developed in the country for the first time.

Advance Torpedo Defence System 'MAAREECH': The Advance Torpedo Defence System consists of towed array,

towed decoy, hull mounted sonar interface, expendable decoy, winch and decoy launcher. The system is capable of detecting, tracking, seducing, confusing and decoying incoming modern and vintage torpedoes. Two production grade systems have been made fully operational onboard two naval ships.

Ship Launched Heavy Weight Torpedo 'VARUNASTRA": The ship launched anti submarine heavy weight electrical torpedo has made significant progress. The project has completed its development cycle and all technical trials have been conducted successfully including four user associated trials. Several User Evaluation Trials (UETs) were conducted in 2013-14 and all the dynamic parameters were proven.

Ship Launched Heavy Weight Torpedo (VARUNASTRA)

Advanced Light Weight Torpedo (ALWT): ALWT is a project undertaken by DRDO for both ship and air borne applications. Launch platforms for ALWT are rotary and fixed wing aircraft. Six dynamic trials were completed during the year. Preliminary static trials of Homing system have been completed. Vehicle stabilisation trials are in progress and development of 120 kW battery has been successfully tested. All components required for practice torpedo configuration are ready. Practice torpedo has been integrated with 60 kW motor and 70 kW batteries.

Air Independent Propulsion (AIP): This is a land based prototype for fuel cell Air Independent Propulsion (AIP) for submarines. The activities related to Pre Production Floor Model (PPFM) hardware system, control system for PPFM and 300 kW simulated load facility to test PPFM have been completed this year. Hydrogen generation prototype has also been integrated and tested.

ALTAS: The advanced Light Towed Array Sonar (ALTAS) is an efficient sensing system for detection and classification of submarines. The trials to verify the performance of receiver system was conducted onboard INS Sharda in November 2013. The system development and lab integration was completed in January 2014.

USHUS Submarine Sonar Simulator: The aim of the project is to develop and supply two USHUS Sonar Simulators for submarine schools to facilitate training of USHUS sonar operators for ensuring

optimum and effective exploitation of sonar in all its operating modes and regimes. USHUS Sonar Simulator (Phase-I) has been installed and handed over for training at INS Satavahana; Eastern Naval Command Vizag and INS Vajrabahu, Western Naval Command, Mumbai. Phase-II has been developed and installed at Eastern and Western Naval Commands in 2013.

MOHINI: DRDO has taken up a Technology Demonstration (TD) project 'MOHINI' which includes development of a mobile decoy, rocket launched decoy, submarine fired decoy, integrated ship launcher for launching mobile decoy and rocket launched decoy and system evaluation software for escape tactics simulator studies.

Electronic Support Measures (ESM) System VARUNA: This is a Modern ESM System capable of interception, detection, classification and identification of pulsed, CW, PRF Agile, Frequency Agile Radars including LPI Radars over wide frequency bands. The engineered model has been installed onboard a naval platform and is under rigorous user trials after its successful sea acceptance. The system has been awarded "Best EW Proficiency" award during Fleet Evening 2013. Production order by Indian Navy for 18 VARUNA is in process.

SAMUDRIKA: DRDO has undertaken indigenous development of a family of seven EW systems customised for different platforms as per Naval Staff Qualitative Requirements (NSQR). Navy has given commitment for further production and induction of these systems. PDR for all the seven systems has been completed. System installation feasibility studies and RF mapping on identified platforms have been carried out. Configurations of all systems have been finalised and sub-systems development is in progress.

GIRISHAKTI: Indian Army is in the process of procurement of integrated EW system for mountainous terrain (HIMSHAKTI) under the category "Buy Indian (BEL) with DRDO Technologies". Development of Target Tracking System for Jammer Interceptor Mobile (JIM) station has been completed. Core system technology modules incorporating homodyne Rx, Quad Superhet Rx, Digital Rx in Radar segment have been integrated.

KAUTILYA for Space Borne ELINT System: Programme KAUTILYA involves development of Electronic Intelligence (ELINT) payload for integration on an indigenous mini Satellite. Preliminary Design Review (PDR) and Detailed Design Review for ELINT payload have been completed. Baseline Design Review with ISRO has also been completed. System feasibility study has been completed and system configuration has been finalised. Hardware development is in progress.

HIMRAJ: The role of the system is to intercept, monitor, analyse and locate adversary's Radar transmission in 70 MHz to 40 GHz band. DRDO is responsible for the system design, development of critical sub-system, and realisation of a truncated reference version of the engineered system for Ground Base Mobile ELINT System (GBMES), which are being pursued towards production at BEL. The entire system configuration has been finalized and realisation of engineered system is in progress.

EW Suite: Advanced EW suite for LCA is under development as a joint development programme between DRDO and MoD, Israel. The system has been installed in Tejas PV1 aircraft and Ground Acceptance Test (GAT) has been completed.

Internal EW System for MiG-29 Aircraft: DRDO has developed a state-of-the-art Unified Electronic Warfare System (UEWS) for MiG-29. This system provides all round azimuth coverage and high accuracy directional capability for both reception and jamming.

EW Suite on MLH – Mi-17: EW Self Protection Suite, developed and integrated on Mi-17 helicopter is an integrated Radar Warning Receiver (RWR) and Missile Approach Warning System (MAWS) with BDL-CMDS. The systems were individually flight evaluated for verification of their respective functional parameters and also evaluated in the integrated mode. After trials the system has been recommended for the entire fleet of Mi-17 helicopters.

Medium Power Radar (MPR) 'Arudhra': Prototype Radar has been developed and demonstrated to the User i.e. IAF at Kasauli.

MPR Arudhra

Active Electronically Scanned Array Radar (AESAR) 'UTTAM': DRDO has taken up the development of flight control RADAR for Fighter Aircraft with 100 km range and multimode operation. Realisation and calibration of prototype Active Aperture Array Antenna Unit (AAAU) has been completed with indigenous TR modules. Airworthy Radar processor and exciter - receiver have been realised and tested on a high rise platform in Mechanical Scanned Array configuration

DRDO has taken up the development of flight control RADAR for Fighter Aircraft with 100 km range and multimode operation.

(MSA) for validation of various algorithms and waveforms of the fire control radar. Software development for Air-Air sub modes has been carried out.

Commander's Non Panoramic TI Sight: Transfer of Technology (ToT) for production of Thermal Imaging (TI) based Commander Sights for combat vehicles to OFB and BEL has been cleared for Commander TI Mk II sights for T-72, T-90 and BMP-II.

Electro-Optical Fire Control System: Six numbers of Electro-Optical Fire Control System (EON-51) have been realised and delivered to Navy.

Light Weight Portable Laser Target Designator: DRDO developed Light Weight Portable Laser Target Designator (LWPLTD) for IAF was found to be compliant with ASR and recommended for induction into Service with M/s BEL being production agency.

Vehicle Mounted High Power Laser Directed Energy System 'ADITYA': The system aims to cause structural damage to RPVs/UAVs/DRONEs and disable electro-optical systems, employing CO_2 gas dynamic laser source with required beam control technologies.

Software Defined Radio (SDR): The objective of the project is development of network enabled, interoperable and modular Software Defined Radio (SDR) to provide wireless secure communication capability to both mobile and static forces required for Indian Navy. Three SDR-NC prototypes (2 V/UHF channels) and three SDR-TAC functional prototypes (2 V/UHF channels) with necessary Software Communication Architecture (SCA) operating environment and radio management functionality have been developed. Developer Sea Trials of SDR-NC and SDR-TAC in AM, FM, Link-II and secure Low Data Rate (64 Kbps) waveform have been carried out. Two SDR-AR prototype hardware modules and chassis have been realised. Porting of AM and FM waveform has been completed and CEMILAC verification carried out for flight testing. Two man-pack SDR chassis along-with baseband and RF modules and two handheld SDR chassis along-with baseband modules have been realised. Three SDR-TAC radios were integrated with UHF Mobile Ad-hoc Network (MANET) waveform and IP gateway have been tested for IP based applications on workbench.

S-band Hub & Ground SATCOM Terminals: The project includes design and development of four types of Secure MSS Terminals (along with accessories) namely, Handheld Satcom Terminals (HST), Man-pack Satcom Terminals (MST), SATCOM Messaging Terminals (SMT) and SOTM Terminals (ST). It also includes augmentation of the existing experimental HUB with necessary RF and scalable baseband hardware and software for efficient networking of user terminals.

Design for all four configurations has been completed while development of software modules and hardware realisation is under progress.

Development of Application Software and Security solutions for Maritime Domain Awareness (MDA) and Maritime Operational Knowledge System (MOKS): Application software and security solutions for maritime situational awareness have been developed. The application software was deployed and has been operationalised. Security solution for communication was designed and developed in house and transferred to the Production Agency. Deployment of these systems across Navy was tested and evaluated in major naval exercises and the application software performed satisfactorily both at sea and inshore establishments.

***Technologies for TacC3I Integration*:** Technologies and solutions that can be used for integration of various TacC3I systems aimed at providing "Force Multiplier" effect to Battlefield Commanders, have been developed. These technologies were demonstrated during an Op Exercise and has been appreciated by Indian Army. The ToT for production has been completed.

Technologies for Cyber Security Solutions: A number of technologies were developed for providing security solutions to meet various requirements of Users. A large number of systems developed and assessed in line with Government norms have been deployed in tactical and strategic environments.

Single Crystal Blades and Vanes for Aero-Engine applications: DRDO has developed single crystal casting process for high pressure turbine blades (HPTB) and high pressure turbine vanes (HPTV) with intricate cooling channels for use in advanced aero-engines.

Improved Kanchan Armour: DRDO has designed and developed improved Kanchan Armour for MBT Arjun Mk-II for enhanced protection against large calibre kinetic energy ammunition. The new armour uses advanced materials and new designs without any increase in weight. Armour modules replicating Mk-I and Mk-II designs have been fabricated and user trials have been carried out on these modules

Titanium sponge: The 500 tons per year commercial titanium sponge plant jointly set up by DRDO, VSSC and M/s Kerala Minerals & Metals Limited (KMML), Chavara, Kollam, Kerala has been regularly producing titanium sponge in 3.5 MT batches. The first lot of finished titanium sponge of aerospace purity was supplied to Midhani, Hyderabad during May 2013. Subsequently another lot of aerospace grade titanium sponge has been supplied to VSSC.

Life extension of AI20D Aero-engine: IAF in collaboration with DRDO and RCMA

(Engines), Koraput has undertaken the task of establishing a systematic methodology for lifing review of aero-engines of AN-32 aircraft. The revision of Total Technical Life (TTL) would generate additional 300,000 h of flying time.

Flame Retardant Aircrew Survival Jacket: A total of 2700 Flame Retardant Aircrew Survival Jacket (FRASJ) which is worn as the outermost garment over normal flying overall has been inducted into the IAF.

Flame Retardant Anti G Suit: Anti G Suit is a counter pressure garment worn over the abdominal and lower limb portions of the body by fighter pilots. These suits have been accepted for high performance aircraft and are being inducted into IAF.

Flame Retardant Gloves: The flame retardant dual material gloves incorporate inherently FR meta aramid fabric on the dorsal side and on the palm side which provides flame retardancy and better resistance to wear and tear. The gloves have been developed in two versions and 10550 pairs have been inducted into IAF.

Activated Carbon Spheres (ACS) coated CBRN Suit (Mk V): DRDO has developed advanced version of CBRN suit for effective protection of personnel in NBC scenario. The ACS process technology has been transferred to industry for bulk production and for developing indigenous suit so as to meet the requirement of 6.5 lakh suits required by Users.

CBRN Suit (Mk V)

Nuclear Biological and Chemical (NBC) Defence Programme: This comprises of 12 Mission mode projects and 24 Science and Technology Projects with participation from 10 DRDO labs and has a strong interface with academia and industries. Products and technologies have been developed to sense, shield and sustain military operations in NBC environment. The entire NBC inventory of the Services is almost indigenous with a large number of products developed or at various stages of User trials. Some of the significant products and technologies of this programme are NBC recce vehicle, mobile decontamination system, integrated field shelter, NBC suit, hazard prediction software, evacuation bag, portable gas chromatograph, automatic chemical agent detection,

NBC Reconnaissance Vehicle

NBC Decontamination System

individual protection equipment, antidotes, bio sensor etc. A few achievements in NBC programme during 2013 include – readiness of prototype of Inflatable NBC shelter, UATT of Multipurpose Decontamination System and Advanced Fitment Tester at CME Pune, readiness of Evacuation bag for UATT and integration of SAW E-nose.

Normobaric Hypoxia Chamber: Modern military operations frequently require rapid deployment of personnel into high altitude with little or no time for physiological acclimatization. Normobaric Hypoxia Chamber has been developed to provide Intermittent Hypoxic Exposure (IHE) as one of the recent approaches to accelerate altitude acclimatization.

Air Traffic Controller Cognitive and Non-cognitive Assessment System: Based on the demand of IAF, the project to develop an Air Traffic Controller Cognitive Assessment System based on Cognitive Aptitudes was initiated. Cognitive Task Analysis to identify the cognitive processes involved in Air Traffic Controlling was carried out among 96 Senior Air Traffic Controllers. The tests were validated for prediction of training performance as well as Categorization Board outcome. This Cognitive Assessment System is presently installed at Air Force Academy, Hyderabad.

8.16 TECHNOLOGY INITIATIVES

In addition to its ongoing Mission Mode project activities, DRDO has also initiated a number of technology development programmes, aimed at addressing future needs of combat systems. These include:

- Establishment of CHESS, Centre for High Energy Systems & Sciences- which will work on the development of high power Laser and High Power Microwave systems for Directed Energy Weapons (DEW) applications.

- Launch of the National Engine Mission for development of high power IC engines for MBTs and allied platforms.
- Establishment of Research & Innovation Centre (RIC) at IIT, Madras Research Park- a new model of DRDO-Academia-Industry collaboration which enables DRDO Scientists posted at RIC to work with IIT faculty in coordination with co-located industries.

8.17 Corporate Initiatives

Services Interaction: DRDO has instituted a system of continuous interaction with the Services with the aim of increasing the quantum of indigenous systems in the Services armoury. Towards this end, perseverant efforts have led to DAC approvals for induction of a number of systems including Day-Night Sights, Integrated Fire Detection and Suppression System (IFDSS) for T-72 tanks, E/F band Air cum Surface Surveillance Radar Revathi and EW System Shakti etc. DAC approval for development of 3rd Gen Anti Tank Guided Missile (ATGM) by DRDO for meeting the future requirement of Army has also been accorded. A number of products have been re-categorised as Make by DRDO or Buy (Indian) based on DRDO technology. Quarterly interaction meetings are being organized with the Services and all efforts are being explored for addressing issues in indigenous developments in relation to requirement of the services. The cumulative value of DRDO Products approved for production has reached approximately 1.6 lakh crore Services LTIPP has been analysed and discussed with the various DRDO clusters and Users to work out a comprehensive list of projects which will be taken up by DRDO for meeting User requirements.

Industry Interface: For commercialization of DRDO developed non-security sensitive technologies in India and foreign countries, DRDO has initiated 'Accelerated Technology Assessment & Commercialization (ATAC)' programme through which 12 licensing agreements for ToT have been signed. For the first time in the history, a DRDO developed technology Explosive Detection Kit (EDK) was transferred from India to M/s Crowe & Co., USA through the DRDO-FICCI-ATAC program.

International Exhibitions: DRDO participated in many international exhibitions viz. Latin American Aerospace & Defence (LAAD-2013), Brazil; Defence & Security Equipment International Exhibition (DSeI-2013), London, UK; Bahrain International Air Show 2014, Bahrain and DefExpo 2014, New Delhi. At the Seoul International Aerospace & Defence Exhibition (ADEX-2013), Korea, India displayed its latest state-of-the-art weapon systems, platforms, sensors, communication systems etc. designed and developed by DRDO.

International Cooperation: One of the objectives of DRDO is to evolve partnership with the best defence technology available worldwide. DRDO is engaged in International Cooperation in the areas of Defence Research, Technology Acquisition and Consultancy, to enhance technological strength in key areas and resolve issues related to export regulation. At the same time, new avenues of cooperation are being explored with friendly countries with a technology edge and strong industrial base. In 2013, DRDO has held bilateral meetings with Russia, Israel, USA, Belarus, Czech Republic, UK, Singapore, South Korea, Canada, Kyrgyzstan, Kazakhstan, Sweden, Hungary, Bulgaria, Ukraine, France, Germany, Italy, Poland and Brazil. A MoU was signed with Hungary in October 2013 for collaborative research in the field of 'Defence Aspects of Microbiological and Radiological Detection and Protection'. MoU on CBRN Security Co-operation has also been signed with UK Home Office in February 2013.

Extramural Research (ER): Twenty three S&T thrust areas have been identified for extramural research to help maintain the country's pre-eminence over its adversaries. Technologies developed form the backbone of various long and short term DRDO projects and programmes. The first ER compendium, which illustrates the outcome of 136 projects completed during 2008-2011, was released by SA to RM. During the period January 2013 to March 2014, 62 new projects costing ₹ 26.5 crore were sanctioned. These projects are in the field of photonics, advanced high energy material, network security, biological sciences, sensor networks, mathematical modeling and simulation. There are over 466 ongoing projects at various universities, IITs, NITs, colleges, R&D Institutions and CSIR labs. Over 397 conferences/workshops in various fields of importance and relevance to DRDO were sponsored. Eleven Directed Research projects, costing more than ₹ 14 crore were sanctioned to Research and Innovation Centre (RIC), IIT Madras Research Park, Chennai. A Memorandum of Co-operation (MoC) was signed between RIC, ER&IPR and IIT Madras for conduct of the projects.

Intellectual Property Rights: In pursuance of providing legal protection to innovations of DRDO, 203 IPR applications (including 4 in foreign countries) were processed for filing on products/processes encompassing the fields of electronics, instrumentation, materials, bio-medical sciences, food technology etc. During the period January 1, 2013 to March 31, 2014, 32 patents (including 13 in foreign countries) were granted. In addition, nine copyrights and three designs were registered in India. In an effort to promote IPR awareness among DRDO scientists, five IPR awareness

programmes/workshops/ patent clinics were held during the period in different laboratories.

8.18 **Awards**

Padma Awards: National recognition of DRDO's achievements was highlighted when DRDO struck rich in the annual Padma awards this year. Former DRDO chief Dr. Vijay Kumar Saraswat and BrahMos CEO Dr. A Sivathanu Pillai were awarded the 'Padma Bhushan', while Shri Avinash Chander, present Scientific Advisor to Raksha Mantri was honoured with Padma Shri. All the three scientists have been engaged in the development of missile systems, both strategic and tactical.

Former DRDO chief Dr. Vijay Kumar Saraswat and BrahMos CEO Dr. A Sivathanu Pillai were awarded the 'Padma Bhushan', while Shri Avinash Chander, present Scientific Advisor to Raksha Mantri was honoured with Padma Shri.

Aryabhatta Award: Dr. Vijay Kumar Saraswat received the prestigious Aryabhatta Award by the Astronautical Society of India. The award was conferred on him for his lifetime contributions to missiles and aerospace technologies and also in recognition of his pioneering contributions towards the growth of Astronautics in the country.

ASI Rocketry Award: DRDO Scientist G. Satheesh Reddy, Director RCI Imarat received the prestigious ASI Rocketry and related technologies award.

DRDO Awards: DRDO awards for the year 2012 for outstanding contribution in various areas of technology were given by the Raksha Mantri. The awards were given in 14 distinct categories to honour 43 individual scientists/ teams of DRDO and partners of DRDO from other sectors for their outstanding contributions in furthering DRDO's efforts in achieving self-reliance.

DRDO Life Time Achievement Award: Dr. Eswara Bhagiratharao received the award for his distinguished contributions in the areas of electronics, communication and electronic warfare systems.

Technology Leadership Awards: Shri SS Sundaram, DS & CC R&D (ECS); Dr KD Nayak, DS & CC R&D (MED & CoS) and Dr VG Sekaran, DS & Director (ASL) received the award for their outstanding contributions in their respective fields and for providing outstanding leadership to various scientific teams.

DRDO Award for Performance Excellence: The award was received by Dr. VG Sekaran and his team for his excellent contributions in Agni 5. The other recipient was Shri Anil M Datar, OS & Director (ARDE) and his team for Pinaka Multi Barrel Rocket Launching System.

DRDO Awards for Path Breaking Research and Outstanding Technology: This award was given to Dr. S Christopher, DS & Director (CABS) and his team for their significant contributions associated with the AEW&C systems. The other recipient was Dr. Dev Raj Saroha, Scientist G, TBRL and his team for his outstanding contribution towards explosively formed projectile (EFP) technology for design of multi-EFP warhead.

Defence Technology Spin-Off Award: The Defence Technology Spin-Off Award went to Snow & Avalanche Study Establishment (SASE), Chandigarh for developing technology for avalanche control structures to mitigate the avalanche threat on NH1A Banihal Tunnel, J&K.

Academy Excellence Awards: Prof. Tapan Kumar Ghoshal, Professor Electrical Engineering, Jadavpur University, Kolkata and Prof. Rajaram Nagappa, National Institute of Advanced Studies, Bengaluru were awarded for their outstanding contributions in DRDO related developments.

Defence Technology Absorption Award: The award was given to M/s Thermax, Pune for successfully absorbing Phosphoric acid fuel cell stack production technology developed by NMRL and M/s Keltron Controls, Aroor, Kerala for developing flexible towed sensor arrays by absorption of requisite technology from NPOL.

In addition to the above, there were 15 Scientist of the Year awards, 7 Agni Awards for Excellence in Self-Reliance and three awards for best Corporate services.

8.19 **Right to Information (RTI):** The RTI Act, 2005 has been implemented in DRDO and is working effectively throughout the laboratories/establishments. RTI Cell at DRDO HQ has installed software (RTI APP System) to monitor all activities. RTI Cell has implemented RTI policies for the Organisation and trained CPIOs/CAPIOs of all the labs throughout the country by organizing zone-wise training programmes. A booklet as guidelines for CPIO has also been published and distributed as ready reference in the form of Standard Operating Procedure.

8.20 **Rajbhasha Initiatives:** The Organization diligently works to increase the use of Rajbhasha in day-to-day activities. DRDO allocates funds to laboratories for the promotion of Rajbhasha. Most of the DRDO laboratories publish in-house journal in Hindi and celebrate Rajbhasha Pakhwada. As on March 31, 2014, 119 Rajbhasha workshops have been organized and 44 Rajbhasha house journals published by DRDO laboratories. Five orientation programmes have been organized for Hindi officers/Sr. Hindi Asstt./Hindi Assts. for all the DRDO labs/ estts.

An International conference on hindi was organized by DRDO at DESIDOC in

December 2013 and 11 books have been published covering papers in Hindi on various fields.

8.21 As DRDO begins its 55th year of existence, it can take pride in having catapulted India to a position of great technological superiority in terms of providing strategic weapons, nuclear powered submarines, fighter aircraft, main battle tanks, electronic warfare, electronic systems of sonars and radars etc. As more and more indigenous systems get inducted, our industrial base will get strengthened, economic growth will be accelerated and technological supremacy will be achieved- all of which will contribute towards enhancing India's position in the world stage.

9

INTER – SERVICE ORGANISATIONS

National Defence College

MES is the oldest and largest Government infrastructure development agency with an annual budget of over Rs. 12,000 crore. It provides engineering support to the Armed Forces and thereby contributes to their operational preparedness.

9.1 The following inter-Service organizations function directly under Ministry of Defence:

(i) Military Engineer Services
(ii) Armed Forces Medical Services
(iii) Directorate General Defence Estates
(iv) Office of the Chief Administrative Officer
(v) Directorate of Public Relations
(vi) Army Purchase Organisation
(vii) Services Sports Control Board
(viii) Armed Forces Films and Photo Division
(ix) National Defence College
(x) School of Foreign Languages
(xi) History Division
(xii) College of Defence Management
(xiii) Defence Services Staff College
(xiv) Ministry of Defence Library

MILITARY ENGINEERING SERVICES

9.2 MES is the oldest and largest Government infrastructure development agency with an annual budget of over ₹ 12,000 crore. It provides engineering support to the Armed Forces and thereby contributes to their operational preparedness. MES contributes towards war effort through creation and maintenance of operational infrastructure in the form of runways, hangars, radar facilities, naval dockyards, jetties, marine structures, blast pens, ammunition depots etc. MES has been executing state of the art Research and Development and industrial facilities, sophisticated workshop sheds, mega hospital projects in addition to conventional buildings. With its in-house design and consultancy facility, MES plays a pivotal role in cantonment planning and provision of utility services such as bulk water and electric supply and sanitation engineering. In addition to the Armed Forces, MES provides works services support to DRDO, KV Sangathan and Border Roads organization.

9.3 MES also contributes towards nation building and disaster mitigation in peace time. Personnel of MES were in the forefront during rehabilitation post Bhuj earthquake and Tsunami and cloud-burst at Leh and

Uttarakhand. In addition, MES personnel have been deployed as a part of Construction Engineer Companies under various United Nations peacekeeping missions from time to time. For development of infrastructure in North East, MES has re-jigged itself to take on massive projects.

9.4 MES has been specially entrusted with the task of ensuring creation of vital infrastructure in the Northern and North Eastern Border Areas/ Regions of our country to not only house soldiers but also help in overall development of the region.

9.5 **Important Projects under Progress:**

(a) **Modernisation of Central Ordnance Depot (COD) Agra and Jabalpur:** The modernization plan consists of conversion of old store house shelters into large span modern Pre Engineered Building (PEB) structures (largest size 198m x 54m) for warehousing. These structures have modern stacking and retrieval system of stores with Mechanized Handling Equipment and Very Narrow Aisle (VNA) tracks. Modern facilities such as High Rise Inventory Storage system, Warehouse Management Software, Fire Fighting Arrangements and Access Control are part of the project. In addition, administrative buildings and OTM accommodation/escort lines are also being constructed.

(b) **High Altitude Area (HAA) Habitat:** A pilot project for improvement of habitat and living conditions of troops in HAA to work out type of design and construction technique has been successfully completed. The trial evaluation of assets post winter and summer has been completed.

(c) **Infrastructure Development in Eastern Command:**

(i) CCS accorded approval for infrastructure development in Eastern Sector with Probable Date of Completion (PDC) in 2016-17. The works are being executed by MES as per DWP 2007. The scope of work includes permanent defences and habitat for troops, communication network through construction of roads, railway lines, operational tracks/ animal tracks, warehousing/ stores, accommodation and other strategic infrastructure.

(ii) A total of 89 numbers of works are at various stages of progress with nine works presently under execution.

9.6 **Important Projects Completed:** Some of the major works completed during the year include:

(a) KLP for Rashtrapati Bhawan Batallion at Delhi

(b) Cardio Thoracic Vascular Science Centre (CTVS) at Army Hospital (R & R)

(c) Residential Accommodation for Coast Guard at Noida

(d) STP Shankar Vihar

(e) OTM Accommodation for Armoured Regiment, an Infantry Battalion and a Medium Regiment.

(f) OTM Accommodation for a Base Hospital and a Military Hospital.

9.7 **Major Initiatives**

(a) **Tapping of Hydel Electricity Power from State PDD in the 14 Corps AoR:** With persistent and continuous efforts of MES, a dedicated electric supply for Kargil and its seven satellite stations has been achieved.

(b) Upgradation of Advance Landing Grounds (ALGs) in 3 Corps Zone has been undertaken.

(c) e-Payment is being implemented in all MES formations to ensure greater transparency.

(d) **e-Tendering:** e-Tendering portal www.eprocuremes.gov.in has been created and hosted on NIC server.

(e) **Heritage Resources in Defence:** Guidelines for conservation policy for Heritage Resources in Defence has been finalised and being issued to formations.

ARMED FORCES MEDICAL SERVICES (AFMS)

9.8 The Armed Forces Medical Services (AFMS) consist of the Medical Services of the Army, Navy and Air Force and a Directorate General, Armed Forces Medical Services. Each Medical Service is under a Director General Medical Service (DGMS) in the rank of Lt General or equivalent. The Director General, Armed Forces Medical Services is the medical advisor to the Ministry of Defence and is also the Chairman of the Medical Services Advisory Committee. The personnel of the Armed Forces Medical Services (AFMS) include officers of the Army Medical Corps (AMC), Army Medical Corps (Non-tech), the Army Dental Corps (ADC) and the Military Nursing Services (MNS). There are 130 Armed Forces Hospital. The authorized strength of Medical officers, Dental officers, MNS officers and AMC (NT) is 6165, 651, 4600 and 368 respectively.

The Armed Forces Medical Services of our country has distinguished record of providing dedicated and dependable health care to Armed Forces personnel and their families including personnel of para military organizations.

9.9 The Armed Forces Medical Services of our country has distinguished record of providing dedicated and dependable health care to Armed Forces personnel and their families including

personnel of para military organizations, while posted in the field and other Central Police/Intelligence forces operating in the disturbed areas of the country. Besides, AFMS also provides medical care to the ex-servicemen and their dependents and needy civilians within the country.

9.10 The AFMS resources are stretched to the limit in terms of work load in all the three services. The OPD load across all MI Rooms, Sick bays, Station Medicare Centre and Specialist OPDs was approximately 1,38,59,000 in the year 2012 across the 130 service hospitals and numerous non-bedded units across the country. In terms of hospital admissions, over 7,08,000 patients were admitted and treated in service hospitals across the country during last year.

Important decisions/ activities undertaken during the year:

9.11 **(I) Augmentation of manpower in AFMS (Phase-II):** Phase II augmentation of manpower has been approved in AFMS involving addition of 3530 medical personnel including 407 medical officers, 25 Dental officer and 684 MNS officers.

(II) Commission in AFMS:

(a) **SSC from civil sources:** 178 doctors from civil sources including 42 women were granted short service commission (SSC) in 2013.

(b) **Commission to AFMC cadets:** 108 cadets from AFMC have been granted commission during the year 2013 as under:

(i) PC - 47
(ii) SSC - 61

(c) **Departmental PC (AMC/ NT):** 32 SSC officers of AMC (NT) have been granted Permanent Commission (PC) during the year 2013.

(d) **PC/SSC in AMC (NT) to PBOR:** 5 PC and 10 SSC were granted to PBORs in AMC (NT) against the vacancies for the year 2013.

(III) **Appointment of Honorary Consultant/ Advisor:** To ensure holistic care to Armed Forces, eminent civilian doctors in different specialities are appointed as honorary consultants at various locations based upon service requirement, expertise of the consultant and their willingness to provide service free of cost.

(IV) **HIV-AIDS in Armed Forces:** The AFMS AIDS Control Organisation (ACO)is the nodal agency for HIV/ AIDS Control in the Armed Forces. The organisation has achieved remarkable success on HIV control in the Armed Forces. Vigorous implementation of preventive strategies has resulted in a declining trend in HIV Positive cases, which suggests that the epidemic may be stabilizing. The year

2012 was a special year as no death or invalidment cases attributable to HIV/ AIDS has been reported.

(V) **Armed Forces Medical College (AFMC), Pune:** The application process for admission to AFMC, Pune was made completely online for the first time. 130 (105 boys and 25 girls) students were admitted into the MBBS course for the year 2013. In addition 6 sponsored candidates were also admitted from friendly neighbouring countries.

(VI) **Modernization of AFMS:**

(a) HQ IDS (Med) has envisioned three tiers of telemedicine for Armed Forces.

(b) A project to telelink ships to mainland tertiary care Naval hospitals is in progress. On completion of the project, opinion and expertise of naval super specialists/ specialists of tertiary care land based hospitals will be gainfully utilized on board ships/ submarines/ hospitals located in remote location.

A modern toxicology Laboratory was installed at IAM, Bangalore at a cost of ₹ 3.6 crore to evaluate the post-mortem biological samples from the aviators for the presence of foreign substances like combustion gases, alcohol and drugs. This is the first Toxicology Lab in India

(c) **Toxicology lab:** A modern toxicology Laboratory was installed at IAM, Bangalore at a cost of ₹ 3.6 crore to evaluate the post-mortem biological samples from the aviators for the presence of foreign substances like combustion gases, alcohol and drugs. This is the first Toxicology Lab in India and information generated through this Lab would be beneficial for the flight safety in IAF.

(d) **CTVS Cell:** A CTVS Cell has been established in the O/o DGAFMS to expedite the phased procurement of 'state of the art' medical equipment for 200 bedded Cardio Thoracic Vascular Surgery (CTVS) Centre at AH (R&R) Delhi Cantt.

(e) High end, sophisticated 'state of the art' medical equipments have been procured through the Annual Acquisition Plans (AAPs) which were conceived in 2006-07 as phased modernisation templates which have evolved into an unprecedented enhancement of the specialised and critical care equipment profile

of service hospitals at present. Since the inception of AAPs, medical equipments worth ₹ 700 crore. have been procured in a phased manner which includes 256 slice CT Scans-02, 16 slice CT Scans-38, MRI Scans-15, PET Scans-05 Caridac Catheteriztion labs -06, Sleep labs-13, Holmium YAG Laser-10, Fully Automated Radio Immune Assay – 06, Laparoscopic Surgical Sets – 33 etc.. Establishment of 'state of the art' ultra specialized Liver Transport Centre, Bone Marrow Transplant Centres, Cochlear Implant Centres, Assisted Reproductive Technology (ART) Centres for treatment of Infertility, DNA lab and Multiple Joint Replacement Centres have brought the facilities of the service hospitals at par with the best in the country. The important equipment procured includes Cardiac Catheterization Lab, Echocardiography Machine-3D, Intra Aortic Balloon Pump, ICU Ventilators and comprehensive Monitoring Solutions.

(VII) **Foreign Aid provided to friendly countries:**

(a) As part of Defence Cooperation between India and Republic of Maldives, a spirometer, Ambulatory Holder monitor have been provided to MNDF hospital at Maldives. At present 1 x CT Scan and 1 x MRI Machines are being procured for gifting to MNDF hospital.

(b) As part of Humanitarian Aid to Nicaragua to combat Dengue epidemic, medical stores worth ₹ 8,82,185/- was sent as relief.

(c) Disaster relief Aid was also sent to Philippines, wherein medical stores worth ₹ 9,38, 986 was sent as relief on a 24 hrs short notice.

(VIII) **Modernisation/ upgradation of hospitals:**

(a) **Laying of Foundation Stone of New Tech & OTM accommodation of Command Hospital (Southern Command) Pune by Raksha Mantri:** Raksha Mantri laid the foundation stone of New modern multistoried Technical and OTM accommodation of Command Hospital (Southern Command) Pune on June 18, 2013. Project is likely to be completed by 2016.

(b) **INHS Navjivani Commissioning:** The hospital has been commissioned in December, 2012.

(IX) **Research Activities:** Approval was accorded to carry out 119 research

projects at a cost of ₹ 10.00 Crore during 51st Armed Forces Medical Research Committee (AFMRC) meeting held at Pune in February, 2013.

(X) **Treatment of Foreign Nationals in AFMS Hospitals:** As a measure of goodwill being extended by the Government of India, the Armed Forces personnel from countries like Afghanistan, Bhutan, Nepal, Bangladesh and Maldives are accorded treatment facilities in AFMS hospitals.

(XI) **Raksha Mantri Trophy for Best Command Hospital:** Command Hospital (Central Command), Lucknow, bagged the coveted 'Raksha Mantri Trophy' for the "Best command Hospital in the Armed Forces" for the year 2013

DIRECTORATE GENERAL DEFENCE ESTATES

9.12 The Directorate General Defence Estates, New Delhi, has advisory and executive functions in matters relating to management of Defence lands and Civic Administration in 62 Cantonments. The Directorate General presently functions through six Principal Directorates at Jammu, Chandigarh, Kolkata, Lucknow, Pune and Jaipur. The Principal Directorates in turn supervise a number of field offices, such as offices of the Defence Estates Officers, Assistant Defence Estates officers and Cantonment Boards. These field offices are entrusted with the day to day management of defence lands and Cantonment Boards across the length and breadth of the country.

9.13 The Ministry of Defence owns approximately 17.54 lakh acres of land throughout the country which is managed by the three Services and other Organizations like Ordnance Factory Board, DRDO. DGQA, CGDA etc. The Army has the maximum of the land holdings under its control and management i.e. 14.14 lakh acres followed by Air Force 1.40 lakh acres and Navy 0.44 lakh acres. The defence land inside the notified Cantonments is approximately 1.57 lakh acres and the remaining around 16.00 lakh acres lie outside the Cantonments.

9.14 The Directorate General has completed computerization of the land records. Work of survey and demarcation of all defence lands and digitization of records in order to strengthen control and management over defence land is in progress.

9.15 The Defence Estates Department also undertakes hiring of residential accommodation and hiring/ requisitioning of land for the Armed Forces. In J&K requisition of immovable property is done under J&K RAIP Act, 1968.

9.16 Directorate General Defence Estates is also responsible on behalf of the Ministry of Defence to control, monitor and supervise the Civic Administration in Cantonments. There are 62 Cantonments in India. These are located in 19 States, including National Capital Territory of Delhi. The Cantonment Boards are 'bodies corporate', functioning under the overall control of the Central Government and under the provisions of the Cantonments Act, 2006. Half of the members of the Cantonment Boards are elected. The Station Commander is the President of the Cantonment Board. Supervision and control over the working of these bodies is exercised through the General Officers Commanding in Chief and Principal Directors, Defence Estates at the intermediate level and by the Central Government through Directorate General Defence Estates at the apex level.

Directorate General Defence Estates is also responsible on behalf of the Ministry of Defence to control, monitor and supervise the Civic Administration in Cantonments.

9.17 The Central Government provides financial assistance by way of grants- in-aid to balance the budget of some of the Cantonment Boards which are financially deficit. During the financial year 2013-14, ₹ 225.69 crore was paid to deficit Cantonment Boards besides a sum of ₹ 20.69 crores were provided for creation of Capital Assets in Cantonments during the financial year 2013-14.

9.18 To provide primary education, Cantonment Boards run Primary Schools. A number of Cantonment Boards also run Higher Secondary Schools and Intermediate/ Junior Colleges. The total number of schools and colleges run by Cantonment Boards is 197.

9.19 Cantonment Boards also have 40 Hospitals, having 1360 beds and 39 dispensaries for providing medical services to the general public of Cantonments and nearby areas.

OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER

9.20 The office of the Chief Administrative Officer (CAO) provides civilian manpower and infrastructural support to the Services Headquarters and the Headquarter Offices of Inter-Service Organisations (ISOs) under the Ministry of Defence. Joint Secretary (Training) also discharges the functions of the Chief Administrative Officer (CAO) and Director (Security).

9.21 The functions of the CAO's Office are carried out by the following seven Divisions:

(a) **Administration Division:** The Division provides administrative cover to about

12,000 civilian personnel employed in the Services Headquarters and Inter-Service Organisations.

(b) **Personnel & Legal Division:** The Personnel Division is responsible for the Cadre Management including posting of the civilian personnel in about 200 grades, posted in the three Service Headquarters and 27 Inter-service Organisations. This Division also looks after the Court cases.

(c) **Manpower Planning and Recruitment Division:** The Division is responsible for recruitment to various categories of the AFHQ Cadre/Ex-Cadre posts, compassionate employment, framing/ amendment of recruitment rules for various grades, re-verification of character and antecedents of employees working in sensitive organisations, Cadre Review/ Restructuring of AFHQ civilian cadres & work related to pay Commissions etc.

(d) **Finance and Material Division:** This Division provides material support to the ISOs which includes procuring and provisioning of office equipment, stores, furniture, stationery and IT equipment.

(e) **Estates and Works Division:** This Division performs the Estate functions for residential accommodation of Service Officers posted at the Armed Forces HQ and coordinates the Major Works Programmes at the Defence Headquarters.

(f) **Departmental Discipline, Coordination and Welfare Division:** This Division deals with all the disciplinary cases pertaining to AFHQ Civilian cadre employees. Coordination within CAO's Office and for JS(Trg) & CAO Wing of Ministry of Defence, matters relating to implementation of Official Language policy, welfare activities like Office Council JCM, Women Cell, Sports & Cultural activities, Departmental Canteen, appointment of AMAs, Defence Civilian Medical Aid Fund (DCMAF) etc., are also dealt with in this Division. Matters relating to implementation of e-governance, electronic data processing, maintenance of LAN & Website of CAO's office also come under the purview of this Division. Administration of MoD (Library) along with the functions/responsibility pertaining to selection of books and securing National Defence fund (NDF) grant for procurement of the same as well as laying down of guidelines for this purpose have also been entrusted to this division.

(g) **Defence Headquarter Training Institute (DHTI):** Training requirements of civilian personnel posted in the Services Headquarters and in the Inter-Service Organisations are looked after

by the Defence HQ Training Institute (DHTI), functioning under the aegis of the CAO. Some specialized courses are also conducted for the Service officers from the three Services. During the year 2013-14, 139 courses have been/ are to be conducted by DHTI covering both civilian &Service personnel at its premise and additional 15 courses at various field establishment.

9.22 **Security Office:** The Security Office is primarily responsible for physical security, access control and prevention of breaches of security and fire within the Defence Headquarters Security Zone.

DIRECTORATE OF PUBLIC RELATIONS

9.23 The Directorate of Public Relations (DPR) is the nodal agency for the dissemination of information to the media and public about the important events, programmes, achievements and major policy decisions of the Ministry, Armed Forces, Inter-Services Organisations and Public Sector Undertakings under the Ministry of Defence. The Directorate with its headquarters in New Delhi and 25 regional and branch offices spread across the country is responsible for providing media support to ensure wide publicity in the print and the electronic media. It also facilitates media interaction with the leadership and senior officials of the Ministry of Defence and Armed Forces by conducting regular interviews, press conferences and press tours.

9.24 As in the previous years, the Directorate conducted the Defence Correspondents' Course for media persons from August 19 to September 18, 2013 to enhance their knowledge about defence matters. Thirty journalists including nine women drawn from all over the country attended the month long course.

9.25 The Directorate brings out a fortnightly journal, Sainik Samachar, for the Armed Forces in 13 languages. The Broadcasting Section of the Directorate produces a 40-minute programme 'Sainikon Ke Liye' that is broadcast daily on All India Radio for the Armed Forces personnel. The Photo Section of the Directorate provides photo coverage to important events related to Defence. Efforts are on to digitise the Photo Archives of the Photo Section.

9.26 The Directorate also arranges all media facilities related to the Republic Day Celebrations and brings out a commentary for the parade on the Rajpath. Other important calendar events such as the Independence Day celebrations at Red Fort, Combined Commanders' Conference and NCC Rally addressed by the Prime Minister and Defence Investiture Ceremonies at Rashtrapati Bhawan were also accorded due publicity.

9.27 The launching of India's first indigenous aircraft carrier INS Vikrant at Kochi was provided extensive publicity. A forty member press party both print and electronic media was taken to Kochi for the coverage.

9.28 This Directorate set up mobile units to coordinate and facilitate media movements into the affected areas during the unfortunate flash floods in Uttarakhand and Himachal Pradesh in June 2013. It assisted in airlifting several media persons to Dehradun, Kedarnath, Gaucharand other badly flood affected areas so that they could report about the massive Rescue and Relief operations 'Rahat' mounted by the Armed Forces, on the basis of their own first-hand experiences.

9.29 DPR also provided befitting publicity to the 8th edition of Defexpo India, a biennial exhibition on Land, Naval, Internal Security and Defence System held at New Delhi, where 624 companies from 30 countries took part.

ARMY PURCHASE ORGANISATION

9.30 Army Purchase Organisation (APO) in the Ministry of Defence is entrusted with the responsibility of procurement and timely supply of different types of food stuffs and dry rations dry rations for the consumption of Defence Forces. APO procures rise and wheat through the Food Corporation of India and sugar is allotted by the Directorate of Sugar out of levy quota allocated to various sugar mills. Other items like pulses, animal ration, edible oils & vanaspati and milk products are procured from the central and State Public Sector Undertakings and National/ State Level Cooperative Consumer/ Marketing Federations. Whole milk powder, butter and ghee are procured from the members of the national Cooperative Diary Federation of India. Tea and tinned items like vegetables, fruits, jams, milk, meat and fish, coffee, egg powder, Meal Ready to Eat (MRE) etc. are procured from registered suppliers including private parties. APO also procures vegetables and chicken curry in retort pouches for the Armed Forces from registered suppliers having the technology.

SERVICES SPORTS CONTROL BOARD

9.31 Services Sports Control Board (SSCB) conducts and co-ordinates various sports activities in the three Defence Services. Inter-Services championships comprising of four teams (Army Red, Army Green, Indian navy and Air Force) are conducted under the aegis of SSCB in 18 Sports and trials are conducted in 12 disciplines to select the Services team for participation in the National Championship/ Games.

9.32 Services Sports control Board has received the prestigious Rashtriya Khel

Protsahan Purushkar 2013 for Establishment and Management of Sports Academies of Excellence on August 31, 2013.

Services Sports control Board has received the prestigious Rashtriya Khel Protsahan Purushkar 2013 for Establishment and Management of Sports Academies of Excellence on August 31, 2013.

9.33 **National Championships:** This year, the Services fielded senior men teams in almost all the National Champion ships, Services teams won the National Championships in Fencing, Equestrian, Water Polo, Diving, Gymnastics (Artistic), Gymnastics (Acrobatic), Gymnastics (Trampoline & Tumbling), Handball, wrestling (Greco Roman), Triathlon, Athletics, Kayaking & Canoeing, Wushu, rowing and were runners up in Cycling (T) and Cycling (R), Archery, and Taekwondo Cross Country, Kabaddi and Judo. The Services team also won 67th Santosh Trophy National Football championship for year 2013, continuously for the second year.

9.34 **Dope Control Measures:** In order to arrest the doping menace from the Services sports, SSCB has initiated anti-doping in tie up with national Anti doping Agency (NADA) test at Inter Services level.

9.35 **Armed Forces Sports Medicine Centre (AFSMC):** The AFSMC located at Ghorpadi, Pune functioning under the SSCB provides scientific support to enhance the sporting performance of Services players. This year two "Physical Conditioner" course and one Masseur Course was conducted by AFSMC for the benefit of players of three Services. A total of 100 students attended the same and all candidates qualified the course.

9.36 **Best Services Sportsman & Team:**

(a) Best Services Team-Army Red Team having scored the maximum points in the Inter-Services Championships was awarded the Defence Services Overall Championship Trophy" 2012-13.

(b) Best Services Sportsman is selected from the three Services on the basis of performance in Services, national and International championships. Shooter MCPO-II Omkar Singh was adjudged 'Best Services Sportsman' for the year 2012-13.

ARMED FORCES FILMS AND PHOTO DIVISION

9.37 Armed Forces Film & Photo Division (AFFPD) is primarily responsible to meet the requirement of Services Headquarters and other defence organizations with regard to projection, procurement and distribution of training films, production of photographs, art work etc. The work of Photo and Video Coverage of all ceremonial functions and

other important events of the MoD is also entrusted with AFFPD.

9.38 At present, 27 training films are under various stages of production, out of which 8 films have been completed as on March 31, 2014, 12 films are at various stages of post production and 7 films are in pre-production stages. The approximate duration of most of the films are 30 to 45 minutes and are produced in both Hindi and English.

9.39 AFFPD has a rich collection of rare films and photographs, this material inherited from the British are of great historical value and are maintained and preserved at the Central Defence Film Library of this Division. These photographs and films depict the Indian Forces in action in various theatres of Second World War and also its Parades, Festivals, Personalities and training activities etc.

9.40 The Central Defence Film Library (CDFL) of this Division is responsible for distribution of training films to various units/ formations/ training establishments/ commands, to meet their specific training requirements. During this year, 200 DVDs have been dispatched/ issued on loan to various units/ formations of Army/ Navy/ Air Force.

9.41 The Mobile Cinema Unit (MCU) of this Division also procured/ distributed Documentary films/ News Magazines on cultural, family welfare, and other socially relevant issues, to the troops in the forward areas. During the year MCU has issued approximately 64 CD/ DVD (containing 16 titles) to Defence Establishment on loan basis.

NATIONAL DEFENCE COLLEGE

9.42 The National Defence College is a premier training institution of the MoD which has established a name for itself as a centre of excellence on matters pertaining to National Security and Strategic Studies. Selected Armed forces officers of the rank of Brigadier/ equivalent from Indian and Foreign Armed Forces and Civil Services officers of equivalent status of director and above are nominated for training at the college. The officers undergo an eleven months programme with focus on national Security, covering all dimensions of domestic, regional and international issues to equip future policy makers with background necessary to get a broad understanding of the multifarious economic, political, military scientific and organizational aspects that are essential for planning of National strategy. The course curriculum comprises study Capsules, Lectures/Panel Discussions, Strategic Game Exercise, Field Tours, Research Activities/ Writing of theses and Seminars. Towards this end, six study capsules are conducted for the course.

9.43 The 54th NDC Course consisted of 100 officers comprising Army (40), Navy (6), Air Force (12), Civil Services (16) and Friendly Foreign Countries (26). The 11 months Course commenced on January 6, 2014.

SCHOOL OF FOREIGN LANGUAGES

9.44 The School of Foreign Languages (SFL) is a unique institution of our country as nowhere else so many foreign languages are taught under the same roof. It has been the pioneer in foreign language teaching in India, since 1948. At present the School is engaged in imparting training in 18 Foreign languages to Armed Forces personnel. It also caters to the needs of the other ministries and departments of the Government of India, such as the Ministry of External Affairs, the Cabinet Secretariat, Central Police Organisation viz, BSF, CRPF, ITBP, etc. Besides civilian students are also admitted for Certificate of Proficiency, Advanced Diploma and Interpreter ship Courses as per the laid down Government rules.

9.45 The Foreign Languages taught on regular basis at the SFL are: Arabic, Bahasa Indonesia, Burmese, Chinese, French, German, Persian, Russian, Spanish, Tibetan, Sinhala and the short term courses in Japanese, Thai, etc.

9.46 The courses offered by the SFL are Certificate of Proficiency Course, Advanced Diploma Course, Interpreter Course and Short-term Course/capsule Course.

9.47 The Interpreter Course is a fulltime Course. The students are sponsored by the Armed Forces, Ministry of Defence, the Cabinet Secretariat and other Government Departments. This course trains the students to become experts in the highly skilled worked of interpretation and translation. It is a highly specialized course, which has no parallel anywhere else in India. Languages of strategic importance from politico-military point of view such as Sinhala, Bhasa Indonesia, Burmese, Pushto Pak Urdu, Thai and Tibetan are taught at SFL.

9.48 Short term courses are conducted as and when necessary, especially for Military Attaches Designates and officers being sent on UN Missions or as per specific need of user organization.

9.49 The SFL is the controlling organization for other Defence institutions where foreign languages are taught, viz National Defence Academy, Pune and Army Education Corps Training Centre and College Pachmarhi. It conducts examinations and issues diploma to the successful candidates. For the IFS probationers, it is obligatory to qualify the Advanced Diploma (IFS) examination conducted by the Institute.

9.50 During 2013-14 SFL has trained the DA/ MA (Designate) to various countries in respective foreign languages viz. Arabic, German, French, Japanese and Russian.

HISTORY DIVISION

9.51 The History Division, earlier known as Historical Section was established on October 26, 1953 to compile the histories of the military operations conducted by the Indian Armed Forces since the independence. Till now, it has compiled and published 20 volumes including the History of Operations in Jammu & Kashmir 1947-48, Operation Polo, Operation Vijay (Goa), Military Costumes of India, Stories of Heroism, the India-Pakistan War of 1965: A History. The Division has also reprinted eight volumes of Official History of the Indian Armed Forces in the Second World War 1939-45. The operations conducted by the Indian Armed Forces on UN Peace Keeping missions have also been compiled and these include the History of Indian Armed Forces in UN Operations in Congo, CFI or The Indian Troops in Korea 1953-54, Operation Shanti (Indian Troops in Egypt) and Terrific Responsibility (The Battle for Peace in Indo-China). Some of the publications have been brought out both in Hindi and English. Presently, the Division is working on two titles, viz. Stories of Heroism Vol. III and War Memorials of the Indian Army.

9.52 The History Division also functions as the research, record and reference office of the Ministry of Defence and the Indian Armed Forces. It receives operational records and miscellaneous records pertaining to military matters from the Ministry of Defence, three Service HQs and various Units on a regular basis for preservations and use. The Division is presently engaged in the digitization of records. The Division also runs a Fellowship scheme under which two research fellowships are granted every three years to encourage research in military history. So far seventeen research fellows have benefitted under the scheme.

9.53 The Heraldic Cell of the Division assists the three Services Headquarters including Coast Guard Headquarters and the Ministry of Defence in all ceremonial matters such as naming of new establishments and acquisitions, designing of crests and badges and coining of suitable mottoes.

9.54 The Departmental Library houses more than five thousands titles, which include some rare books, periodicals and foreign publications of military importance. About 600 books have been added to the Library during past one year. Efforts are also being made to digitize the catalogue of the Library to facilitate the availability of the books.

COLLEGE OF DEFENCE MANAGEMENT (CDM)

9.55 CDM is a tri-Service training institution which imparts Defence Management education to senior officers of the three Services, Para Military Forces, officers of the Ministry of Defence and international participants at the conceptual, directional and the functional levels. The

College also hosts a number of civilian and foreign delegations on defence management training. To meet the requirements of 'Higher Defence Management' education in the Indian Armed Forces, necessitated by the 'Revolution in Military Affairs', CDM has optimised its existing training infrastructure and yearly trains approximately 500 officers. CDM has also developed tailor made capsule courses/ Management Development Programmes (MDPs) for management education at all levels in the Indian Armed Forces. These MDPs are also subscribed by large number of Friendly Foreign Countries. From January 1, 2013 to March 31, 2014, CDM has conducted one Higher Defence Management course, two Senior Defence management course, Ten Management Development Programmes and various External Capsule courses. The participants of HDMC also carry out project studies sponsored by service HQs and on successful completion of the course get Master in Management (MMS) degree from Osmania University.

DEFENCE SERVICES STAFF COLLEGE

9.56 The Defence Services Staff College (DSSC) is an Armed Forces Training Institution (AFTI) located at Wellington which conducts Staff Course for the selected officers of the three Services and also the officers from the Central Civil Services. In addition, defence officers from friendly foreign countries also subscribe to the Staff Course conducted by the college. The officers passing out of DSSC are awarded Master of Science (MSc) in Defence and Strategic Studies from Chennai University. To meet the requirements of the three services, concerted efforts are on to enhance the capacity of staff course to 500 in a phased manner. The planned training infrastructure for the same has been already established. However, the construction for the married accommodation is in progress as part of the 'Married Accommodation Project' (MAP), which is likely to be completed by 2015. Notwithstanding, the strength of the current Staff Course (69th SC) has been enhanced to 445 including 32 officers from the Friendly Foreign Countries, by optimising the existing infrastructure. DSSC has also made notable progress in modernisation of training aids by procuring 'Deep Blue War Gaming Package for Air Ops' and digitisation of the Sand Model Rooms.

MINISTRY OF DEFENCE LIBRARY

9.57 The Ministry of Defence library provides literature on subjects relevant to planning and policy formulation in Ministry of Defence, three Services Headquarters, Inter-Service Organisations and other allied Defence Establishments located in Delhi. It specializes in Defence and related subjects, besides catering to the needs of general readers. During the year the library added 1725 books, subscribed to 129 Journals/ Periodicals and 29 Newspapers.

10

RECRUITMENT AND TRAINING

National Defence Academy

UPSC holds entrance Examination twice a year for entry into the NDA and NA. Candidates on completion of 10 + 2 examination or while in the 12th standard are eligible to compete.

10.1 The Armed Forces epitomize the ideals of service, sacrifice, patriotism and composite culture of the country. Recruitment to the Armed Forces is voluntary and open to all citizens of India irrespective of caste, class, religion and community provided the laid down physical, medical and educational criteria are met.

10.2 **Recruitment of Commissioned Officers in the Armed Forces through UPSC:** Commissioned Officers in the Armed Forces are recruited mainly through UPSC which conducts the following two All India Competitive Examinations:

(a) **National Defence Academy (NDA) and Naval Academy (NA):** The UPSC holds entrance Examination twice a year for entry into the NDA and NA. Candidates on completion of 10 + 2 examination or while in the 12th standard are eligible to compete. Having cleared UPSC written examination, eligible candidates undergo Service Selection Board (SSB) interview, which lasts for five days. On being medically fit and coming in NDA merit list, successful candidates join the NDA or NA as per their option of service exercised at the time of applying. On completion of the course, they are sent to the respective Service Academies for their pre-commissioning training.

(b) **Combined Defence Service Examination (CDSE);** CDSE is conducted by the UPSC twice a year. University graduates or those in final year of graduation are eligible to appear in the examination. Candidates qualifying in written examination have to undergo SSB interview and medical tests. Candidates whose names appear in the merit list undergo basic military training of 18 months at Indian Military Academy/Air Force Academy and Naval Academy for Permanent Commission and 11 months at Officers Training Academy (OTA) to become Short Service Commissioned Officers (SSCOs). SSCOs can serve for duration of 10 years extendable to 14 years. However, they can opt for a permanent commission after completion of 10

years or seek release after completion of five years of service, which is considered on case to case basis.

ARMY

10.3 Apart from the UPSC entries, Commissioned officers are also recruited in the Army through the following entries:

(a) **10 + 2 Technical Entry Scheme (TES):** Candidates who have qualified 10 + 2 CBSE/ ICSE/ State Board Examination with minimum aggregate of 70% marks in Physics, Chemistry and Mathematics are eligible to apply for commission under the 10 + 2 (TES). On being successful in the SSB and being declared fit by the medical board, they undergo one year basic military training at the Officers Training Academy, Gaya and thereafter undergo three years engineering degree course in respective streams before getting Permanent Commission. On being commissioned, they are further put through one year of post commissioning training for the Arm/Service into which they are commissioned.

(b) **University Entry Scheme (UES):** Pre-Final year students in the notified engineering disciplines are eligible to apply for Permanent Commission in the Technical Arms of the Army as Commissioned Officers under the UES. Eligible candidates are selected through a campus interview by the Screening Teams deputed by the Army Headquarters. These candidates are required to appear before SSB and Medical Board. Successful candidates undergo one year pre-commission training at the Indian Military Academy (IMA), Dehradun. Cadets through this entry are also entitled to one year ante-date seniority on commissioning.

(c) **Technical Graduates Course (TGC):** Engineering graduates from notified discipline of engineering, post graduates with minimum second division aggregate marks in notified discipline for Army Education Corps and M.Sc. in Agriculture/Dairy for Military Farm are eligible to apply for Permanent Commission through this entry. After the SSB and the Medical Board, the selected candidates are required to undergo one year pre-commissioned training at the IMA, Dehradun. Engineering Graduates through this entry are also entitled to one year ante-date seniority on commissioning.

(d) **Short Service Commission (Technical) Entry:** The Short Service Commission (Technical) Entry Scheme provides avenue for recruitment to eligible technical graduates/post graduates into Technical Arms. After SSB and medical Board, the selected candidates are required to undergo approximately 49 weeks pre-commission training at OTA,

Chennai. On completion of training, they are inducted as Short Service Commissioned Officers. Cadets through this entry are also entitled to one year's ante-date seniority on commissioning.

(e) **NCC (Special Entry Scheme):** University graduates possessing NCC 'C' Certificate with minimum 'B' grade and 50% aggregate marks in graduation examination are eligible to apply for Short Service Commission through this entry. Those studying in third year are allowed to apply provided they have secured minimum 50% aggregate marks in first two years. Such candidates will need to secure overall aggregate of minimum 50 % marks if selected in interview failing which his candidature will be cancelled. Candidates must possess graduation degree at the time of joining OTA or those candidates studying in third year should be able to produce the degree within 12 weeks from date of commencement of training at OTA. Such cadets have to undergo SSB interview followed by a medical board. Candidates meeting the qualitative requirements have to apply through NCC Group Headquarters at the State level. After Screening by respective Group Headquarters, Directorate General of NCC forwards the applications of eligible cadets to the Recruiting Directorate of Integrated Headquarters of Ministry of Defence (Army).

(f) **Judge Advocate General Entry:** Law graduate with minimum 55% aggregate marks in LLB age between 21 to 27 years can apply for Judge Advocate General Branch. Eligible candidates are called for direct SSB interview and medical test, thereafter. It is a Short Service Commission Entry wherein suitable candidates can opt for Permanent Commission.

(g) **Short Service Commission Women:** Eligible women candidates are recruited in the Army as Short Service Commission Officers. Commission is granted in Corps of Electronics and Mechanical Engineers, Corps of Engineers, Signals, Army Educational Corps, Military Intelligence Corps, Judge Advocate General's Branch, Army Supply Corps, Army Ordnance Corps and Army Air Defence. Women are offered Short Service Commission in three streams viz. Non-Technical Graduate, Technical and Post Graduate/Specialist for a period of ten years, extendable by additional four years purely on voluntary basis. Recently, Govt of India had granted option for permanent commission for officers in Army Education Corps and Judge Advocate General Branch after completion of 10 years of service. The duration of

training is 49 weeks at Officers Training Academy, Chennai. For Short Service Commission Women (Technical) Entry, passed or final year/semester students of B.E/ B.Tech in notified streams are eligible to apply. Eligible candidates appear for direct SSB interview and Medical Test, thereafter. The applicants for Non-Technical Graduate, however, are required to apply through UPSC and after written examination, come up for SSB interview as is being done for Short Service Commissioned male officers. A total of 20% allotted seats from Non-Technical stream have been reserved for NCC 'C' certificate holders women candidates with minimum 'B' grade and 50% aggregate marks in graduation examination. The applications will be routed through NCC Directorate, Integrated Headquarters of Ministry of Defence (Army), as applicable for male officers. For Judge Advocate General Branch, applications are invited from Law Graduates with minimum 55%, for direct SSB interviews. Widows of Defence Personnel who meet the laid down eligibility criteria are granted four years age relaxation and 5% seats of each course (2.5 each in Tech and Non-Tech) are reserved for them. Short Service Commission Women (Tech), NCC entry and Judge Advocate General Branch are exempted from written examinations and need to apply directly to Additional Directorate General of Recruiting, Integrated Headquarters of Ministry of Defence (Army). The notification is published along with SSCW (Tech) twice a year.

(h) **Service Entries:** Recruitment of Junior Commissioned Officer & Other Ranks (JCOs &ORs) into officers cadre is done through Service Selection Board in the following:

(i) **Army Cadet College (ACC) Entry:** The eligible Other Ranks (OR) in age group of 20-27 years and minimum two years of service, having 10+2 pass qualifications can apply for Regular Commission. After qualifying in written examination conducted by the Military Training Directorate, the aspirants are screened by SSB and the Medical Board. Successful candidates are trained at Army Cadet College Wing, Dehradun for three years at the end of which they get a graduation degree. This is followed by one year pre-commission training at IMA, Dehradun.

(ii) **Special Commissioned Officers (SCO) Scheme:** Under this entry JCOs/NCOs/OR in the age group of 28-35 years, with a Senior School

Certificate Pass (Class 10+2 pattern) qualification, are eligible for Permanent commission after screening by SSB and Medical Board. They have to undergo pre-commission training of one year at OTA Gaya. The rules for substantive promotion and acting promotion are the same as for regular officers. These officers are employed in units as sub unit commander/ Quarter Master and on various Extra Regimental Employment appointments up to the rank of Major. They retire at the age of 57 years after serving for period of about 20-25 years. The scheme not only improves the career prospects of the existing JCOs and OR but also helps in making up the deficiency of the support cadre officers in the Army to some extent.

(iii) **Permanent Commission (Special List) (PC SL):** Under this entry, JCOs/ NCOs/OR up to 42 years of age and minimum 10 years of service, with a Senior Schools Certificate Pass (Class 10+2 pattern) qualification are eligible for commission after screening by SSB and Medical Board. They are granted PC (SL) after successful completion of four weeks orientation training at the IMA.

10.4 **Intake:** Intake of candidates for pre-commission training as officers during the year 2013 is given in Table No. 10.1.

Table No. 10.1

S.No	Academy	Entry	Induction
1.	NDA	Army	617
		Navy	120
		Air Force	211
		Total	**948**
2.	IMA	IMA (DE)	487
		ACC	168
		SCO	124
		PC(SL)	55
		Total	**834**
3.	OTA	SSC(NT)	181
		SSCW (NT)	46
		SSCW (T)	37
		NCC	84
		NCC(W)	12
		JAG	14
		JAG(W)	6
		Total	**380**
4.	Tech Entries	UES	83
		SSC (T)	149
		10+2 TES	347
		TGC	288
		Total	**867**
		Grand Total	**3029**

10.5 **Raising of Selection Centre North:** Government has sanctioned raising of two Service Selection Boards (SSBs) under

Selection Centre North at Ropar (Punjab) which is in progress.

In the recruiting year, 122 rallies have been conducted, in which a total of 54,186 candidates have been recruited till March 25, 2014.

10.6 **Recruitment of Junior Commissioned Officers & Other Ranks (JCOs & ORs):** In the Army, there are eleven Zonal Recruiting Offices, two Gorkha Recruiting Depots, one Independent Recruiting Office and 59 Army Recruiting Offices in addition to 47 Regimental Centers which carry out recruitment through rallies in their respective areas of jurisdiction. Recruitment of JCOs & OR is carried out through Open Rally system. The recruitment of JCOs & OR commences with the preliminary screening of aspiring candidates at rally site followed by document checking, physical fitness tests, physical measurements, and medical examination. This is followed by a written examination for the candidates who are found eligible in all respects. Finally, selected candidates are dispatched to respective Training Centers for training. Efforts are made so that each district of the country is covered at least once by recruitment rallies in a recruitment year.

10.7 **Recruitment Rallies**: In the recruiting year, 122 rallies have been conducted, in which a total of 54,186 candidates have been recruited till March 25, 2014. Under developed areas were also addressed including conduct of 14 rallies in insurgency affected areas in which a total to 3221 recruits have been enrolled.

10.8 **Computer Based Entrance Test (CBET):**

(a) A CBET software developed to replace the 'paper pencil' based test for Common Entrance Examination is being utilized successfully at all HQ Recruiting Zones initially for the Nursing Assistant trade. Advantages of CBET are as under:

(i) Complete transparency.

(ii) User friendly.

(iii) Need for invigilation and evaluation board of officers is reduced thus saving on precious manpower.

(iv) Obviates impersonation.

(v) Instant results are possible.

(vi) Right to Information (RTI) compliant.

(b) **Present progress on CBET Labs:** At present, there are 11 functional CBET labs for conducting computer based Common Entrance Examination for Soldier Nursing Assistant category.

10.9 **Installation of Biometrics in Military Hospitals and Regimental Centres:** Military Hospitals and Regimental Centres are a vital link for automation with a view to prevent impersonation and fraudulent enrolment. It involves establishment of a terminal with internet connectivity and installing of a biometric device. Instructions have been issued for installation of Biometric devices in all Military Hospitals and Regimental Centres.

NAVY

10.10 Recruitment into the Navy is based on the requirement to effectively man all new and existing ships, submarines, aircraft and shore establishments to the optimum levels. Towards this end, recruitment is being carried out on all India basis. The total number of personnel recruited depends on the number of eligible applicants (men and women) who are able to qualify in the written test, Services Selection Board (SSB) interview, medical examination and their relative position in the merit list. No distinction is made on the basis of gender/ religion/ caste/ creed, either during recruitment or at any point of time during their tenure in Service.

Recruitment of Officers in Indian Navy (IN)

10.11 **The Method of Recruitment:** The recruitment system of the Indian Navy is a streamlined, transparent, expeditious and candidate friendly procedure. There are two modes of induction in the Navy viz. UPSC Entry and Non-UPSC Entry:

(a) UPSC Entry. The UPSC holds an examination, twice a year, for entry into the National Defence Academy (NDA) and Indian Naval Academy (INA) as Permanent Commission (PC) entries. Candidates are eligible to compete on completion of the 10 + 2 (PCM) Examination or while in the 12th standard. UPSC short lists candidates after written examinations. Thereafter, candidates are sent to the Services Selection Boards located at Bengaluru, Bhopal and Coimbatore. Results of qualified candidates are forwarded to UPSC for making the final merit list. Medically fit candidates who are in the merit list are intimated by ADG (Rtg)/ IHQ of MoD (Navy) for appointment to NDA/ INA as cadets. On completion of the NDA/ INA training, the Naval Cadets are sent to training ships at Kochi for Naval sea training. For the Graduate Special Entry, the UPSC holds Combined Defence Services Examination (CDSE) twice a year. Graduates with B Tech degree are also eligible to appear in the examination. Successful candidates join the Indian Naval Academy at Ezhimala, Kerala for the Naval Orientation Course (NOC).

(b) **Non-UPSC Entry:** The non-UPSC entries cater to both Permanent Commission (PC) and Short Service Commission (SSC). In this case, applications are invited and short-listed at IHQ of MoD (Navy). The short-listed candidates are then sent for SSB interviews. Thereafter, a merit list, comprising qualified candidates, is prepared as per the availability of vacancies. Recruitment for the Non-UPSC entries is made through Service Selection Boards for the following branches/ cadres of the Navy:

(i) **Executive:** Short Service Commission through University Entry Scheme (UES) and other Short Service Commission (SSC) Schemes for Executive (GS)/ Air Traffic Control/ Law/ Logistic/ Naval Armament Inspectorate (NAI)/ Hydro/ Pilot/ Observer and also Permanent Commission for Logistic/ Law/ NAI cadres.

(ii) **Engineering (Including Naval Architects):** Short Service Commission through University Entry Scheme (UES), Special Naval Architects Entry Scheme (SNAES) & SSC (E) Schemes. Permanent Commission is through 10 + 2 (Cadet Entry Scheme).

(iii) **Electrical Engineering:** SSC entry through UES and SSC(L) Schemes. Permanent Commission is through 10 + 2 (Cadet Entry Scheme).

(iv) **Education Branch:** Permanent Commission and Short Service Commission schemes exist for this branch.

(c) **10 + 2 (Cadet Entry Scheme):** This scheme is for permanent commission in the Executive, Engineering and Electrical branches of the Indian Navy. Under this scheme, candidates with 10 + 2 (PCM) qualifications, after selection through the Services Selection Board, are sent to the Indian Naval Academy for the B Tech Course. On successful completion of the course, they are granted Permanent Commission in the Executive, Electrical and Engineering branches of the Indian Navy.

(d) **University Entry Scheme (UES):** The UES has been re-launched w.e.f. August 2005 course as a Short Service Commission Scheme. Seventh and Eighth semester Engineering students are eligible for induction into the Executive and Technical Branches of the Indian Navy. Naval selection teams from the IHQ of MoD (Navy) and Command Headquarters visit AICTE approved engineering colleges, across the country, to short-list the candidates. The short-listed candidates, based on All India Merit, are called for interview at the Services Selection Board. The

successful candidates are, thereafter, put through medical tests. Final selection is based on all India merit on the basis of marks obtained in the SSB interviews.

10.12 **Women Officers:** Women are being inducted into the Navy, as short Service Commission (SSC) officers in the Executive (Observer, ATC, Law 7 logistic), Education Branch and the Naval Architecture cadre of the Engineering Branch.

10.13 **Permanent Commission to SSC Officers:** The Ministry of Defence has introduced grant of Permanent Commission prospectively to the Short Service Commission officers, for both men and women, of the Executive Branch (Law Cadre), Education Branch and Engineering Branch (Naval Architecture).

10.14 **Recruitment through NCC:** University graduates possessing NCC 'C' certificate with minimum 'B' grading and 50% marks in the graduation degree examination are inducted in the Navy as regular commissioned officers. These graduates are exempted from appearing in the CDSE conducted by the UPSC and are selected through the SSB interview only. They join the Indian Naval Academy for Naval Orientation Course (NOC) along with the CDSE cadets.

10.15 **Special Naval Architecture Entry Scheme:** The Government has recently approved the induction of Naval Architect officers into the IN, as Short Service Commission Officers, under a 'Special Naval Architects Entry Scheme' (SNAES). An empowered Naval team visits IIT *Kharagpur*, IIT *Chennai*, *Cochin* University of Science and Technology (CUSAT) and *Andhra* University, where B Tech (Naval Architecture) courses are conducted, to select candidates through campus interviews. The selected candidates undergo medical examination at the nearest Military Hospital and if found fit, are selected for training.

Recruitment of Sailors

10.16 **Method of Recruitment:** Recruitment into the Navy is carried out on all India basis on state wise merit of the eligible recruitable male population, as per the number of vacancies available. The number of personnel recruited from a particular State depends on the number of eligible applicants who are able to qualify in the written examination, physical fitness test and medical examination and their relative position in the merit. There is no quota of vacancies based on caste/creed or religion. Advertisements in all leading National and Regional newspapers and Employment News are published inviting applications from the eligible volunteers. Publicity material is also despatched to a large number of schools/ colleges and all Zilla Sainik Boards. The local administration carries out the publicity drive in rural / backward areas through local media.

10.17 **Types of Entries:** The various entries, for recruitment of sailors, are as follows (with educational qualifications indicated against each):

(a) Artificer Apprentices (AAs) – 10+2 (PCM).

(b) Senior Secondary Recruits (SSR) – 10+2 (Sc.).

(c) Matric Entry Recruits (MR), for recruitment of Cooks, Stewards and Musicians – Matriculation.

(d) Non Matric Recruit (NMR), for recruitment of Topass Sailors (Safaiwala) – Class VI.

(e) Direct Entry (Outstanding Sportsmen).

Training Session at Premium Naval Sailor's Training Centre INS Chilka

INDIAN AIR FORCE

Recruitment of Officers

10.18 The policy for selection of officers in Indian Air Force is strictly on the basis of merit and is open to all citizens of the country. Being a technologically intensive service, the IAF strives to maintain high standards for induction of personnel.

10.19 **Induction of Officers:** National Defence Academy (NDA) and Combined Defence Service Examination (CDSE) entries through Union Public Service Commission (UPSC) are prime feeders for the officer cadre. The non-UPSC entries for induction into the officer cadre are: Short Service Commission (SSC) (Men & Women) Flying, NCC Entry (Permanent Commission for men), Ground Duty Officer Commissioning (GDOC) (Non Tech) (PC for Men), Airmen Entry (PC for Air Warriors), Short Service Commission (Technical) (Men & Women) and Short Service Commission (Non Tech) (Men & Women).

10.20 **Recruitment through Service Selection Boards:** Recruitment through Service Selection Boards/Air Force Selection Boards is made for the Flying

Flying Training Institutes bring the Best out of a Trainee Pilot Cadet

(Pilot), Aeronautical Engineering (Electronics), Aeronautical Engineering (Mechanical), Education, Administration, Logistics, Accounts and Meteorology branches of the IAF.

IAF's career website, www.careerairforce.nic.in, has been upgraded to a dynamic website w.e.f. June, 2012 to enable online applications from aspirants. This website was one among the top 20 most-visited government websites during 2013-14.

10.21 **University Entry Scheme:** Final/Pre-Final year students in engineering disciplines are eligible for induction into the technical branches of Air Force as Permanent Commissioned Officers under the University Entry Scheme.

10.22 **Service Entry Scheme:** Under this entry, serving personnel with minimum 10 years of service (of technical and non-technical trades) of the rank of Sergeant and above between the age of (36 - 42 years) and minimum educational qualification as 10+2, are eligible for Commission after screening at unit level followed by Air Force Selection Board selection tests and medical examination. Service personnel of technical trades are inducted in the Technical Branch and personnel from Non-technical trades are inducted in the Ground Duty Branches.

10.23 **Recruitment of Women Officers:** Eligible women are recruited as Short Service Commissioned Officers in the Flying, Aeronautical Engineering (Electronics), Aeronautical Engineering (Mechanical), Education, Administration, Logistics, Accounts and Meteorology branches of the IAF.

10.24 **Recruitment through National Cadet Corps (NCC):** University graduates possessing NCC 'C' Certificate with minimum 'B' grading and 50% marks in graduation are inducted in the Navy and Air Force as Regular Commissioned Officers by way of selection through the Service Selection Boards.

10.25 IAF's career website, www.careerairforce.nic.in, has been upgraded to a dynamic website w.e.f. June, 2012 to enable online applications from aspirants. This website was one among the top 20 most-visited government websites during 2013-14. A total of 1,46,462 applications were submitted for Air Force Common Admission Test (AFCAT) cycle 02/ 2013.

10.26 **Establishment of New Air Force Selection Boards (AFSBs):** Government has approved two additional AFSBs for IAF.

10.27 **Recruitment of Airmen:** Recruitment in Indian Air Force in airmen cadre is on All India Merit Basis through Scheduled Selection Tests. It is open to all eligible citizens of the country without any discrimination of caste, creed, religion or community. In addition to the Scheduled

Tests, Recruitment Rallies are conducted in remote/ low response/ border/ insurgency affected/ naxal affected/ tribal areas/ hill districts and island territories of the country to provide opportunities to youth from these regions to join the IAF at the level of airmen.

10.28 **Induction Training for Civilians:** Civilians constitute a sizeable work force of IAF and play a very important role in achieving overall objectives/ goals set by IAF. Till recently, there was no induction training of civilians joining Air Force; therefore, an Induction Training course for civilian clerks joining IAF has been introduced. The objective of the training is to acquaint them with the IAF and various nuances of Civil Administration, enhance their skills and inculcate in them a sense of professionalism. This course will be conducted at Air Force Station (AFS) Jalahalli under the aegis of HQ Training Command IAF.

10.29 **Capsule Course for Air Officers of IAF:** A Capsule Course on Civil Administration has been introduced for Air Force Officers posted as Officer- in- Charge of Civil Administration. Objective of this course is to apprise the officers regarding Conduct Rules, Disciplinary Proceedings, Handling of Court/ CAT Cases, Pay Structure & MACP, Financial Effect of Penalty, Leave Rules and JCM, etc. The course has been well received by the Officers. Three such courses are being conducted annually.

10.30 **Induction of Basic Trainer Aircraft PC-7 Mk-II:** With the induction of Pilatus PC-7 Mk-II aircraft in IAF, the flying training pattern in IAF has witnessed a paradigm shift. The new Basic Training Aircraft (BTA) has changed the philosophy of training due to improved performance and advanced onboard avionics and navigation systems. The aircraft in its role as the Basic Trainer Aircraft, will lay a solid foundation for future generation of pilots of all streams, including, fighters, transports or helicopters.

10.31 **Improvement in Career Prospects:** To encourage merit in performance of officers in various 'In-Service' courses, due weightage is being given to the officers' performance in the courses during merit-based selections for placements/appointments. This would significantly improve Professional Military Education (PME) amongst the officers.

INDIAN COAST GUARD

10.32 **Recruitment of officers:** The Officers are recruited into Coast Guard bi-annually. The vacancies for Assistant Commandant in Coast are advertised in Employment News and leading newspapers in the month of December/January and June/July. Five years relaxation of age for SC/ ST and 3 years for OBC is admissible for recruitment. The Officers are recruited in the following streams:

(a) **General Duty:** Male/ female candidates

having Bachelor's degree with mathematics and physics as subject up to 12th standard of 10 + 2 + 3 scheme of education and between the age group of 21-25 years are eligible to apply for officers as General Duty stream.

(b) **General Duty (Short Service Appointment Scheme) for Women:** Women candidates having Bachelors degree with mathematics and physics as subject up to 12th standard of 10 + 2 + 3 scheme of education and between the age group of 21-25 years are eligible to apply for officers as General Duty stream.

(c) **General Duty (Pilot/ Navigator):** Male/ Female candidates having Bachelor's degree in mathematics and physics as subject during graduation and between age group of 19-27 years are eligible to apply for officers as General duty (Pilot/ Navigator) stream.

(d) **General Duty (Commercial Pilot Licence Short Service Entry):** Male/ Female candidates having 12th class in the 10 + 2 + 3 scheme or equivalent and in possession of Director General Civil Aviation approved current Commercial Pilot License (CPL) on the date of submission of application and between age group of 19-27 years are eligible to apply for officers in CPL short Service Entry.

(e) **Technical Branch:** Male candidates with degree in engineering (Naval architecture/ Mechanical/ Electrical/ Telecommunication and Electronic/ Design/ Production Aeronautical/ Control Engineering) or equivalent qualification and between age group of 21-30 years are eligible to apply for officers in technical stream.

10.33 **Selection of Officers:** The Selection of officers [General duty/ General Duty {Pilot/ Navigator/ CPL Holders (Short Services Appointment)}], Women Short Service Appointment and Technical Branch is made through Coast Guard Selection Board.

10.34 **Induction of Subordinate officers as officers:** Outstanding subordinate officers up to the age of 48 years are selected Assistant Commandant in General duty and Technical branch as per the selection procedure.

10.35 **Recruitment of Personnel below Officers Rank (PBORs):** the PBORs are recruited into Coast Guard bi-annually. The vacancies for PBORs in Coast Guard are advertised in Employment News and all leading Newspapers in the month of December/ January and June/ July. The PBORs are recruited in the following main streams:

(a) **Yantrik:** Male candidate having passed matriculation with three years diploma in mechanical/ Electrical/ Electronic

Engineering and between the age group of 18-22 years are eligible to apply as Yantrik.

(b) **Navik (General Duty):** Male candidate having passed matriculation with three years diploma in Mechanical/ Electrical/ Electronic Engineering and between the age group of 18-22 years are eligible to apply as Navik (General Duty).

(c) **Navik (Domestic Branch):** Male candidates having passed Matric and between age group of 18-22 years are eligible to apply as Navik (Domestic Branch).

TRAINING FOR DEFENCE SERVICES

10.36 A large number of training institutions in the Defence Sector work in coordination with one another. The important ones are described in the following paragraphs.

SAINIK SCHOOLS

10.37 Sainik Schools were established as a joint venture of the Central and State Governments. These are under the overall governance of Sainik Schools Society. At present, there are 25 Sainik Schools located in various parts of the country. Proposals to set up a Sainik School at Mainpuri in Uttar Pradesh and two more schools in Rajasthan have been approved.

10.38 The objectives of Sainik Schools include bringing quality Public School education within the reach of the common man, all round development of a child's personality and to remove regional imbalance in the officer's cadre of the Armed Forces. The number of cadets joining the National Defence Academy is on the rise in keeping with the primary aim of establishing of Sainik Schools to prepare boys academically, physically and mentally for entry into the National Defence Academy. For the 130th NDA Course which commenced in July 2013, 112 Cadets from 21 Sainik Schools joined the NDA and Naval Academy.

10.39 Sainik Schools admit boys into classes VI and IX. Their age should be 10-11 years for classes VI and 13-14 years for class IX as on 1st July of the year in which admission is sought. Admissions are made strictly in the order of merit on the basis of an All India Sainik School Entrance Examination held in January each year.

10.40 The Sainik Schools Society has taken a number of measures to achieve academic excellence which have also resulted in achieving record higher Board and NDA results. National University for Educational Planning and Administration has carried out a comprehensive study on the functioning of Sainik Schools to further enhance performance of Sainik Schools. Efforts are also being made to open Sainik Schools in small states located in North-East of the Country.

RASHTRIYA MILITARY SCHOOLS (RMS)

10.41 There are five Rashtriya Military Schools in the country at Belgaum and Bangalore in Karnataka, Chail in Himachal Pradesh and Ajmer and Dholpur in Rajasthan. The last Rashtriya Military School was set up at Dholpur. These schools are affiliated to CBSE. These schools aim to provide quality education to boys and prepare them to join Defence Services.

10.42 Rashtriya Military Schools admit boys through a Common Entrance Test. The candidates are tested in four subjects i.e. English, Mathematics, Intelligence and General Knowledge. 67% of the seats in RMS are reserved for the wards of Junior Commissioned Officers/ other ranks, 20% seats are reserved for wards of Commissioned Officers and the remaining 13% for the wards of civilians.

NATIONAL DEFENCE ACADEMY (NDA)

10.43 NDA is a premier Tri-Service institution which trains cadets of all three Services before inducting them into their respective pre commissioning training academies. Keeping in mind the shortage of officers in the Indian Armed Forces and the consequent urgency for making up the deficiency, the intake capacity of NDA was recently enhanced from 1800 cadets to 1920 cadets with the sanction for raising an additional Sqn at NDA i.e. 16th Sqn. Since, the construction of a building will take a few more years, as an interim measure, pre-fabricated shelters to accommodate 120 cadets have been constructed at NDA. In addition, a proposal for raising of an additional Battalion (5th Bn) with 4 Sqns at NDA to further enhance the intake capacity of cadets to 2400 cadets by 2015 is being processed. The academic threshold of NDA cadets is also being enhanced to equip military leaders of tomorrow to cope with the future technology inductions in the Indian Armed Forces.

Keeping in mind the shortage of officers in the Indian Armed Forces and the consequent urgency for making up the deficiency, the intake capacity of NDA was recently enhanced from 1800 cadets to 1920 cadets with the sanction for raising an additional Sqn at NDA i.e. 16th Sqn.

RASHTRYA INDIAN MILITARY COLLEGE (RIMC)

10.44 Rashtriya Indian Military College (RIMC) was established in 1922 with the aim to prepare selected boys to join National Defence Academy (NDA) and Naval Academy (NAVAC). 25 cadets are admitted in each term twice a year (January and July) on the basis of All India Entrance Examination without any reservation.

10.45 Selection of boys for RIMC is through a written examination cum viva voce conducted through the State Governments. Seats for respective States are reserved based on population. The College admits boys in Class VIII.

INDIAN MILITARY ACADEMY (IMA), DEHRADUN

10.46 Founded in 1932, Indian Military Academy, Dehradun aims at the fullest development of intellectual, moral and physical qualities of persons joining the Army as officers. The various modes of entry into IMA are:

(a) On graduation from NDA.

(b) On graduation from Army Cadet College, which is a Wing of the IMA itself.

(c) Direct Entry graduate cadets, who qualify the Union Public Service Commission Exam and get through the Service Selection Board.

(d) For Technical Graduate's Course.(TGC)

(e) Under University Entry Scheme (UES) for engineering college students in Final/ Pre-Final year of studies.

(f) Through 10 + 2 Technical Entry Scheme (TES)

10.47 The IMA also imparts training to Gentlemen Cadets from friendly countries.

OFFICERS TRAINING ACADEMY (OTA), CHENNAI

10.48 Established in 1963, the Officers Training School (OTS) was re-designated as Officers Training Academy (OTA) from January 1, 1988 on completion of 25 years of its existence. Its main task, before 1965 was to train Gentlemen Cadets for grant of Emergency Commission. From 1965 onwards, the Academy trains cadets for Short Service Commission.

10.49 With the entry of women officers in the Army since September 21. 1992, around 100 lady officers now get commissioned from OTA every year in Army Service Corps, Army Education Corps, Judge Advocate General's Department, Corps of Engineers, Signals and Electrical and Mechanical Engineers.

10.50 OTA imparts pre-commission training for the following:

(a) Short Service Commission (Non Technical) for Graduates.

(b) Short Service Commission (Technical) for Graduates.

(c) Short Service Commission (Woman) for Graduate/ Post Graduate Lady Cadets.

OFFICERS TRAINING ACADEMY (OTA), GAYA

10.51 The Cabinet Committee on Security (CCS), approved setting up of the second Officers Training Academy (OTA) at Gaya,

Bihar on December 3, 2009. Training at this academy commenced from July 18, 2011. At present 305 cadets are undergoing training at OTA, Gaya. The capacity will be progressively increased to 750 Gentlemen cadets.

ARMY WAR COLLEGE, MHOW

10.52 Re-designated as the Army War College from January 15, 2003, the earlier College of Combat was created out of Infantry School and established as an independent institution on April 1, 1971. A premier all arms tactical training institution for officers, the AWC performs the important function of evaluation of new concepts and doctrines in the fields of tactics and logistics.

JUNIOR LEADERS WING (JLW), BELGAUM

10.53 The Junior Leaders Wing at Belgaum is training junior officers, JCOs and NCOs in Sub Unit Level Tactical and Special Mission Techniques to enable them to carry out assigned operational missions in varied terrain under severe stress and strain and be able to command and administer their Sub-Units effectively in war and peace. It trains officers and NCOs of Army, Para Military Forces, Central Police Organisations and friendly foreign countries in commando type of operations and makes them capable of either forming part of special mission groups or leading independent missions in all types of terrain and operational environment.

JUNIOR LEADERS ACADEMY (JLA), BAREILLY

10.54 Considering the need for more training facilities, JLA Ramgarh has been amalgamated with JLA, Bareilly. The institution has been imparting training to 4212 candidates every year.

HIGH ALTITUDE WARFARE SCHOOL (HAWS), GULMARG

10.55 The aim of the School is to train selected personnel in all aspects of high altitude (HA) mountain warfare and develop techniques for fighting in such terrains. HAWS conducts two series of courses, viz, Mountain Warfare (MW) and Winter Warfare (WW) at Sonamarg and Gulmarg respectively for officers, JCOs and NCOs. The training periods broadly run from January to April (WW Series) and May to October (MW Series). Personnel from the School have scaled some of the important peaks in the world including Mt.Everest, Mt Kanchenjunga and Mt.Mckinley in the USA.

COUNTER INSURGENCY & JUNGLE WARFARE SCHOOL (CIJW), VEIRANGTE

10.56 The CIJW conducts courses for

Officers, JCOs/NCOs in counter insurgency techniques, language courses in Assamese, Bodo, Nagamese, Manipuri/ Tangkhul as also imparts Pre-induction Training (PIT) for all units prior to induction into insurgency areas.

COUNTER INSURGENCY PRE INDUCTION TRAINING BATTLE SCHOOLS

10.57 Since the capacity of CIJW School was limited and on account of peculiar operational situation and administrative problems of movement of Units, it was considered necessary to impart training to units at places closer to their areas of operation, more Corps Battle Schools from within the resources of the Army have been established at Kheru, Sarol and Bhalra for units moving into Northern Command and at Thakurbari for units moving into Assam and Meghalaya. Besides training for counter insurgency, these schools especially in the Northern Command are training units for their role along the line of control and high altitude.

INFANTRY SCHOOL, MHOW

10.58 The Infantry School is the largest and oldest military training institution of the Indian Army. Courses conducted at Infantry Schools are Young Officers Course, Platoon Weapon Course, Mortar Course, Anti Tank& Guided Missile Course, Medium Machine gun & Automatic Grenade launcher (J/N) Course, Section Commanders Course, Automatic Data Processing Course, Sniper Course and Support Weapon Course. The institution is training Officers, JCOs and Ors of not only infantry but other arms and services also, besides Para Military Forces and Civil Police Organisations.

COLLEGE OF MATERIALS MANAGEMENT

10.59 The College owes its lineage to Indian Army Ordnance Corps (IAOC) School of Instruction established at Kirkee in October, 1925. The School was later re-designated as IAOC Training Centre in February, 1939 and shifted to its present location at Jabalpur. In January, 1950, the IAOC, School became the Army Ordnance Corps (AOC) School. The AOC, School was renamed as College of Materials Management (CMM) and affiliated to the University of Jabalpur (Rani Durgavati Vishwa Vidhyalaya) in 1987. The CMM attained an autonomous status in 1990. The College is also registered as a 'Government College' with the University Grants Commission. It also has the approval of All India Council of Technical Education (AICTE).

10.60 The National Assessment and Accreditation Council (NAAC), an autonomous body constituted under the UGC Act has awarded Five Star (Highest) Accreditation to the College. The college imparts necessary institutional training to

all ranks of AOC and civilians entrusted with management of Ordnance support in the Indian Army. It also imparts training in handling unit administration and material management to selected Officers, JCOs and Other Ranks of all arms and services.

SCHOOL OF ARTILLERY, DEOLALI

10.61 The School of Artillery, Deolali, the academic centre for various sub-disciplines of the science and methodology of artillery warfare imparts technical training to Officers, JCOs and NCOs on artillery weapons and systems including training of pilots for Air Observation Post duties. Besides, the review of doctrines, study and trials of artillery equipment, both Indian and foreign, is also carried out.

10.62 Apart from a large number of Officers, JCOs and NCOs of the Indian Army, the school has also trained several officers and personnel from friendly foreign countries during the year.

ARMY AIR DEFENCE COLLEGE, GOPALPUR

10.63 The Army Air Defence College (AADC) earlier functioned as a wing of School of Artillery, Deolali till October, 1989, when it was moved to Gopalpur before separation of Air Defence Artillery from the main branch of Artillery. The college trains personnel of Air Defence Artillery, others arms and armed forces personnel of friendly foreign countries in Air Defence related subjects.

10.64 The AADC conducts a number of courses. Some of the courses are Long Gunnery Staff Course (Officers), Young Officers Course, Electronic Warfare Course, Senior Command Air Defence Course, Long Gunnery Staff Course, Junior Commissioned Officer/Non Commissioned Officer, Technical Instructors Fire Control Course, Aircraft Recognition Course, Unit Instructors and Crew Based Training and Automated Data Processing Course.

ARMY SERVICE CORPS (ASC) CENTRE AND COLLEGE, BANGALORE

10.65 Army Service Corps Centre (South) and Army School of Mechanical Transport were merged with ASC Centre at Bangalore to establish Army Service Corps Centre and College at Bangalore on May 1, 1999. It is a premier training institute imparting basic and advanced training in multifarious disciplines viz logistics management, transport management, catering, automated data processing etc. to Officers, Junior Commissioned Officers, Other Ranks and recruits of Army Service Corps as well as other arms and services.

10.66 Since 1992, the ASC College has been affiliated to Rohilkhand University, Bareilly for award of diplomas/ degrees in Logistics and Resource Management.

ARMY EDUCATION CORPS TRAINING COLLEGE AND CENTRE, PACHMARHI

10.67 The AEC Training College & Centre, Panchmarhi is a Defence Seat of Excellence in Educational Training in the Armed Forces. It is also an Autonomous College affiliated to Barkatullah University, Bhopal with academic and administrative powers to design, conduct, test and award its own courses and degrees.

10.68 The Department of Map Craft runs a ten week long Map Reading Instructors Course for AEC Officers and Personnel Below Officer Rank (PBOR) of all Arms and Services of Indian Army, Para Military Forces personnel and personnel from friendly foreign countries.

10.69 The 12-week long Unit Education instructors (UEI) Course trains ORs from all Army and Services of the Indian Army to be effective instructors in their units.

10.70 The Foreign Language Wing (FLW), which is one of the three Divisions of the AEC Training College & Centre, a premier node of foreign language training, not only in the Armed Forces but also in the national academic environment has two digitized language labs, each with a capacity of 20 students.

MILITARY MUSIC WING, PACHMARHI

10.71 The Military Music Wing (MMW) raised in October, 1950 under the patronage of the then C-in-C Gen (later Field Marshal) KM Cariappa, OBE as a part of the AEC Training College & Centre, Pachmarhi has a rich treasure of more than 200 musical compositions to its credit and has also excelled in maintaining the standard of military music in India through a diverse range of courses designed to train the recruit bandsmen, pipers and drummers.

REMOUNT AND VETERINARY CORPS CENTRE AND SCHOOL, MEERUT

10.72 The Remount and Veterinary Corps (RVC) Centre and School, aims at training officers and PBORs of all Arms and Services on animal management and veterinary aspects. Eleven courses for officers and six for PBORs are conducted.

ARMY SPORTS INSTITUTE (ASI), PUNE

10.73 With a view to producing prospective medal winners at international sporting events, the Army Sports Institute at Pune has been set up alongwith Army Sports Nodes in selected disciplines at various placed in the country. Appropriate funds have been earmarked for state-of-the-art infrastructure and equipment coupled with food, habitat, foreign exposure and training under foreign coaches.

ARMY SCHOOL OF PHYSICAL TRAINING, PUNE

10.74 Army School of Physical Training (ASPT) a premier institution imparting

systematic and comprehensive instruction to personnel of the Army regarding the conduct of physical training in units and sub units, also imparts basic training in Sports and Games with a view to improving the standard in the Army and complement physical training through recreation in games and sports. These courses are attended by Officers, JCOs and ORs of the Army, Para Military Forces and service personnel from friendly foreign countries. In collaboration with National Institute of Sports ASPT has started six allied sports in Boxing, Volleyball, Basketball, Swimming and Life Saving, Judo and Yoga Courses for PBORs.

COMBAT ARMY AVIATOR TRAINING SCHOOL (CAATS), NASIK ROAD

10.75 Combat Army Aviator Training School (CAATS) raised at Nasik Road in May, 2003 aims to train aviators in aviation skills and handling of aviation units in various operations of war, to train aviation instructors to develop Standard Operating Procedures (SOPs) and also to assist Army Training Command in development of Aviation Tactical Doctrine in Synergy with ground troops. The courses identified to be run in the School are Pre-Basic Pilot Course, Basic Army Aviation Course, pre-Qualified Flying Instructor Course, Aviation Instructor Helicopter Course, Helicopter Conversion on type, Flight Commanders Course and New Equipment Course.

COLLEGE OF MILITARY ENGINEERING (CME), PUNE

10.76 The College of Military Engineering at Pune is a premier technical institution conducting training for personnel of the Corps of Engineers, other Arms and Services, Navy, Air Force, Para Military Forces, Police and Civilians. Besides, personnel from friendly foreign countries are also trained. CME is affiliated to Jawaharlal Nehru University (JNU) for the award of B.Tech and M. Tech degrees. All India Council for Technical Education (AICTE) also recognizes the graduate and postgraduate courses run by the CME.

MILITARY COLLEGE OF ELECTRONICS AND MECHANICAL ENGINEERING (MCEME), SECUNDERABAD

10.77 The role of MCEME is to provide technical education to all ranks of EME, including civilians, in various disciplines of engineering, weapon systems and equipment with special reference to their maintenance, repairs and inspection and to provide training in management and tactics at senior, middle and supervisory levels. The MCEME is designed to train 1760 personnel (all ranks). It conducts 13 courses for officers and 61 different courses for PBORs.

10.78 Computer Based Training Packages (CBTs) and digitized charts have been developed which contain exhaustive

technical information on the functioning, repair, maintenance, servicing aspects and the correct usage of the electrical and electronics portion of equipment being taught at MCEME.

CORPS OF MILITARY POLICE CENTRE AND SCHOOL, BANGALORE

10.79 The role of the School is to train officers and PBORs on military and police duties in law, investigation, traffic control etc. Four courses for officers and fourteen courses for PBORs are being conducted. The total strength of students being trained is 910.

ARMY AIRBORNE TRAINING SCHOOL (AATS), AGRA

10.80 The Army Airborne Training School (AATS) was previously designated as Army Air Transport Support School (AATSS). In response to the need to concentrate all Airborne Training under one single agency, the Army Air Transport Support School was redesignated as Army Airborne School with effect from January 15, 1992.

MILITARY COLLEGE OF TELECOMMUNICATION ENGINEERING (MCTE), MHOW

10.81 MCTE, Mhow trains signal Officers in Combat Communication, Electronic Warfare, Communication Engineering, Computer Technology, Regimental Signal Communications and Cryptology. Besides, the five Training Faculties and Wings, the College has a Department of Administration to provide administrative and logistic support to the staff and the students, a Conceptual Studies Cell to evolve communication doctrines and produce training material, a modern and well-stocked library, and an in house printing press. Trainees are provided with an opportunity to study and train in a formal setting to equip them with the requisite skills, knowledge and abilities for current as well as future tasks.

MILITARY INTELLIGENCE TRAINING SCHOOL AND DEPOT (MINTSD), PUNE

10.82 The Military Intelligence Training School and Depot (MINTSD) is a premier establishment responsible for imparting training on Intelligence Acquisition, Counter Intelligence and Security aspects to all ranks of the Indian Army, Navy, Air Force, and Para Military Forces and personnel of friendly foreign countries. Civilian officers of the Department of Revenue Intelligence are also trained at this establishment. The School has the capacity to impart training to 90 officers and 130 Junior Commissioned Officers/ Non Commissioned Officers of all the arms at a time. The School trains approximately over 350 Officers and 1100 Junior Commissioned Officers/Non Commissioned Officers every year.

ELECTRONIC AND MECHANICAL ENGINEERING SCHOOL (EME), VADODARA

10.83 The EME School conducts postgraduate level courses for officers and diploma and certificate level courses for PBOR. A number of foreign officers and PBOR from friendly foreign countries have been attending various courses conducted at EME, School.

INSTITUTE OF MILITARY LAW, KAMPTEE

10.84 The Institute of Military Law was established at Shimla. In 1989, the institute was shifted to Kamptee. The charter of duties of the School includes a comprehensive system of legal education for officers of all arms and services of the Army. The School undertakes wide-ranging research, development and dissemination work in the field of Military and allied laws.

ARMOURED CORPS CENTRE AND SCHOOL, AHMEDNAGAR

10.85 In 1948, the Training Wings, the Recruits Training Centre and Armoured Corps Depot and Records were shifted to Ahmadnagar where the fighting Vehicles School was already functioning and they were all amalgamated to form the Armoured Corps Centre and School and Armoured Corps Records. It has six wings namely School of Armoured Warfare, School of Technical Training, Basic Training Regiment, Driving and Maintenance Regiment, Automotive Regiment and Armament and Electronics Regiment for Specialised training in these disciplines.

FOREIGN TRAINING

10.86 With the interest of foreign armies for training in Indian Army establishments, the scope and reach of foreign training cooperation has increased considerably in recent past. Army personnel from strategically important neighbouring countries, South East Asia, Central Asian Republics (CAR), African continent and a few developed countries are regularly being trained in India. Training courses are also being availed by Indian Officers in certain disciplines in developed countries abroad every year.

10.87 Under the Indian Technical and Economic Cooperation (ITEC) programme of Ministry of External Affairs, the Government of India provides assistance to the developing and under developed nations. Under this programme, personnel from developing countries get training in service institutions either free of cost or at subsidized rates. Developed western countries also send their officers for training in these institutions on reciprocal and self -financing basis by paying cost of training and other related charges.

11

RESETTLEMENT AND WELFARE OF EX-SERVICEMEN

Participation in CII Seminar 'Skills required for Employment'

KSB Secretariat is the apex body of Government of India responsible for implementing Government policies for welfare of Ex-servicemen and their families.

11.1 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 Secretariat (KSB Sectt.), Directorate General (Resettlement) (DGR) and Central Organisation, Ex-servicemen Contributory Health Scheme (ECHS). The KSB is responsible for the welfare of Ex-Servicemen and their dependents and also for the administration of welfare funds. The KSB is assisted in its task by 32 Rajya Sainik Boards (RSBs) and 386 Zila Sainik Boards (ZSBs), which are under the administrative control of respective State Governments/Union Territory Administrations. The office of Directorate General of Resettlement implements various policies/ schemes/ programmes on pre and post retirement training, re-employment and self- employment etc. The DGR is assisted in its task by Directorates of Resettlement Zones (DRZs) at each of the 5 Commands. ECHS takes care of the healthcare and medical needs of Ex-servicemen and their dependents.

WELFARE

11.2 **Kendriya Sainik Board, Secretariat:** KSB Secretariat is the apex body of Government of India responsible for implementing Government policies for welfare of Ex-servicemen and their families. The welfare schemes for Ex-servicemen are implemented through Rajya Sainik Boards located at State capitals and Zila Sainik Boards located at district level. The establishment expenses of these RSBs/ZSBs are shared by the Centre and states. The funding pattern is 75:25 in respect of special category states namely, Arunachal Pradesh, Assam, Jammu and Kashmir, Meghalaya, Mizoram, Manipur, Nagaland, Sikkim, Tripura, Himachal Pradesh and Uttarakhand and 60:40 in the case of other States.

ARMED FORCES FLAG DAY FUND (AFFDF)

11.3 Apart from the Defence Services Budget, Armed Forces Flag Day Fund is the

major source of funding for welfare of ESM and their dependents. Presently, the corpus of AFFDF is ₹ 254.05 Crore. With concerted efforts made this year, ₹28.00 Lakh have been collected so far.

11.4 Out of the interest earned on the AFFDF corpus, 92.5% is utilized for funding various welfare schemes for the ESM and their dependents and 7.5% is ploughed back to the AFFDF corpus.

Raksha Mantri's Discretionary Fund (RMDF)

11.5 Financial assistance is provided to ESM/ dependents for their identified personal needs, e.g., Penury Grant, Children Education Grant, etc. under RMDF. During 2013-14, financial assistance amounting to ₹ 21.82 Crore has been disbursed under RMDF.

PM SCHOLARSHIP SCHEME (PMSS)

11.6 To support higher technical and professional education of dependent wards/ widows of ex-servicemen and ex-Indian coast guards, the scheme was introduced in the year 2006. 4000 scholarships are awarded annually under this scheme to the wards of Ex-servicemen/widows. The scheme is funded out of National Defence Fund. The amount of scholarship is as under:

(a) ₹ 2,000/- per month for boys (paid annually).

(b) ₹ 2,250/- per month for girls (paid annually).

11.7 Since the inception of the scheme an amount of ₹ 118.5 Crore has been disbursed to students undergoing Professional Degree Courses in India duly recognized by Indian regulatory bodies such as AICTE, MCI etc. During 2013-14, 19337 students have availed benefit under the Prime Minister's Scholarship Scheme and an amount of ₹ 40.89 Crore has been disbursed thereunder.

Other Welfare Schemes

11.8 **Financial Assistance for Serious Diseases:** Financial assistance upto 90% and 75% of expenditure or maximum of ₹ 1,25,000/- for heart ailments, etc. and ₹ 75000/- per year for dialysis and cancer is being provided to non-pensioner PBOR and officers, respectively. The scheme is also applicable to Indian Ex-servicemen Welfare Organisation in Nepal (IEWON), Nepal and ₹1.35 Crore has been disbursed during 2013-14 to Nepal domiciled ESM.

11.9 **Paraplegic Rehabilitation Centres (PRCs):** In addition to ₹ 14,600/- per annum per inmate, annual grant of ₹ 9,60,750/- and ₹ 4,34,375/- is being provided for upkeep/ establishment to PRC Kirkee and Mohali, respectively, the autonomous organizations run for rehabilitation of paraplegic and tetraplegic ESM. An amount of ₹34.46 Lakh

has been disbursed to both the PRCs.

11.10 **War Memorial Hostels (WMH):** WMH Grant of ₹ 1350/- and ₹ 675/- per month per child is provided to wards of war widows/ war disabled whose death/ disability is attributable to war/ war like operations respectively. An amount of Rs 30.91 Lakh (Attributable) and ₹ 12.29 Lakh (Non-attributable) has been disbursed under this scheme.

11.11 **St Dunstan's Organisation:** St Dunstan's Organisation for blinded Soldiers, Sailors and Airmen provides psychological support to overcome the shock of blindness and also imparts vocational training to enable the blind ESM to adjust to the changed situation in society, besides providing after care service. Every year, ₹ 14 Lakh is released to the Organization.

11.12 **Reservation of Seats in Medical/ Dental Colleges:** Some seats have been allotted to KSB Secretariat as Government of India nominee for Wards of Defence personnel for the year 2013 –14. 21 MBBS seats and 03 BDS seats have been allotted during the year 2013–14.

RESETTLEMENT

11.13 The main thrust of the Department of Ex-servicemen Welfare (DESW) is on resettlement/re-habilitation of ESM. Nearly 60,000 armed forces personnel retire or are released from active service every year, most of them being in the comparatively younger age bracket of 35 to 45 years and they need a second career to support their families. These personnel constitute a valuable, disciplined, well-trained, dedicated and talented pool available for nation building. Resettlement is sought to be achieved through the following modalities:

Directorate General Resettlement (DGR) is entrusted with the responsibility of preparing retiring/ retired service personnel for a second career.

(a) Assisting ESM in finding re-employment and upgrading their skills by imparting necessary training to prepare them to take on new assignment/ jobs.

(b) Constant endeavor to provide employment opportunities in government/quasi government/ public sector organizations.

(c) Pro-active action to facilitate re-employment of ESM in the Corporate Sector.

(d) Providing jobs through schemes for self-employment.

(e) Assistance in entrepreneurial ventures.

TRAINING PROGRAMMES

11.14 Directorate General Resettlement (DGR) is entrusted with the responsibility of

preparing retiring/ retired service personnel for a second career. Since the focus of training is on resettlement of ESM and retiring service personnel in civilion life, training courses are constantly reviewed to cater to the requirements of public, private and the corporate sector.

Officers' Training

11.15 For training of ESM (O) the Resettlement Training Programme range from modular management and vocational courses of three months duration to business management programme of six months duration. New courses like Business Excellence through Six Sigma, Certified Financial Planner, Project Management Course have been introduced for the training year 2013-14.

JCOs/ OR and Equivalents Training

11.16 For JCOs/ OR and equivalent, the training courses are conducted in diversified fields for a duration of upto one year in government/ semi-government and private institutes spread all over the country. These courses are conducted free of cost for the JCOs/ ORs. All the training courses are reviewed every year based on the need of Industry, re-employability and feedback received from Service Headquarters. For the training year 2013-14, a number of new courses including high value courses having better employability prospects in various sectors have been conducted.

ESM Training

11.17 Under this scheme, funds are allotted to RSBs for conducting vocational training for ESM in their States. The scheme is primarily meant for those ESM who could not avail the facility of resettlement training while in service. The scheme has also been extended to the widow/ one dependent of an ESM. The course is free of cost for the ESM and a stipend of ₹1000/- per month is also paid to each trainee. During the year 2013-14, 662 Officers, 27,004 JCOs/ OR and 179 ESM have been trained.

11.18 **Reservation in Government Jobs:** The Central Government has provided for the following reservation in services for ESM:

a) 10% in Group 'C' posts and 20% in Group 'D' posts.

b) 14.5% in Group 'C' and 24.5% Group 'D' posts in PSUs and Nationalized Banks.

c) 10% posts of Assistant Commandants in paramilitary forces.

d) 100% in Defence Security Corps.

11.19 Department of ESW has recommended to Department of Personnel and Training (DoPT) to consider shifting of 20% reservation in the erstwhile Group 'D' to Group 'C' and 10% reservation available

in Group 'C' to Group 'B' in the government jobs, as the Group 'D' posts have been abolished by the government as per recommendation of the 6th Pay Commission (CPC).

11.20 On the advice of DOP&T, Department of Ex-Servicemen Welfare issued OM dated March 18, 2013 granting Ex-recruits ESM status with effect from February 1, 2006.

11.21 **Placement:** Persistent efforts of the Department with the dual aim of increasing awareness amongst the Corporate Sector on the availability of valuable human resources in Ex-Servicemen and enhancing job opportunities for ESM in Corporate/ Private Sector have borne fruit. 52607 ESM have gained employment. The details of some of the major placements are as under:

(a) **Security Agencies:** The DGR empanels/ sponsors ESM run private security agencies, companies and ESM corporations for providing security guards to various Central Public Sector Undertakings (PSUs). The scheme offers good self-employment opportunities to retired officers and adequate employment opportunity to retired JCOs/ ORs and equivalent in the field of their expertise. The number of ESM employed during 2013-14 is 53414. A total of 338 Security Agencies have been empanelled during 2013-14.

(b) **Officers' Employment:** During the year 2013-14, 696 officers have been placed.

11.22 **Employment Directorate**

(a) Guidelines for functioning of DGR empanelled Security Agencies have been issued by Department of Ex-Servicemen Welfare in July, 2012 to ensure smooth and transparent functioning of Security Agency Scheme. Further modification in these guidelines has been done in January, 2013. The guidelines are available on the website www.desw.gov.in.

b) Details of empanelment of Security Agencies and sponsorship done are being regularly uploaded in DGR website www.dgrindia.com for the information of all stake holders and to bring about transparency in the system.

11.23 **Upgradation of Skills Category for ESE Security Guards:** DGR has taken the initiative with the Ministry of Labour and Employment for matching basic wages of security guards with their skill set. The new gazette has come into force wherein Security guards without arms formerly categorized as 'unskilled' have been upgraded to 'semi-skilled' category. Similarly, security guards with arms have been upgraded from 'semi-skilled' to 'skilled' category.

SCHEMES FOR SELF EMPLOYMENT

11.24 The Government has formulated several self-employment schemes for rehabilitation and resettlement of Ex-servicemen and their families. DGR has revised its MoU with Coal India Limited and Coal Subsidiaries on December 12, 2013. At present 61 ESM Companies are carrying out transportation of coal in various Coal Subsidiaries. Demand of 13 new ESM Coal companies has been received from various Coal Subsidiaries and sponsorship for the same is under progress. In Coal tipper scheme during the year 2013-14, a total of 58 widows/ disabled soldiers have been benefited. DGR has issued 194 eligibility certificates to entitled ESMs/ widows/ dependents during this year for allotment of various oil product agencies. Company Owned and Company Operated (COCO) retail outlets of IOCL and BPCL are providing employment to Commissioned Officers of defence services for managing retail outlets all over India under the COCO scheme. DGR has sponsored 891 ESM (O) for COCO Scheme.

11.25 **Mother Dairy Milk Booths and Fruit and Vegetable (SAFAL) shops:** This is a time tested well-paying self-employment scheme for ESM JCOs/ ORs equivalent. 258 JCOs/ ORs equivalent have benefited from this scheme during the year 2013-14.

11.26 **Management of CNG Station by ESM (Officers) in NCR:** The Scheme has been recently revised. The scope of the scheme has been extended to cover entire NCR to include NOIDA, Faridabad and Gurgaon. 123 ESM (Officers) have benefited from this Scheme during the year 2013-14.

11.27 **Allotment of Army Surplus Class V 'B' Vehicles:** Ex-Servicemen and widows of defence personnel, who died while in service are eligible to apply for allotment of Army Surplus Class V 'B' vehicles. A total of 122 ESM were registered with DGR.

11.28 **Publicity and Awareness Campaign:** To spread awareness and in commemoration of the sacrifices made by the Defence Forces Personnel a 13 episode TV series "Sare Zahan Se Achha" has been completed and will be telecast on Doordarshan.

11.29 DGR participated in the four day DEFEXPO-2014 global exhibition held at Pragati Maidan, New Delhi from February 6, 2014. DGR showcased its trained and disciplined human resource in the form of ex-servicemen, who could be gainfully employed by the Corporate Sector and CPSUs.

HEALTH CARE

11.30 Ex-Servicemen Contributory Health Scheme (ECHS) was launched with effect from April 1, 2003. The Scheme was further expanded in October, 2010.

ECHS aims to provide quality healthcare to Ex-Servicemen (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 Govt. Health Scheme (CGHS) and is financed by the Government of India. The endeavour is to provide cashless treatment by utilising empanelled hospitals.

Total beneficiaries under the scheme is 45,86,889. The scheme has 929 civil hospitals empanelled with it and all the above hospitals have signed Memorandum of Agreement for providing cashless treatment to ECHS beneficiaries.

11.31 ECHS Polyclinics are designed to provide **'Out Patient Care'** that includes consultations, essential investigation and provision of medicines. Specialised consultations, investigations and **'In Patient Care'** (Hospitalisation) is provided through spare capacity available in Service hospitals, all Government hospitals as also through civil medical facilities empanelled with ECHS.

11.32 **Regional Centres:** There are a total 28 Regional Centres spread across the country. A total of 432 ECHS Polyclinics including six polyclinics in Nepal have been sanctioned by the Government of India so far. Out of this, 388 polyclinics have been operationalised.

Present Status

11.33 As on March 31, 2014, a total of 14,14,531 ESM pensioners have enlisted themselves with the scheme alongwith 31,72,358 dependents. Total beneficiaries under the scheme is 45,86,889. The scheme has 929 civil hospitals empanelled with it and all the above hospitals have signed Memorandum of Agreement for providing cashless treatment to ECHS beneficiaries. ₹ 966.93 crores were spent on medical treatment of ECHS patients during the last financial year.

Inauguration of Echs Polyclinic : Shakurbasti

11.34 (a) **On-Line Bill Processing:** Government accorded sanction for 'On-Line Bill Processing' using a Bill Processing Agency (UTI-ITSL) in February, 2012 at five major Regional Centres i.e. Delhi, Chandimandir, Pune, Hyderabad and Trivandrum. Sanction for extending 'On-

line' bill processing to five more Regional Centres at Kolkata, Kochi, Jaipur, Jalandhar and Lucknow was accorded in February 2013 and the same has been implemented. On-line Bill processing has reduced processing time and hence payment of empanelled hospital bills has become much faster now. It has also ushered in much needed transparency. Extension of 'on-line' billing to the remainder 18 Regional Centres has been approved.

(b) **Operationalisation of Regional Centres and Polyclinics:** 28 Regional Centres and 388 Polyclinics have been operationalised. Only 38 Polyclinics are left to be operationalised. Efforts are on to achieve the target of operationalising all the Polyclinics.

(c) **ECHS Nepal:** ECHS facilities have been extended to Nepal Domiciled Gorkha (NDG) Ex-Servicemen in Nepal. The Government has sanctioned three ECHS Polyclinics at Kathmandu, Pokhra and Dharan with a mobile clinic co-located at each of the above locations, for providing healthcare benefits to ECHS beneficiaries residing in remote parts of Nepal.

(d) **Acquisition of Land for Construction of Polyclinic Buildings:** Land has been acquired at 203 locations for construction of Polyclinic buildings. Construction works have been completed at 134 locations and are in various stages of progress at 28 locations. Aim is to expedite the process of building construction at all the locations so that every Polyclinic can be equipped as per designed capability to enable its functioning at an optimum level.

(e) **Empanelment of Civil Medical Facilities:** 174 new hospitals have been empanelled with ECHS, taking the total numbers of empanelled hospitals, with whom Memorandum of Agreement (MOA) have been signed, to 929.

(f) **Information and Communication Technology (ICT):** A detailed study has been carried out on how to improve delivery of healthcare in ECHS using ICT. The endeavour is to automate most aspects of ECHS, thereby enhancing responsiveness of the Scheme as also enhancing transparency. So far, 264 Polyclinics have carried out the automation in their day to day functioning.

(g) **Scale of Medical Equipment:** The scales of equipment for Polyclinics were revised on December 18, 2012 and necessary actions have been initiated to procure equipment as per the new scales.

(h) **Procurements:** 182 Generators (30 KVA) have been procured so far. All Polyclinics have one 30 KVA Generator for power back-up. 77 ambulances were procured for the newly sanctioned ECHS Polyclinics. The procurement of 105 more Ambulances is underway.

(i) **Additional Manpower for ECHS:** Additional manpower of 1,709 staff has been sanctioned for the country-wide ECHS network. This will improve the performance of ECHS Polyclinics, in terms of providing healthcare benefits to the veterans and their dependents, qualitatively.

(j) **ECHS Toll-free Helpline:** ECHS toll-free Helpline has been made available to all ECHS members at 1800-114-115 for resolving queries on Membership, Treatment and Employment. The service is available from Monday to Friday on all working days from 0900-1700 hrs.

PENSION REFORMS

11.35 **Family Pension in case of missing pensioners:** As a measure of social security, Government has provided Family Pension to the families of missing pensioners after a period of six months from the date of filing FIR. Similar provision has now been extended in the case of missing family pensioner to mitigate the hardship of the families as a consequence of disappearance of the family pensioner. Family pension shall be granted to the next eligible family member.

(a) **Regulation 18 of Pension Regulations for Army, Part-II (2008):** Pending enquiry award provides for release of interim pension for tiding over immediate difficulties in cases of individuals being boarded out due to Pulmonary Tuberculosis and Leprosy. This provision has now been made applicable to all invalidment attributable/ aggravated/ war injury cases.

(b) **Ex-gratia to Reservists:** The ex-gratia payable to reservists and their families has been revised upwards w.e.f. June 4, 2013 vide Government letter No. 1(06)/2010-D (Pen.Pol) dated February 10, 2014.

(c) **One Rank One Pension (OROP):** Government's acceptance of the principle of 'One Rank One Pension (OROP)' in respect of defence personnel was announced in the interim budget on February 17, 2014. Accordingly, the Government has taken steps to implement the OROP from the financial year 2014-15. Implementation of OROP will further improve pensions of past pensioners.

(d) **Disability Pension to Pre 1.1.1973:** Grant of Service element of disability pension to pre 1.1.1973 invalided out JCOs, ORs and NCs (E)/Sailor/ Airmen when the accepted degree of disablement reassessed as less than 20% regarding vide Government letter No. 12(28)/2010-D(Pen/Pol) dated February 10, 2014.

12

COOPERATION BETWEEN ThE ARMED FORCES AND CIVIL AUThORITIES

Disaster Management during Floods in Andhra Pradesh

Army has undertaken a large number of military civic action programmes aimed at "Winning Hearts and Minds" of the people in areas affected by terrorism and insurgency in Jammu & Kashmir and the North Eastern States under 'Operation Sadbhavana'.

12.1 Apart from the main responsibility of defending the borders of the country, the Armed Forces render timely assistance to civil authorities for the maintenance of law and order and/ or essential services as also in rescue and relief operations during natural calamities. The details of assistance provided by the Armed Forces during the period are given in the succeeding paragraphs.

INDIAN ARMY

MILITARY CIVIC ACTION PROGRAMME

12.2 Army has undertaken a large number of military civic action programmes aimed at "Winning Hearts and Minds" of the people in areas affected by terrorism and insurgency in Jammu & Kashmir and the North Eastern States under 'Operation Sadbhavana'. The focus of Operation Sadbhavana in these regions has been 'Quality Education', 'Women Empowerment', 'Community and Infrastructural Development', 'Health and Veterinary Care', 'Development of Gujjars/ Bakarwals' and 'Nation Building'. To promote cross-cultural exchange, projects are also undertaken for 'Educational/ Motivational Tours' by students, elders and Veer Naris to other parts of the Country. In addition, provision of water supply, electricity and animal husbandry are given importance while taking up Operation Sadbhavana projects.

Conduct of Medical Camps

12.3 During 2013-14, a sum of Rs 55.27 crore was allotted for undertaking Military-Civic action in Jammu & Kashmir and the North East Region.

12.4 Army is proactively involved in disaster management and relief operations. Details of assistance provided by Army are given in the succeeding paras:

Army deployed 8000 personnel including 150 from the Special Forces, within a week, despite severe challenges on account of disruption of lines of communication. A total of 38,720 pilgrims were rescued by the Army and evacuated to safer places.

FLOOD RELIEF OPERATIONS

12.5 **Uttarakhand:** Following the cloudburst in Uttarakhand, Army responded with promptness and deployed personnel proactively. Prompt action by Army resulted in saving of several precious lives especially during the critical initial phase of rescue operations. Army deployed 8000 personnel including 150 from the Special Forces, within a week, despite severe challenges on account of disruption of lines of communication. A total of 38,720 pilgrims were rescued by the Army and evacuated to safer places. Four relief camps and seven medical camps were also established by the Army to provide much needed comfort and medical attention. Twelve (12) helicopters from Army Aviation were also deployed. These helicopters contributed immensely to the relief and rescue efforts. A total of 32 medical teams were deployed. 19,960 patients were given medical assistance. A number of footbridges were laid by the Army along

all roads disrupted due to heavy rains. A Class III Aluminum bridge was laid by the Army at Govindghat which played a significant role in evacuating a large number of pilgrims stranded across the river.

RELIEF & RESCUE OPERATIONS BY ARMY

MEDICAL ASSISTANCE

12.6 **Madhya Pradesh:** Due to release of water from Tawa and Bargi dams, several parts of Hoshangabad district got inundated. Five columns including two Engineer columns were deployed by Army at Hoshangabad with effect from August 23, 2013. Approximately 700 civilians were rescued by the Army and evacuated to safer places in coordination with the Civil administration.

12.7 **Gujarat:** Due to incessant rains, Civil administration requisitioned aid from Army on September 24, 2013 in Vadodara and Bharuch districts of Gujarat. Six columns including three Engineer teams were deployed by Army at Vadodara and Baruch with effect from September 26, 2013. Approximately 463 civilians were rescued.

12.8 **Cyclone Phailin: Odisha & Andhra Pradesh:** Subsequent to cyclone threat in Odisha and Northern Andhra Pradesh, Army responded proactively and staged forward the tactical Headquarters of Madhya Bharat Area ex Jabalpur and COSA ex Raipur to Bhubaneswar, Odisha on October 12, 2013. Ten Army columns were stationed in Odisha. Four Army columns were deployed in the Northern districts of Andhra Pradesh for cyclone relief operations. An Engineer Task Force (ETF) was also airlifted from Allahabad to Bhubaneswar on October 12, 2013. Army carried out relief operations in Ganjam and Balasore districts of Odisha.

12.9 **Cyclone `LEHAR' : Andhra Pradesh:** Consequent to cyclone threat in Andhra Pradesh, Ten (10) composite columns including engineer and medical personnel were staged forward on November 28, 2013 to the affected areas for cyclone relief operations.

humanitarian Assistance to Philippines

12.10 Hurricane `HAIYAN' (Local Name `YOLANDA') made landfall in

Philippines on November 8, 2013. As part of Humanitarian Assistance by India, the Indian Army despatched 13.82 tons of relief material including tents, blankets, tarpaulins, medicines etc to Philippines.

Maintenance of Law and Order

12.11 **Assam:** Due to outbreak of violence during Panchayat Elections in Goalpara and Dhubri districts of Assam, civil administration requisitioned Army for maintenance of law and order. Ten Army columns conducted Flag Marches in violence affected areas from February 12-19, 2013.

12.12 **J & K:** On August 9, 2013, communal clashes broke out between two communities in Kishtwar. Three columns were deployed in Aid to Civil Authority on receipt of requisition from DC Kishtwar. Pre-emptive deployment of 54 Army columns was done in districts of Kishtwar, Jammu, Rajaouri, Samba and Kathua to control the situation. Prompt and effective actions taken by the Army prevented escalation of communal tension and violent incidents.

12.13 **Communal Violence-Muzaffarnagar & Shamli Districts of UP:** Consequent to communal clashes in Muzaffarnagar and Shamli districts of UP, Army was requisitioned by Civil administration on September 8, 2013 to maintain Law and Order in the affected areas. Accordingly eight columns in Muzaffarnagar, one column in Shamli and one column in Meerut was deployed with effect from September 8, 2013. Army columns deployed at Muzaffarnagar and Shamli were deployed till September 16 and 17, 2013 respectively. The presence of Army assisted the civil administration in controlling the situation rapidly.

INDIAN NAVY (IN)

12.14 **Uttarakhand Relief Operations:** In June, 2013, consequent to the natural calamity in Uttarakhand, Indian Naval Marine Commandos (MARCOS) and naval divers were deployed for diving assistance and Search & Rescue. Two teams comprising of one officer and 11 sailors each were positioned at Haridwar and Rudraprayag respectively. The teams were deployed along with National Disaster Relief Force (NDRF)/ local authorities for Search and Rescue (SAR) operations.

12.15 **Op '*Phailin*':** Cyclone '*Phailin*' crossed Odisha and north coastal Andhra Pradesh near Gopalpur on October 12, 2013. INS *Jalashwa* and INS *Ranvijay* were available with relief material onboard which could cater to 10,000 persons for three days. INS *Investigator* sailed with two medical teams, three diving units, relief material and medical supplies for 1000 persons from Port Blair on October 13, 2013 to support relief efforts for the flood victims. In addition,

diving and medical teams were deployed from Eastern Naval Command and food items were supplied.

Naval Rescue Team during Op Phailin, Andhra Pradesh

12.16 **Floods in Andhra Pradesh-*Op Madad:*** Andhra Pradesh experienced heavy rainfall from October 25, 2013, resulting in flooding in 16 Districts. Based on the request from the civil authorities, the Indian Navy carried out rescue/ relief operations, in which a total of 17 rescue/ relief teams comprising 66 personnel with boats and diving equipment were deployed. The teams rescued 440 persons and distributed 210 food packets provided by the Civil Administration.

12.17 **Assistance to Local Villagers:** On February 16, 2013, a major fire broke out in the fisherman village Aurkaththurai near Vedaranyam, Tamilnadu. The sailors of the Naval Detachment (Thopputhurai) successfully put out the fire thereby preventing any loss of life or property. The prompt response by the Indian naval unit was highly acclaimed by the local population.

12.18 **Major Fire Fighting Operation, Ramanathapuram:** On June 2, 2013, a major grass fire adjacent to the ONGC gas collecting station at Valantharavi, close to Chennai, was reported to the Indian Naval authorities. Naval personnel and Fire Tender were immediately deployed to undertake fire fighting and containment operations.

Major Fire Fighting Operation at Ramanathapuram, Chennai

12.19 **Accident at HPCL, Visakhapatnam:** On August 23, 2013, there was an accident in the cooling tower of HPCL. On receipt of the information, the Indian Naval hospital (INHS *Kalyani*), was fully activated to receive and manage casualties. The ambulances from the hospital and other naval establishments were utilized to ferry the patients. A total of 39 casualties were given immediate treatment.

12.20 **Coastal Security Awareness Campaigns:** A number of Joint Coastal

Security Awareness Campaigns were conducted along with the Indian Coast Guard and Marine Police in the coastal villages. The campaign aimed to enhance security awareness among the villagers and fisherman of the coastal villages so as to encourage them to act as the 'eyes and ears' of the security agencies.

12.21 **Interaction with Fishermen:** All Naval Detachments at Tamil Nadu conducted awareness camps to interact with local fishermen leaders and fisheries officials. Fishermen were advised to inform all incidents occurring at sea to render timely assistance.

12.22 **Naval Health Camps:**

(a) **Ex-Servicemen Medical Camp at Zila Parishad Girls High School, Kasimkota (Andhra Pradesh):** INHS *Kalyani* and Arogya Group of Navy Wives Welfare Association (NWWA) conducted a medical camp for ex-servicemen at Zila Parishad Girls High School, Kasimkota on June 23, 2013. The camp was a resounding sucess with a large number of ex-Servicemen and their families residing in and around Kasimkota attending the medical camp.

(b) **Medical Camp at Karwar, Karnataka:** As a part of the community outreach activities by the hospital and Sparsh group of Naval Wives Welfare Association (NWWA) (Karwar), a health check up camp was organized at Asha Niketan (school for children with hearing impairment) on July 31, 2013. Dental, Paediatric, Gynaecology and Medical OPDs were set up at the site

(c) **Medical Camp at Diu, Gujarat:** A medical camp was conducted at Diu on August 22, 2013 with four specialists from Indian Naval Hospital Ship (INHS) Asvini, Mumbai. A total of 349 local patients availed the consultancy of naval medical specialist (Surgery, Medical, Gynaecology, Dental and Paediatrician) and free medicine was distributed to the patients.

(d) **Medical Camp at Porbandar, Gujarat:** A naval medical camp which provided free consultation and health services to approximately 1500 personnel was set up at Porbandar in September 2013. Free medication and consultation in the field of medicine, gynaecology, paediatrics & surgery along with basic investigations were undertaken during this period and this camp received overwhelming response. The medical camp was a social initiative and also included blood donation by the officers and men of INS *Deepak*.

(e) **Conduct of Medical Camps:** Two medical camps of one day each were conducted at the Naval Detachments Mallipatnam and Jegathapatnam on October 5 and 7, 2013 respectively by the medical team from INS Adyar at Chennai. The response to the camp was overwhelming and villagers turned up in large numbers to avail the facility. A total of 735 and 1150 patients were treated and provided with medicines.

COAST GUARD

12.23 **Flood Relief:**

(a) **Flood Relief, Gujarat:** The ICG rescue team undertook flood relief operation in flood hit areas in Porbandar and Jamnagar on September 27, 2013 and rescued 44 persons including ladies and children.

(b) **Flood Relief, Mayabunder:** On October 9, 2013, a flood relief operation was undertaken by ICGS Mayabunder for rescue/ evacuation assistance of local populace from flood hit areas of Tugapur in coordination with local forest personnel. 20 people including 8 women were rescued.

ICGALH Winched up Survivors

(c) **Cyclone Phailin:** Cyclone Phailin made a landfall on October 12, 2013 near Gopalpur (Orissa). Following two distress situations were reported during the passage of cyclone:

(i) 2 Fishing boats with 18 fishermen were stranded 10 nautical miles South West of Paradip Port, due to fuel exhaustion. Deployment of ICGS Vajra and one OSV were futile and meanwhile, the boats drifted close to coast and the fishermen swam ashore safely, where ICG medical team attended the fishermen and found them safe.

(ii) A Panama flag cargo vessel MV Bingo with 18 crew having 8125 MT of iron ore sank in position 25 nautical miles SE of Sagar Island on October 12, 2013. Life boats/ rafts drifted towards the coast and all crew reached safely on shore near the mouth of Subarnarekha river on October 13/14, 2013.

(d) **Cyclonic Storm 'Lehar' :** A deep depression formed over south Andaman

sea and intensified into a cyclonic storm 'Lehar' on November 24, 2013. It crossed Andaman & Nicobar Islands close to Port Blair on November 25, 2013. Six (6) ICG ships, besides aircraft and helicopter were deployed for SAR operations. 32 lives were saved in the operations.

(e) MT 'Alihuras': On March 4, 2014 two crew who were injured due to accidental fire on board 'MT Alihuras' were evacuated by ICGS C-143 and shifted to hospital at Porbandar for treatment.

INDIAN AIR FORCE

Operation Rahat (Op Rahat)

12.24 The unprecedented magnitude of destruction caused by the flash floods in Uttarakhand called for an immediate and large scale relief and rescue effort. IAF responded to this enormous challenge with characteristic speed, resolve and fortitude. IAF resources were marshalled from different corners of the country, and up to 45 helicopters were involved during the major part of the operations.

12.25 The scale at which IAF mounted the rescue and relief operation was unprecedented. The magnitude of this operation can be gauged by the figures at the end of Op Rahat on September 23, 2013 by when the IAF had flown 3702 missions, evacuated 24,260 civilians and lifted 894.9 Tons of relief supplies. This extraordinary and prompt response has already been recorded as the largest aerial relief operation ever.

12.26 With the complete evacuation of the stranded people, IAF shifted gear and moved into Phase-II of Op Rahat. With a different approach and new strategy, IAF stepped forward to support Government of Uttarakhand in rebuilding roads, communication links, and shelter for the locals.

Country's Biggest Ever Rescue Operations by Air

At the end of Op Rahat on September 23, 2013 the IAF had flown 3702 missions, evacuated 24,260 civilians and lifted 894,899 Tons of relief supplies. This extraordinary and prompt response has already been recorded as the largest aerial relief operation ever.

IAF Aircraft in Rescue Operations

12.27 **Operation Triveni (Op Triveni):** Six Mi-17 helicopters of Indian Air Force have been deployed since December, 2009 in support of MHA for anti-naxal operations. Since induction, a total of 5714 hrs in 7742 sorties have been flown in support of anti-naxal operations. During these missions, a total of 42,146 passengers, 254 causalities, 267 mortal remains and 886 Tons of load have been airlifted.

12.28 **Humanitarian Assistance and Disaster Relief (HDAR) Task for Other Agencies:** During the current year, IAF helicopters have flown 3593 missions, rescued 23,915 stranded civilians and airlifted 800 Tons of relief material for various State Governments in support of flood relief operations.

12.29 **Cyclone Phailin:** During the Cyclone Phailin, IAF was asked to standby for HADR mission. IAF provided helicopter effort in two phases. In Phase I, helicopters were positioned on October 11, 2013 at Bhubaneshwar and withdrawn on October 17, 2013. During this phase a total of 29 hrs were flown over 17 sorties; including, carriage of essential relief load of 60 Tons and evacuation of 15 passengers. In phase II (October 25-28, 2013) a total of 28 hrs were flown over 50 sorties; including, a load of 40 Tons was flown in and 69 passengers were cevacuated.

12.30 **Recovery of Damaged Pawan Hans Helicopter by IAF Mi-17 V5 Helicopter:** In addition to the rescue missions flown by IAF transport and helicopter fleet for "Op Rahat", some civil helicopters were also operating. One such helicopter, operated by Pawan Hans was damaged due to a hard landing at Harsil helipad and the wreckage was lying at the helipad since then. IAF was approached by Pawan Hans for recovery of this helicopter.

Damaged Pawan Hans being relocated by IAF Mi-17 Under-Slung Operations

12.31 The operation was undertaken in a very systematic and professional manner. Inspite of natural and manmade hurdles encountered during the operation, the task was completed with clinical precision, perfect coordination and dedicated involvement of all agencies using an IAF Mi-17 V5.

12.32 **Restoration of Power Line in J&K on January 22 - 23, 2013:** In January 2013, due to heavy snowfall in Jammu &Kashmir, life in the entire region was thrown out of gear with Srinagar valley having partial power failure due to the HT lines at Banihal Pass getting buried under snow. On January 21, 2013, Power Grid Corporation of India approached IAF to assist them in power restoration. The helicopter unit based at Udhampur was tasked for this challenging mission; to airlift a repair team to Banihal top as they needed to carry out repairs on the 300 MW power line.

12.33 In spite of lack of visual references, sub-zero temperatures, adverse wind conditions, coupled with high density of obstructions, the whole operation was accomplished with precision and accuracy. The mission enhanced IAF's image of being ever ready to provide succour to the civilian population of Jammu & Kashmir.

12.34 **Assistance to Government of Tamil Nadu during Flash Floods:** Government of Tamil Nadu approached IAF to rescue 4 civilians stranded on trees in the middle of river Cauvery during flashfloods close to Hogenakkal waterfalls. The civilians had been stranded post-noon hours on August 5, 2013. Two Advanced Light Helicopter (ALH) located at AF Station Sulur were tasked to undertake the rescue mission with two Garud commandos carrying additional rescue equipment onboard each helicopter.

12.35 The foliage was extremely dense and there being no indications from the survivors on ground, a prolonged hover was required to spot the survivors. All the four survivors were winched up by the crew with help from the Garud commandos and taken to safety.

13

NATIONAL CADET CORPS

'The Final Step' – Ncc Boys Team during the Mt Everest Expedition – May 2013

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 the country.

13.1 The National Cadet Corps (NCC) was established under the NCC Act, 1948. It has completed 65 years of existence. 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 the country. The motto of NCC is "Unity and Discipline".

13.2 The total sanctioned strength of NCC cadets is 15 Lakh. This includes two lakh NCC cadet strength sanctioned in 2010. This additional 2 Lakh cadet strength will get absorbed in phases by raising new NCC units during the period 2010-11 to 2015-16. The NCC's presence presently extends to 670 districts of the country covering 15,671 institutions.

13.3 Wing-wise distribution of enrolled cadet strength is as under:

(a)	Army Wing	-	7,58,555
(b)	Air Wing	-	54,378
(c)	Naval Wing	-	55,435
(d)	Girls Wing	-	3,04,661
	Total	**-**	**11,73,029**

13.4 In the field of sports and adventure, this year marked successful conduct of NCC National Games in Delhi in October, 2013 and scaling of Mt Everest by Boys team of NCC cadets in May, 2013.

MAIN ACTIVITIES AND MAJOR ACHIEVEMENTS

13.5 **New raisings in the 3rd Phase of 2 lakh additional NCC Cadet Strength Sanction:** Government sanction for raising 11 Army Units and one Naval Unit for the 3rd Phase has since been accorded. This will increase the number of NCC Units to 812 once these units are set up.

13.6 **Revision of enrolment period of NCC Senior Division/ Senior Wing Cadets:** Government sanction has been accorded for enrolment period of 3+1 years for Senior Division/Senior Wing Cadets and the enrolment would start from the training year, 2014-15.

13.7 **Opening of NCC Cells in States/ Union Territories and Placing NCC**

Activities in States under State Education Department: Proposals for placing NCC activities in all the states under State Education Department and nominating state Assistant Directors General/Deputy Directors General (AD'sG/ DD'sG) as Head of Department (HoD) of the NCC Cells in the States has been approved by the Ministry of Defence. Necessary guidelines to this effect have been issued by the Ministry of Defence to all State Governments and Union Territory Administrations on September 12, 2013.

13.8 **NCC Coverage of districts:** At present, 670 districts are covered by NCC as against 633 in the corresponding period last year.

13.9 **Raising of NCC Girls Battalions:** Two Girls Battalions were raised in the 2nd Phase. In the 3rd Phase, Government sanction has been accorded for raising one Girls Battalion.

TRAINING

13.10 Training in NCC comprises the following important facets:

(a) Institutional Training.
(b) Camp Training.
(c) Adventure Training.
(d) Social Service and Community Development Activities.
(e) Youth Exchange Programme.

Camp Training is an important part of NCC curriculum. The camps help in developing Camaraderie, Team Spirit, Dignity of Labour, Self-Confidence and the most important aspect of Unity and Discipline.

Obstacle crossing Training of Girl cadets

13.11 **Institutional Training:** The aim of this training is to expose the youth to a regimental way of life and inculcate in them the values of discipline, personality development and orderliness. All enrolled cadets go through the Institutional Training in their respective schools/ colleges as per specified syllabi for each wing of NCC.

13.12 **Camp Training:** Camp Training is an important part of NCC curriculum. The camps help in developing Camaraderie, Team Spirit, Dignity of Labour, Self-Confidence and the most important aspect of Unity and Discipline. NCC has also introduced classes on Human Values as part of Personality Development Programme for its cadets. Various types of camps conducted in NCC are as listed below:-

(a) **Annual Training Camps (ATC):** Annual Training Camps are conducted

at State Directorate level so as to ensure that a minimum of 50% Junior Division/ Wing (JD/JW) cadets and 100% of Senior Division Wing (SD/ SW) cadets numbering approximately 8.5 lakh attend at least one camp per year. Approximately 1700 such camps are conducted every year.

(b) **National Integration Camp (NIC):** A total of 37 NICs are conducted every year. 24,200 cadets from all States and Union Territories participate in these NICs. So far, 36 NICs have been conducted in different parts of the country. In addition, Special NICs were conducted at the following places:

(i) **SNIC Leh:** A special NIC was conducted at Leh from August 26 to September 6, 2013 with the aim to promote NCC in that region. A total of 170 cadets from all parts of the country participated in this SNIC. The camp was attended by senior military and civil dignitaries.

(ii) **SNIC Zakhama (Nagaland):** A national level camp was conducted in Zakhama (Nagaland) from June 18-29, 2013. 600 Cadets from all over India participated.

(iii) **SNIC Badabagh (Jaisalmer):** A Special NIC was conducted at Badabagh (Jaisalmer) from October 18-29, 2013. 300 cadets from all over India participated.

(iv) **SNIC Port Blair:** A Special NIC, conducted at Port Blair from February 9-20, 2014, was attended by 180 cadets.

(c) **Vayu Sainik Camp (VSC):** Every year an All India Vayu Sainik Camp for Senior Division/Senior Wing (SD/SW) NCC cadets is organized at Jakkur Airfield (Bangalore) for a period of 12 days. This year the camp was conducted from October 20-31, 2013. 594 SD/ SW cadets from all 16 State NCC Directorates (except J&K Directorate) participated in this Camp.

(d) **Nau Sainik Camp (NSC):** This camp is also organized once a year for Naval Wing SD and SW cadets for 12 days. This year the camp has been conducted at Visakhapatnam from January 7-18, 2014. 589 SD/ SW cadets participated in this camp from all 17 State NCC Directorates.

(e) **Thal Sainik Camps (TSC):** Two concurrent TSCs were conducted at Republic Day Parade ground, Delhi Cantt, one for SD boy cadets and one for SW girl cadets, from September 27 to October 8, 2013. Total 1360 cadets from all 17 State NCC Directorates participated in this camp.

(f) **Leadership Camps:** Six Advance Leadership Camps (ALCs) are organized every year on all India basis. A total of 1800 cadets attended these camps from June to December, 2013.

(g) **Rock Climbing Training Camps:** Four Rock Climbing camps were held this training year to expose the cadets to the basics of rock climbing and to inculcate the spirit of adventure in them. 540 cadets attended these camps in the month of November, 2013.

(h) **Republic Day Camp 2014:** NCC Republic Day Camp and PM's Rally, 2014 were conducted at Delhi in January, 2014. The camp was attended by 2070 cadets from all over India, besides cadets of friendly foreign countries with whom NCC has an ongoing Youth Exchange Programme. Inter Directorate competitions concerning institutional training, cultural competitions and National Integration awareness programmes were conducted during the month long camp.

13.13 **Republic Day Parade:** Two NCC marching contingents and two (one combined boys and one girl) NCC bands participated in the Republic Day Parade at Rajpath on January 26, 2014.

Ncc Girls c ontingent on the Rajpath

13.14 **Attachment Training:** The NCC cadets derive first hand experience of immense value through attachment training with the Armed Forces units. During the year, attachments were made as under:

(a) 440 officers and 20,000 cadets attended the attachment training with regular army units including women officers and 560 SW cadets.

(b) 120 SD cadets underwent attachment training at Indian Military Academy, Dehradun and 48 SW cadets were attached to Officers Training Academy, Chennai. Both attachments were for duration of two weeks each.

(c) 1000 SW cadets were attached with various Military Hospitals.

(d) 100 Air Wing NCC cadets (76 SD and 24 SW) from the 16 State NCC Directorates (except J&K) underwent attachment training with Air Force Academy, Dundigal. This training is

conducted twice a year for 13 days each in June and October respectively.

(e) 60 NCC Officers and 560 SW Cadets of Army Wing underwent attachment training with various Army units.

13.15 **Microlite Flying:**Microlite flying is being conducted in NCC with a view to give air experience to the Air Wing (SD/ SW) NCC cadets. At present Microlite flying facilities are provided at 47 NCC Air Squadrons across all the States of the country with the help of 45 Zen air Microlite and 6 'X'-Air Microlite aircraft.

13.16 **Pre-Commission and Refresher Courses for Air Wing ANOs :** Every year 3 Pre-Commission Courses of 8/9 weeks duration each and 3 Refresher Courses of 4 weeks duration each for Air Wing Associate NCC Officers (ANOs) are conducted at Air Force Station Tambaram. About 210 Air Wing ANOs attend the subject courses every year.

13.17 **Naval Ship Attachment:** 295 cadets of naval wing embarked on naval ships at Mumbai, Kochi and Visakhapatnam for training and attachment for a period of 12 days.

13.18 **Foreign Cruises:**

(a) **Naval Cruise:**

(i) One Cadet visited Colombo and Male from March 31 to April 13, 2013 on board Naval training ships.

(ii) 10 Cadets visited Seycelles and Mauritius from September 17 to October 31, 2013 on board Naval Ships.

(b) **Coast Guard:** Six NCC cadets visited South and South East Asia ports of Singapore, Jakarta, Port Klang and Phuket from February 22 to March 30, 2013.

13.19 **Naval Academy Attachment Training:** Annual Training Camp for 170 SW cadets was conducted at Indian Naval Academy Ezhimala from December 9-20, 2013.

13.20 **Technical NCC Camp for Naval Wing:** 115 SD/ SW Cadets from Engineering Colleges at Chennai attended the Annual Technical Camp from June 10-19, 2013. The cadets were taken to Naval Engineering Establishments at INS Shivaji and Naval Dockyard at Mumbai on study tour.

ADVENTURE TRAINING

13.21 **All India Sailing Regatta at Chilka:** 51 SD and 51 SW Cadets from all NCC Directorates participated in All India NCC Sailing Regatta conducted at INS Chilka from November 6-13, 2013. One officer and 6 cadets from Bangladesh NCC also attended the Regatta.

13.22. **Sailing Expedition:** Sailing Expedition is an interesting feature of the Naval Training. Each NCC Directorate undertakes a minimum of one sailing expedition for a period of 12 days covering a total distance of 400 to 500 kms. 40 to 60 cadets from each NCC Directorate participate in the event. A total of 14 such expeditions were conducted by different NCC Directorates in year 2013-14.

First ever NCC Boys Expedition team consisting of 8 SD Cadets and 4 PI Staff scaled the Mt Everest peak on May 19 & 20, 2013 in two groups.

13.23 **Scuba Diving:** Four Scuba Diving Camps are conducted at Mumbai, Goa and Chennai (02) with assistance from the Naval Diving Teams of Indian Navy.

13.24 **Wind Surfing/ Kayaking:** Cadets of Naval Wing are also trained and exposed to the basic skills of Wind Surfing and Kayaking.

13.25 **Mountaineering Expeditions:**

(a) **Mountaineering Courses:** A total of 344 SD/SW cadets from all NCC Directorates were allotted various courses at Nehru Institute of Mountaineering, Uttarkashi, Himalayan Mountaineering Institute, Darjeeling, Jawahar Institute of Mountaineering and Winter Sports, Nunwan, Pahalgam and Directorate of Mountaineering and Allied Sports, Manali in the training year 2013-14.

(b) **NCC Boys and Girls Mountaineering Expeditions:** NCC organizes two mountaineering expeditions every year, one for the Senior Division (boys) cadets and the other for Senior Wing (girls) cadets. Since 1970, the NCC has conducted 71 mountaineering expeditions, of which 38 expeditions were for boys and 33 expeditions for girls. During the training year 2013-14, one NCC girls expedition to Mt Shitidhar in Manali was conducted in September/ October, 2013.

(c) **Mt Everest Expedition:** First ever NCC Boys Expedition team consisting of 8 SD Cadets and 4 PI Staff scaled the Mt Everest peak on May 19 & 20, 2013 in two groups.

13.26 **Trekking Expedition:** A total of 23 trekking expeditions were conducted by NCC Directorates during the training year 2013-14 with total participation of 11500 cadets.

13.27 **Para Sailing:** Para sailing is conducted at each Group HQ level as part of adventure activity for boys and girls cadets of NCC.

13.28 **Para Basic Courses:**Every year 40 boy and 40 girl cadets are nominated for Para Basic course held at Para Training School, Agra. During the training year

2013-14, 40 SD and 39 SW cadets attended the course.

13.29 **Slithering Demonstration:** 120 cadets were trained in Slithering during the year 2013-14 and 25 SD and 25 SW cadets participated in the slithering demonstration during NCC PM's Rally, 2014.

13.30 **Desert Camel Safari:** During the year 2013-14, two officers and 10 cadets from Singapore, two officers and 12 cadets from Kazakhstan alongwith 20 Indian cadets participated in Desert Safari held at Jaisalmer from November 8-19, 2013.

YOUTH EXCHANGE PROGRAMME (YEP)

13.31 **Out-Going YEP Visits:** 9 outgoing YEP visits were undertaken during the year 2013-14 as per the following details:

S. No.	Country	Officers	Cadets
(a)	Singapore (Air Wing)	1	4
(b)	Singapore (Naval Wing)	1	4
(c)	Russia	2	10
(d)	Sri Lanka – I	2	12
(e)	Sri Lanka – II	1	6
(f)	Singapore (Army)	2	10
(g)	Vietnam	2	13
(h)	Kazakhstan	2	12
(i)	Nepal	1	4
	Total	**14**	**75**

13.32 **In-Coming YEP Visits:** The following incoming YEP visits by foreign delegations were undertaken during the year 2013-14:

S.No.	Country	Officers	Cadets
(a)	Singapore and Kazakhstan NCC cadets for Desert Safari	4	18
(b)	Bangladesh (Sailing Regatta)	1	6
(c)	Bangladesh Belgaum Trek	1	8
(d)	Shivaji Trail Trek, Sri Lanka	1	6
(e)	Delegations from 8 foreign countries including Russia, Kazakhstan, Bangladesh, Nepal, Sri Lanka, Singapore, Bhutan and Vietnam attended Republic Day Camp (RDC) – 2014	13	68
(f)	Heads of Departments (HODs) of the friendly foreign country's youth organization.	6	0
Total		**26**	**106**

Social Service and Community Development

13.33 Social Service and Community Development activities are undertaken in NCC with the aim of making cadets imbibe the qualities of selfless service to the community, dignity of labour, importance of self help, need to protect the environment and to assist in upliftment of weaker sections of the society. This is carried out through

programees involving adult education, tree plantation, blood donation, visit to Old Age Homes, Orphanages, slums, village upliftment and various other social schemes. Major activities in which NCC cadets participated are given in subsequent paras:

Social Service and Community Development activities are undertaken in NCC with the aim of making cadets imbibe the qualities of selfless service to the community, dignity of labour, importance of self help, need to protect the environment and to assist in upliftment of weaker sections of the society.

(a) **Tree Plantation:** NCC cadets plant saplings and thereafter maintain them in conjunction with the concerned State Department/ Colleges/ Schools and Villages. This year as part of environment protection and preservation drive, cadets planted 2.31 lakh saplings all over the country.

(b) **Blood Donation:** NCC cadets have been donating blood as voluntary service whenever needed by Government Hospitals/ Red Cross. This year 15751 NCC cadets voluntarily donated blood.

(c) **Old Age Homes:** Like previous years, this year also cadets provided their services to old age homes.

(d) **Disaster Relief:** NCC has always extended its helping hand during natural and other calamities and accidents. Over the year, NCC cadets have rendered outstanding service during the floods in Uttarakhand, earthquake in Sikkim and the cyclone related disaster in Odisha.

(e) **AIDS Awareness Programme:** NCC cadets participate actively in the AIDS/ HIV awareness programme and are carrying out AIDS awareness programmes throughout the country. Lectures and interactive sessions on HIV/ AIDS are also being conducted during various camps. This year AIDs awareness day was observed celebrated on December 1, 2013. Approx 27,600 NCC cadets from all 17 Directorates participated.

(f) **Anti Dowry and Anti Female Foeticide Pledge:** NCC cadets all over the country took a pledge on Anti Dowry and Anti Female Foeticide. About 30,000 NCC cadets participated.

Aid S Awareness c ampaign

(g) **Anti Drug Rally:**About 37,900 NCC cadets all over the country participated in Anti Drug Rallies organized in major cities and towns in the country.

(h) **Pulse Polio Immunisation:** NCC cadets have also participated in numerous Polio eradication programmes launched by the Government all over the country as per National schedule.

(i) **Adult Education:** NCC cadets visited remote areas, villages and underdeveloped areas to emphasise the need for education and to assist in the conduct of the Adult Education Programme.

(j) **Community Work:** 21,752 cadets of NCC participated in the rural and urban community projects and other development works like village track improvement, sanitation drives, etc.

(k) **Anti Leprosy Drive:** NCC cadets have launched anti-leprosy drive throughout the country and are helping various voluntary/ Governments Organisations in this field.

(l) **Cancer Awareness Programme:** Around 23000 NCC cadets actively participated in Cancer Awareness Programme organized in various cities.

(m) **Anti-Tobacco Drive:** About 37,900 NCC cadets from all NCC Directorates actively participated in 'NO TOBACCO DAY' observed on May 31, 2013. On this day, all State NCC Directorates organized numerous rallies/ street shows/ plays by NCC cadets to spread awareness among masses about ill effects of tobacco.

(n) **Sensitisation on Civic Sense and Rules:** NCC cadets regularly participate in Traffic rule awareness drives organized in various cities. During this period the cadets man various traffic check posts and supplement the resources of local traffic police.

(o) **Adoption of Villages/ Slum Areas:** NCC has adopted over 939 villages/ slum areas in different parts of the country to induce all round and inclusive growth of these villages/ slum areas. This also provides an opportunity to NCC cadets to identify themselves with different sections of society and people living in villages.

SPORTS ACTIVITIES AT NATIONAL LEVEL

13.34 **NCC National Games:** NCC National Games were held in New Delhi from October 17-27, 2013. A total of 2100 cadets participated in Football, Hockey, Athletics, Kho-Kho, Kabadi and Shooting competition. West Bengal &Sikkim Directorate was the overall champions and Maharashtra Directorate was the Runner up.

13.35 **Jawahar Lal Nehru Hockey Cup Tournament:** This year NCC teams in Junior Girls and Sub-Junior Boys categories participated in the prestigious Jawaharlal Nehru Hockey Tournament 2013, where they played against some of the best teams in the country and some foreign teams.

13.36 **Subroto Cup Football Tournament:** NCC teams in Junior Boys, Sub-Junior Boys and Junior Girls categories participated in the prestigious Subroto Cup Football Tournament 2013, where they played against some of the best teams in the country and some foreign teams. Sub Junior Boys NCC team reached the semi finals and Junior Boys NCC team reached the Quarter final.

13.37 **All India GV Mavlankar Shooting Championship (AIGVMSC):** Firing being one of the core training activities of NCC, shooting discipline enjoys special place in NCC sporting activities. Selected NCC cadets during the NCC National Games, 2013 participated in the All India GV Mavalankar Shooting Competition this year. NCC shooting teams have been performing well in the event for the last many years and this year 46 cadets participated and NCC shooting team won 6 Gold, 5 Silver and 8 Bronze medals.

13.38 **National Shooting Championship Competition (NSCC):** Every year NCC Shooting teams participate in the prestigious National Shooting Championship Competition (NSCC). In the year 2013, 30 NCC shooters were selected for 57th National Shooting Championship Competition. The team won 3 Gold, 5 Silver and 5 Bronze Medals.

14

DEFENCE COOPERATION WITH FOREIGN COUNTRIES

Indian Army held the 3rd Joint Exercise "Hand in Hand" with the PLA from November 4-14, 2013 in China.

Strengthening defence cooperation with friendly foreign countries is an important component of our national security and defence strategy.

14.1 Strengthening defence cooperation with friendly foreign countries is an important component of our national security and defence strategy. It comprises initiatives and activities undertaken by the Ministry of Defence and the Armed Forces to build and promote mutual trust and understanding, avoid hostilities and contribute towards conflict prevention and resolution. Defence diplomacy initiatives have been pursued in the form of high level visits, dialogues, training exchanges, joint/multilateral exercises, Services to Services talks and other forms of defence cooperation.

14.2 India continued its endeavour to support **Afghanistan** in its efforts to stabilize its political and security situation. India has been assisting the Afghan National Army by way of military training courses, medical training and medical assistance.

14.3 Defence cooperation with **Bangladesh** has been strengthened by bilateral visits and exchange of defence related training courses. Gen Iqbal Karim Bhuiyan, Chief of Army Staff, Bangladesh Army visited India from April 1-4, 2013. The inaugural India-Bangladesh Navy to Navy Staff Talks were held in India from April 15-17, 2013. The 4th India-Bangladesh Army to Army Staff Talks were held at Dhaka from August 25-28, 2013.

14.4 India has had historically close defence relations with **Bhutan**. An Indian Military Training Team (IMTRAT), established in Bhutan in 1963 assists the Royal Bhutanese Army in training of its personnel. Maj Gen Batoo Tshering, Chief Operations Officer, Royal Bhutan Army visited India from September 12-17, 2013.

14.5 The 5th Annual Defence Dialogue (ADD) between India and **China** was held in Beijing on January 14-15, 2013. Defence Secretary led the delegation from the Indian side and Lt Gen Qi Jianguo, Deputy Chief of General Staff of the People's Liberation Army (PLA) led the Chinese side.

14.6 Raksha Mantri led a high level delegation to China from July 4-7, 2013. During the visit Raksha Mantri had meetings

with the Premier Li Keqiang and Defence Minister Gen Chang Wanquan. During the visit of Hon'ble PM to China from October 22-24, 2013, an Agreement on Border Defence Cooperation between India and China was signed at Beijing on October 23, 2013. Defence Secretary was signatory to the Agreement from the Indian side. The agreement seeks to strengthen measures for maintenance of peace and stability in the border areas.

During the visit of Hon'ble PM to China from October 22-24, 2013, an Agreement on Border Defence Cooperation between India and China was signed at Beijing on October 23, 2013.

14.7 The 3rd joint exercise 'Hand in Hand' was held between the Indian Army and the PLA from November 4-14, 2013 in China. The 6th Annual Defence and Security Dialogue (ADSD) was held in New Delhi on January 24, 2014. Defence Secretary, led the delegation from the Indian side and Lt. Gen Wang Guanzhong, Deputy Chief of General Staff of the People's Liberation Army (PLA) led the Chinese side.

14.8 Defence relations between India and **Maldives** have been growing steadily during recent years. Mr Mohamed Nazim, Minister of Defence and National Security of Maldives visited India from April 14-19, 2013 and from December 11-15, 2013. During his meeting with Raksha Mantri, issues of mutual interest relating to bilateral defence cooperation were discussed. Brig Gen Mohamed Shiyam, CDF, Maldives visited India to participate in Defexpo from February 3-8, 2014. He also visited India from March 15-16, 2014 to review the passing out parade at OTA Chennai.

During the visit of Defence Minister of Maldives, Col. (Retd.) Mohd. Nazim to India in November 2013, an ALH was handed over during a ceremony held in SNC, Kochi.

14.9 Defence cooperation with **Myanmar** has been progressing well. The on-going defence cooperation activities with Myanmar include regular exchange of visits, port calls by Indian Navy ships and training exchanges. Raksha Mantri visited Myanmar from January 21-22, 2013. The inaugural Coordinated Patrol (CORPAT) between the Indian Navy and Myanmar Navy was held from March 17-21, 2013 at the International Maritime Boundary Line (IMBL). Vice Admiral Thura

Thet Swe, Commander-in-Chief, Myanmar Navy visited India from July 29 to August 1, 2013. Chief of Army Staff visited Myanmar from October 29 to November 2, 2013. The 2nd Indian Navy – Myanmar Navy (IN-MN) Staff Talks were conducted at NayPyiTaw, Myanmar from November 5-7, 2013. Vice Sr Gen Soe Win, Dy C-in-C of Defence Services & C-in-C Army, Myanmar visited India from December 11-14, 2013.

14.10 India endeavors to nurture the bilateral defence relationship with **Nepal**. A substantial number of Nepal Army personnel avail training in Indian defence establishments every year. Gen Gaurav SJB Rana, Chief of Army Staff, Nepal Army visited India from January 7-15, 2013 and from September 23 to October 6, 2013. During his visit in September-October, 2013, he witnessed the 1st Battalion level joint exercise 'Surya Kiran' that was held between Indian Army and Nepal Army from September 23 to October 6, 2013 in India. The Chief of Army Staff visited Nepal from June 10-11, 2013 and from March 13-14, 2014, during which time he witnessed the 2nd Battalion level Joint Army Exercises that was held from March 5-18, 2014 at Saljhandi, Nepal.

14.11 Defence exchanges with **Sri Lanka** are undertaken in the backdrop of the common security issues facing the region. The 3rd India-Sri Lanka Army Staff Talks were held in New Delhi from September 23-25, 2013. The 3rd India-Sri Lanka Navy Staff Talks were held in Colombo from September 25-26, 2013. The joint exercise 'SLINEX' was held between the Indian Navy and Sri Lankan Navy from November 4-7, 2013 off the coast of Goa. Chief of Naval Staff visited Sri Lanka from November 25-28, 2013. The 5th Indian Air Force-Sri Lanka Air Force Staff Talks were held in New Delhi from December 4-6, 2013.

14.12 India's relations with **Indonesia** have remained cordial. The 21st cycle of Coordinated Patrol (CORPAT) between the Navies of India and Indonesia was conducted from May 6-25, 2013 and the 22nd cycle was held from September 9-27, 2013. The 6th Navy-to-Navy Staff Talks were held in Jakarta from August 27-28, 2013. The joint exercise 'Garud Shakti' was held between the two Armies from November 18 to December 1, 2013 in Indonesia. The 4th India-Indonesia Joint Defence Cooperation Committee meeting was held in New Delhi on December 20, 2013. Deputy Chief of Integrated Defence Staff (DCIDS), HQ IDS, led a delegation to Indonesia to attend the Jakarta International Defence Dialogue – 2014 on march 19-20, 2014. An Indian Naval Ship participated in the multilateral exercise "Komodo" conducted by Indonesian navy during March 28 to April 3, 2014.

14.13 Defence relations with **Malaysia** have been cordial. The 5th Navy-to-Navy

Staff Talks were held in New Delhi from June 17-19, 2013. The 10th Malaysia-India Defence Cooperation Meeting (MIDCOM) was held in New Delhi on June 21, 2013. Defence Secretary led the Indian delegation while the Malaysian delegation was led by Mr. Dato' Sri Dr. Haji Ismail bin Haji Ahmad, Secretary General, Ministry of Defence, Malaysia. Chief of Naval Staff visited Malaysia from September 23-26, 2013. The 4th round of Army Staff Talks with Malaysia were held from October 22-24, 2013 in New Delhi. Gen Tan Sri Dato Sri Rodzali bin Daud, Chief of Air Force, Royal Malaysian Air Force visited India from November 26-29, 2013. The 6th Air-to-Air Staff Talks were held during December 18-20, 2013 in Malaysia.

14.14 Defence relations between India and **Singapore** have been growing steadily during recent years. The 7th India-Singapore Defence Working Group meeting was held in New Delhi on January 28, 2013. The 9th Navy-to-Navy Staff Talks were held at Singapore from March 11-13, 2013. The 8th Army-to-Army Staff Talks were held in India from March 13-15, 2013. Maj Gen Ravinder Singh, Chief of Army, Singapore visited India from March 19-22, 2013. The joint exercise 'SIMBEX' was held between the two Navies from May 16-30, 2013 in South China Sea. Chief of Naval Staff visited Singapore from May 31 to June 2, 2013. Raksha Mantri visited Singapore on June 3, 2013. During the visit, both sides also extended the Bilateral Agreement for conduct of joint Army Training and Exercises in India, for a period of five years with effect from August, 2013. The 7th round of Air Force Staff Talks was held in Singapore from September 23-25, 2013. The Chief of Army Staff visited Singapore from January 21-24, 2014. Exercise "Bold Kurukshetra" [Armoured Exercise] was held at Babina from March 1-31, 2014.

Indian Defence Secretary and Singaporean Permanent Secretary of Defence, Mr Chiang Chie Foo exchanging the signed documents of an agreement to extend the use of training and exercise facilities in India by the Singapore Army for a further period of five year

14.15 Defence Cooperation with **Thailand** has been progressing well. The 2nd India-Thailand Defence Dialogue was held in Thailand on February 18, 2013. Additional Secretary led the Indian side while Gen Nipat Thonglek, Dy. Permanent Secretary for Defence, Ministry of Defence, Thailand led the Thai delegation. The 16th cycle of Coordinated Patrol (CORPAT) between

the Indian Navy and the Royal Thai Navy was held from April 18-26, 2013 and the 17th cycle was held from November 13-21, 2013. The 4th Air-to-Air Staff Talks were held in Thailand from May 20-22, 2013. Raksha Mantri made an official visit to Thailand on June 5-6, 2013 and met his counterpart. During the meeting, defence issues of common concern were discussed. The 6th Navy-to-Navy Staff Talks were held from July 8-10, 2013 in New Delhi.

14.16 India-**Vietnam** relations have been friendly and cordial. Col Gen Do Ba TY, Vice Minister of National Defence, Chief of the General Staff of Vietnam visited India and called on Raksha Mantri on September 24, 2013. The 8th India-Vietnam Security Dialogue was held in Vietnam on November 8, 2013. Defence Secretary led the Indian delegation while Col Gen Nguyen Chi Vinh, Deputy Minister of Defence led the Vietnamese delegation. India and Vietnam signed an Agreement on Reciprocal Protection of Classified Information Exchanges during the visit of Secretary General of the Communist Party of Vietnam to India on November 20, 2013.

14.17 India and **Australia** have enjoyed good bilateral relations for several years. The 7th Navy- to- Navy Staff Talks were held in Sydney on March 7, 2013. Raksha Mantri visited Australia on June 4-5, 2013 and met his counterpart Mr. Stephen Smith. This was followed by the visit of Vice Admiral R J Griggs, Chief of Royal Australian Navy from June 10-13, 2013. Chief of Army Staff visited Australia from September 3-6, 2013. The 3rd session of the India-Australia Defence Policy Dialogue was held in India on October 4, 2013. The dialogue was co-chaired at the level of Additional Secretary. During the dialogue, both sides exchanged views on a number of issues of mutual interest concerning bilateral defence cooperation and regional and global security scenario.

14.18 India's defence relations with **Japan** continue to develop steadily. Exchange of high level visits and training exchanges have been growing. The Director General, Indian Coast Guard paid an official visit to Japan during January 20-24, 2013. The Chief of Army Staff visited Japan from February 11-15, 2013. Admiral Katsutoshi Kawano, Chief of Staff, Japan Maritime Self Defence Force visited India from February 24-26, 2013 and Gen Eiji Kimizuka, Chief of Staff of Japan Ground Self Defence Forces visited India from May 5-8, 2013. Mr. Masanori Nishi, the Administrative Vice Minister of National Defence, Japan visited India from July 8-10, 2013. The Joint exercise 'JIMEX' was held between the two Navies from December 19-22, 2013 off the coast of Chennai. Mr. Itsunori Onodera, Minister of Defence of Japan visited India from January 5-8, 2014 during which he had discussions with Raksha Mantri on issues of mutual interest.

14.19 India and **Republic of Korea** (RoK) share friendly relations and defence cooperation is an aspect of this bilateral relationship. Chairman COSC visited RoK from July 8-11, 2013. General Sung Hwan, Chief of Air Staff of the Republic of Korea visited India from November 13-15, 2013. A delegation led by Additional Secretary visited Seoul to attend the inaugural Defence Policy Dialogue (DPD) held from December 23-24, 2013. Lieutenant Gen Yoo Jeh Seung, Deputy Minister for Policy, Ministry of National Defence, Republic of Korea, co-chaired the Dialogue from the RoK side. An Agreement on Protection of Classified Military Information was signed between the two countries on January 16, 2014 during the visit of the President of RoK to India. Mr Lee Young, Dy. Minister of Defence, RoK visited India in February 2014 to attend DEFEXPO -2014. During the visit he met Raksha Rajya Mantri and Defence Secretary.

14.20 India maintains cordial defence relation with **Oman**. The 6th India-Oman Joint Military Cooperation Committee (JMCC) meeting was held in Muscat on January 6, 2013. The Indian side was led by the Defence Secretary while Mr. Mohd. Bin Nasser Al-Rasby, Under Secretary, Ministry of Defence, Sultanate of Oman led the Omani delegation. Chief of Naval Staff visited UAE and Oman from April 14-19, 2013. The Indian Navy and Royal Navy of Oman conducted exercise 'Naseem Al-Bahr-13' off the coast of Oman from September 23-26, 2013. The Indian Air Force and Royal Air Force of Oman conducted the 3rd joint Air exercise 'Eastern Bridge' at Masirah Island from October 2-12, 2013. The 7th JMCC meeting was held in India on January 29, 2014. Defence Secretary led the Indian side while Mr. Mohd. Bin Nasser Al-Rasby, Secretary General, Ministry of Defence, Sultanate of Oman led the Omani side.

14.21 Our relations with **Qatar** have been friendly. The 3rd India – Qatar Joint Defence Committee (JDC) meeting was held in Doha on September 16, 2013. The Indian side was led by Joint Secretary (PIC) and the Qatari side was led by Brig Mohammed M. Abdullah Al-Suwaidi, Chief of North and South American Affairs, Office of the General coordinator, Ministry of Defence of the State of Qatar.

14.22 The 4th Navy-to-Navy Staff Talks with **UAE** were held in New Delhi on October 21-22, 2013. The 6th India-UAE Joint Defence Cooperation Committee meeting was held in Abu Dhabi on October 27, 2013. The meeting was co-chaired by Joint Secretary (PIC) and Maj Gen Ishak Mohammed Al Balushi, Joint Logistics Command and Commander, GHQ Armed Forces, UAE.

14.23 Defence relations with **Israel** have been cordial and friendly. Chief of Air Staff visited Israel from January 20-23, 2013.

The 8th India-Israel Sub-Working Group on Defence Procurement, Production and Development (SWG-DPPD) was held in New Delhi on May 20, 2013. It was co-chaired by DG (Acquisition) from Indian side and Brig Gen Shmaya Avieli, Director, SIBAT, Ministry of Defence, Israel from the Israeli side. Maj Gen Guy Zur, Chief of Ground Forces, Israeli Defence Forces visited India from November 11-14, 2013. The Army to Army, Navy to Navy and Air Force to Air Force Staff talks with Israel were held on March 11, 2014 in Israel. The Chief of Army Staff visited Israel from March 18 - 21, 2014. Major General Dan Harel, Director General, Israeli Ministry of Defence visited India in February 2014 for attending DEFEXPO-2014. During the visit he called on Raksha Rajya Mantri and also met Defence Secretary.

14.24 India's relations with Saudi Arabia have been progressing steadily. Both sides signed a Memorandum of Understanding on Defence Cooperation on February 26, 2014 during the visit of the Dy. Prime Minister and the Defence Minister of Saudi Arabia to India.

14.25 India traditionally shares friendly relations with the **Central Asian Republics (CARs)**. The engagements with these countries in the field of defence have been gradually expanding to mutual benefit. The second meeting of the India-Tajikistan Joint Working Group (JWG) on Defence was held in India on March 22-23, 2013. The joint Special Forces exercise was held between the Armies of India and Tajikistan from October 26 to November 7, 2013 in India. The third JWG meeting was held in Tajikistan on March 9-11, 2014.

14.26 The Kyrgyz Defence Minister Maj Gen Taalaibek Omuraliev visited India on September 11-15, 2013. During the visit, he held discussions with Raksha Mantri on a range of issues concerning the bilateral defence relationship and it was agreed to further strengthen cooperation between the defence establishments on both sides.

14.27 Our bilateral defence relations with **Mongolia** have been friendly and cordial. The 9th joint exercise 'Ex-Nomadic Elephant' between the Indian Army and the Mongolian Army was held in Mongolia during June 11-23, 2013. The 6th meeting of the Mongolia-India Joint Working Group on defence cooperation was held in New Delhi on November 22, 2013.

14.28 India and **Russia** share a long standing defence relationship, based on mutual trust and understanding. It is the only country with which India has an institutionalized annual defence cooperation mechanism at the level of the Defence Ministers of the two countries. The 13th meeting of the India-Russia Inter-Governmental Commission on Military Technical Cooperation (IGIRC-MTC) was held in Moscow on November

18, 2013. The meeting was co-chaired by Raksha Mantri and Mr. S.K. Shoigu, Minister of Defence of the Russian Federation. The Defence Ministers of both countries signed a Protocol at the conclusion of 13th IRIGC-MTC meeting. Raksha Mantri also participated in the ceremony for the commissioning of INS Vikramaditya on November 15-16, 2013.

The 6th meeting of the India-Russia High Level Monitoring Committee was held in Moscow on September 2, 2013. The meeting was co-chaired by the Defence Secretary and Mr. Alexander V.Fomin, Director, FSMTC, Russia.

14.29 The 6th meeting of the India-Russia High Level Monitoring Committee was held in Moscow on September 2, 2013. The meeting was co-chaired by the Defence Secretary and Mr. Alexander V.Fomin, Director, FSMTC, Russia. The 13th Meeting of the India-Russia Working Group on Military Technical Cooperation was held in Moscow on September 9-10, 2013. The meeting was co-chaired by Director General (Acquisition) and Mr. A.A. Boytsov, First Deputy Director of the FSMTC, Russia. Mr A.V.Fomin, Director, FSMTC, who accompanied the Russian Deputy Prime Minister Dmitry Rogozin during his visit to India, met Defence Secretary on February 26, 2014 and discussed bilateral military technical cooperation issues.

14.30 The joint exercise 'Indra' was held between the two Armies from October 16-28, 2013 in India.

14.31 India and **France** continue to share cordial and mutually beneficial defence relations. Mr. Jean-Yves Le Drian, French Defence Minister visited India on February 14, 2013 as part of the delegation accompanying the French President and met Raksha Mantri. Chief of Army Staff visited France from May 27-30, 2013. Raksha Rajya Mantri visited France from June 18-19, 2013 to witness the Paris Air Show. The French Defence Minister also visited India from July 25-27, 2013. During the meeting with Raksha Mantri on July 26, 2013, bilateral relations, defence trade and technology, bilateral defence exchanges and security issues were discussed. The joint Army exercise 'Shakti 2013' was conducted in France from September 9-21, 2013.

14.32 Defence relations with **Norway** gained momentum during the year. Mr. Oystein Bo, Deputy Minister of Defence, Norway visited India from December 10-14, 2013 and met Raksha Rajya Mantri on December 13, 2013. During the meeting, defence cooperation possibilities between the two countries were discussed.

14.33 Bilateral defence cooperation dialogue between India and the **United Kingdom** was established with the signing of the Terms of Reference for the 'Defence

Consultative Group' in 1995. Since then, defence relations between India and UK have been growing steadily. There are regular exchange of high level visits, training and expert exchanges and joint projects for defence production between the two countries.

Bilateral defence cooperation dialogue between India and the United Kingdom was established with the signing of the Terms of Reference for the 'Defence Consultative Group' in 1995. Since then, the defence relations between India and UK have been growing steadily.

14.34 Sir Stephen Dalton, Chief of Air Staff, Royal, UK visited India from March 6-9, 2013. A joint Army exercises was held with the UK, namely, 'Ajay Warrior' from April 3-30, 2013 in India. Indian Army also participated in ex 'Cambrian Patrol' from October 10-18, 2013 in the UK. The joint Naval exercise 'Konkan' was held from October 14-19, 2013 off the coast of Goa. Mr Ian Thompson, Permanent Secretary for Defence, UK visited India during February 3-4, 2014 and participated in the 15th meeting of the India-UK Defence Consultative Group (DCG) on February 4, 2014.

14.35 India's defence relations with **United State of America (USA)** are an important element of the broader strategic partnership between the two countries. The bilateral defence cooperation is progressed through regular conduct of military cooperation activities, expert exchanges, exchanges of high level visits, cooperation in defence research and regular conduct of joint exercises.

14.36 Two joint Army exercises were held with USA, 'Yudh Abhyas' from May 3-17, 2013 in USA and 'Shatrujeet' from October 3-6, 2013 in India. Chief of Air Staff visited USA from July 22-25, 2013. Gen Raymond T Odierno, Chief of Staff, United States Army visited India from July 23-26, 2013. Two joint Naval exercises were held, 'Malabar 13' from November 5-11, 2013 in India and 'Sangam' from November 5-13, 2013 in the USA. Chief of Army Staff visited USA from December 2-5, 2013.

14.37 Defence relations with **Brazil** are warm and friendly. The 3rd India-Brazil Joint Defence Committee meeting was held in New Delhi on May 21, 2013. Issues relating to defence cooperation were discussed in the meeting.

14.38 Defence relations with **Peru** were formalized with the signing of the India-Peru Defence Cooperation Agreement on October 28, 2013 during the visit of Vice President of India to Peru.

14.39 A four member **Algerian** delegation headed by Gen Abdelkrim BENYAHIA visited India from October 23-25, 2013 and met officials in Ministry of Defence. Various issues concerning bilateral

defence cooperation were discussed in the meetings.

14.40 Gen Abdel Fattah El Sisi, the then Defence Minister of **Egypt** visited India from March 18-20, 2013 as a part of the delegation led by the President of Egypt and held a meeting with Raksha Mantri. The 4th meeting of the India-Egypt Joint Defence Committee (JDC) was held in New Delhi on May 1, 2013. During the JDC meeting, both sides discussed issues related to bilateral cooperation in the field of defence.

14.41 Mr. Moshoeshoe David Sehloho, Principal Secretary of Defence, Kingdom of **Lesotho** visited India and had a meeting with Defence Secretary on August 23, 2013. Both sides discussed issues of mutual interest concerning bilateral defence co-operation.

14.42 Chief of Naval Staff visited **Mauritius** from February 3-6, 2013. Mrs. K.O.F Weng - Poorun, Senior Chief Executive, PMO, Government of Mauritius visited India in first week of August, 2013 and met Defence Secretary on August 5, 2013. Both sides reviewed the ongoing defence co-operation activities between the two countries.

14.43 The inaugural meeting of India-**Nigeria** Joint Defence Cooperation Committee (JDCC) was held on April 22, 2013 in New Delhi. During the JDCC meeting, both sides discussed issues related to bilateral cooperation in the field of defence. Vice-Admiral DJ Ezeoba, Chief of Naval Staff, Nigerian Navy visited India from December 9-12, 2013.

14.44 Relations between India and **Seychelles** have been warm and cordial. India has been partnering Seychelles in the capacity building of its Armed Forces. A Dornier-228 aircraft was handed over by India to Seychelles during the visit of the Foreign Minister of Seychelles to India in January, 2013. The joint Army exercise 'LIMITER' was held in Seychelles from December 2-15, 2013.

14.45 General (PSC) Abed Elrahman Mohammed Zain Ahmad, Secretary General, Ministry of Defence, Govt. of **Sudan** visited India from September 11-13, 2013 and met Defence Secretary. During the meeting, both sides explored possible areas of defence co-operation between the two countries.

14.46 A four member delegation from Corps of Military Police, **Tanzanian** Peoples' Defence Forces visited India from February 22-28, 2013.

14.47 **ADMM Plus:** India is actively participating in all Expert Working Groups (EWGs) activities conducted under the ADMM Plus fora. Indian Armed forces participated in the Humanitarian Assistance and Disaster Relief/Military Medicine (HADR/MM) exercise held from June 10-22, 2013 in Brunei. Raksha Rajya Mantri attended the 2nd ADMM Plus meeting held in Brunei Darussalam on August 29, 2013. Indian Armed Forces participated as observer in Counter Terrorism Exercise (CTX) held in

Indonesia from September 7-13, 2013. Indian Navy participated in Maritime Security Field Training Exercise (FTX) held off the coast of Australia from September 28 to October 1, 2013. In addition to the five existing EWGs, a new EWG on Humanitarian Mine Action (HMA) has been established. India will be co-chairing the EWG on HMA with Vietnam from 2014 to 2017.

14.48 **India, Brazil and South Africa (IBSA) Trilateral Defence Cooperation:** The 5th meeting of the IBSA Joint Working Group on Defence (IBSA DJWG) was conducted on May 23-24, 2013. The Indian delegation was led by Joint Secretary (Planning and International Cooperation), the Brazilian delegation was led by Rear Admiral Renato Rodrigues de Aquiar Freire, Dy. Chief of International Matters and the South African delegation was led by Lt. Gen. V I Ramlakan, Chief of Corporate Staff. The meeting reviewed the defence cooperation activities being progressed under the forum and formulated an action plan for the year 2013-14.

15

CEREMONIAL AND OTHER ACTIVITIES

A view of the illuminated Rashtrapati Bhawan, South Block and North Block during the Beating Retreat Ceremony

The Ministry of Defence encourages and promotes both academic and adventure activities through autonomous institutions

15.1 The Ministry of Defence encourages and promotes both academic and adventure activities through autonomous institutions which are provided regular financial assistance. These institutions are:

(i) The Institute for Defense Studies and Analyses, New Delhi;

(ii) Mountaineering Institutes at Darjeeling and Uttarkashi; and

(iii) The Jawahar Institute of Mountaineering and Winter Sports (JIM) at Pahalgam.

15.2 The important activities of these institutions during the period under review are enumerated in the succeeding paragraphs.

INSTITUTE FOR DEFENCE STUDIES AND ANALYSES (IDSA)

15.3 The Institute for Defence Studies and Analyses (IDSA), established in November 1965, is a registered body under the Registration of Societies Act III of 1860 (Punjab Amendment Act 1957) as amended from time to time. The Institute is a non-partisan, autonomous body dedicated to objective research and policy relevant studies on all aspects of defence and security with a mission to promote national and international security through the generation and dissemination of knowledge on defence and security-related issues.

15.4 As India's engagement with the rest of the world deepened, the IDSA's interaction with the strategic community also increased. IDSA has expanded its research to focus on emerging issues such as climate change energy, water security as well as cyber and space security. The Institute analysed in depth the emergence of new challenges and India's responses. Special attention was paid to defence diplomacy and numerous security dialogues initiated by the Government. Developments in the neighbourhood remained a priority area for IDSA scholars. A large number of books, monographs, papers were brought out during the year.

15.5 IDSA's outreach activity has expanded considerably. A number of

eminent visitors and delegations from abroad were hosted at the IDSA. Prominent think tanks and universities were also engaged. IDSA's website has become a source of information on a wide range of security and defence issues for researchers, students and public alike. Social media tools have been used extensively to enhance IDSA's reach. This has made the IDSA's website as one of the most visited globally. A number of research projects were undertaken on behalf of various government departments. IDSA has a large publications programme. Its flagship journal, Strategic Analysis and the quarterly Journal of Defence Studies emerged as major sources of reference.

15.6 IDSA is funded by the Ministry of Defence and functions autonomously. IDSA Scholars are drawn from academia, the defence forces and the civil services. The research faculty of 54 scholars are organised under 13 Centres. The Institute also hosted 19 Visiting Fellows from various countries under its Visiting Fellowship Programme and 26 Interns under its Internship Programme during the year, which has improved outreach of the institute as well as enhanced its visibility across the globe. 72 IDSA Scholars were invited to attend Seminars, Round Tables and Conferences outside the country during the year (upto March 31, 2014).

The 16th Asian Security Conference was organised from February 19-21, 2014 on the theme "Emerging Strategic Trends in Asia and India's Response".

15.7 **International and National Conferences/ Seminars/ Dialogues:** A number of seminars, round tables, lectures and dialogues on issues of national and international significances were held by IDSA throughout the period.

15.8 The Institute conducted the 7th South Asia Conference on "India and South Asia: Exploring Regional Perceptions" on October 30-31, 2013. The 15th Asian Security Conference (February 13-15, 2013), was organised on the theme "Emerging Trends in West Asia: Regional and Global Implications". The 16th Asian Security Conference was organised from February 19-21, 2014 on the theme "Emerging Strategic Trends in Asia and India's Response".

15.9 Apart from the above two major Conferences, the Institute also organised the following:

- Two-day conference on the Arctic titled "AsiArctic" was held in close-co-operation with the three Norwegian Research Institutions: the Fridtjof Nansen Institute (FNI), the Norwegian Institute for Defence Studies (IFS) and Peace Research Institute Oslo (PRIO);

- One day seminar organized in collaboration with the Indian Council of Social Science Research (ICSSR) on "Developing Indigenous Concepts and Vocabulary: Kautilya's Arthasastra;
- One day seminar organized on "Internal Security Challenges: State Structures and Responses" on October 9, 2013;
- National conference of Indian think tanks organized on October 22, 2013;
- Second India-Australia 1.5 Dialogue organized on "Realizing the India-Australia Vision for Partnership and Prosperity" on October 26, 2013.

15.10 **Y.B. Chavan Memorial Lecture:** The 4th Y. B. Chavan Memorial Lecture was delivered by Admiral (Retd) Arun Prakash on Maritime Security of India - Future Challenges on November 26, 2013. It was chaired by Dr C Raja Mohan.

15.11 **Special and Eminent Persons Lectures:** The Institute organised several eminent person's lectures during the year. Important among them was the address by Hon'ble Minister of Defence of the French Republic on the topic "Indo-French Defence Partnership: The Choice of Strategic Autonomy".

15.12 **Bilateral Interactions:** An important part of the Institute's outreach is the relationship that it has forged and continues to foster with prestigious institutions and think tanks of international repute from around the world. Some of these international institution/ think tanks along with subject on which interaction took place are as follows:

- Institute for Strategic Studies (ISS) Ulaanbaatar on "Emerging International Strategic Dynamics: Indian and Mongolian Perspectives" on March 14, 2013.
- German Institute of Global and Area Studies (GIGA) Hamburg on "New Challenges and Partnership in the Age of Multipolarity: Indian and European Perspectives" on March 12-13, 2013.
- China Institutes of Contemporary International Relations (CICIR) on "India-China Relations" on April 1, 2013.
- Diplomatic Academy of Vietnam (DAV) Vietnam on India-Vietnam Relations, India-ASEAN Relations, Rise of China and Maritime Issues in the South China Sea on April 8, 2013
- Bangladesh Institute of International & Strategic Studies (BIISS) on "Future of India Bangladesh Relations" held on July 3, 2013.
- National Institute for Defence Studies (NIDS), Japan on "India is Important for Japan's Maritime Democracy in Asia" on September 25, 2013.

15.13 A workshop on "Defence, deterrence and the Use of Force" was organised by the IDSA in collaboration with the International Institute for Strategic Studies (IISS) London on March 4, 2013.

15.14 **IDSA Publications:** Important publications during the year 2013 which were edited and authored by IDSA scholars included:

- Defence Acquisition: International Best Practices (Edited by Vinay Kaushal and Laxman K Behera);
- Asian Strategic Review (Edited by SD Muni and Vivek Chadha);
- Mission Mars: India's Quest for the Red Planet (authored by Ajey Lele);
- China Year Book 2012 (edited by Rukmani Gupta);
- Developments in the Gulf Region: Prospects and Challenges for India in the Next two Decades (edited by Rumel Dahiya);
- Stability and Growth in South Asia (edited by Sumita Kumar)
- India and Africa Enhancing Mutual Engagement (Edited by Ruchita Beri).

Apart from these, the Institute also published 15 Monographs, 33 Issue Briefs and 2 Policy Briefs during the Year.

15.15 **IDSA Website:** IDSA publications are posted on the Institute's website. Visitors are given Open Access to most of the publications. Open Access to publications creates a healthy environment for scholarship and communication. It also helps in sharing authors' ideas worldwide and preserves the publications in digital form leading to greater shelf life.

15.16 **49th IDSA Foundation Day:** The 49th Foundation Day of IDSA was celebrated on November 9, 2013. Deputy Chairman, Planning Commission delivered this year's lecture on the topic "Indian Economy and National Security" and presented the 7th K Subrahmanyam Award and the Presidential Awards for Excellence. The 7th K Subrahmanyam Award was conferred on Wg Cdr (Dr) Ajey Lele , Research Fellow, IDSA. The Deputy Chairman also gave away the Presidents' Award for Excellence to Shri Sam Rajiv, Associate Fellow, IDSA.

MOUNTAINEERING INSTITUTE

15.17 The Ministry of Defence

administers, jointly with the concerned State Governments, three Mountaineering Training Institutes, namely, Himalayan Mountaineering Institute (HMI), Darjeeling in West Bengal, Nehru Institute of mountaineering (NIM), Uttarkashi in Uttarakhand and Jawahar Institute of Mountaineering & Winter Sports (JIM & WS), Pahalgam in J&K. These Institutes are run as Registered Societies and have been conferred the status of autonomous bodies. While Raksha Mantri is President of these Institutes, the Chief Minister of the respective State acts as Vice-President of the Institute. The Institutes are governed by Executive Councils consisting of members elected by General Body of each Institute, nominees from amongst donors and /or persons who are keen to promote the cause of mountaineering, and representatives of Central and State Governments.

15.18 These Institutes provide an impetus to mountaineering as a sport, give boost to mountaineering and inculcate the spirit of adventure in youth. The broad objectives of the Mountaineering Institutes are:

(a) to impart theoretical knowledge and practical training in mountaineering and rock climbing techniques;

(b) to awaken interest in and love for mountains and exploration; and

(c) to encourage and provide training in Winter Sports.

15.19 These Institutes conduct courses in the Basic and Advanced Mountaineering, Method of Instruction (MOI), Search & Rescue (S&R) and Adventure. Trainees to these courses comprise personnel from Army, Air Force, Navy, ITBP, BSF, NCC and Indian citizens as well as foreigners. The syllabi, duration, grading and other details for admission to courses are available on the website of these Institutes which are www.hmidarj@gmail.com www.nimindia.net and www.jawaharinstitutepahalgam.com for HMI, NIM and JIM respectively.

15.20 The details of regular courses conducted by the Institutes and number of men and women trained in these courses from April to December 2013 are given in Table No. 15.1.

Table No. 15.1

Institute	Basic Course		Advanced Course		Adventure Course		MOI Course		S&R Course	
	No. of Courses	No. of Trainees	No. of Courses	No. of Trainees	No. of Courses	No. of Trainees	No. of Courses	No. of Trainees	No. of Courses	No. of Trainees
HMI	05	296	03	138	01	92	--		--	
NIM	05	320	03	86	04	149	01	35	01	35
JIM	06	380	02	110	-	-	01	08	-	-

15.21 HMI also conducted two special Basic Mountaineering Courses for 50 students and 4 Special Adventure Courses for 183 students.

15.22 NIM conducted 12 Special Courses for various organizations in which 552 men and women were trained.

15.23 JIM & WS conducted 41 Special Adventure Courses for 1326 men and women; two Para Gliding Courses for 29 persons, two Environment Camps for 1711 men and women and one white water rafting course for 20 students.

15.24 A new Institute named as National Institute of Mountaineering & Allied Sports (NIMAS) has been set up at Dirang, Arunachal Pradesh as a registered society funded by Ministry of Defence in Jan 2013. Raksha Mantri is President and Chief Minister Arunachal Pradesh is its Vice-president. The broad objectives of this new institute are:-

(a) imparting theoretical and practical training in the field of Aqua Adventure and Aero Adventure Activities, apart from Mountaineering.

(b) awakening interest in and love for adventure activities and exploration among the youth.

(c) generating a sense of preservation of environment and ecology in the Himalayan region through nature workshops.

15.25 NIMAS is the first National Institute of its kind where theoretical and practical training for activities relating to Mountaineering, Aero Adventure and Aqua Adventure would be conducted. Trainees for the courses at the Institute shall be from all parts of India and abroad.

15.26 The Institute has started functioning from temporary HQrs at Dirang. The Institute will initially conduct Mountaineering Courses only and courses in aqua and aero activities will commence as soon as the storage capacity for their equipment is created.

15.27 NIMAS has conducted one Basic Mountaineering Courses for 28 students, one Special Course on Trekking Guides for 40 students, one Special Course on Eco-camp Management for 20 students and one Special Rock Climbing Course for 20 Army Personnel during the year.

CEREMONIAL, HONOURS AND AWARDS

15.28 The responsibility for organising National functions like the Republic Day Parade, Beating Retreat Ceremony, Martyr's Day and the Independence Day rests with Ministry of Defence. The Ministry also organises the Defence Investiture Ceremonies for presentation of Gallantry and Distinguished Service Awards at Rashtrapati Bhawan in association with the President's

Secretariat. The Ceremonial functions organised during 2013-2014 are detailed in the following paragraphs.

15.29 **Independence Day Flag Hoisting Ceremony:** The celebration of the Independence Day began with singing of patriotic songs in different Indian languages by the School children's choir at Red Fort. The three Services and Delhi Police presented the Guard of Honour to the Prime Minister. Thereafter, the Prime Minister unfurled the National Flag on the Ramparts of the Red Fort to the accompaniment of the National Anthem played by the Services Band. A Gun Salute was presented on the occasion. After the Prime Minister's Address to the Nation, the ceremony concluded with the singing of National Anthem by school children and the NCC cadets followed by release of balloons. Later, during the day, the President laid a wreath at the Amar Jawan Jyoti at India Gate to pay homage to those who sacrificed their lives for the freedom of the motherland.

15.30 The Gallantry Awards announced on the eve of the Independence Day-2013 are given in Table No. 15.2.

Lt Cdr Abhilash Tomy being Awarded Kirti Chakra by the President of India

15.31 **Vijay Diwas:** Vijay Diwas was celebrated on December 16, 2013. On this occasion, the Raksha Mantri laid a wreath at the Amar Jawan Jyoti at India Gate.

15.32 **Amar Jawan Jyoti Ceremony, 2014:** The Prime Minister laid a wreath at the Amar Jawan Jyoti at India Gate in the morning of January 26, 2014. A two minute silence was observed for paying homage to those

Table No. 15.2

Award	Number of Awards	Posthumous
Ashoka Chakra	01	01
Kirti Chakra	03	01
Shaurya Chakra	10	02
Bar to Sena Medal (G)	02	-
Sena Medal (G)	21	-
Nao Sena Medal (G)	01	-
Vayu Sena Medal (G)	05	-

who laid down their lives in safeguarding the integrity of our nation.

15.33 **Republic Day Parade, 2014:** The unfurling of the National Flag at Rajpath marked the beginning of Republic Day Parade. The President's Body Guards presented the National Salute followed by the National Anthem played by the Service Bands and a 21 gun salute. His Excellency Mr. Shinzo Abe the Prime Minister of Japan was the Chief Guest on the occasion.

15.34 Mounted columns of 61 Cavalry, mechanised columns comprising of Tank T-90 (Bhishma), ICV BMP-II (Sarath), Weapon Systems, Smerch 300 mm Multi Rocket Launcher System, T-72 Full Width Mine plough, Transportable Satl Terminals, PMS (Bridging System), OSA-AK-Weapon System, fly past by Advanced Light Helicopters, marching contingents and bands of the three Services, Para Military Forces, Delhi Police, NCC, NSS etc. were part of the Parade. The DRDO equipment column included LCA Tejas, Astra and Helina Missiles, MBT Arjun MK-II, Unmanned Systems Tableau.

15.35 Out of twenty five children conferred with National Bravery Awards, five were posthumous. Twenty award winning children, seated in decorated Army Jeeps, participated in the Parade. Tableaux of States, Central Ministries/ Departments and cultural items presented by school children were the other attractions of the parade. 18 tableaux and 5 school children items reflected the cultural diversity of the nation. The parade concluded with a motorcycle display by the jawans of BSF followed by an impressive fly past by Indian Air Force.

15.36 The Gallantry and distinguished service awards announced on the Republic Day are given in Table No. 15.3.

Table No. 15.3

Name of the award	Total	Posthumous
Gallantry Awards		
Kirti Chakra	03	02
Shaurya Chakra	10	03
Bar to Sena Medal/Vayu Sena Medal (Gallantry)	02	-
Sena Medal/Nao Sena Medal/ Vayu Sena Medal (Gallantry)	64	05
Distinguished Awards		
Param Vishisht Seva Medal	28	-
Uttam Yudh Seva Medal	05	-
Bar to Ati Vishisht Seva Medal	07	-
Ati Vishisht Seva Medal	45	-
Yudh Seva Medal	19	-
Bar to Sena Medal/Nao Sena Medal (Devotion to duty)	05	-
Sena Medal/ Nao Sena Medal/Vayu Sena Medal (Devotion to duty)	58	-
Bar to Vishisht Seva Medal	10	-
Vishisht Seva Medal	112	-

15.37 **Beating Retreat Ceremony, 2014:** 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, 2014, which brought down the curtain on the Republic Day festivities. Bands of the three Services participated in this Ceremony. The conclusion of the ceremony coincided with illumination of the Rashtrapati Bhawan, North Block, South Block, Parliament House and India Gate.

15.38 **Martyrs' Day Ceremony, 2014:** On January 30, 2014, the President laid a wreath at Mahatma Gandhi's samadhi at Rajghat. The Vice President, the Prime Minister, the Raksha Mantri, Raksha Rajya Mantri and other dignitaries also paid floral tributes. This was followed by observance of two minutes' silence at 1100 hours to pay homage to those who sacrificed their lives in India's struggle for freedom.

15.39 **Armed Forces Flag Day (AFFD):** The Armed Forces Flag Day was commenced on December 7, 2013 like every year throughout the country. This day is observed to remember the sacrifices made by our gallant servicemen in defending the integrity of our borders, honour the brave and express solidarity and support towards welfare of widows, children, disabled and sick ex-servicemen.

An Official Language Division is functioning in the Ministry of Defence for implementation of the official language policy of the Union Government. This Division provides assistance and guidance to the officers and employees of the Ministry of Defence.

OFFFICIAL LANGUAGE DIVISION

15.40 An Official Language Division is functioning in the Ministry of Defence for implementation of the official language policy of the Union Government. This Division provides assistance and guidance to the officers and employees of the Ministry of Defence (Secretariat), the three Services Headquarters, all Inter-Service Organizations and Defence Undertakings for proper implementation of the provisions of the Official Language Act and rules made thereunder and the directions/ orders issued by the nodal Department viz. Department of Official Language, Ministry of Home Affairs in this regard from time to time. There are two separate Hindi Advisory Committees constituted under the chairmanship of Raksha Mantri in the Ministry. These Committees are constituted with a view to advise the respective Department(s) of the Ministry on matters relating to the progressive use of Hindi for official purposes. The work relating to official language

implementation comprises achieving of targets prescribed by the Department of Official Language every year for the progressive use of Hindi in official work, imparting training of Hindi, Hindi typing and Hindi Stenography to the officers and staff working in the Ministry, organizing Hindi workshops for the staff to enable them to work in Hindi without any hesitation. The work relating to monitoring includes carrying out official language inspections of subordinate offices, defence undertakings and sections of the Ministry, organizing quarterly meetings of both the official language implementation committees (OLICs) of the Ministry, taking part in the meetings of OLICs of the three Services Headquarters and Inter-Service Organizations located at New Delhi by senior officers of the Division as representative of the Ministry and reviewing the quarterly progress reports received from the above offices for taking remedial measures.

15.41 **Annual Programme:** Annual Programme for the year 2013-14 received from the Department of Official Language was circulated to all defence organizations for achieving targets laid down therein. Emphasis is being laid on enhancing the original correspondence in Hindi, issuing all communication falling under Section 3(3) of Official Language Act in bilingual form, conducting Hindi workshops regularly and getting the officers/ employees trained in Hindi under the Hindi Teaching Scheme. In the quarterly meetings of the departmental OLICs, progress made in this regard is being reviewed regularly.

15.42 **Translation Work:** Substantial material for translation received from various offices and sections of the Ministry was disposed of during the year which included MP/VIP references, communications issued from Raksha Mantri/ Raksha Rajya Mantri offices, cabinet notes, audit paras, documents submitted to Standing Committee on Defence and Consultative Committee, Annual Report of the Ministry, Parliament Questions, Ageements etc.

15.43 **Meeting of Hindi Advisory Committees:** A meeting of the Hindi Advisory Committee of Department of Defence, Department of Defence Research and Development and Department of Ex-Servicemen Welfare was held on March 23, 2013 under the chairmanship of Raksha Rajya Mantri. The decisions taken therein have been compiled with. A meeting of Hindi Advisory Committee of the Department of Defence Production was held on November 6, 2013 under the chairmanship of Raksha Rajya Mantri.

15.44 **Incentive schemes for writing books in Hindi on subjects relating to defence:**

Entries under the scheme for the block year i.e. 2011-13 were invited by widely circulating and advertising the scheme through newspaper. Evaluation process of the books received is underway.

15.45 **Hindi Pakhwara:** Hindi 'Pakhwara' (fortnight) was held in the Ministry from September 14 to 30, 2013 for encouraging the officers/employees to use Hindi in their day-to-day official work. A number of competitions were organized during the period, which included Hindi noting and drafting, Hindi typing, Hindi stenography and essay writing competitions etc. In all, 145 officers/ employees participated in the above competitions.

15.46 **Inspections of Parliamentary Committee on Official Language:** Like previous years, the Committee of Parliament on Official Language made inspection tours of various defence organizations at different stations in the country during the year. The Ministry assisted the offices under inspection by reviewing their questionnaires and suggesting amendments wherever required. Assurances given by the offices at the time of their inspection are being fulfilled as per the directions and requirements of the Committee.

WELFARE OF PERSONS WITH DISABILITIES

15.47 The representation of persons with disabilities in Group 'A', 'B', 'C' and 'D' posts in Ministry of Defence (Department of Defence) and in attached and Subordinate Offices under Department of Defence Production is presented in Table No. 15.4 and Table No. 15.5 respectively.

Table No. 15.4

Annual Statement showing the representation of the persons with disabilities in services

(As on January 1, 2013)

Group	No. of employees				
	Total	In identified posts	Visually handicapped	Hearing handicapped	Orthopedically handicapped
Group A	2982	600	0	0	5
Group B	13441	3959	19	9	109
Group C	165581	25565	214	336	1355
Group D	62225	490	141	108	241
Total	**244229**	**30614**	**374**	**453**	**1710**

Table No. 15.5

Annual Statement showing the representation of the persons with disabilities in services in Attached and Subordinate Offices under Department of Defence Production

(As on January 1, 2013)

Group	Number of Employees				
	Total	In Identified Posts	Visually handicapped	Hearing Handicapped	Orthopedically Handicapped
Group A	1882	22	1	2	14
Group B	32218	392	14	19	233
Group C	65827	1516	136	183	1092
Group D	44	8	0	0	1
Total	**99971**	**1938**	**151**	**204**	**1340**

15.48 **Armed Forces:** Provisions enshrined under Sections 33 and 47 of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, lay down safeguards for persons with disabilities in the matter of recruitment and retention in the Service. However, keeping in view the nature of duties performed by the Armed Forces personnel, all combatant posts have been exempted from the applicability of the relevant Sections by virtue of special Notifications issued by the Ministry of Social Justice and Empowerment.

15.49 **Department of Defence production:** All Defence Public Sector Undertakings (DPSUs) under the Ministry of Defence have been following the provisions of the Persons with Disabilities (Equal opportunities, Protection of Rights and Full participation) Act 1995 in order to enable persons with disabilities to avail the benefits of reservation. Several concessions and relaxations, in addition to those prescribed by the Governments, are also extended to persons with disabilities.

15.50 **Defence Research and Development Organisation:** DRDO is committed to implement the Government policies and instructions relating to the welfare of persons with disabilities. The 3% reservation in the recruitment and promotion is being provided to the persons with disabilities as per the Government instructions.

Department of Ex-Servicemen Welfare

15.51 A number of soldiers become disabled during action or due to accidents and other causes and are invalidated out from service. These ex-Servicemen (ESM) are provided special medical care and training to become self-reliance. The care and rehabilitation of such personnel is undertaken in specialized institutions which are supported financially by Kendriya Sainik Board (KSB).

16

ACTIVITIES OF VIGILANCE UNITS

The Vigilance Division in the Ministry of Defence has been entrusted with the task of dealing with complaints regarding corrupt practices, misconduct and irregularities in respect of employees of the Ministry of Defence and various units under it.

16.1 The Vigilance Division in the Ministry of Defence has been entrusted with the task of dealing with complaints regarding corrupt practices, misconduct and irregularities in respect of employees of the Ministry of Defence and various units under it. It serves as a nodal point for interaction on behalf of the Ministry of Defence with the Central Bureau of Investigation (CBI), Central Vigilance Commission (CVC) etc. on vigilance related issues and complaints. The Vigilance Division initiates measures with a view to combating corruption.

16.2 For administrative convenience, the vigilance work in respect of the Department of Defence (including Department of Ex-Servicemen Welfare and Department of Defence Research and Development) and Department of Defence Production is being looked after by their respective Chief Vigilance Officers.

16.3 In accordance with the directives of the Central Vigilance Commission, all Departments/ Organisations/ Units under Ministry of Defence observed Vigilance Awareness Week from October 28 to November 2, 2013 with the intention of emphasizing good governance.

DEPARTMENT OF DEFENCE

16.4 In keeping with the need to ensure transparency, fair play, accountability and integrity, efforts are being made continuously in the Ministry of Defence for sensitization against corrupt practices .

16.5 The Chief Vigilance Officer maintains liaison with all concerned offices to ensure timely completion of various reports/ cases/ tasks relating to vigilance work and all reports required to be sent to Central Vigilance Commission (CVC) were sent at the prescribed periodic intervals.

The Ministry keeps a close watch over vigilance cases pending at different stages including the case pending in its Attached and Subordinate Offices, so that such cases are disposed of in a time bound manner.

16.6 The Ministry keeps a close watch over vigilance cases pending at different stages including the case pending in the concerned so that such cases are disposed of in a time bound manner. The status of pendency is monitored by the CVO at regular intervals.

16.7 During the period, a total of 17 complaints were referred by CVC, on which action were initiated. A total of 16 complaints received in the current and previous year were brought to logical conclusion. Prosecution sanction has been granted against 3 Gp. A Officers during 2013-14. During the year, three officers were awarded major penalty and one officer was exonerated.

16.8 During the Annual Zonal Review Meeting, 2013 taken by Chief Vigilance Commissioner (CVC) on September 11, 2013 at Satarkta Bhawan, New Delhi, several areas were identified for taking action. CVC stressed upon the need for transparency, fairness and equity in public procurements in the Defence sector.

DEPARTMENT OF DEFENCE PRODUCTION

16.9 **Ordnance Factory Board:** Vigilance newsletter "Sajag" was published during vigilance awareness week.

16.10 System improvement measures were undertaken in form of reducing discretionary powers in recruitment process, by eliminating marks in interview.

16.11 Plant & Machinery Manual was updated and published on OFB 's intranet.

Hindustan Aeronautics Limited (HAL)

16.12 For improving awareness of the employees about various aspects of their working, from vigilance point of view, vigilance awareness programs are being conducted regularly.

16.13 As part of proactive vigilance initiatives, following booklets, periodicals and report were compiled and issued during the year:

(a) Bi-lingual Booklet collating the best practices to enhance transparency in procurement.

(b) Bi-lingual Booklet of compilation of gist of CVC Guidelines on tenders for Works, Goods & Services.

(c) Bi-lingual Booklet on "public employment" containing constitutional provisions, landmark court judgments, best practices in various PSEs, ethics in recruitment, technology in recruitment, handy hints, points to ponder etc.

(d) Report on System Studies in respect of procurement, vendor registration, hiring of transport, recruitment, TA/DA expenditure etc.

(e) Fortnightly bi-lingual bulletin "V2", with each devoted to a single subject, covering all the reference like company policy, CVC guidelines, court judgments etc. on the subject.

(f) Bi-lingual Vigilance Newsletter titled as "Marg Darshan", containing write-ups on preventive vigilance strategies, articles from field executives, update about vigilance department activities etc.

16.14 Vigilance Department of HAL received Vigilance Innovation Award for the year 2013 from Vigilance Study Circle on August 19, 2013 in recognition of its in-house effort in design and execution of "OLIV", an Online Vigilance Clearance programme. The OLIV handles vigilance databases in integration with HR Portal of the Company, for issue of Vigilance clearances to over 34000 employees of the Company.

16.15 Annual Vigilance Talk by former Justice of India and former Lokayukta, Karnataka State was organised on October 28, 2013, for HAL employees.

16.16 **Bharat Electronics Limited (BEL):** Vigilance Awareness Week–2013 was observed from October 28 to November 2, 2013. Various competitions like slogan writing, essay writing, cartoon/ poster painting, debate, skit and Quiz competitions were held during the week.

16.17 By leveraging technology, to increase transparency, following actions have been taken:

(a) Online submission of applications for registration of vendors;

(b) Online submission of applications for recruitment;

(c) Details of contracts awarded/purchase orders issue, valuing more than Rs.10 Lakh in respect of works contracts, service contracts, capital items & non-production items, are published on company's website;

(d) Details of contracts awarded/purchase orders issued on nomination/ single tender basis, for value exceeding Rs.5 Lakh, are published on company's website;

(e) Vendor Payments Information System is made available online.

(f) Electronic Clearing Service (ECS)/ Electronic Funds Transfer (EFT) has been implemented and as on September 2013, 99.93% payments to employees & 97.48% payments to vendors is made online.

16.18 **Garden Reach Shipbuilders and Engineers Ltd. (GRSE):** Policy guideline on vigilance clearances and complaint handling were issued.

16.19 A Voluntary Code of Ethics for the GRSE employees has been proposed, and is

under active consideration. This will improve the professionalism and organizational culture in the company.

16.20 The Vigilance Awareness Week, from October 28 to November 2, 2013, was observed in an innovative and more appealing format by creating awareness through case studies, discussions, management games and film shows.

16.21 **Goa Shipyard Limited (GSL):** The overall objective of vigilance has been to encourage transparency in the organization and instill confidence amongst the citizens in the dealings of the organization in pursuit of good corporate governance. Regular inspections and surprise checks were carried out to prevent any lapses/violations of laid down procedures/guidelines. All newly joined management trainees and executives were made aware of vigilance role and its functions.

16.22 Vigilance Awareness Week was celebrated from October 28 to November 2, 2013. During this, various competitions were arranged for the executives, employees and CISF personnel in the company. Debate & essay competition were also organized for various Higher Secondary Schools and colleges students of Goa. A speech on "Good Governance, Ethics, Moral values" was delivered by Dy. Chairman, MPT, Goa. Vendors meeting with Management was organized.

16.23 **Hindustan Shipyard Limited (HSL):** Besides regular activities, following events were also conducted:

(a) Three workshops on Disciplinary Proceedings and Tender Procedures were conducted during the year.

(b) Vigilance Awareness week was observed during October 28 to November 2, 2013. Relevant banners were displayed in the yard. A debate competition on "Promotion of Good Governance" was conducted at HS Junior and Degree colleges. A seminar on "Promotion of Good Governance – Positive contribution of Vigilance" was also conducted.

16.24 **Mazagon Dock Ltd. (MDL):** The Vigilance Department of MDL takes appropriate action to carry out preventive and punitive vigilance in the company. It promotes transparency and fairness in various activities of company including procurement, subcontract, recruitment etc. The Vigilance Department also attempts to ensure that integrity is maintained in all domains of the Company's functioning. Vigilance Week was observed from October 28 to November 2, 2013, during which various activities/ functions to increase awareness towards vigilance were organised.

16.25 **BEML Ltd.:** Complaint Handling Policy of BEML was revised to be in line with

CVC instructions. A pamphlet published by CVC, detailing the procedure for registration and lodging complaints through Mobile Phone and Internet on the VIGEYE portal of CVC has been uploaded on the company's website.

16.26 Keeping in view the changing business scenario, the sensitive areas list was reviewed and fresh areas were notified as sensitive. An Annual Inspection Plan of the Regional/ District Offices of Marketing division of BEML was drawn up and a team of three Vigilance Officers from different divisions, with diverse background, conducted the inspection as per the Plan.

16.27 As part of e-library CVC/ MoD Circulars are being uploaded on SAP/ ERP. The ERP provides the Last Purchase Price for the same Part Number across the Divisions. Procurement Officers have been advised to provide assurance that they have verified the Last Purchase Price while processing the procurement.

16.28 Purchase Module on SAP-ERP is monitored on regular basis by the vigilance to check for the following red flags and outcome is communicated to Management for systemic correction:

(a) Purchase Order not linked to Purchase Requisition.

(b) If Multiple RFQs are being generated for one item.

(c) If Purchase Requisitions are split to give price advantage to vendors/ suppliers and/ or avoid DOP.

16.29 Training on vigilance awareness was conducted for promoted/ newly joined executives. Sensitization Programme for newly inducted vigilance officers of the divisions was also organized.

16.30 Vigilance awareness week was observed from October 28 to November 2, 2013. Highlight for this year was an address by the CMD & CVO, via live two way video transmission, connecting with all the three divisions at KGF, Mysore and Bangalore. A special journal `VIG-KIRAN' Ver.3 was also published on the theme "Promoting Good Governance-Positive Contribution of Vigilance".

16.31 **Mishra Dhatu Nigam Ltd. (MIDHANI):** During the year, effective measures were taken to improve vigilance administration in the company by focusing on preventive vigilance. Interaction with shop-floor level executives has been continuing during the year, for creating awareness amongst employees. Conducting surprise checks during disposal of scrap and scrutiny of procurement files on random basis were some of the initiatives taken by Vigilance Department.

16.32 As a part of Vigilance Awareness Week, eminent vigilance professionals were

invited to deliver talks on relevant topics to educate the employees.

16.33 **Bharat Dynamics Ltd. (BDL):** Following measures were implemented to increase transparency:

(a) Integrated Material Management Manual, in line with the spirit of DPP & DPM, was published.

(b) Recruitment Manual/ Rules were updated.

(c) More than 90% of the procurement, by value, was done through e-procurement.

(d) All payments, except cash on delivery and miscellaneous, are made through e-payments.

e) Online System for clearance of contractors' bills was introduced, which is having facility for tracking the status of bills by contractors.

(f) Computerized File Tracking System (FTS) was introduced in the Company

16.34 Vigilance Awareness Week was observed from October 28 to November 2, 2013 during which lectures were delivered by various eminent personalities on the theme of "Promoting Good Governance – Positive Contribution of Vigilance". Interactions of vigilance were organized with executives. Essay/slogan writing Competitions for employees and essay/ slogan writing & poster making competitions for school children of BDL schools were organized.

16.35 As part of preventive/pro-active vigilance, following system improvement measures were suggested to the management:

(a) Based on a report on procurement of Containers for TAL project, management decided to procure "Roto Moulded Polyethylene- Container" instead of FRP-Containers, which resulted in savings of Rs. 63.5 Lakh approximately.

(b) In the work of "Tree Plantation at Ibrahimpatnam and Vizag units", a discreet enquiry was conducted and a report was submitted to management with recommendations for systemic improvement, which resulted in savings of Rs. 46 Lakhs approximately

16.36 **Action Taken by Department of Defence Production:** To increase transparency in various activities of Defence PSUs and Ordnance Factory Board, a comprehensive list of actionable points was made and conveyed to all the DPSUs and OFB. Compliance of these actionable points was monitored by calling for quarterly status reports from all the DPSUs & OFB, reviewing these status reports and conveying review comments for compliance in next quarterly

reports. By the close and regular monitoring at the Ministry's level, following action were implemented:

(a) Updating all Procurement/ Purchase Manuals in all the DPSUs.

(b) Updating Recruitment Manual/ Rules. The weightage for interview in recruitments at induction/initial level made through Written Exam and Interviews kept within 15% maximum.

(c) All the payments to vendors/ contractors through e-payment, as far as possible.

(d) Discretionary Quota in Allotment of Houses brought within 5% and it is exercised by a Committee.

(e) On-line tracking of status of bills by contractors implemented in all DPSUs and OFB.

(f) Holding of regular structured meeting between CVO and CMD in all DPSUs and OFB.

(g) Number of sensitive posts identified in all the DPSUs and OFB.

16.37 Good vigilance practices prevailing in various DPSU were collected and circulated to all the DPSUs for adopting suitably in their companies.

DEPARTMENT OF DEFENCE RESEARCH AND DEVELOPMENT

16.38 During the year 2013-14, the main activities of the Directorate of Vigilance and Security of DRDO were as under:

- The Directorate coordinated with the IB, Ministry of Home Affairs (MHA) and facilitated inspections of CAIR Bengaluru, GTRE Bengaluru, LRDE Bengaluru, HEMRL Pune, NSTL Vishakhapatnam and DLRL Hyderabad.
- The Directorate conducted Security Audit of ADE Bengaluru, DEAL Dehradun, DL Jodhpur, DLRL Hyderabad, HEMRL Pune, PXE Balasore, ITR Chandipur, ASL Hyderabad and ACEM Nasik.
- Scientists and staff were sensitized on security matters related to sensitive research and handling sensitive documents so as to guard against any breach of information security. A security sensitization programme was conducted at RCI Hyderabad by IB, MHA on August 8, 2013 for Directors, senior scientists and personnel holding important appointments of all DRDO labs/ establishments.

17

EMPOWERMENT AND WELFARE OF WOMEN

Learning the Aerodynamics of Microlite Flying

The role of women has been increasing steadily in the field of national defence. Women are employed in Defence Production Units, Defence Research & Development Laboratories and in the Armed Forces.

17.1 The role of women has been increasing steadily in the field of national defence. Women are employed in Defence Production Units, Defence Research & Development Laboratories and in the Armed Forces. With the induction of women in various non-combatant branches of the Armed Forces like flying (transport and helicopter stream), logistics and law, a larger role is envisaged for them.

INDIAN ARMY

17.2 **Women Officers in the Army:** Women officers have been serving in the Armed Forces for about 80 years and have served with competence and distinction. They were inducted in the Military Nursing Service in 1927 and in the Medical Officers cadre since 1943. In the Armed Forces Medical Services, there are both permanent and Short Service Commission Officers (SSCOs).

17.3 In a significant step which would attract more women in the Army, the tenure of Women Officers in Short Service Commission has been increased from 10 years to 14 years. Besides, their promotional avenues have been substantially enhanced. Earlier, they were eligible for only one promotion, viz., to the rank of Major after 5 years of service. Women Short Service Commission Officers in the Army are now granted time-scale substantive promotions to the rank of Captain, Major and Lt. Colonel Rank after 2, 6 and 13 years of reckonable service respectively. This is at par with the promotions available to the Permanent Commission Officers. In addition, with a view to ensuring gender equality, the training period of women officers in the Army in Short Service Commission has been increased from 24 weeks to 49 weeks, to be at par with male Short Service Commission Officers.

17.4 Keeping in view the role and responsibility of the Armed Forces in defending the nation and protecting the territorial Integrity of the country, the future policy on induction and employment of

women in Armed Forces has been enunciated in November, 2011, as under:

(i) Women Officers may continue to be inducted as Short Service Commission Officers (SSCOs) in Branches/ Cadres where they are being inducted presently in the three Services;

(ii) Women SSCOs will be eligible for consideration for grant of permanent commission alongwith Men SSCOs in specific Branches in the three Services viz. Judge Advocate General (JAG) and Army Education Corps (AEC) of Army and their corresponding branches in Navy and Air Force; Naval constructor in Navy and Accounts branch in Air Force.

(iii) In addition to the above, in the Air Force, women SSCOs will be eligible alongwith male SSCOs, for consideration for grant of permanent commission in Technical, Administration, Logistics and Meteorology Branches.

17.5 The grant of permanent commission is subject to the willingness of the candidate and service specific requirements, availability of vacancies, suitability, merit of the candidate as decided by each Service.

Keeping in view the role and responsibility of the Armed Forces in defending the nation and protecting the territorial Integrity of the country, the future policy on induction and employment of women in Armed Forces has been enunciated in November, 2011.

INDIAN NAVY

17.6 **Women Officers:** Women are being inducted into the Navy as ShortServiceCommission (SSC) officers in the Executive (Observer, ATC, Law & Logistic), Education Branch and the Naval Architecture Specialisation of the Engineering Branch.

17.7 **Permanent Commission to Women Officers:** The Ministry of Defence has introduced grant of Permanent Commission prospectively to Short Service Commission women officers of the Executive Branch (Law Cadre), Education Branch and Engineering Branch (Naval Architecture).

17.8 **Measures to prevent Sexual Harassment:** Various measures to sensitise naval personnel on the issue of sexual harassment are as follows:

(i) During the ab-initio training stage for officers, a gender sensitisation capsule is conducted in Centre for Leadership and Behavioural Studies (CLABS), at Kochi.

(ii) Periodic lectures are undertaken at the Command/ Unit level to reiterate the need to prevent sexual harassment at workplace.

INDIAN AIR FORCE

17.9 Till the 1990s, women could be inducted into IAF only in the Medical or

Dental Branches. In 1991, the Government of India approved induction of Women officers through Short Service Commission (SSC) in the ground duty Non-Technical branches and subsequently in 1992-93 for Technical and Flying branches (Transport and Helicopter stream). At present, women are employed in all branches in the IAF in the SSC cadre, except the fighter flying stream.

17.10 **Women in Defence Forces:** Women officers are part of the officer cadre in the IAF. The present ceiling for SSC officers, without gender bias, is 20% of establishment in Flying and AE branches and 25% in Non-Tech Ground Duty Branches.

17.11 **Measures:** Adequate and equal opportunities are provided to Women officers of IAF to participate in adventure activities.

17.12 **IAF Women in Adventure and Sports**

(a) Women skydivers of IAF have participated in several prestigious skydiving demonstrations conducted by Air Devil Team.

(b) Three Women Officers have successfully undergone professional Advance Mountaineering Course.

(c) A Lady Officer participated in the 'Gangotri to Ganga Sagar', river rafting expedition in October, 2013.

All - Women IAF Skydiving Team in Action

(d) A Lady Officer officiated as Match Referee during Subroto Cup 2013.

(e) A Lady Officer is part of IAF Golf Team.

(f) A Lady Officers team has also scaled Mount Everest.

17.13 **Welfare:** As far as possible, Air HQ considers and accommodates posting requests from married women officers for co-location postings with their serving husbands in IAF. Women officers/ Flt Cdts and other women employees are provided with very conducive working environment. Special care is taken for ensuring 'Gender Sensitisation in IAF'. Various sensitisation capsules and workshops on the subject have also been introduced in the IAF training institutes to address this issue.

INDIAN COAST GUARD

17.14 The Indian Coast Guard has been inducting Women Officers as Assistant

ICG Women Pilots – Displaying Flying Skills

Commandant since 1997 in the General Duty (Permanent), General Duty (Pilot/ Navigator) and General Duty (Law) branches. The women officers are posted only in non-seagoing appointments. Recently the Short Service Appointment scheme for women officers in General Duty and General Duty (Commercial Pilot License Holder) branches has also been introduced to increase the intake of women officers in the service. Women officers holding Commercial Pilot License are inducted in both fixed wing as well as rotary wing aircraft. The selection process for women and male candidates are similar. The women officers in Indian Coast Guard have the option to serve till superannuation, except for the officers appointed under short service scheme. At present, there are 103 women officers in Indian Coast Guard.

DRDO is an organization which provides gender bias-free employment opportunity. This has resulted in many women scientists leading important defence projects of national importance.

DEFENCE RESEARCH DEVELOPMENT ORGANISATION

17.15 DRDO is an organization which provides gender bias-free employment opportunity. This has resulted in many women scientists leading important defence projects of national importance. DRDO is sensitive to the need for empowerment and welfare of its women employees. Government instructions and directives issued on the subject are being followed both in letter and spirit. It is ensured that women employees are accorded equal opportunities for enhancement of their skills and knowledge and fulfilment of their potential. Their work and output towards achieving organizational objectives, is appreciated and duly recognized by the management.

17.16 A number of welfare measures have been put in place for women. Crèches have been set up in various laboratories/ establishments of DRDO located all over the country. Women's cells have been in existence in the laboratories/establishments of DRDO. Complaints Committees have been formed which exclusively deal with the issue of sexual harassment.

17.17 Commemorating International Women's Day, DRDO organized a

one-day seminar on "Women in Science, Education and Research (WISER-2013)" at Terminal Ballistics Research Laboratory (TBRL) at Ramgarh near Chandigarh. More than 350 women scientists, technologists, officers and staff from different laboratories of DRDO from all over the country attended the seminar. The focal theme of the seminar was to highlight the contribution of women in science, education and research.

DEPARTMENT OF DEFENCE PRODUCTION

17.18 **Ordnance Factory Board (OFB):** The strength of Women Employees/Officers in OFB is 7291. Complaint Committees have been constituted in each factory/unit and in Headquarters of Organisation in order to redresses the grievances arising out of sexual harassment. Grievance redressal cell for women employees has also been constituted at all factories/units.

17.19 **Hindustan Aeronautics Ltd. (HAL):** The strength of women employees in HAL is 2595 as on March 31, 2014. All statutory welfare amenities have been extended to women employees. Maternity Leave has been enhanced from 84 days to 180 days. In addition to this leave, Leave without Pay is also extended on a need basis for a maximum period of one year during the entire service period.

17.20 **Bharat Electronics Ltd. (BEL):** BEL has around 2100 women employees across the Company in various Units/Offices. Complaint Committees constituted and headed by a senior Woman Executive is functioning in all BEL Units/SBUs/Offices. Various Welfare measures like Crèche, Nursing breaks are provided to women employees. "Best Women Employee Award" (non-executive category) was given to BEL by the Apex body of Forum of Women in Public Sector (WIPS) for the year 2012-13.

17.21 **Garden Reach Shipbuilders & Engineers Ltd. (GRSE):** There are 130 women employees in GRSE. GRSE regularly organizes sensitization workshops to mobilize and harness the power of women as well as to prevent discrimination against lady employees and gender bias. A 'Complaint Committee' headed by a lady officer and with an NGO representative has been set up to redress complaints of sexual harassment at work place.

17.22 **Goa Shipyard Ltd. (GSL):** Empowerment of women is given prime importance at GSL and they are treated at par with the male counterparts in all walks of life. A 'Complaint Committee' for prevention of sexual harassment and redressal of complaints has been constituted, with more than 50% women representative & one independent local NGO representative.

17.23 **Hindustan Shipyard Ltd. (HSL):** A 'Gender Budgeting Cell' has been constituted

with four women officers to act as Nodal Agency for all gender responsive budgeting initiatives. The Cell ensures effective implementation of general development programs such as training for advancement of skills, provision of welfare amenities like maintenance of crèches, health, water and sanitation at work place etc.

17.24 **Mazagon Dock Ltd.(MDL):** A unit of the CPSU forum 'Women in Public Sector' is functioning in MDL. A Grievance Redressal Cell for Complaints of Sexual Harassment has been formed to look into all aspects of gender specific issues at workplace. The cell is headed by a senior lady officer. All the complaints received are redressed promptly and are treated with utmost confidentiality.

17.25 **BEML Ltd:** Total strength of women employees/officers in BEML Ltd. is 319. Equal opportunity is given to women in recruitment, selection, training & development etc. Also, all the applicable statutory provisions under the Factories Act, Maternity Benefit Act, etc. are being complied with both in letter and spirit. In addition to the above, "Gender Equity and Anti-discrimination Policy" was formulated to promote gender equity. The Company has constituted Women Cells in all the Production Units including Corporate Office to address the issue of sexual harassment of the women Employees/ Executives. Creche allowance of ₹ 200/- per month is given to women employees/ executives having children below the age of 5 years.

17.26 **Bharat Dynamics Ltd. (BDL):** There are 331 women employees working in BDL. Of these, 92 are executives and 239 are non-executives and constitute 10.75% of the total workforce in the Company. To encourage women employees, the company provides necessary facilities for participation in the conferences/ programmes organized by CPSU forum i.e. Women in Public Sector. A 'Complaint Committee' headed by a senior woman officer has been constituted to inquire into complaints of sexual harassment.

17.27 **Mishra Dhatu Nigam Limited (MIDHANI):** MIDHANI is extending all facilities as per the statutes for welfare of the Women Employees. The strength of Women employees is 60 as on March 31, 2014. A programme on International Women's day was organized on March 8, 2014 in MIDHANI. Women employees both executives and Non-executives were nominated for in-house as well as external programmes. MIDHANI is setting up a plant for manufacture of fasteners at a cost of ₹ 7 crore, which will be run exclusively by women employees.

17.28 **Directorate General of Quality Assurance (DGQA):** Women's Cell exists at Headquarters and at every DGQA establishment which looks into the

grievances of its women members to fight discrimination, harassment or hardship in office as also in families. Seminars and interactions with persons from eminent fields are organized for women employees and they are encouraged to participate in extra- curricular activities.

17.29 **Directorate of Standardisation (DoS):** A 'Complaint Committee' under the chairmanship of a lady officer has been set up to investigate the complaints of sexual harassment against the women employees of DoS.

DEPARTMENT OF EX-SERVICEMEN WELFARE

17.30 Department of Ex-Servicemen Welfare deals with the rehabilitation and welfare of about 29 lakh ex-servicemen including widows of former Armed Forces personnel and their dependent family members. Financial assistance is being provided to the girls and women under various schemes. Kendriya Sainik Board (KSB) provides financial assistance for marriage of daughters of ESM.

17.31 Unmarried/ widowed daughters of armed forces personnel in receipt of children allowance prior to 4th CPC have now been allowed family pension w.e.f. September 6, 2007. Widows are also eligible for dual family pension subject to conditions.

17.32 Scholarship amount for girls under PM Scholarship Scheme has been enhanced to ₹ 2250/- per month.

17.33 Widows of ESM are eligible for Resettlement Training under Directorate General of Resettlement (DGR). A number of DGR Employment Schemes like Coal Tipper Scheme, Oil Produce Agencies, Surplus Vehicles, etc. are also open to widows of ESM.

MATTERS DEALT WITH BY THE DEPARTMENTS OF THE MINISTRY OF DEFENCE

A . DEPARTMENT OF DEFENCE (Raksha Vibhag)

1. Defence of India and every part thereof, including preparation for defence and all such acts as may be conducive in times of war to its prosecution and after its termination to effective demobilization.
2. The Armed Forces of the Union, namely, the Army, the Navy and the Air Force.
3. Integrated Headquarters of the Ministry of Defence comprising Army Headquarters, Naval Headquarters, Air Headquarters and Defence Staff Headquarters.
4. The Reserves of the Army, Navy and Air Force.
5. The Territorial Army.
6. The National Cadet Corps.
7. Works relating to Army, Navy and Air Force.
8. Remounts, Veterinary and Farms Organisation.
9. Canteen Stores Department.
10. Civilian Services paid from Defence Estimates.
11. Hydrographic Surveys and preparation of navigational charts.
12. Formation of Cantonments, delimitation/ excision of Cantonment areas, local self-government in such areas, the constitution and powers within such areas of Cantonment Boards and authorities and the regulation of housing accommodation (including the control of rents) in such areas.
13. Acquisition, requisitioning, custody and relinquishment of land and property for defence purposes. Eviction of unauthorized occupants from defence land and property.
14. Defence Accounts Department.
15. Purchase of food stuffs for military requirements and their disposal, excluding those entrusted to Department of Food and Public Distribution.
16. All matters relating to Coast Guard Organisation, including :-
    (i) Surveillance of maritime zones against oil spills;
    (ii) Combating oil spills in various maritime zones, except in the waters of ports and within 500 metres of off-shore exploration

and production platforms, coastal refineries and associated facilities such as Single Buoy Mooring (SBM), Crude Oil Terminal (COT) and pipelines;

(iii) Central Co-ordinating Agency for Combating of Oil Pollution in the coastal and marine environment of various maritime zones;

(iv) Implementation of National Contingency Plan for oil spill disaster; and

(v) Undertaking oil spill prevention and control, inspection of ships and offshore platforms in the country, except within the limits of ports as empowered by the Merchant Shipping Act, 1958(44 of 1958).

17. Matters relating to diving and related activities in the country.

18. Procurement exclusive to the Defence Services.

B. DEPARTMENT OF DEFENCE PRODUCTION (Raksha Utpadan Vibhag)

1. Ordnance Factory Board and Ordnance Factories.
2. Hindustan Aeronautics Limited.
3. Bharat Electronics Limited.
4. Mazagon Docks Limited.
5. Garden Reach Shipbuilders & Engineers Limited.
6. Goa Shipyard Limited.
7. Bharat Dynamics Limited.
8. Mishra Dhatu Nigam Limited.
9. Defence Quality Assurance Organizations, including Directorate General of Quality Assurance and Directorate General of Aeronautical Quality Assurance.
10. Standardisation of defence equipment and stores including Directorate of Standardisation.
11. BEML Limited.
12. Hindustan Shipyard Limited.
13. Development of aeronautics industry and co-ordination among users other than those concerned with the Ministry of Civil Aviation and the Department of Space.
14. Indigenisation, development and production and defence equipment and participation of the private sector in the manufacture of defence equipment.
15. Defence exports and international cooperation in defence production.

C. DEPARTMENT OF DEFENCE RESEARCH & DEVELOPMENT (Raksha Anusandhan Tatha Vikas Vibhag)

1. Apprising, assessing and advising

Raksha Mantri on the influence on National Security of emerging developments in Science and Technology.

2. Rendering advice to Raksha Mantri and to the three services and inter-services organizations on all scientific aspects of weapons; weapons platforms; military operations; surveillance; support and logistics in all likely threats of conflict.

3. To function, with the concurrence of the Ministry of External Affairs, as the nodal co-ordinating agency of the Ministry of Defence on all matters relating to Instruments of Accord with foreign Governments relating to the acquisition of technologies whose export to India is the subject of national security related controls of foreign Governments.

4. Formulation and execution of programmes of scientific research and design, development, test and evaluation, in fields of relevance to national security.

5. Direction and Administration of agencies, laboratories, establishments, ranges, facilities, programmes and projects of the Department.

6. Aeronautical Development Agency.

7. All matters relating to certification of the design air worthiness of military aircrafts, their equipment and stores.

8. All matters relating to the protection and transfer of technology generated by the activities of the Department.

9. Scientific analysis support and participation in the acquisition and evaluation proceedings of all weapon systems and related technologies proposed to be acquired by the Ministry of Defence.

10. To render advice on the technological and intellectual property aspects of the import of technology by production units and enterprises manufacturing, or proposing to manufacture, equipment and stores for the Armed Services.

11. To deal with reference made under section 35 of the Patents Act, 1970(39 of 1970).

12. Financial and other material assistance to individuals, institutions and bodies corporate, for study and for the training of manpower on aspects of Science an d Technology that bear on national Security.

13. In consultation with the Ministry of External Affairs, international relations in matters connected with the role of Science and Technology in national security, including :

    (i) matters relating to relations with Research Organizations of other countries and with Inter-governmental agencies, particularly those which concern themselves, inter alia, with the

scientific and technological aspects of national security.

(ii) Arrangements with Universities, educational and research-oriented institutions or bodies corporate abroad to provide for foreign scholarships and the training of Indian scientists and technologists under the administrative control of the Department.

14. Execution of works and purchase of lands debitable to the budget of the Department.

15. All matters relating to personnel under the control of the Department.

16. Acquisition of all types of stores, equipment and services debitable to the budget of the Department.

17. Financial sanctions relating to the Department.

18. Any other activity assigned to, and accepted by the Department through understandings or arrangements with any other Ministry, Department, Agency of the Government of India whose activities have a bearing on the scientific and technological aspects of national security.

D. DEPARTMENT OF EX-SERVICEMEN WELFARE (Poorva Senani Kalyan Vibhag).

1. Matters relating to Armed Forces Veterans (Ex-Servicemen), including pensioners.

2. Armed Forces Veterans (Ex-Servicemen) Contributory Health Scheme.

3. Matters relating to Directorate General of Resettlement and Kendriya Sainik Board.

4. Administration of :

a) the Pension Regulations for the Army 1961(Parts I and II);

b) the Pension Regulations for the Air Force, 1961 (Part I and II);

c) the Navy (Pension) Regulations 1964; and

d) the Entitlement Rules to Casualty Pensionary Awards to the Armed Forces Personnel, 1982.

E. DEFENCE (FINANCE) DIVISION (RakshaVittaVibhag)

1. To examine all Defence matters having a financial bearing.

2. To render financial advice to the various functionaries of Ministry of Defence and the Services Headquarters.

3. To act as integrated Finance Division of Ministry of Defence.

4. To assist in the formulation and implementation of all schemes/ proposals involving expenditure.

5. To assist in the formulation and implementation of Defence Plans.

6. To prepare Defence budget and other estimates for the Defence Services,

Civil Estimates of Ministry of Defence, estimates in respect of Defence Pensions and to monitor the progress of the scheme against the budget.

7. To exercise post-budget vigilance to ensure that there are neither considerable shortfalls in expenditure nor unforeseen excesses.

8. To advise heads of branches of the Armed Forces Headquarters in the discharge of their financial responsibility.

9. To function as the accounting authority for the Defence Services.

10. To prepare the Appropriation Accounts for the Defence Services.

11. To discharge the responsibility for payments and internal audit of Defence expenditure through the Controller General of Defence Accounts.

MINISTERS, CHIEFS OF STAFF AND SECRETARIES WHO WERE IN POSITION FROM JANUARY 1, 2013 ONWARDS

RAKSHA MANTRI

Shri A.K. Antony — From October 24, 2006 to May 26, 2014
Shri Arun Jaitley — From May 27, 2014 onwards

RAKSHA RAJYA MANTRI

Shri Jitendra Singh — From October 28, 2012 to May 26, 2014
Shri Inderjit Singh Rao — From May 27, 2014 onwards

DEFENCE SECRETARY

Shri Shashi Kant Sharma,
From July 14 (FN), 2011 to May 23 (FN), 2013
Shri Radha Krishna Mathur,
From May 24 (FN), 2013 onwards

CHIEF OF ARMY STAFF

General Bikram Singh,
PVSM, UYSM, AVSM, SM, VSM, ADC
From May 31 (AN), 2012 onwards

SECRETARY DEFENCE PRODUCTION

Shri Radha Krishna Mathur,
From October 1(FN), 2012 to August 6(AN), 2013
Shri Gokul Chandra Pati,
From August 7(FN), 2013 onwards

CHIEF OF NAVAL STAFF

Admiral DK Joshi,
PVSM, AVSM, YSM, NM, VSM, ADC
From August 31 (AN), 2012 to February 26, 2014

Admiral RK Dhowan,
PVSM, AVSM, YSM, ADC
From April 17, 2014 onwards

SECRETARY EX-SERVICEMEN WELFARE

Shri Vijay Chhibber,
From September 10 (AN), 2012 to January 31(AN), 2013
Shri Radha Krishna Mathur,
From January 31, 2013 to February 12(AN), 2013

CHIEF OF AIR STAFF

Air Chief Marshal NAK Browne,
PVSM, AVSM, VM, ADC
From July 31 (AN), 2011 to December 31 (AN), 2013
Air Chief Marshal Arup Raha,

Shri Rajiv Gupta, PVSM, AVSM, VM ADC
From February 12(AN), 2013 to July 4 (AN), 2013 From December 31(AN), 2013 onwards

Ms. Sangita Gairola,
From July 4(AN), 2013 onwards

SECRETARY (DR&D) AND SCIENTIFIC ADVISOR TO RAKSHA MANTRI

Dr. V.K. Saraswat,
From August 31(AN), 2009 to May 31(AN), 2013
Dr. Avinash Chander,
From May 31 (AN), 2013 onwards

SECRETARY DEFENCE FINANCE

Smt. Priti Mohanty,
From July 2 (FN), 2012 to June 30(AN), 2013
Shri Arunava Dutt,
From July 1(FN), 2013 onwards

(II) Report No. 13 of 2013 on Compliance Audit Observations

Highlights of significant paras included in the Report are given below:

MINISTRY OF DEFENCE

1. Ministry of Defence sanctioned in July 1999, design and development of an Intermediate Jet Trainer (UT) by Hindustan Aeronautics Limited (HAL) at a cost of ₹180 crore to be completed by July 2004. Though the design and development of UT was yet to reach the stage of obtaining approval for Initial Operational Clearance (IOC), the Ministry also sanctioned concurrent handling of Limited Series Production (LSP) (March 2006) and Series Production (SP) (March 2010) by HAL. Audit observed the following:

IOC originally scheduled for March 2007 had not been achieved even after six years of delay. The development was beset with a number of failures at various stages.

Set back to the scheduled timelines for different stages was due to non-freezing of engine design, change in weight of engine and experimenting with engine of inadequate thrust. Accidents to both the prototypes after completion of the prescribed number of flights resulted in suspension of flight test activities and modifications for strengthening the structure of the aircraft.

The prescribed procedure for fabrication and testing of the Structural Test Specimen whereby the basic airframe was to be tested to one-and-a-half times the designed load to prove the robustness of the design was not adhered to in respect of the first prototype. This resulted in cracking of specimen fuselage even at less load, leading to fabrication of another wing entailing extra expenditure of ₹38.78 crore.

Since the Company could not achieve refinement of stall characteristics and spin testing, engagement of a consultant at a cost of ₹23.59 crore was done as late as in December 2012.

Adoption of tentative purchase price for equipments /components while quoting for LSP resulted in extra expenditure of ₹63.59 crore.

Against the original sanction for development of ₹180 crore, the project had already incurred an expenditure of ₹516 crore.

Milestones set for release of funds to HAL were without linkage to definite and substantive physical progress. Against the

sanctioned cost of ₹487 crore for LSP, the amount released by Ministry even before achievement of IOC was ₹444 crore. In respect of SP, against the sanction for ₹6180 crore, the releases amounted to ₹3075 crore but the expenditure was only ₹168 crore.

Acceptance of reduced initial life of engine despite calling quotations for engine with unlimited total technical life and later seeking enhancement of life resulted in avoidable expenditure of ₹131 crore.

Procurement of Line Replacement Units in advance of requirement resulted in warranty expired inventory of ₹114.76 crore.

On account of non-delivery of aircraft as per requirement, the intermediate stage training to the pilots of IAF was adversely affected as of March 2013.

(Para No. 7.8)

2. Bharat Dynamics Limited (BDL) was incorporated with the objective of manufacturing sophisticated Defence equipment required by the Armed Forces. BDL is a prime production agency for Guided Missiles in India. The Bhanur unit of BDL established (1988) for manufacturing Konkurs ATGM Systems and Unified Launchers was assigned with the production of Konkurs missiles since 1989 as a part of the contract entered into by the MoD. Since Konkurs missile was not defeating the tanks fitted with ERA panel, Army recognized (1994) the need for induction of Konkurs-M missile which is an advanced version of Konkurs and capable of defeating tanks protected by ERA.

Audit observed that, the process of finalizing the contract took about eight years from the date of recognizing (1994) the need of improved version of Konkurs-M. Further, technology absorption took a longer time than anticipated and this led to delay in execution of the contract by three years and consequential delay in supply of 14,722 missiles resulted in loss of ₹283.72 crore besides levy of Liquidated Damages (LD) of ₹38.81 crore by the Army. The estimated loss for supply of the balance ₹13,278 missiles is ₹297.25 crore and the likely LD is ₹75.57 crore. BDL planned (August 2010) to enhance the capacity for production of missiles in two phases at a cost of ₹50 crore and ₹130 crore respectively. Phase- I was to be completed by March 2012 and phase-II by March 2013. Though the first phase was to be completed by March 2012, the capacity remained at the same level of 3000 missiles per annum, even after spending ₹59.27 crore till February 2013.

Audit further observed that MoD, concluded a contract with M/s Rosoboron export for purchase of 10,000 Konkurs-M at a cost of ₹1223 crore for the Army on

the ground that BDL had not been able to meet their contractual obligations due to problems in absorption of TOT. This indicates that the efforts of MoD to indigenize production of Konkurs-M missiles to avoid dependency on foreign suppliers was defeated despite buying technology at a cost of ₹249 crore from KBP under a contract concluded as early as in October 2002.

(Para No. 7.3)

3. Bharat Electronics Limited (BEL) entered into a contract for procurement with a foreign vendor M/s Rheinmetall Air Defence, AG, Zurich (RAD) despite the fact that the CBI was investigating the firm's deals for alleged corrupt practices in earlier contracts which had the risk of the firm being blacklisted. As the firm was eventually blacklisted, this led to blocking of BEL's funds of ₹502.31 crore.

(Para No. 7.4)

4. Hindustan Aeronautics Limited (HAL) signed (January 2003), a Co-operation Agreement (agreement), with Turbomeca, France (TM) at a cost of ₹878.08 crore for co-development and indigenous production of 320 Shakti engines in five phases (0 to 4) by 2013. The assembly kits for various phases were to be supplied by TM at the agreed prices subject to escalation (with 2002 as base year) valid up to the year of delivery.

Audit observed that even after more than a decade, the self-reliance in manufacture of an engine to suit requirements of ALH has not been achieved as envisaged. The need for variants of engines to operate at different climatic conditions and altitude was not foreseen leading to frequent modifications requiring more investment in terms of time and money. HAL had to bear additional burden due to the failure of TM, indicating undue favours extended to the foreign partner in the development and production of Shakti engines. Failure to ensure compliance to offset obligation by the foreign collaborator has so far denied an opportunity to the Indian industry to contribute towards self-reliance. Acquisition of additional technical know-how without optimal usage of free technical assistance has further contributed to extra cost on the project.

Thus, inability of HAL to absorb the technology and non-assessment of the available in-house capacity to manufacture Shakti engines impacted timely induction of ALH into Defence forces and also resulted in avoidable extra expenditure of ₹204.27 crore to HAL.

(Para No. 7.7)

Executive Summary

Background

Five factories of Ordnance Equipment Group (OEFG) under the control of Ordnance Equipment Group Headquarters Kanpur (OEF HQ) and Ordnance Factory Board Kolkata (OFB) are engaged in production of general stores and clothing (GS&C) items to meet the requirements of the Services. Army is the main recipient of these items (around 77%).

Mention was made in previous Audit Reports of the Comptroller and Auditor General of India about inefficient production planning, deficiencies in procurement of stores and machinery, underperformance in production, underutilization of resources, etc. in OEFG. Performance of these factories for the period 1999-2004 had been reviewed in audit during February-June 2004 and the results thereof were included in Paragraph 8.2 of Report No. 6 of 2005 of the Comptroller and Auditor General of India. The performance of OEFG was reviewed by us afresh during January – July, 2011 with focus on the areas of production planning, utilisation of capacity, production and issue of GS&C products of specific quality at the right time to the Army (major recipient of the products). The data for the year 2011-12, wherever stated in this Report, was collected subsequently in April 2013.

The Performance Audit of these factories for the years 2008-12 brought out systemic deficiencies right from planning to execution.

Key findings

1. Shortcomings in fixation of annual production targets

Deficiencies including mismatch of the targets and capacity of the factories, delay in fixation of targets for annual production and subsequent unilateral reduction of targets by the factories persisted, which resulted in slippages in supply of items to the Army.

(Chapter-III)

2. Violation of procurement norms

Paragraphs 3.1.1, 3.7.7, 4.6.1 and Annexure-47 of OFBs Material Management and Procurement Manual (MMPM) stipulate the procurement norms, procedures etc. We observed that procurement of stores in violation of these extant provisions in MMPM resulted in over-provisioning of stores worth ₹ 165.54 crore during 2008-11. Similarly, against the prescribed provision for 20 per cent purchases through open tender enquiry (OTE) in MMPM, four factories, in violation, made only 4 to 10 per cent of the purchases through OTE. An extra expenditure of ₹ 12.31 crore was observed in procurement of 14 items through 40 supply orders due to limited tender enquiry (LTE), instead of

OTE. Further, in violation of OFB's direction (April 2007), 107 supply orders valuing ₹ 94.33 crore were placed by OEFG even though the rates exceeded the reasonable limit of eight per cent over the last purchase rate. This manifests that reasonability of rates was not ensured before placing orders by the factories.

Failure to break the suppliers' cartel in line with the OFB's instruction of July 2007 led to procurement of stores worth ₹ 33.91 crore through 102 orders from different suppliers, at identical rates.

As compared to the specific timeframe stipulated in MMPM, there were significant delays (up to 1441 days) in placement of 4117 orders valuing ₹ 430.63 crore, out of 11689 orders placed by the five factories in 2008-12.

(Chapter-IV)

3. Slippages in production and issue of items to the Army

In 116 out of 228 instances, the percentage of shortfalls in production and issue of GS&C items to the Army ranged between 21 and 100. The value of shortfalls in respect of 34 to 41 items out of 52 items analysed each year works out to ₹ 1147.13 crore during 2008-12. Besides, the value of issues to the Services spilled over to the next year amounts to ₹ 493.08 crore. The endemic slippages in issue of GS&C items despite outsourcing of jobs and unilateral reduction of targets in many cases, caused serious concern to the Army. OEFG also failed to tap the potential needs of paramilitary forces as it catered only 2.62 per cent of their requirements (₹ 1068.36 crore) of GS&C items during 2008-12.

(Chapter-V)

4. Underutilization of resources

Although the available standard man-hours was not fully utilised, the factory management allowed overtime payments of ₹ 48.68 crore to the Industrial Employees (IEs) in excess of actual requirement in 2008-12. Besides, the factories made additional payment of ₹ 10.91 crore towards piece work profit to IEs in 2011-12. Use of machines on single shift also led to underutilization of capacity in the range of 45 to 69 per cent.

(Chapter-VI)

5. Poor quality control and assurance of products

Inefficient manufacture and inadequate quality control by the factories led to increasing trend of 'Returned for Rectification' (RFR) at quality assurance stage even in respect of established items. High level of RFR beyond 20 per cent and up to 100 per cent was noticed in 72 out of 266 instances in respect of 31 items during 2008-12. There were final rejections of five

items valuing ₹ 11.66 crore in two factories during 2009-11. Apart from regular customer complaints, we came across rejections worth ₹ 10.42 crore in five cases at the users' end though the same were passed in inspection by Quality Assurance agencies.

(Chapter-VII)

6. Recurring loss in issue of products to the indentors

Deficient pricing mechanism of OFB and ineffective cost control by the factories led to recurring losses in four factories during 2008-12 in issue of items to the indento₹ Net loss suffered by the OEFG worked out to ₹ 226.09 crore during 2008-12. Besides there was extra expenditure of ₹ 105.47 crore in 16 instances due to higher cost of production for common items at one factory compared to that of another factory. OEFG had the production share of only six per cent every year while it accounted for 16 to 18 per cent of direct labour cost of ordnance factory organisation as a whole during 2008-12. OEFG could not tap potential market for its products due to their exorbitant price.

(Chapter-VIII)

7. Ineffective internal control and monitoring

Inadequate internal control and lack of proper monitoring at the factories coupled with ineffective monitoring and guidance by the OEF HQ resulted in irregular booking of labour charges on closed/ non-existent warrants, non-regularisation of losses arising from rejections/wastages and manufacture with excess or without drawal of material. The monitoring by the top level management on the working of OEFG was also inadequate.

(Chapter-IX)

Recommendations

- Ministry may ensure that the Army and OFB, in close coordination, fix production targets taking into account Army's requirement and capacity of OEFG. OFB should communicate its production capacity for each item to the Army well in advance before target fixation meetings.
- Ministry may ensure that the Army and OFB hold target fixation meetings at the appropriate time so as to give the factories the required procurement lead time.
- OFB may ensure that the factories adhere to the prescribed policy/ guidelines in assessment of net requirement of stores for reliable and accurate provisioning to avoid excess procurement.
- The e-procurement system should be implemented effectively in all the factories and all factories should maintain shareable database.

- OFB may ensure that the procurement agencies strictly adhere to the OFB's guidelines of July 2007 to prevent cartelisation.
- Ministry may ensure that OEFG formulate judicious production and procurement plan so as to achieve realistic production targets.
- A system should be institutionalised to ensure that Army's account is debited with simultaneous credit of ordnance factories' account only after the stores are inspected and cleared by the consignee Army's depots to plug the deficient accounting for spill-over issues.
- OFB may streamline the outsourcing policy to minimise the outsourcing of jobs so as to ensure optimum capacity utilisation and also institute a mechanism to ensure reasonableness of rates.
- OFB should generate a database at OEF HQ with the latest and reasonable rates for outsourcing of jobs which can be shared by all factories.
- OFB may ensure that the factories plan their production activities efficiently, deploy their manpower judiciously in tune with the workload requirements and fully utilise the available SMH before resorting to work on overtime payment.
- Ministry may ensure that OFB follow the correct methodology for making payment towards piece-work profit by excluding additional 25 per cent over and above the output SMH booked.
- OFB should operationalise two-shift working in the factories to increase the productivity and to optimise capacity utilisation.
- OFB should put in place a system of periodical review of inventory holding at different factories as well as take prompt action to dispose of all surplus/ obsolete/non-moving/waste after proper identification.
- OFB must ensure that the factories diligently follow the prescribed norms for inspection of input materials.
- OFB may ensure that factories adhere to 100 per cent pre-inspection as required, by independent Quality Control staff of the factories**.**
- Ministry may ensure that OEFG generate reliable cost-data for enforcing strict cost control on the products.
- Ministry may ensure that the OFB and the factories strengthen their internal control and monitoring mechanism, especially in planning and production, accounting and documentation of the related activities.
- A comprehensive and effective internal

control system must be put in place by the OEFG to avoid irregularities in booking of labour charges and manufacture with excess or without drawal of materials.

Report No. 10 of 2013

Acquisition of helicopter for VVIPs

- The Communication Squadron of the Indian Air Force (IAF) maintains a fleet of aircraft and helicopters for providing air transportation to VVIPs. IAF proposed (August 1999) to replace Mi-8 helicopters in this squadron with an advanced version of helicopters due to their ageing and; operational limitations. Ministry of Defence (MoD) concluded a contract (February 2010) with M/s Agusta Westland International Ltd., UK for the procurement of 12 numbers of AW-101 helicopters at a total cost of ₹ 3726.96 crore (Euro 556,262,026). Compliance audit of acquisition of VVIP helicopters was conducted and the key findings of audit are highlighted below:
- The initial RFP issued in March 2002 for replacement of present Mi-8 helicopters stipulated a mandatory altitude requirement of 6000 metre. The EH-101 helicopter (later renamed as AW-101 of Agusta Westland) could not be field evaluated as it was certified to fly up to an altitude of 4572metre only. The first RFP was subsequently cancelled due to emergence of a resultant single vendor situation. In the revised RFP issued in 2006 the 'mandatory SQR relating to altitude requirement of 6000 metre was reduced to 4500 metre and a cabin height of atleast 1.8 metre was introduced. While mandatory requirement of minimum cabin height of 1.8 metre reduced the competition, the lowering of altitude requirement was against the inescapable operational requirement of 6000 metre for transportation to many areas in North and North East. The purpose of reframing the SQRs i.e. avoidance of a resultant single vendor situation, could not be met because even with the revision of SQRs, the acquisition process again led to a resultant single vendor situation and AW-101 of Agusta Westland was selected.
- The initial RFP of March 2002 issued to eleven vendors was 'cancelled due to reservations of PMO as it resulted in a single vendor situation. In the revised RFP of 2006, instead of making the SQRs broad based to increase the competition, these were made more restrictive thereby narrowing down the choices to a limited range of helicopte The revised RFP was issued only to six 'vendo'.

- The Field Evaluation Trial of AW-101 of Agusta Westland was conducted on representative helicopters Merlin MK-3A and Civ-01 and mock-up of the passenger cabin and not on the actual helicopter whereas actual S-92 helicopter of Sikorsky was evaluated. Even at the stage of the FET, the helicopter offered by Agusta Westland was still in its developmental phase. Evaluation of helicopters following different methodologies could not give the desired assurance that equal opportunity was provided to both the shortlisted vendo'.

- Several instances have been observed where the Ministry had deviated from the provisions of the DPP-2006 and RFP issued in September 2006. While approval for deviation was required to be obtained with extreme caution and in exceptional circumstances, the frequent deviations made in this case are counter to the principal aim with which Paragraph 75 of the DPP-2006 has been incorporated.

- IAF continued to face operational disadvantage on the existing helicopters due to inordinate delay of more than 10 years in finalizing the acquisition process.

- Despite the emphasis laid in the DPP-2006 on determination of reasonableness of price for the purpose of benchmarking, the benchmarked cost (₹ 4871.5 crore) arrived at by CNC was unreasonably high and thus it had provided no realistic basis for comparison with the offered cost (₹ 3966 crore) of helicopters for price negotiations.

- Additional procurement of 4 helicopters at a cost of ₹ 1240 crore was avoidable as assessed requirement was not commensurate with the low. utilisation levels of existing helicopters providing transportation to VVIPs in the past.

- Agusta Westland had projected seven programmes which were to be completed as part of the offset contract. The allowed offsets were not compliant with the DPP, besides many Indian Offset Partners (IOPs) selected for discharge of offset obligations were not eligible.

- There was ambiguity in the offset contract regarding the type of services and export orders to be executed by IDS Infotech (Indian Offset Partner). Agusta Westland gave an year-wise break up of work from 2011 to 2014 to be executed by IDS Infotech under this offset programme even though the work had been completed well before 'the conclusion of the contract in 2010.

Position of Action Taken Notes (ATNs) as on 31.12.2013 in respect of observations made in the C&AG Reports/PAC Reports

Sl. No.	Year		Details of the Paras/PA reports on which ATNs are pending as on 31.12.2013			
		No. of Paras/PA reports on which ATNs have been submitted to PAC After vetting by Audit During 2013-14 **(upto 31.12.2013)**	No. of ATNs not sent to Audit by the Ministry even for the first time	No. of ATNs sent to Audit for vetting	No. of ATNs sent but returned with observations and Audit is awaiting their resubmission by the Ministry	No. of ATNs which have been finally vetted by Audit but have not been submitted by the Ministry to PAC
1	1987-88				1	
2	1988-89				2	
3	1990-91				1	
4	1996-97				1	
5	1997-98				2	
6	2001-02			1	1	
7	2002-03					
8	2003-04				1	
9	2004-05				3	
10	2005-06	1			1	
11	2006-07					
12	2007-08			1		
13	2008-09	2		1	3	
14	2009-10			2	3	
15	2010-11	13		5	10	
16	2011-12	16	2	13	5	
17	2012-13	17	2	22	12	1
Total		49	4	45	46	1

Results-Framework Document (RFD) for Department of Defence Production (2012-13)

Section 1:
Vision, Mission, Objectives and Functions

Vision

To achieve self-reliance in production of weapon platforms, arms, ammunition and other materials required for thedefence of our nation.

Mission

1. To facilitate enhancement of capability and capacity in th Ordnance Factories & DPSUs by fostering capability for design, development and production of state of art defence equipments through policies, initiatives and incentives for improving quality and timely delivery of defence equipment for Armed Force. 2.To encourage R&D efforts in Indian defence industries for self-reliance & improve the functioning of OFB, DPSUs for transforming them into global leaders.

Objectives

1 Timely deliveries of arms/ammunitions and equipments to the armed forces as per their requirement.

2 Increase the share of Indian products in the procurement by our armed forces.

3 Modernization and capacity augmentation.

4 Taking up more R & D projects and increasing allocation for R&D.

5 Facilitating and guiding improvements in the functioning of DPSUs and OFB.

6 Increase transparency in procurement.

Functions

1 To indigenise, develop & produce defence equipment

2 To encourage participation of the private sector in the manufacture of defence equipment.

3 To develop the aeronautics industry & coordination among users other that those concernd with the ministry of civil aviation & the Department of space.

4 To encourage defence exports & promote international cooperation in defence production.

5 To oversee Defence Quality Assurance Organization including DGQA & DGAQA.

6 To encourage standardisation of defence equipments & stores through Directorate of Standardisation.

7 To oversee and monitor work relating to the following organisations & undertakings. a) OFB & OFs b) HAL c) BEL d) MDL e) GRSE f) GSL g) BDL h) MIDHANI i) BEML j) HSL

Section- 2:

Performance Evaluation Report

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					Achiev-ement	Performance		As Approved by HPC
						Excellent	Very Good	Good	Fair	Poor		Raw Score	Weigh-ted Score	
						100%	90%	80%	70%	60%				
1 Timely deliveries of arms/ammunitions and equipments to the armed forces as per their requirement.	30.00	Delivery of armoured vehicles due for delivery by 31.03.2013 (200 Nos) as per annual target	Nos Delivered	No	4.00	200	190	181	172	163	194	94.0	3.76	194
		Delivery of ammunition due for delivery by 31.03.2013 (as per annual target)	Value of ammunition delivered	Rs in Crores	4.00	4990	4740	4503	4278	4064	5036	100.0	4.0	5036
		Delivery of Pinaka rokets due for delivery by 31.03.2013 (1100 Nos) as per annual targets	Nos Delivered	No	4.00	1100	1045	992	943	895	918	64.79	2.59	918
		Delivery of LFG Guns due for delivery by 31.03.2013 (50 Nos) as per annual targets	Nos Delivered	No	3.00	50	47	45	43	41	44	75.0	2.25	44
		Delivery of Missiles due for delivery by 31.03.13 (6000 Nos) as per annual targets	Nos Delivered	No	4.00	6000	5700	5415	5144	4887	5530	84.04	3.36	5530
		No of Ships Delivered due for delivery by 31.03.2013 (14 Nos) as per annual targets	Nos Delivered	No	4.00	14	13	12	11	10	9	0.0	0.0	9
		Delivery of air-crafts/helicoptersdue for delivery by 31.03.13 (73 Nos) as per annual targets	Nos Delivered	No	3.00	73	69	65	62	59	55	0.0	0.0	55
		Delivery of Digital Radio Trunking System(DRTS) for Army due for delivery by 31.03.13 (20 Nos) as per annual targets	Nos Delivered	No	1.50	20	15	10	7	5	19	98.0	1.47	19
		Delivery of Passive Night Vision Devise(PNVD) for	Nos Delivered	No	1.50	10000	9000	8000	7000	6000	10364	100.0	1.5	10364

Performance Evaluation Report

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					Achiev-ement	Performance		
						Excellent	Very Good	Good	Fair	Poor		Raw Score	Weigh-ted Score	As Approved by HPC
						100%	90%	80%	70%	60%				
		Army due for delivery by 31.03.13 (10000 Nos) as per annual targets												
		Delivery of RADARS & Fire Control Systems due for delivery by 31.03.13 (50 Nos) as per annual targets	Nos Delivered	No	0.99	50	45	40	35	30	60	100.0	0.99	60
2 Increase the share of Indian products in the procurement by our armed forces.	30.00	Increase in no of manufacturing Vendors	Increase in the percentage over previous year.	%	6.00	6	5	4	3	2	6	100.0	6.0	6
		Encourage Private Participation.	Number of licences recommended.	Nos.	6.00	50	45	40	35	32	50	100.0	6.0	50
		Indigenisation of T 90 tanks from the present level of indigenisation (60%) to cumulative (65%)	Cumilative increase in % of indigenisation from the present level	%	6.00	5	4	3	2	1	5	100.0	6.0	5
		Indigenisation of sukhoi Aircrafts from the present level of indigenisation (33%) to cumulative(41%)	Cumilative increase in % of indigenisation from the present level	%	6.00	8	6	4	2	1	8	100.0	6.0	8
		Indigenisation of P-17 from the present level of indigenistaion (53%) to cumulative (57%)	Cumilative increase in % of indigenisation from the present level	%	6.00	4	3	2	1	0	4	100.0	6.0	4
3 Modernization and capacity augmentation.	15.00	Modernisation of Ordnance Factories.	Expenditure incurred on modernisation	Rs in cr.	1.00	900	855	812	771	732	748	64.1	0.64	748
		Capacity augmentation of NG plant in Ord Factory Itarsi	Expenditure Incurred on capacity augmentation	Rs in cr.	1.00	38.8	36.8	34.8	32.8	30.8	32.85	70.25	0.7	32.85
		Key Modernisation Projects of OFB (Creation / Augmentation of capacity for specific	% completed	%	1.00	46	41	36	31	26	40.83	89.66	0.9	40.83

Performance Evaluation Report

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					Achiev-ement	Performance		As Approved by HPC
						Excellent	Very Good	Good	Fair	Poor		Raw Score	Weigh-ted Score	
						100%	90%	80%	70%	60%				
		product OF Nalanda)												
		Modernisation of shipyards.	Expenditure incurred on modernisation	Rs in cr.	1.00	829	788	749	712	676	332.69	0.0	0.0	332.69
		Key Modernisation Projects in Shipyards (MDL) (Completion of the Goliath Crane Component)	% completed	%	1.00	100	95	90	85	80	100	100.0	1.0	100
		Modernisation of BDL.	Expenditure incurred on modernisation	Rs in cr.	1.00	60	57	54	51	48	72.14	100.0	1.0	72.14
		Key Modernisation Projects in BDL (Capacity Expansion of Konkurs-M ATGM)	% completed	%	1.00	50	45	40	35	30	14	0.0	0.0	14
		Modernisation of HAL	Expenditure incurred on modernisation	Rs in cr.	1.00	450	428	407	387	368	456	100.0	1.0	456
		Key Modernisation Projects in HAL (Commissioning of high value machinery into production operations at Transport Aircraft Division, HAL, Kanpur- Percentage Achivements for contract finilisation.	Stage Completed	%	1.00	100	90	80	70	60	92	92.0	0.92	92
		Modernisation of BEL.	Expenditure incurred on modernisation	Rs in cr.	1.00	342	325	309	294	279	347	100.0	1.0	347
		Key Projects in BEL (Creation of Near Field Antenna Measurement facilities)	% completed	%	1.00	100	95	90	85	80	100	100.0	1.0	100
		Modernisation of MIDHANI.	Expenditure incurred on modernisation	Rs in cr.	1.00	60	57	54	51	48	80.24	100.0	1.0	80.24

Performance Evaluation Report

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					Achiev-ement	Performance		As Approved by HPC
						Excellent	Very Good	Good	Fair	Poor		Raw Score	Weigh-ted Score	
						100%	90%	80%	70%	60%				
		Key Modernisation Projects in MIDHANI Completion of the Ring Rolling Mill Component	% completed	%	1.00	100	95	90	85	80	100	100.0	1.0	100
		Modernisation of BEML.	Expenditure incurred on modernisation	Rs in cr.	1.00	120	114	108	102	97	88.26	0.0	0.0	88.26
		Key Projects in BEML (Construction of a hanger at Aerospace SEZ project Devanahalli)	% completed	%	1.00	100	90	80	70	60	0	0.0	0.0	0
4 Taking up more R & D projects and increasing allocation for R&D.	3.00	R&D Efforts in DPSUs	Expenditure Incurred	Rs. in cr.	2.00	1533	1454	1379	1308	1240	2406.39	100.0	2.0	2406.39
		R&D efforts in OFB	Expenditure Incurred	Rs. in cr.	1.00	45	43	41	39	37	27.49	0.0	0.0	27.49
5 Facilitating and guiding improvements in the functioning of DPSUs and OFB.	5.00	Strict Monitoring of the MOU signed by the DPSUs and RCs	Excellent rating by the DPSE	No.	1.50	5	4	3	2	1	5	100.0	1.5	5
			Very good rating by DPSE	No.	1.00	3	2	1	0	0	3	100.0	1.0	3
		Finalisation of subsidiary of RFD of RCs	Timely completion	Date	1.00	30/04/2012	10/05/2012	15/05/2012			30/04/2012	100.0	1.0	30/04/2012
		Improving the quality of Labs	Number of Labs that get NABL accreditation	No.	1.50	8	6	5	4	3	8	100.0	1.5	8
6 Increase transparency in procurement.	2.00	To increase transparency in procurement	E-procurement audit by committee of 3 officers from DPSUs and OFB	Date	2.00	30/09/2012	31/10/2012	30/11/2012			25/09/2012	100.0	2.0	25/09/2012
* Efficient Functioning of the RFD System	5.00	Timely submission of Draft for Approval	On-time submission	Date	2.0	05/03/2012	06/03/2012	07/03/2012	08/03/2012	09/03/2012	27/04/2012	0.0	0.0	27/04/2012
		Timely submission of Results for the year 2011-12 RFD	On-time submission	Date	1.0	01/05/2012	03/05/2012	04/05/2012	05/05/2012	06/05/2012	04/05/2012	80.0	0.8	04/05/2012

* Mandatory Objective(s)

Performance Evaluation Report

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					Achiev-ement	Performance		As Approved by HPC
						Excellent	Very Good	Good	Fair	Poor		Raw Score	Weigh-ted Score	
						100%	90%	80%	70%	60%				
		Review the Strategic Plan	Finalise review of the Strategic plan for the next 5 years.	Date	2.0	10/12/2012	15/12/2012	20/12/2012	24/12/2012	31/12/2012	10/12/2012	100.0	2.0	10/12/2012
* Administrative Reforms	6.00	Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	2.0	100	95	90	85	80	83	66.0	1.32	91.396
		Develop an action plan to implement ISO 9001 certification	Finalize an action plan to implement ISO 9001 certification	Date	2.0	10/12/2012	15/12/2012	20/12/2012	24/12/2012	31/12/2012	10/12/2012	100.0	2.0	05/12/2012
		Timely preparation of departmental Innovation Action Plan (IAP)	On-time submission	Date	2.0	01/05/2013	02/05/2013	03/05/2013	06/05/2013	07/05/2013	01/05/2013	100.0	2.0	01/05/2013
* Improving Internal Efficiency / responsiveness / service delivery of Ministry / Department	2.00	Implementation of Sevottam	Review and resubmission of Citizen's Charter	Date	1.0	10/12/2012	15/12/2012	20/12/2012	24/12/2012	31/12/2012	04/10/2012	100.0	1.0	04/10/2012
			Independent Audit of implementation of public grievance redressal system	%	1.0	100	90	80	70	60	20.70	0.0	0.0	20.70
* Ensuring compliance to the Financial Accountability Framework	2.00	Timely submission of ATNs on Audit paras of C&AG	Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG during the year.	%	0.5	100	90	80	70	60	100	100.0	0.5	100
		Timely submission of ATRs to the PAC Sectt. on PAC Reports	Percentage of ATRS submitted within due date (6 months) from date of presentation of Report to Parliament by PAC during the year.	%	0.5	100	90	80	70	60	0	0.0	0.0	0
		Early disposal of pending ATNs on Audit Paras of	Percentage of outstanding ATNs	%	0.5	100	90	80	70	60	73.33	73.33	0.37	73.33

* Mandatory Objective(s)

Performance Evaluation Report

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					Achiev-ement	Performance		
						Excellent	Very Good	Good	Fair	Poor		Raw Score	Weigh-ted Score	As Approved by HPC
						100%	90%	80%	70%	60%				
		C&AG Reports presented to Parliament before 31.3.2012.	disposed off during the year.											
		Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2012	Percentage of outstanding ATRS disposed off during the year.	%	0.5	100	90	80	70	60	0	0.0	0.0	0

* Mandatory Objective(s)

Total Composite Score : 79.08

PMD Composite 79.4

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
[1] Timely deliveries of arms/ammunitions and equipments to the armed forces as per their requirement.	[1.1] Delivery of armoured vehicles due for delivery by 31.03.2013 (200 Nos) as per annual target	[1.1.1] Nos Delivered	No	--	--	190	--	--
	[1.2] Delivery of ammunition due for delivery by 31.03.2013 (as per annual target)	[1.2.1] Value of ammunition delivered	Rs in Crores	--	--	4740	--	--
	[1.3] Delivery of Pinaka rokets due for delivery by 31.03.2013 (1100 Nos) as per annual targets	[1.3.1] Nos Delivered	No	--	--	1045	--	--
	[1.4] Delivery of LFG Guns due for delivery by 31.03.2013 (50 Nos) as per annual targets	[1.4.1] Nos Delivered	No	--	--	47	--	--
	[1.5] Delivery of Missiles due for delivery by 31.03.13 (6000 Nos) as per annual targets	[1.5.1] Nos Delivered	No	--	--	5700	--	--
	[1.6] No of Ships Delivered due for delivery by 31.03.2013 (14 Nos) as per annual targets	[1.6.1] Nos Delivered	No	--	--	13	--	--
	[1.7] Delivery of air-crafts/helicoptersdue for delivery by 31.03.13 (73 Nos) as per annual targets	[1.7.1] Nos Delivered	No	--	--	69	--	--

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
	[1.8] Delivery of Digital Radio Trunking System(DRTS) for Army due for delivery by 31.03.13 (20 Nos) as per annual targets	[1.8.1] Nos Delivered	No	--	--	15	--	--
	[1.9] Delivery of Passive Night Vision Devise(PNVD) for Army due for delivery by 31.03.13 (10000 Nos) as per annual targets	[1.9.1] Nos Delivered	No	--	--	9000	--	--
	[1.10] Delivery of RADARS & Fire Control Systems due for delivery by 31.03.13 (50 Nos) as per annual targets	[1.10.1] Nos Delivered	No	--	--	45	--	--
[2] Increase the share of Indian products in the procurement by our armed forces.	[2.1] Increase in no of manufacturing Vendors	[2.1.1] Increase in the percentage over previous year.	%	--	--	5	--	--
	[2.2] Encourage Private Participation.	[2.2.1] Number of licences recommended.	Nos.	--	--	45	--	--
	[2.3] Indigenisation of T 90 tanks from the present level of indigenisation (60%) to cumulative (65%)	[2.3.1] Cumilative increase in % of indigenisation from the present level	%	--	--	4	--	--
	[2.4] Indigenisation of sukhoi Aircrafts from the present level of indigenisation (33%) to cumulative(41%)	[2.4.1] Cumilative increase in % of indigenisation from the present level	%	--	--	6	--	--

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
	[2.5] Indigenisation of P-17 from the present level of indigenistaion (53%) to cumulative (57%)	[2.5.1] Cumilative increase in % of indigenisation from the present level	%	--	--	3	--	--
[3] Modernization and capacity augmentation.	[3.1] Modernisation of Ordnance Factories.	[3.1.1] Expenditure incurred on modernisation	Rs in cr.	--	--	855	--	--
	[3.2] Capacity augmentation of NG plant in Ord Factory Itarsi	[3.2.1] Expenditure Incurred on capacity augmentation	Rs in cr.	--	--	36.8	--	--
	[3.3] Key Modernisation Projects of OFB (Creation / Augmentation of capacity for specific product OF Nalanda)	[3.3.1] % completed	%	--	--	41	--	--
	[3.4] Modernisation of shipyards.	[3.4.1] Expenditure incurred on modernisation	Rs in cr.	--	--	788	--	--
	[3.5] Key Modernisation Projects in Shipyards (MDL) (Completion of the Goliath Crane Component)	[3.5.1] % completed	%	--	--	95	--	--
	[3.6] Modernisation of BDL.	[3.6.1] Expenditure incurred on modernisation	Rs in cr.	--	--	57	--	--
	[3.7] Key Modernisation Projects in BDL (Capacity Expansion of Konkurs-M ATGM)	[3.7.1] % completed	%	--	--	45	--	--

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
	[3.8] Modernisation of HAL	[3.8.1] Expenditure incurred on modernisation	Rs in cr.	--	--	428	--	--
	[3.9] Key Modernisation Projects in HAL (Commissioning of high value machinery into production operations at Transport Aircraft Division, HAL, Kanpur-Percentage Achivements for contract finilisation.	[3.9.1] Stage Completed	%	--	--	90	--	--
	[3.10]Modernisation of BEL.	[3.10.1] Expenditure incurred on modernisation	Rs in cr.	--	--	325	--	--
	[3.11]Key Projects in BEL (Creation of Near Field Antenna Measurement facilities)	[3.11.1] % completed	%	--	--	95	--	--
	[3.12]Modernisation of MIDHANI.	[3.12.1] Expenditure incurred on modernisation	Rs in cr.	--	--	57	--	--
	[3.13]Key Modernisation Projects in MIDHANI Completion of the Ring Rolling Mill Component	[3.13.1] % completed	%	--	--	95	--	--

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
	[3.14] Modernisation of BEML.	[3.14.1] Expenditure incurred on modernisation	Rs in cr.	--	--	114	--	--
	[3.15] Key Projects in BEML (Construction of a hanger at Aerospace SEZ project Devanahalli)	[3.15.1] % completed	%	--	--	90	--	--
[4] Taking up more R & D projects and increasing allocation for R&D.	[4.1] R&D Efforts in DPSUs	[4.1.1] Expenditure Incurred	Rs. in cr.	--	--	1454	--	--
	[4.2] R&D efforts in OFB	[4.2.1] Expenditure Incurred	Rs. in cr.	--	--	43	--	--
[5] Facilitating and guiding improvements in the functioning of DPSUs and OFB.	[5.1] Strict Monitoring of the MOU signed by the DPSUs and RCs	[5.1.1] Excellent rating by the DPSE	No.	--	--	4	--	--
		[5.1.2] Very good rating by DPSE	No.	--	--	2	--	--
	[5.2] Finalisation of subsidiary of RFD of RCs	[5.2.1] Timely completion	Date	--	--	10/05/2012	--	--
	[5.3] Improving the quality of Labs	[5.3.1] Number of Labs that get NABL accreditation	No.	--	--	6	--	--
[6] Increase transparency in procurement.	[6.1] To increase transparency in procurement	[6.1.1] E-procurement audit by committee of 3 officers from DPSUs and OFB	Date	--	--	31/10/2012	--	--

* Mandatory Objective(s)

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
* Efficient Functioning of the RFD System	Timely submission of Draft for Approval	On-time submission	Date	05/03/2012	06/03/2012	27/04/2012	08/03/2012	09/03/2012
	Timely submission of Results for the year 2011-12 RFD	On-time submission	Date	01/05/2012	03/05/2012	03/05/2012	05/05/2012	06/05/2012
	Review the Strategic Plan	Finalise review of the Strategic plan for the next 5 years.	Date	10/12/2012	15/12/2012	15/12/2012	24/12/2012	31/12/2012
* Administrative Reforms	Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	100	95	95	85	80
	Develop an action plan to implement ISO 9001 certification	Finalize an action plan to implement ISO 9001 certification	Date	10/12/2012	15/12/2012	15/12/2012	24/12/2012	31/12/2012
	Timely preparation of departmental Innovation Action Plan (IAP)	On-time submission	Date	05/07/2012	06/07/2012	02/05/2013	08/07/2012	09/07/2012
* Improving Internal Efficiency / responsiveness / service delivery of Ministry / Department	Implementation of Sevottam	Review and resubmission of Citizen's Charter	Date	10/12/2012	15/03/2013	15/12/2012	24/12/2012	31/12/2012
		Independent Audit of implementation of public grievance redressal system	%	100	95	90	85	80
* Ensuring compliance to the Financial Accountability Framework	Timely submission of ATNs on Audit paras of C&AG	Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG during the year.	%	100	90	90	70	60

* Mandatory Objective(s)

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 10/11	Actual Value for FY 11/12	Target Value for FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
	Timely submission of ATRs to the PAC Sectt. on PAC Reports	Percentage of ATRS submitted within due date (6 months) from date of presentation of Report to Parliament by PAC during the year.	%	100	90	90	70	60
	Early disposal of pending ATNs on Audit Paras of C&AG Reports presented to Parliament before 31.3.2012.	Percentage of outstanding ATNs disposed off during the year.	%	100	90	90	70	60
	Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2012	Percentage of outstanding ATRS disposed off during the year.	%	100	90	90	70	60

* Mandatory Objective(s)

Section 4:
Description and Definition of Success Indicators and Proposed Measurement Methodology

Description and definition of success indicators and proposed methodology :

The success indicators and the proposed methodology have been indicated in Table 1 in terms of timelines, the percentage of the targets to be met and physically achieved in terms of numbers. These success indicators have been formulated after taking into account the nature and objectives of the Department of Defence Production. The objectives of the DDP are basically to ensure that the ordnance factories and the Defence Public sector undertakings produce adequate number of arms, ammunitions, weapons and equipments that are required by our armed forces and deliver it to them in time.

Section 5:
Specific Performance Requirements
from other Departments

Specific performance requirement from the Departments:

Production of equipment is determined by the needs of the Armed forces. While the aim of the Department of Defence Production is to maximize indigenous indigenous manufacture, this has necessary to be subordinate to the building up of Defence capability. Armed capability. Armed forces decide the nature of the equipment that would futher Defence capability. Many times, equipments have to be imported in view of the latest technology that such product have. Thus indigenous production and the success of DDPs efforts are conditional on such factors.

Section 6:
Outcome/Impact of Department/Ministry

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
1 Production of Ordanance Factories	Armed forces, DGQA, OEMs	Total Issues	Rs. in Crores	11211	11700	12935	13581	14260
2 Turnover Value of Production of Defence PSUs	OEM, Armed Forces, DGQA	Volume	Rs. in Crores	30086	31590	33170	34829	36570

Special Forces Slithering Operations

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