Annual Report

2004-05

सत्यमेव जयते

MINISTRY OF DEFENCE

GOVERNMENT OF INDIA

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Ministry of Defence
Government of India

Front Cover :

'BRAHMOS' Supersonic Cruise Missile being launched from a Naval war ship.

Back Cover:

The aerobatic team of the Indian Air Force – the Suryakirans demonstrating its awesome aerobatic skills.

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1

The Security Environment

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The Security Environment

PHYSICAL ENVIRONMENT

1.1 Connected by land to west, central, continental, and south-east Asia, and by sea, to the littoral states of the Indian Ocean from East Africa to the Indonesian archipelago, India is strategically located vis-à-vis both continental Asia as well as the Indian Ocean Region. It has a landmass of 3.3 million sq. kms. and is home to over a billion people with varying ethnic, linguistic, religious and cultural backgrounds.

1.2 The topography of India is diverse, ranging from the snow clad Himalayas with peaks over 28,000 feet to deserts, thick jungles and vast plains. The Siachen Glacier in the North is the world's highest battlefield with posts located as high as 21,000 feet. India's western border runs through deserts, fertile plains and thickly forested mountains. The North-Eastern frontier also comprises steep, high ranges and dense tropical forests. To the South, there are ranges close to the sea, inland plateaus interspersed with river valleys, coastal plains, and far flung island territories such as the Lakshadweep to the west and the Andaman and Nicobar Islands to the East. On three sides, from Gujarat to West Bengal, it is bordered by the Arabian Sea, the Indian Ocean and the Bay of Bengal. India is thus a maritime as well as continental entity. This geographical and topographical diversity, especially on its borders, also poses unique challenges to our Armed Forces.

1.3 India's land frontiers extend across more than 15,500 kms sharing borders with seven neighbours namely Afghanistan, Pakistan, Bangladesh, Myanmar, China, Bhutan and Nepal. Most of them do not share borders amongst themselves, heightening the focus of their relations with their larger common neighbour.

1.4 India's peninsular shape provides India a coastline of about 7,600 kms and an Exclusive Economic Zone of over 2 million sq. kms. The island territories of the Andamans and Nicobar in the East are 1,300 kms. away from the mainland, physically much closer to South-East Asia. Peninsular India is adjacent to one of the most vital sea-lanes of the world, stretching from the Suez Canal and the Persian Gulf to the Straits of Malacca through which 55,000 ships and much of the oil from the Gulf region transit each year. The seas

surrounding India have been a theatre of super power rivalry in the past, and continue to be a region of heightened activity from and by extra-regional navies on account of topical security concerns.

1.5 Historically, India with its long, layered and textured history stretching back close to 5,000 years, is one of the major sources of civilization having received, and radiated, influences from and to West and Central Asia, China, Mongolia and East Asia, South-East Asia, the Gulf and East Africa. Today, politically, South Asia hosts a diversity of political experiences and experiments ranging from monarchies and military dictatorships to nascent and established democracies. The region also faces the menace of terrorism and trafficking in, and proliferation of, arms and drugs. In the midst of this, India stands as a bulwark against fundamentalism and extremism, a centre of economic gravity, a beacon of democracy (despite challenges of human diversity and economic disparity), a bastion of stability and a symbol of peaceful coexistence and non-violence. An appreciation of India's security concerns and its security is thus critical to regional and global stability and security.

1.6 India's size, strategic location, trade links and Exclusive Economic Zone (EEZ), and its security environment link India's security directly with its extended neighbourhood, particularly neighbouring countries and the

The fencing along the Line of Control helps check infiltration

regions of Central Asia, South-East Asia, the Gulf and the Indian Ocean. India's location at the base of continental Asia and the top of the Indian Ocean gives it a vantage point in relation to both Central Asia and the Indian Ocean Region.

The Security Environment

1.7 At its widest level, with some variations for better or worse, India's strategic environment remained largely unchanged from those identified in the Annual Report of the Ministry of Defence, last year. The post Cold War, post 9/11 concerns regarding the challenges posed by terrorism and the proliferation of weapons of mass destruction remained central to the international security agenda and at the bottom of India's primary and most general security concerns. Many of the trends in international relations and military affairs identified in last year's report remain valid. The US retained its position as the pre-eminent world power though the nascent challenge posed by a fast growing and modernizing China was too strong to be ignored. The European Union continued its process of enlargement and consolidation. Relations between major powers remained stable though historical strains between Japan and China were beginning to reappear in East Asia. Russia continued trying to deepen its ties with the US, Europe, China and Central Asia for its security and economic revival. China's rapid modernization elicited both awe and nervousness in some quarters. The global dependency on the energy resources of the Gulf was underlined by the steep hike in oil prices intensifying efforts to seek access and control of the region and for alternative sources of energy, notably in Central Asia. The Revolution in Military Affairs (RMA) continued to drive military reform, restructuring and modernization amongst the major world powers. While elections in Iraq and the Palestine, and the Israeli pullout from the Gaza Strip opened prospects for the return of peace in the Gulf and West Asia, it is still too early to predict a positive outcome. Strains over Iran's nuclear intentions and the reactions of the international community to it, could have a destabilizing impact on the region. By the end of the year, there were also signs that new strategic alignments, and a growing appreciation of India's economic growth and potential, military experience and success as a democracy had induced major powers to begin to redefine their relations with India and opened fresh prospects for India.

1.8 India's immediate security concerns also remained basically the same though tempered by positive developments with its two largest neighbours. Internal instability, authoritarian and/or military rule, extremist political or religious movements, weak state structures, and

insurgencies and internal or ethnic conflicts continued to characterize many of the countries of the region. Despite the operations against the Al Qaeda and Taliban elements on the Pak-Afghan border, the principal threats to peace and stability in the region remains the combination of fundamentalism and terrorism nurtured in madarssas and training camps in the area, and the danger of proliferation of weapons of mass destruction and access to them by fundamentalists and terrorists.

1.9 Building on the November 2003 cease-fire along the International Border (IB), Line of Control (LoC) and the Actual Ground Position Line (AGPL) between India and Pakistan in J&K, and the unconditional commitment given by President Musharraf on January 6, 2004 not to permit any territory under Pakistan's control to be used to support terrorism in any manner, a number of initiatives were taken during the year to ease tensions, normalize and improve relations between India and Pakistan. At the level of the Government, the Composite Dialogue was initiated with the resumption of Foreign Secretary level talks in June 2004. The first round concluded in September 2004 included the Armed Forces in the talks in Delhi between the two countries on the Sir Creek issue followed by a joint survey of the boundary pillars in the horizontal segment of the international boundary in the area in February 2005; and talks between Defence Secretaries of India and Pakistan, on the Siachen issue. The second round of the Dialogue commenced in December 2004. High-level contacts provided the momentum. Prime Minister met President Musharraf on the sidelines of the United Nations General Assembly in September 2004 where PM reiterated the importance of the fulfillment of President Musharraf's reassurance on terrorism. The Pakistan PM visited India as Chairperson of the SAARC in November 2004.

1.10 At the level of the Armed Forces, a number of confidence-building measures (CBMs) were exchanged. Meetings on nuclear and conventional CBMs were held in which understandings were reached on upgrading the link between the Directors General of Military Operations (DGMOs) of the two countries. India proposed, inter alia, an agreement on peace and tranquility along the LoC, new communication links at Divisions/Corps Commanders level, annual meetings at the level of Vice-Chiefs of Army Staff, and exchanges between the Armed Forces-related academic institutions, National Defence Colleges, etc. In December 2004, the Foreign Secretaries agreed to promote regular contacts at local levels at designated places and explore further CBMs along the IB and the LoC. It was decided during

External Affairs Minister's (EAM's) visit to Pakistan in February 15-17, 2005, that agreements would be concluded in the coming months on the pre-notification of missile tests, and the establishment of communications links between the Indian Coast Guard and the Pakistan Maritime Security Agency. It was also decided that discussions would begin on agreements on Preventing Incidents at Sea, and Reducing the Risk of Nuclear Accidents or Unauthorized Use of Nuclear Weapons.

1.11 Major steps were taken during the year to step up people-to-people contacts. Agreement was reached during EAM's, visit to Pakistan in February, 2005 to start bus services between Srinagar and Muzaffarabad (which commenced on April 7, 2005) and between Amritsar and Lahore, including to religious places such as Nankana Sahib. Pakistan also agreed to work on the early restoration of the Khokrapar-Munabao rail link. The visa regime for Pakistani nationals was unilaterally liberalized.

1.12 While the year ended on a hopeful note on India-Pakistan relations, it could not be said that there was an end to cross-border terrorism in J&K. While there was some decline in the level of infiltration, this was more on account of measures on the part of the Indian Armed Forces than any discernible change of heart, or action, by the Pakistani authorities. There was no evidence of any significant Pakistani effort to dismantle the infrastructure of terrorism, such as communications, launching pads, and training camps on its eastern borders with India comparable to Pakistan's operations for the war against terrorism on its western borders with Afghanistan. The acquisition of sophisticated weapons and platforms like the F-16s, P3C Orion maritime surveillance aircraft etc. that have nothing to do with the war against terrorism on the other hand, casts doubts on Pakistan's real intention in joining the war against terrorism and could complicate prospects for lasting peace in the region. India will have to guard against its implications on the balance of military power in the region.

1.13 Developments in Afghanistan have a direct bearing on peace and security in the region. The holding of the Constitutional Loya Jirgah, adoption of a new Constitution and the successful conduct of the Presidential elections in Afghanistan in October 2004 with the strong support of the international community, were milestones in the Bonn process, though there has been a slippage in the holding of the parliamentary elections. Though the task of reconstruction and rebuilding institutions is progressing and the situation in Afghanistan is stabilizing, threats to internal security

posed by remnants of the Taliban and other like-minded, fundamentalist groups continue to pose a challenge to the Afghan Government and cause concern further afield including India. India has committed US $ 500 million over the period 2002-2008 for economic reconstruction in virtually every province in Afghanistan, and almost every sector, including 300 military use vehicles for the Afghan National Army, in its effort to contribute to peace, stability and reconstruction in Afghanistan.

1.14 Within the sub-continent, despite good and close relations with most of its other immediate neighbours, lesser security problems continue to complicate relationships. Bangladesh has remained indifferent to the rising influence of political parties and organizations of fundamentalist and radical Islamist orientation in Bangladeshi society and government. It has been insensitive and unresponsive to India's concerns regarding the presence and activities of Indian insurgent groups from the North-East and the Pakistani Inter-Services Intelligence (ISI) on Bangladesh soil, large-scale illegal immigration, and the criminalization of the border. Political violence and assassinations against internal political opponents have risen alarmingly, and gone unpunished. There is still no explanation for the large cache of arms and ammunition bound for the north-east of India detected in Chittagong in April 2004.

1.15 The dismissal of the multi-party Government, imposition of emergency, arrest of political leaders and others and imposition of media censorship by the King on February 1, 2005 has resulted in a further deterioration in the political and security situation in Nepal. It has alienated the political parties, isolated the King, and ranged the palace and Royal Nepalese Army against political parties besides the Maoists. India and other countries have deplored these developments which have made efforts for reconciliation between the two pillars for stability in Nepal, namely political parties representing multi-party democracy and constitutional monarchy, more complicated. It has always been our considered view that the problems facing Nepal, particularly the Maoist insurgency can be addressed effectively only through a national consensus between the constitutional forces. India is of the view that there can be no purely military solution to the Maoist insurgency. India has, over the years, cooperated with Nepal in addressing its security requirements. The Maoist grip over the country-side, particularly in the Terai area bordering India, their links with left extremist outfits in parts of India, and the possible

Marine Commando slithering down from a Sea-King Helicopter onboard INS Viraat

expansion of their influence, remain causes of serious concern for India.

1.16 Bhutan continues to display exemplary good-neighbourliness in preventing the return of insurgent groups that had set up military camps and bases of operations within its territory. Myanmar too cooperated in undertaking coordinated operations against Indian insurgent groups in the north-east that take refuge or operate from camps in Myanmar.

1.17 In Sri Lanka, the suspension of the talks between the LTTE and the Government continued though the cease-fire remained in force. There was some limited cooperation between the Government and the LTTE on the post December 26, 2004 Tsunami. There are indications that the LTTE continued to strengthen itself militarily although it suffered losses, along with the Sri Lankan defence forces, on account of the Tsunami. India remains committed to the unity, integrity and sovereignty of Sri Lanka and to a comprehensive, negotiated settlement acceptable to all communities of Sri Lanka, and reflecting the pluralistic nature of Sri Lankan society, within the framework of a united Sri Lanka and consistent with democracy and respect for human rights. India assisted the Sri Lankan Armed Forces in meeting some of its training requirements, cooperated in enhancing maritime security and responding to Sri Lanka's urgent

needs of rescue, relief and rehabilitation after the December 26, 2004 Tsunami.

1.18 China pursued its rapid modernization, including military modernization, while seeking peaceful relations with its neighbours in order to consolidate itself politically and economically internally and build up its 'Comprehensive National Strength'. India and China continued to maintain peace and tranquillity in their border areas and build mutual trust and confidence, including between their armed forces; and stepped up efforts to address differences on the boundary question through discussions between the Special Representatives who are tasked to explore a framework of a boundary settlement from the political perspective of the overall bilateral relationship. Five rounds of talks between the Special Representatives have been held so far. (The last at New Delhi in April 2005. On April 11, the Special Representatives of the two countries signed the Agreement on the Political Parameters and Guiding Principles for the Settlement of the India-China Boundary Question.)

1.19 India-China relations have entered a phase of comprehensive all-round development supported by high-level exchanges and dialogue. (During the visit of Premier, Wen Jiabao in April 2005, the two countries agreed that the relations have now acquired a strategic character, and established an India-China 'Strategic and Cooperative Partnership for Peace and Prosperity.) Defence exchanges too gained momentum during the year reflected in the visit of the Chief of Army Staff of India to China in December 2004 and participation, for the first time, of an Indian delegation in a PLA military exercise held in Henan province in September 2004. China's close defence relationship with and military assistance to Pakistan continued. We will also continue to monitor development of military infrastructure by China in India-China border areas and its military modernization, including in the maritime sector.

1.20 The Gulf region forms part of our strategic neighbourhood, an important source of energy, and home to over 3.5 million Indians. It is a major trading partner. Its stability, security and prosperity is important to India. Parts of the region, including Iraq, are affected by Islamic radicalism and terrorism. Efforts are being made by the region's governments to contain it. The elections in Iraq in January 2005 have generated hopes for peace and development and have hopefully set in motion a process that would lead to the Iraqi people taking full control of their

destiny. Efforts by fundamentalist outfits to destabilize Central Asia also continue. In addition, Central Asia attracts extra-regional attention and competition because of its location and energy assets. India's rapid economic integration with the Asia-Pacific underpins a common interest with South-East and East Asia in the security of shipping and energy flows from the Western Indian Ocean to the Asia-Pacific. India and South-East Asia also have a vital interest in preserving the traditions of peaceful co-existence amongst their diverse religious communities against the intrusion of dogmatic, alien, fundamentalist and extremist religious tendencies.

1.21 At the regional level, India has purposefully pursued dialogue and confidence-building and trust through cooperative security structures like the ASEAN Regional Forum (ARF) and the Conference on Interaction and Confidence-Building Measures in Asia (CICA) at Almaty, Kazakhstan in October 2004.

Internal Threats to Security

1.22 In addition to these external threats and challenges, India also faces internal threats from (i) insurgency inspired by ethnic and tribal identities and a desire to achieve some kind of autonomy from the Centre; (ii) left-wing radicalism and extremism motivated by a dissatisfaction with the prevailing socio-economic order which it desires to overthrow through armed revolution and guerrilla activities; (iii) communal conflict, fomented by religious fundamentalism; and (iv) caste conflicts including attacks against Scheduled Castes and Tribes. These threats posed a grave challenge to the unity and development of India as a nation-state and impinge on our national security.

Position on Weapons of Mass Destruction

1.23 India remains a firm and consistent proponent of global nuclear disarmament based on the principles of non-discrimination, universal acceptability and effective compliance. Faced with an untenable nuclear environment, India was forced to resort to the nuclear option in 1998. As a nuclear state, India is even more conscious of its responsibility in regard to nuclear safety, non-proliferation and nuclear disarmament. India is an active participant in the global debate on nuclear disarmament and the elimination of weapons of mass destruction. India's nuclear doctrine is based on the principle of a minimum credible deterrent and no-first-use as opposed to doctrines or postures of launch-on-warning. It is an original

State Party to the Chemical Weapons Convention and is committed to participating constructively in international efforts to strengthen norms against biological weapons and toxins enshrined in Biological and Toxicological Weapons Convention (BTWC). It is also a Party to the Convention on Certain Chemical Weapons (CCW) and has ratified all its Protocols including the Amended Protocol II which restricts the use of anti-personnel mines. India also participated as an observer in the First Review Conference of States Parties to the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction (the Ottawa Convention) held at Nairobi, Kenya in November-December 2004.

Conclusion

1.24 India's response to these multiple threats and challenges has always been restrained, measured and moderate, consistent with its peaceful outlook and reputation as a peace-loving country. Diplomacy remains India's chosen means of dealing with these challenges, but effective diplomacy has to be backed by credible military power. India's strategic and security interests require a mix of land-based, maritime and air capabilities, and a minimum credible deterrent to thwart the threat

Brahmos Supersonic Cruise Missile on display

of use of nuclear weapons against it. Its force postures remain defensive in orientation while its nuclear policy is characterized by a commitment to no-first-use, moratorium on nuclear testing, minimum credible nuclear deterrence, and the rejection of an arms race or concepts and postures from the Cold War era. India remains fully committed to maintaining peace with its neighbours and stability in the region through a combination of defence-preparedness, unilateral restraint, confidence building and dialogue, and expanding bilateral interactions.

2

Organisation and Functions of the Ministry of Defence

Independence Day Celebrations

Organisation and Functions of the Ministry of Defence

HISTORICAL BACKGROUND

2.1 A Military Department was created in the Government of the East India Company at Calcutta in the year 1776, having the main function to sift and record orders relating to the Army issued by various Departments of the Government of the East India Company. The Military Department initially functioned as a branch of the Public Department and maintained a list of Army personnel.

2.2 With the Charter Act of 1833, the Secretariat of the Government of East India Company was reorganised into four Departments, including a Military Department, each headed by a Secretary to the Government. The Army in the Presidencies of Bengal, Bombay & Madras functioned as respective Presidency Army till April 1895, when the Presidency Armies were unified into a single Indian Army. For administrative convenience, it was divided into four Commands viz., Punjab (including the North West Frontier), Bengal, Madras (including Burma) and Bombay (including Sind, Quetta and Aden).

2.3 The supreme authority over the Indian Army vested in the Governor General-in-Council, subject to the Control of the Crown, which was exercised by the Secretary of State for India. Two Members in the Council were responsible for military affairs, one of whom was the Military Member, who supervised all administrative and financial matters, while the other was the Commander-in-Chief who was responsible for all operational matters. The Military Department was abolished in March 1906 and it was replaced by two separate Departments, the Army Department and the Military Supply Department. In April 1909 the Military Supply Department was abolished and its functions were taken over by the Army Department. The Army Department was redesignated as the Defence Department in January 1938. The Department of Defence became the Ministry of Defence under a Cabinet Minister in August 1947.

POST-INDEPENDENCE ORGANISATIONAL SET-UP AND FUNCTIONS

2.4 On August 15, 1947, each Service was placed under its own Commander-in-Chief. Under the

Constitution, the Supreme Command of the Armed Forces vests in the President. In 1955, the title of Commander-in-Chief was abolished and the three Service Chiefs were designated as the Chief of the Army Staff, the Chief of the Naval Staff and the Chief of the Air Staff respectively. In November 1962, a 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 requirements for defence purposes. These two Departments were later merged to form the Department of Defence Production and Supplies. A Scientific Adviser to the Defence Minister was appointed to advise him on scientific aspects of military equipment, research and design of equipment used by the Defence forces. In 1980, the Department of Defence Research and Development was created. Further, the Department of Ex-Servicemen Welfare was created in 2004.

2.5 The Armed Forces are primarily responsible for ensuring the territorial integrity of the nation. The Ministry of Defence, provides policy framework and wherewithal to the Armed Forces to discharge their responsibility in the context of the defence of the country.

DEPARTMENTS

2.6 The principal task of the Ministry is to obtain policy directions of the Government on all 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 also required to ensure effective implementation of the Government's policy directions and the execution of approved programmes within the allocated resources.

2.7 The Ministry of Defence now consists of four Departments, namely, Department of Defence, Department of Defence Production, Department of Defence Research and Development and Department of Ex-Servicemen Welfare. 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 principal functions of all 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 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 also 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 an Additional Secretary and deals with all resettlement, welfare and pensionary matters of Ex-Servicemen.

2.8 The Finance Division of the Ministry of Defence is headed by Secretary Defence (Finance). The Secretary exercises financial control over proposals involving expenditure from the Defence Budget and is responsible for internal audit and accounting of defence expenditure. In the latter tasks, he is assisted by the Controller General of Defence Accounts (CGDA). A list of items dealt with by the Departments in the Ministry of Defence is given in Appendix-I to this report.

2.9 The three Services Headquarters, viz., the Army Headquarters, the Naval Headquarters and the Air Headquarters function, under the Chief of the Army Staff (COAS), the Chief of the Naval Staff (CNS) and the Chief of the Air Staff (CAS) respectively. They are assisted by their Principal Staff Officers (PSOs). The Inter-Services Organisations, under the Department of Defence are responsible for carrying out tasks related to common needs of the three Services such as medical care, public relations and personnel management of civilian staff in the Defence Headquarters.

2.10 A number of Committees dealing with defence related activities assist the Raksha Mantri. The Chiefs of Staff Committee is a forum in which the Service Chiefs discuss matters having a bearing on the activities of the Services and advise the Ministry. The position of Chairman of the Chiefs of Staff Committee devolves on the longest

serving Chief of Staff, and consequently rotates amongst the three Services. To facilitate the work of the Chiefs of Staff Committee, a number of sub-committees have been established.

2.11 Information regarding the Ministers in the Ministry of Defence, the Chiefs of Staff, the Secretaries in the three Departments of the Ministry and the Secretary Defence (Finance) who held positions from April 1, 2004 onwards is given in Appendix-II to this report.

REFORMS IN MANAGEMENT OF DEFENCE

2.12 Keeping in view the broad array of challenges to the national security in the fast changing geo-strategic security environment, the Government had instituted a comprehensive review of the National Security System by a Group of Ministers (GOM) constituted on April 17, 2000. The recommendations of the GOM included, amongst others, measures such as creation of the Chief of Defence Staff(CDS), creation of a Defence Procurement Board, a Defence Production Board, a Defence Research and Development Board, preparation of holistic and integrated Defence Perspective Plans for 15-20 years, establishment of a National Defence University, effective media management, establishment of Andaman and Nicobar Command and Strategic Forces Command, integration of Service Headquarters with the Ministry of Defence and delegation of higher administrative and financial powers to the Services.

2.13 The Government approved the recommendations made in the report relating to Management of Defence with the modification that a view on the recommendations relating to the institution of Chief of Defence Staff (CDS) would be taken after consultations with various political parties. Accordingly, Integrated Defence Staff, Defence Intelligence Agency, Defence Acquisition Council, Defence Technology Council, Andaman and Nicobar Command, Strategic Forces Command etc. have been established. Various administrative and financial powers have also been delegated to the Integrated Service Headquarters to impart enhanced autonomy in their functioning. These reforms have brought about improvements in the organisations, structures and processes for the integration of civil and military components and have made the defence set-up more capable to meet any kind of challenge to the national security.

DEFENCE EXPENDITURE

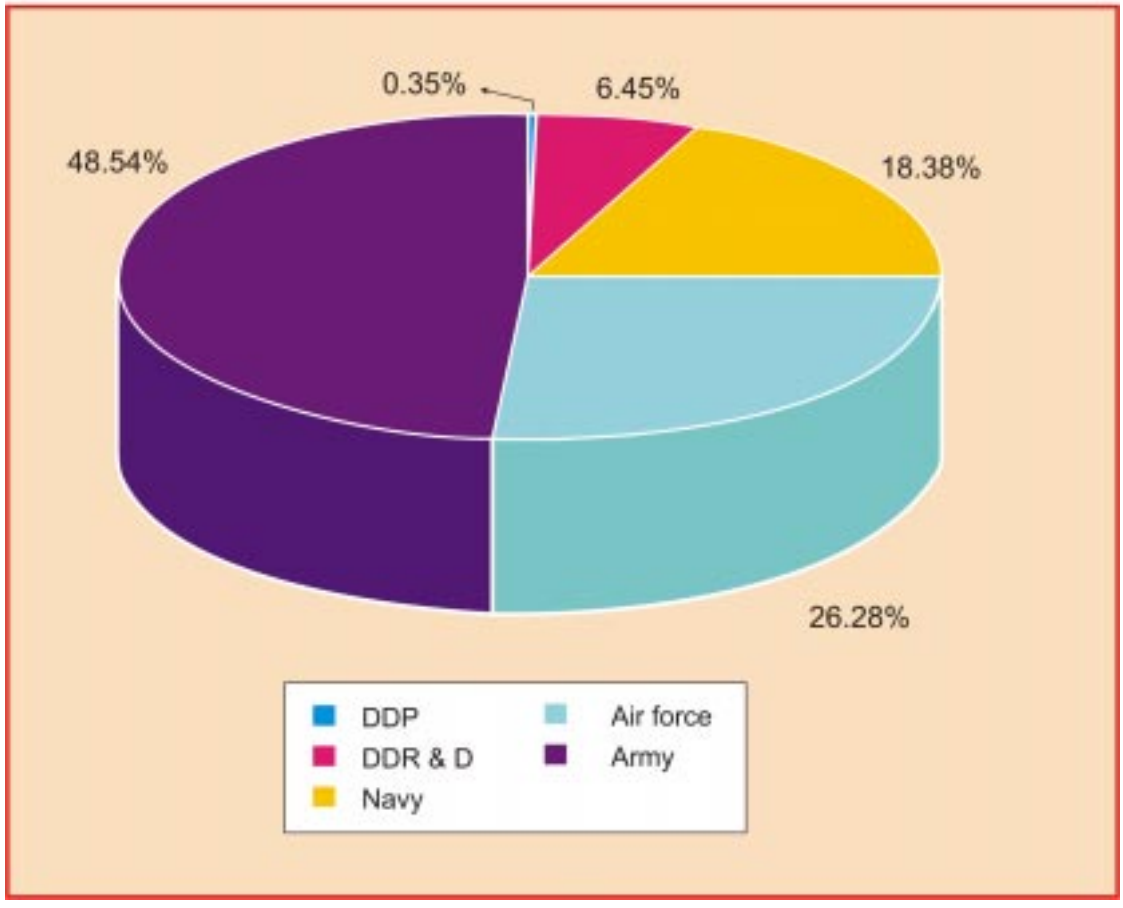
2.14 The two charts in this chapter represent Service/Department-wise break-up of Defence expenditure for the years 2002-2003, 2003-2004, Revised Estimates for 2004-2005 and Budget Estimates for the year 2005-2006 and Service/ Department-wise expenditure as a percentage of total Defence expenditure.

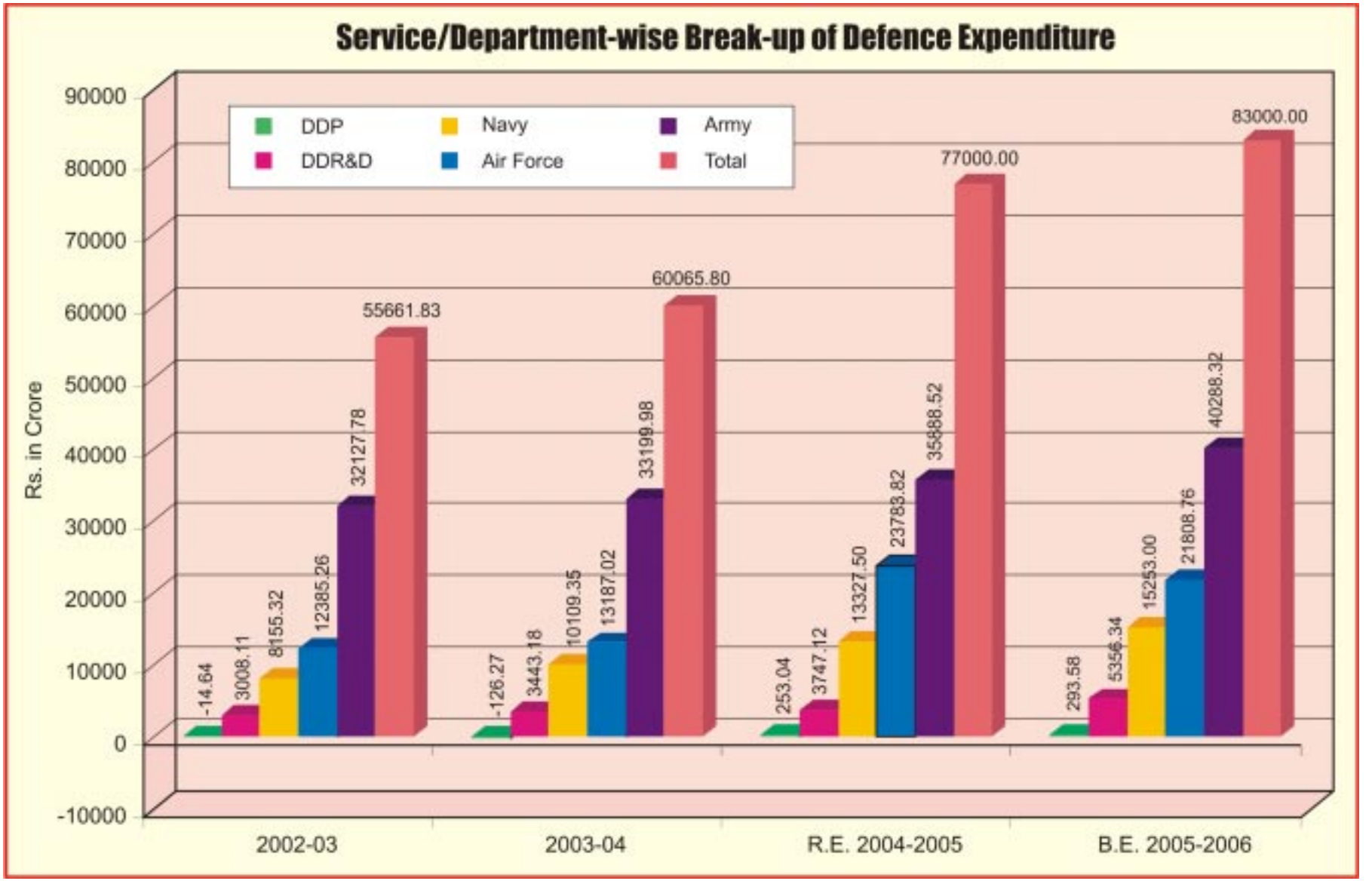
Service/Department-Wise Break-Up of Defence Expenditure

(Rs. in crores)

Service/Deptt		2002-2003	2003-2004	R.E. 2004-2005	B.E. 2005-2006
Army		32127.78	33199.98	35888.52	40288.32
Navy		8155.32	10109.35	13327.50	15253.00
Air Force		12385.26	13187.02	23783.82	21808.76
DDP	DGOF	(-)388.89	(-)210.58	(-)158.78	(-)127.94
	DGQA	374.25	336.85	411.82	421.52
	Total	(-)14.64	126.27	253.04	293.58
DR&D		3008.11	3443.18	3747.12	5356.34
Total		55661.83	60065.80	77000.00	83000.00

Service/Department-wise Expenditure as a Percentage of Total Defence Expenditure 2005-06 (BE)




Service/Department-wise Break-up of Defence Expenditure
DDP
Navy
Army
DDR&D
Air Force
Total
Rs. in Crore
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
-10000
-14.64
3008.11
8155.32
12385.26
32127.78
55661.83
-126.27
3443.18
10109.35
13187.02
33199.98
60065.80
253.04
3747.12
13327.50
23783.82
35888.52
77000.00
293.58
5356.34
15253.00
21808.76
40288.32
83000.00
2002-03
2003-04
R.E. 2004-2005
B.E. 2005-2006

2.15 Observations of C&AG on the working of Ministry of Defence: Summary of latest Comptroller & Auditor General (C&AG) on the working of the Ministry of Defence is given in Appendix-III to this report.

3

Indian Army

T-90 Tank on Display

Indian Army

3.1 The primary responsibility of the Army is to defend the country against external aggression and to safeguard its territorial integrity. The enormity of the task can be gauged from the prevalent geo-political, social and strategic environment. Since inception, the Indian Army has been extremely vigilant at all times to meet the challenges not only arising along the country's long borders encompassing different geographical and climatic conditions but also at the time of natural calamities and internal disturbances. Result oriented efforts are being made to make the Army suitably structured, equipped, modernised and trained to meet these enormous challenges.

MODERNISATION OF WEAPONS AND EQUIPMENT

3.2 During the year, continued efforts were made to modernize and upgrade the weapons and weapon systems of the Army, to prepare it to address the requirements of modern day warfare and enhance its combat

Mounted ZU 23 MM Twin Gun on display

efficiency. The notable efforts made are indicated in the succeeding paragraphs:

(i) Mechanised Forces: The difficulties faced by our Mechanised forces to operate by night has been addressed on priority by procurement of Thermal Imaging/Image Intensification based Sights. The armoured thrusts have been made more effective by induction of T-90 tanks. For enhancing the navigational capabilities of tanks and infantry combat vehicles, steps have been taken for procurement of Advanced Land Navigation Systems. To enhance communication capabilities of the armoured formations, action has been taken for procurement of Combat Net Radio Sets.

(ii) Artillery: Various surveillance systems like Radars and Night Vision Devices are being procured to enhance the surveillance capability of the Army. Also, steps have been initiated for procurement of a number of self propelled and towed versions of Artillery Guns, Rockets and Rocket Launchers to enhance the fire power of the Artillery. Unmanned Aerial Vehicles, proposed for procurement, will enhance early warning and surveillance in high altitude areas and remote locations.

(iii) Infantry: The combat potential, surveillance and counter-insurgency capabilities of Infantry are being comprehensively transformed through a quantum enhancement of their surveillance, fire power, protection, night vision capability, communication and mobility requirements. Steps are being taken for procurement of state-of-the-art weapon systems of great lethality, range and precision; thermal imaging devices; bullet and mine-proof vehicles and secure radio sets for the Infantry.

(iv) Signals: Communication problems of Indian Army were addressed in a very big way, post-Kargil. Relentless efforts have resulted in procurement of large number of communication equipment and systems, integrated into function networks, which have brought us closer towards fighting Network Centric Warfare. AVAN is being established to enhance the communication abilities. The electronic warfare capabilities are also proposed to be upgraded by procurement of various electronic warfare systems.

(v) Engineers: The demining capabilities of the Engineers

have been enhanced through procurement of demining equipments. The induction of various equipments for defence against nuclear, biological and chemical warfare has improved the capability for disaster management during a nuclear, chemical and biological warfare scenario. The protection against Improvised Explosive Devices (IED) is being enhanced through procurement of a sophisticated range of Counter Improvised Explosive Devices Equipment (IEDE).

(vi) Air Defence Artillery: Air Defence Artillery is in the process of improving its capability by inducting new radars. Necessary steps have been initiated for procurement of upgraded guns and missiles.

(vii) Army Aviation: In order to enhance the lift capability, the Advanced Light Helicopters are being inducted into the Army. For enhancing the reconnaissance capabilities, necessary steps are being taken to procure light helicopters for replacing the existing Cheetah/Chetak models.

ORGANISATIONAL RESTRUCTURING

3.3 Reorganisation of Command and Control Structure of Army: The Government has approved the reorganization of Command and Control Structure of Army in the Western sector, albeit without any accretion in posts. The restructuring has been effected to address the changes in operational scenario and to rationalize the extent and span of control of Northern Headquarters in order to facilitate effective deployment of Army HQ's (Headquarters) reserves, allocated to army during war. The restructuring entails carving out an additional Corps HQ and HQ South Western Command from the existing resources. This would facilitate better control and coordination of areas of operational responsibilities of various formations. While addressing the existing structural anomalies, the Government of India remains committed to the maintenance of peace and tranquility along its western borders. The existing confidence building measures initiated by the Government including de-induction of troops from J&K would consolidate the peace process between India and Pakistan.

3.4 Implementation of AV Singh Committee recommendations: Government of India had constituted a committee under the chairmanship of Shri Ajai Vikram Singh in May 2001, to examine certain shortcomings and imbalances in the organisational structure of the officers' cadre of Army. The Committee submitted its report in the month of January 2003. The Committee in its report recommended a

comprehensive plan for restructuring the officers' cadre, reduction in qualifying service for promotion in non-select ranks and a package of peel off measures to mitigate stagnation and a plan for broad – basing the select ranks. The main purpose of the report has been in achieving optimum combat effectiveness by bringing down the age profile of battalion/brigade commanders and to make the organization more effective in fulfilling individual career aspirations of the officers. Phase I of the report pertaining to non – select ranks has since been approved and implemented in respect of Army Officers along with their counterparts in Navy & Air Force.

MODERNISATION OF CENTRAL ORDNANCE DEPOTS (CODs)

3.5 There are seven Central Ordnance Depots located at Delhi Cantonment, Dehu Road, Cheokki, Kanpur, Agra, Mumbai and Jabalpur. These Depots were set-up in the pre-independence period and have temporary/semi-permanent structures, which have now become dilapidated and lack modern material handling and storage facilities. Therefore, it has been decided to modernize all the seven Central Ordnance Depots in a phased manner. To begin with the modernization of Central Ordnance Depot, Kanpur at an estimated cost of Rs. 187 crores was started in April 2001 and the project is likely to be completed at the end of year 2005. The modernization of COD Kanpur covers state-of-the-art warehousing facilities with higher vertical space utilization and automated material handling equipments like forklift trucks, mobile belt conveyors, hydraulic elevating cable etc., for loading/unloading and retrieval/stacking of stores. It also includes computerised inventory management system and installation of state-of-the-art fire prevention and fire fighting systems.

3.6 The detailed project reports in respect of Ordnance Depots at Agra and Jabalpur are also under the advanced stage of finalization and it is expected that the modernization of COD Agra and COD Jabalpur at an estimated cost of Rs. 350 crores each is likely to start in the year 2005.

MODERNISATION OF AMMUNITION DEPOTS

3.7 There is one Central Ammunition Depot at Pulgaon and fourteen Ammunition Depots located in different parts of the country. It is proposed to modernize security and safety infrastructure in these depots by providing devices such as Powered Fencing, Early Warning System, Electronic Alarming System, Close Circuit TV, Sensors, Electronic Surveillance Devices and Equipment for frisking of personnel and vehicles at entry points.

COUNTER INSURGENCY OPERATIONS

Jammu and Kashmir

3.8 The Line of Control fence and an integrated surveillance, multi-tiered grid has contributed immensely towards controlling infiltration. The number of infiltrators in 2004 had dropped. Due to effective and relentless counter terrorist operations, the strength of terrorists in the hinterland has come down and the terrorists are consequently suffering from low morale and inter-group rivalries, with a discernible divide between the terrorists of local and foreign origin. The Prime Minister's peace pronouncements and initiatives have raised the expectations of people manifold. There appears a genuine yearning for normalcy, peace and rejection of violence amongst the people with successful J&K Elections in 2004. The 'healing touch' policy of the State Government has also been well received by the civil population. A record number of yatris (3.82 lakhs) visited the Holy Cave of Amarnath this year. Tourist influx to the Valley is also expected to reach an all time high during this season. As part of the ongoing peace process and Confidence Building Measures (CBMs), a reduction in troops deployed in J&K has been effected. This decision is likely to give an impetus to the peace process and further improve the prevailing environment.

Army Patrol Team Searching IED in snow covered area in J & K

3.9 Winning hearts and minds of people through 'Operation Sadbhavana': In 'Operation Sadbhavana' civic action, i.e., small scale developmental and community projects have been undertaken by the armed forces, for the benefit of civilians in areas where troops are deployed to win hearts and minds of people. The programmes include:-

(a) Infrastructure Development: Infrastructure development like construction of bridges, roads and electrification of remote areas.

(b) Education: Scholarship to students, computer training, construction and renovation of schools, etc.

(c) Health: Free health care to insurgency victims, lady doctors for medical camps in remote areas, assistance in construction and running of primary health centres, potable water supply schemes in remote areas, provision of artificial limbs, etc.

(d) Miscellaneous: Construction and running of community development centres, adoption of villages for development, women empowerment, clean up of Wular Lake / Dal lake, reception of Hajis and construction of mini hydel projects. Up to March 31st, 2004, Rs 46 crores have been allocated for 'Operation Sadbhavana'. The

Medical assistance to stranded civilians by Army in snow covered areas

budget outlay for 2004-05 is Rs. 41 crores and the projected outlay for 2005-06 is Rs. 55.92 crores.

North East

3.10 The Security Forces have maintained relentless pressure on the militants and have established ascendancy over them in the entire North-East. The peace initiatives with various groups have progressed well and there is a general ground swell for peace.

(a) Assam: Consequent to Bhutan operations in December 2003, the pressure has been maintained on the militants, which has forced them to go on the back foot. The militants efforts on resorting to desperate acts of attacking soft targets/ innocent population has resulted in alienating them from the population and student organisations. The National Democratic Front of Bodoland (NDFB) offer of ceasefire augurs well for Assam. At the same time, implementation of Bodoland Territorial Council (Autonomous District) (BTC AD) Accord and rehabilitation of surrendered Bodoland Liberation Tiger (BLT) cadres is progressing well.

(b) Nagaland: Nagaland has witnessed relative peace since August 1997. The ceasefire with National Socialist Council of Nagaland (Issac & Muviah) [NSCN (IM)] has been further extended and the group was invited for talks to Delhi. However, the increased attempts by NSCN (IM) to consolidate and increase its area of influence, thereby, becoming the mother group in the region, is of concern. Notwithstanding the same, there is a considerable increase in general awareness and ground swell for peace, which has not only emboldened the masses but has infused in them greater activism to check the illegal activities of militant groups.

(c) Manipur: The newly established Unified Headquarters is helping in imparting synergy to the efforts of the security forces. Additional Army and Assam Rifles units have been inducted and it has already started showing good results towards achieving normalcy.

(d) Tripura: Though the porosity of the border is being exploited by the militants based in camps across the international border, the situation in Tripura is well under control. The pressure of security forces has resulted in National Liberation Front of Tripura (NLFT) (NB) signing a tripartite agreement with the Government of India,

bringing into effect "Suspension of Operations" with effect from 15 April 2004. A turf war between two major militant groups has been continuing, which has resulted in killing of each others cadres, immigrants and civilians.

(e) Arunachal Pradesh: The State is peaceful except for the districts of Tirap and Changlang, which stand declared as disturbed. Security forces are ensuring maintenance of law and order, which is evident from the peaceful conduct of the Assembly Elections held in October 2004.

(f) Meghalaya: Clash of interests between the Garos and Khasi tribes and exploitation of Garo Hills by Assam militant groups [United Liberation Front of Assam (ULFA) and National Democratic Front of Bodoland (NDFB)] has continued throughout the year. Signing of the accord with Achik National Volunteer Council (ANVC), which is a Garo Group, on July 23rd, 2004 augurs well for peace in the State.

DIRECTORATE GENERAL RASHTRIYA RIFLES

3.11 (a) During the year, formations and units have remained fully committed in fighting the proxy war in Jammu and Kashmir (J&K). The performance of Rashtriya Rifles (RR) in its assigned role has been very commendable. Rashtriya Rifles troops ensured safe and successful conduct of Amarnath Yatra despite threats from terrorists. With its proactive offensive stance, Rashtriya Rifles have dealt a severe blow to the terrorist outfits. Such has been the intensity of operations, and so relentless has been the pressure that the terrorist organisations have lost their cohesion resulting in infighting amongst various groups. Besides performing creditably in its assigned role, the troops of Rashtriya Rifles have also played an excellent role in winning the hearts and minds of people by undertaking a number of goodwill missions.

(b) New Raisings: The security environment in the state of J&K is dynamic and is reviewed constantly based on threat perceptions. To reduce the commitment of Army on internal security duties, the Government had given 'in principle' approval in 2000, to raise 30 more Rashtriya Rifles battalions, to bring up the total strength of Rashtriya Rifles troops to five Force Headquarters, 17 Sector

Headquarters and 66 Rashtriya Rifles Battalions by the year 2005. Rashtriya Rifles battalions (1 to 57) have been raised and inducted in the Northern Sector. Rashtriya Rifles Battalions (58 to 63) are under raising.

(c) Modernisation: A comprehensive case to modernise RR battalions, in terms of its firepower, surveillance capabilities, communications and mobility is under active consideration. In the interim, considering the intensity of ongoing militancy in J & K, Rashtriya Rifles battalions have been allotted substantial quantities of equipments as Sector Stores under the modernisation programme.

(d) Performance of Rashtriya Rifles: Operational performance of Rashtriya Rifles has been exemplary. This has been possible due to high motivational levels of troops, a good intelligence network developed over the years, and an excellent rapport with local population and civil administration. However, success in this proxy war has not been without a cost. Many gallant officers and men of Rashtriya Rifles have made the supreme sacrifice in the relentless pursuit of our objective.

(e) Goodwill Missions: Rashtriya Rifles troops have undertaken a number of goodwill missions in their respective areas to project the humane face of the army and to win the hearts and minds of locals. These include running of schools, organising friendly matches between Army and locals and prize distribution. There has been overwhelming response from the people for such programmes, which has generated tremendous goodwill towards Rashtriya Rifles troops.

(f) Development Works: Rashtriya Rifles troops have undertaken a number of development works including constructions of roads, water supply, education, model village, dispensary, children park, community hall, shopping complex etc under 'Operation Sadbhawana' in Jammu and Kashmir.

(g) Medical Camps: As part of people friendly civic action projects, medical and veterinary camps for general public of remote villages were organised every month. A team of specialist doctors including Physicians, Ophthalmologists, Gynaecologists, Dentists and Veterinary doctors worked in close cooperation with Army doctors to make the medical

camps a big success. The camp provided services of the Army and civilians medical officers for immunization and family planning programmes.

(h) The various formations and units of Rashtriya Rifles have been providing selfless service in the state of Jammu and Kashmir in combating terrorism, providing aid to civil authorities and conducting numerous meaningful civic action programmes. Rashtriya Rifles troops maintained law and order, provided safety to general public and created conditions conducive to the local populace participating in elections. Such laudable achievements and sacrifices of all ranks will go a long way towards marginalisation of militancy in J&K and in further enhancing the image of the Rashtriya Rifles and the Indian Army as a whole in the years to come.

DIRECTORATE GENERAL INFORMATION SYSTEMS (DGIS)

3.12 Director General Information Systems has been created on May 15th, 2004, to meet the challenges of modern battlefield. The following Project Management Organisations were created to synergise the Information System functions in the Army.

(a) Project Management Organisation Command Information and Decision Support System (PMO CIDSS): Centre for Artificial Intelligence and Robotics (CAIR), Bangalore is the developing agency of the Project SAMVAHAK and PMO CIDSS is the technical co-coordinating authority for the Project, which is to be completed in three phases. Phase-I covers development of test bed in a Corps Zone comprising of one Corps Headquarters, one Division Headquarters, three Brigade Headquarters and nine battalion modules by DRDO and subsequent equipping and integrating remaining formations/units of Corps by the Army. The probable date of completion of 1st Phase is December 2005. The system once successfully tested and fielded will enable collecting, collating, filtering, processing, formating all levels in a field force. The system would present multiple operational options to commanders and support dissemination of decisions, plans, tasking and orders. The capability of staff and commanders will be greatly enhanced. CIDSS will have the capability to function both from Key Lay out Plan as well as operational locations. CIDSS

will be carried to operational locations in specially modified shelters and fabricated to cater for various tactical headquarters.

(b) Project Management Organisation Battlefield Surveillance System (PMO BSS): The Automated Battlefield Surveillance system will be one of the major force multipliers available to the commanders on the battlefield. It will enable commanders to take decision within a time frame, which will eventually provide the decisive edge between victory and defeat. Project SANJAY for the development of Automated Battlefield Surveillance System, is being developed under aegis of PMO BSS. The developing agency is Bharat Electronic Ltd (BEL), Ghaziabad with security solutions being provided by Centre for Artificial Intelligence and Robotics (CAIR), Bangalore. Under this project various methods for automatic transfer of data from the surveillance devices to the communication terminals have been innovated. Data enabled broadband radio sets and fibre optic cables have been identified for the smooth transmission of video, images, data and voice. Multi Sensor Data Fusion and Situation Assessment Tools have been developed and integrated with Customised Global Information System (GIS) software. The shelters for housing the Surveillance Centre Terminal, Generator Sets and Communication Control Units have been fabricated.

(c) Project Management Organistion Artillery Combat Command and Control System (PMO ACCCS): The ACCCS has been visualised as a network of military grade tactical computers, extending from Corps Fire Control Centre (FCC) down to individual gun platforms. The ACCCS system will automate and provide decision support for all operational aspect of Artillery functions from Corps down to the battery. ACCCS terminals are suitably inter-connected using Combat Net Radio (CNR) both VHF/HF, line and AREN/ASCON Grid communication. The main stay of communication will be data transmission in spurts of suitably sized packets and the ACCCS System works on Geographical Information System (GIS) background.

(d) Project Situation Awareness and Tactical Handheld Information (SATHI): Project BETA was a project for development of a handheld computing platform combining several technologies such as Geographical

Information System, Global Positioning System and Wireless Networking, customized for use by Infantry troops deployed in Counter Insurgency Operations. The project is aimed at developing a single low-cost hardware platform to meet the Infantry requirements of navigation, map reading, radio communications and information management, so that situation awareness and command and control in close combat situations are immensely facilitated. The project has been named SATHI i.e., Situation Awareness and Tactical Handheld Information, which is first R&D project initiated by the Army with no precedence or parallel. This project would take information technology to the most needed places. Using this technology instead of firepower, we could position our men in meeting our challenges in Counter Insurgency operations. Today what the Infantry finds the most difficult in successful execution of an operation is maintenance of Command and Control after the mission is launched. If the soldier knew where he is and where his other team-mates are and what his mission is, then the task becomes more simple. All these requirements have been made available on a simple device to enable fighting cohesively and with minimal casualties.

UNITED NATIONS PEACEKEEPING OPERATIONS

3.13 India remains firmly committed to the peacekeeping endeavours of the United Nations. Our contribution to UN peacekeeping operations since 1950 crossed the 70,000 troops mark, which is the highest by any country in the world. The professional élan of the Indian soldier is evident from the fact that for every new mission established by the UN, the first offer to contribute troops was made by the UN to India. Government has approved deployment of Indian contingents in the UN Mission in Democratic Republic of Congo (MONUC) and the proposed UN Mission in Sudan (UNMISUD). As on date, over 4000 Indian Army Troops are deployed in UN Missions.

(a) United Nations Interim Force in Lebanon (UNIFIL): India has been contributing an Infantry Battalion Group and a number of Staff Officers to UNIFIL since 1998. The mission was established in 1978 with an aim to oversee the withdrawal of Israeli forces from South Lebanon and establishment of Lebanese authority in the region. Located in the perpetually volatile region of the Middle East, the success of UNIFIL is

extremely important to the region as a whole. To this end, the professionalism and tactical acumen of the Indian Peacekeepers has ensured that peace in the region is not disturbed and the mandate of the UN Mission is effectively achieved. Deployed in some of the most difficult areas along the 'Blue Line', Indian Peacekeepers have also endeared themselves to the local populace by undertaking a number of humanitarian projects which have provided much needed succor to the locals.

(b) United Nations Mission in Ethiopia – Eritrea (UNMEE): Established in 2000, at the end of a bitter three years war between Ethiopia and Eritrea, UNMEE had the task of ensuring separation of the two forces by creating a de-militarised zone between the two and ensuring security in the region to enable the International Boundary Commission to demarcate the border over which the two neighbours had gone to war. India has been contributing an Infantry Battalion Group, a Force Reserve Company, a Construction Engineer Company and a number of Military Observers and Staff Officers to the mission since its inception. Current Indian contribution to the mission stands at 1554. The Indian troops have been efficiently carrying out their mandated tasks in their Area of Responsibility of the de-militarised zone and have effectively prevented situations from getting out of control. To alleviate the lot of the local population, most of whom were displaced due to the war; the Indian Contingent has instituted a number of relief and rehabilitation projects which include construction of school buildings, hospitals, digging of wells, repair and construction of roads and tracks and conduct of medical camps, computer training classes etc.

(c) United Nations Organization Mission in Democratic Republic of Congo (MONUC): The mission was established in February 2000 and India has been contributing a sizeable number of Military Observers to the mission ever since. Indian Aviation contingent, comprising 343 personnel both from the Army and the Air Force, was inducted into the mission in July 2003. Recent events, especially in Eastern Congo, have necessitated induction of additional troops into Congo as part of the UN Force in the mission. The UN, under a fresh

UN Security Council Resolution on November 1st, 2004, has authorized induction of 5900 additional military personnel into the mission. Once again, responding to the call of the UN, India is inducting an Infantry Brigade Group comprising three Infantry Battalions, a Recce and Observation Flight, a Level III Hospital and a Communication Company apart from an Aviation Contingent of the Air Force, in Eastern Congo as part of the UN mission. This large sized contingent commenced induction into the mission area in end November 2004.

(d) United Nations Mission in Sudan (UNMISUD): After 21 years civil war between the Government of Sudan in the North and the Sudan People Liberation Army/Movement (SPLA/M) in the South, both the parties are in the process of reconciliation in which the UN has played a major role. To ensure that the provisions of the Agreement to be signed between the warring parties are implemented in totality, the UN has planned to establish a Peacekeeping Mission under Chapter VI of the UN Charter in Sudan. India has pledged to provide a contingent comprising an Infantry Battalion, two Construction Engineer Companies, a Force Communication Company, a Sector Transport Company and a Level II Hospital.

(e) Participation in Other UN Missions: Apart from the above missions, India is also contributing Staff Officers and Military Observers to the UN Missions in Burundi, Ivory Coast as well as at the UN Department of Peacekeeping Operations, United Nations Headquarters, New York.

(f) In recognition of India's contributions, an officer of Indian Army Lt. Gen R.K.Mehta, has been selected to the prestigeous assignment of Military Adviser (MILAD) to UNO.

ADVENTURE AND SPORTS ACTIVITIES

3.14 The Indian Army has a tradition of encouraging the spirit of adventure. It has played a pioneer role in adventure sports on land, air and water. The Army organised multifaceted adventure activities during the year as given in succeeding paragraphs.

Land Based Adventure

3.15 (a) Indian Army (Dogra Regiment) Expedition to Kanchenjunga (8586 Metres): The Expedition consisted of 22 climbers from the

Dogra Regiment and was led by Lt Col. SC Sharma, SC, VSM. On October 10th, 2004, 6 climbers led by Major MS Chauhan reached the summit. Unique achievements of the Kanchenjunga Expedition are as follows:-

(i) After Japan, India, has become the second country to scale Kanchenjunga from the East as well as the West. First Indian Army climb of Kanchenjunga was achieved in June 1997.

(ii) Naib Subedar CN Bodh is the only Indian to scale four 8000m peaks out of a total of 14 such peaks in the world and Naib Subedar Neel Chand became the second Indian to scale three 8000m peaks.

(b) Indo Nepalese Army Expedition to Saser Kangri – I (7672m): A joint Indo-Nepalese Army expedition, organised by the Army Adventure Wing, climbed the Saser Kangri-I peak (7672m) along the West ridge route. The team led by Lieutenant Colonel SP Malik repeated the route followed by the Indo-UK Saser Kangri 1987 expedition led by Brigadier (Retd) DK Khullar. Seven climbers (including one Royal Nepal Army personnel) led by Captain SS Negi made the ascent of the Peak on June 17th, 2004.

(c) Paratroopers expedition to Nun (7140m): A paratroopers expedition led by Major SS Shekhawat, SC achieved a very creditable ascent of Nun Peak in Zanskar region of Ladakh by placing 31 members on the summit on September 6th , 8th , 10th and 11th, 2004.

(d) Rajputana Rifles expedition to Trishul (7120m): A mountaineering team from the Rajputana Rifles comprising of seasoned mountaineers and new recruits successfully climbed Trishul Peak from outside the Nanda Devi Sanctuary. Fourteen members led by Lieutenant Colonel RS Tokas scaled the summit on October 5th and 6th, 2004.

(e) Army Women Expedition to Abi Gamin(7355m): Army launched a mountaineering expedition comprising Army Women Officers, Special Frontier Force (SFF) Women and National Cadet Corps girl cadets during the year. The women were trained in basic and advance mountaineering courses in May-June 2004. Seven women members successfully scaled Mt Abi Gamin

(7355m) on October 7th, 2004, which was organised as a pre-Everest Expedition training.

(f) Raid-de-Himalaya Car Rally: For the first time ever, nine teams from the Indian Army participated in the Raid-de-Himalaya Car Rally. The car rally which was conducted in the first week of October 2004 commenced from Shimla and after traversing through regions of Ladakh terminated at Manali. Army teams bagged the overall trophy in the four wheeler category.

(g) India-ASEAN Motor Car Rally: India-ASEAN car rally was organised by the Ministry of External Affairs and Confederation of Indian Industries (CII) from November 22nd to December 12th, 2004. The route of the rally was Guwahati – Thailand-Laos – Vietnam – Cambodia – Malaysia – Singapore – Indonesia. The rally was flagged off by the Prime Minister on November 22nd, 2004 at Guwahati. One team from the Army alongwith two other Indian teams participated in the car rally.

Aero Adventure Activities

3.16 (a) First Army Hang Gliding Championship: First Army Hang Gliding Championship was conducted at the Army Adventure Aero Nodal Centre for Hang Gliding, Deolali from January 27th to 29th, 2004. Havaldar Paramjit Singh of Aero Nodal Centre (ANC), Deolali secured first position among the Army pilots.

(b) First Inter Command Paragliding Competition: First Inter Command Paragliding Competition was held from October 4th to 10th, 2004 at Pune. Southern Command stood first followed by Eastern Command. Mechanised Infantry Regimental Centre (MIRC) won the flying trophy. This competition was the first of its kind in the country.

(c) Participation of Army Team in Paragliding Pre-World Cup at Bir-Billing: For the first time Army Adventure Paragliding team of three pilots participated in the competition which featured pilots from more than 17 countries. This was the beginning of a new era for adventure paragliding in the country. Indian Army pilots are expected to reach international standards in this sport within the next few years.

(d) Hot Air Ballooning Expedition by Mechanised Infantry Regimental Centre (MIRC): A hot air ballooning expedition was conducted by MIRC,

Ahmednagar from Nasik to Ahmednagar from November 5th to 7th, 2004. Team comprised of two Officers and four Other Ranks (ORs).

(e) Hot Air Ballooning Expedition by 3 Electrical Mechanical Engineer Centre: A hot air ballooning expedition was conducted by 3 Electrical Mechanical Engineer Centre, Bhopal from Vadodara to Bhopal from November 8th to 12th, 2004.

Aqua Adventure Activities.

3.17 (a) Army Adventure Challenge Cup: Army Adventure Challenge Cup was held from April 27th to May 6th, 2004 at Raiwala. 21 teams from all Commands, except Northern Command, and 3 teams from Para Military Forces and Indian Navy participated in the event.

(b) White Water Rafting Expedition by Electrical Mechanical Engineer Directorate: A white water rafting expedition was conducted by Electrical Mechanical Engineer Directorate from Karanprayag to Rishikesh from October 6th to 10th, 2004.

(c) White Water Rafting Expedition by 1/11 Grenadier (GR): A white water rafting expedition was conducted by 1/11 GR from Karnprayag to Rishikesh from October 6th to 10th, 2004.

(d) White Water Rafting Expedition by 90 Armd Regiment: A white water rafting expedition was conducted by 90 Armoured Regiment from Rudraprayag to Rishikesh from October 6th to 10th, 2004.

(e) White Water Rafting Expedition by 11 Mechanical Infantry: A white water rafting expedition was conducted by 11 Mechanical Infantry from Rudraprayag to Rishikesh from November 10th to 14th, 2004.

(f) White Water Rafting Expedition by 20 Jat Regiment: A white water rafting expedition was conducted by 20 Jat Regiment from Rudraprayag to Rishikesh from November 10th to 14th, 2004.

(g) White Water Rafting Expedition by 20 Kumaon Regiment: A white water rafting expedition was conducted by 20 Kumaon Regiment from Rudraprayag to Rishikesh from November 10th to 14th, 2004.

3.18 Miscellaneous Activities: Photographs of adventure activities conducted by the Army Adventure Wing and original adventure equipment were put on display during the India International Trade Fair 2004

(IITF 2004) from November 14th to 27th, 2004 at the Defence Pavilion.

OTHER IMPORTANT EVENTS DURING THE YEAR

3.19 Pacific Armies Management Seminar XXVIII: Pacific Armies Management Seminar (PAMS) XXVIII was co-hosted by the Indian Army along with the US Army, Pacific in New Delhi recently. Over 102 Security Forces Officers from thirty one countries participated in the event. The theme for PAMS XXVIII was "Regional Cooperation in a Changing Security Environment". In his opening address, Chief of Army Staff mentioned that terrorism did not appreciate any boundaries or borders and there was a need to understand each other's concern to fight the menace.

WELFARE

3.20 Army Central Welfare Fund (ACWF) grant to next of kin of fatal battle casualties and war disabled soldiers: As part of welfare measures, next of kin of all battle casualties and war disabled soldiers who were boarded out during the period from August 15th, 1947 to April 30th, 1999 are given Rs.50,000/- each from National Defence Fund and Army Central Welfare Fund.

3.21 ACWF Grant For Disabled Soldiers (Battle Casualties) other than Operation Vijay (Kargil): Disabled soldiers (battle casualties) who are boarded/invalided out of service w.e.f. May 1st, 1999, other than OP Vijay (Kargil), are eligible for one-time grant of Rs. 1 lakh out of ACWF.

3.22 ACWF Grant to Disabled Soldiers (Battle Casualties) (Retained in Service): The disabled soldiers (battle casualties) who sustained injuries in various military operations w.e.f. May 1st, 1999, and are retained in service, get a grant out of ACWF based on their percentage of disability as under:-

(a)	Above 75% disability	:	Rs. 30,000/-
(b)	Between 50% to 74%	:	Rs. 20,000/-
(c)	Less than 50%	:	Rs. 10,000/-

3.23 ACWF Grant to Next of Kin of all fatal casualties other than Battle Casualties: Next of kin of all personnel who die in harness after April 30th, 2001 are paid a one time grant of Rs. 30,000/- from ACWF.

3.24 Vijay Veer Awas Yojna: The Delhi Development Authority had offered a housing scheme named "Vijayee Veer Awas Yojna" for rehabilitation of battle casualties. Under the Scheme 312 flats for PBOR and 102 flats for officers have been constructed. The scheme was open till September 30th, 2003 for next of kin of battle

casualties and disabled boarded out soldiers of all operations with effect from May 1st, 1999. The cost laid down is Rs. 5.93 lakhs for flats for officers and Rs. 3.98 lakhs for JCOs/ORs.

3.25 Education Scholarship: Education scholarships are being provided to wards of all physical casualties who die in harness from the various Defence Welfare corpuses. The wards of battle casualties are given scholarships by the Central Government w.e.f. August 6th, 2003 onwards.

3.26 Concession in Second Class/ Sleeper Class Fare for all war widows: Ministry of Railways has announced 75% concession in 2nd Class/Sleeper Class fares for all war widows including widows of soldiers who lay down their lives fighting against terrorists.

3.27 Medical Welfare Team: Six medical teams have been identified to visit and treat the ex-servicemen and dependents of service personnel of Indian Army domiciled in Nepal during the year. One medical team has already visited Nepal from September 23rd, 2004 to October 18th, 2004.

3.28 Vocational Training: A number of ESM/widows/wives/wards of ESM have been trained so far. Various courses are conducted in the twelve Vocational Training Centres located at Bhartiya Gorkha Sainik Nivas, Pension Paying Offices and Zila Sainik Boards to enhance technical efficiency of ESM and their families so as to enable them to get suitable jobs.

3.29 Financial assistance to needy ex-servicemen: During the period many needy ex-servicemen were granted financial assistance by the General Officers during their visit to Nepal.

4

Indian Navy

A US Naval Helicopter landing on INS Mysore during Indo-US Joint Naval Exercise

Indian Navy

INDIAN NAVY

4.1 During the year, The Indian Navy maintained its personnel and equipment in a high state of combat preparedness due to continued presence of multinational maritime forces in the Indian Ocean Region (IOR) resulting in a fast pace of activities in the area.

4.2 Indian Navy(IN) continues to lay special emphasis in the fields of training, exercises and operations with foreign navies, which has further strengthened our relations with littoral countries. Indian Navy was also called upon to provide assistance to foreign countries in the form of coastal security for the World Economic Forum Summit and Afro-Pacific-Caribbean (APC) Heads of State Summit at Mozambique, Exclusive Economic Zone (EEZ) surveillance off Mauritius, surveillance off Ras-al-Hadd etc.

4.3 The induction of *Tabar,* a 1135.6 class frigate and one Extra Fast Attack Craft (XFAC) in April 2004 and *Betwa* in July, 2004 has added the much-needed punch to the Indian Navy. Induction of platforms in accordance with the Long Term Perspective Plan is being progressed in a systematic manner. Towards this end, the indigenously designed amphibious ship *Shardul* was launched in April 2004.

MAJOR OPERATIONS AND EXERCISES

4.4 Surveillance: Surveillance of areas of strategic interest is one of the vital tasks of the Navy. All the key areas of interest for the Navy were kept under constant surveillance during the year. Naval ships and aircraft continued their vigil in the Palk Bay and off the coasts of Gujarat and Maharashtra for prevention of smuggling of arms and illegal movement of undesirable elements. Naval ships and aircraft were also deployed on extensive surveillance, and anti-poaching operations in the Andaman, Nicobar and Lakshadweep Islands.

4.5 SPRINGEX 04: Indian Navy's annual exercise, SPRINGEX-2004 was conducted on the western seaboard from February 1 to 25, 2004, wherein 41 Indian Naval ships, three Coast Guard ships, five submarines and 38 aircraft, including two Jaguars from the Indian Air Force participated.

4.6 Security Patrols off Maputo – Op FARISHTA 04: IN Ships *Savitri*

Surface to Air Missile (SAM) being fired from Indian Naval Ship

and *Sujata* were deployed off Maputo in Mozambique from May 23 to July 13, 2004, for providing coastal security as requested for by the Government of Mozambique, during the World Economic Forum Summit held at Maputo and Afro-Pacific-Caribbean (APC) Heads of State Summit from June 21 to 24, 2004. In addition to this IN ships provided training to over 100 personnel of the Mozambique Navy. Besides, medical officers of IN ships conducted two medical camps and treated more than 450 patients.

SURVEILLANCE-CUM-PRESENCE MISSION

4.7 North Bay of Bengal: IN Ships *Khanjar* and *Kirpan* were deployed on the eastern seaboard (North Bay of Bengal and Preparis Channel in Andaman Sea) from March 24 to April 2, 2004 to maintain surveillance in our areas of interest. During the deployment, the ships carried out an operational turn around (OTR) at Yangon (Myanmar) from March 29 to 30, 2004.

4.8 South China Sea: The ships of the Eastern Fleet comprising IN Ships *Rana*, *Khukri*, *Ranvir*, *Kora* and *Udaygiri* were deployed for 'Presence-cum-Surveillance Missions' in Malacca Strait, Sunda Strait and South China Sea during May 2003. During the deployment, the ships made a port call for Operational Turn Around (OTR) at Jakarta and Singapore as follows:-

(a) Jakarta - May 12 to 13, 2004; *Rana* and *Khukri*.

(b) Singapore - May 17 to18, 2004; *Ranvir*, *Kora* and *Udaygiri*.

4.9 Op SIRIUS: Naval ships were regularly deployed on patrol, off the Southern and Eastern coast of Sri Lanka, during the year.

OVERSEAS DEPLOYMENT

4.10 Return Passage – INS Tabar: INS *Tabar* upon her commissioning at Baltiysk, Russia, on April 30, 2004, commenced her maiden voyage to India and arrived at Mumbai via Cape Town (South Africa) on July 31, 2003. The ship visited various ports en-route.

4.11 Mediterranean Sea: Four ships of the Western Fleet namely, *Mysore*, *Godavari*, *Ganga* and *Shakti* were deployed to the Gulf of Aden and Mediterranean Sea on Overseas Deployment. During the deployment, the ships visited ports in Israel, Cyprus, Egypt and Turkey.

4.12 South Indian Ocean: IN Ships *Tir* and *Sharda* from First Training Squadron were deployed in the South Indian Ocean on Overseas Deployment from September 12 to October 14, 2003. During the deployment, the ships made port calls at Port Victoria (Seychelles), Mombassa (Kenya) and Male (Maldives).

4.13 Persian Gulf: IN Ships *Mumbai*, *Talwar, Delhi, Kulish, Aditya, Pralaya* and *Sindhuraj* were deployed on Overseas Deployment to the Persian Gulf from September 7 to October 1, 2003. IN Ships *Delhi, Mumbai, Aditya* and *Kulish* participated in a Passage Exercise (PASSEX) with Islamic Republic of Iran Navy (IRIN) ships *Bandar Abbas* and *Sabalan* off Bandar Abbas. During the deployment, the ships undertook 'Presence-cum-Surveillance Mission' in the Persian Gulf and made port calls at Muscat, Bandar Abbas, Abu Dhabi and Bahrain.

4.14 Gulf of Thailand: IN Ships LCU-33 and *Tillanchang* were deployed on overseas deployment in the Gulf of Thailand from October 3 to 13, 2003. During the deployment the ships made a port call at Phuket from October 6 to 10, 2003.

4.15 South China Sea/West Pacific Ocean: IN ships *Ranvijay, Ranjit, Godavari, Kirch, Sukanya* and *Jyoti* were deployed in South China Sea and West Pacific Ocean from October 1 to November 20, 2003. During the deployment, the ships visited Pusan (South Korea), Tokyo (Japan), Jakarta (Indonesia), Manila (Philippines) and Ho Chi Minh City (Vietnam).

4.16 2nd Western Pacific MCMX and DIVEX: INS *Karwar* was deployed at Singapore from April 21 to May 7, 2004, to participate in the 2nd Western Pacific Mine Counter Measures Exercise (MCMX) and Diving

Exercise (DIVEX). This exercise was attended by 18 countries of the Asia Pacific region.

4.17 Navy to Navy Staff Talks: The 3rd Indo-French Navy to Navy Staff talks were held from January 17–21 , 2005.

EXERCISES AND JOINT OPERATIONS WITH FOREIGN NAVIES

4.18 The Indian Navy has institutionalised joint exercises with USA, France and Singapore and joint patrols with Indonesia. The details of such exercises are as mentioned in succeeding paragraphs.

4.19 Singapore : IN-RSN Exercise: The 6th Indian Navy - Republic of Singapore Navy (RSN) bilateral exercise was conducted from March 7 to 19, 2004, off Kochi. The RSN ships visited Port Blair from March 1 to 3, 2004, prior to their port call at Kochi. The RSN had deployed four ships for the exercise and the IN participation included three ships, a submarine and four rotary and fixed wing aircrafts.

4.20 France : Exercise VARUNA 04/1: The largest ever bilateral exercise with the French Navy was held off Goa from April 6 to 15, 2004 off the Western seaboard, in which six ships including the latest French aircraft carrier *Charles de Gaulle*, an SSN (Nuclear submarine), and seven aircrafts of the French Task force participated. The Task Force also included a Royal Navy ship. The IN had fielded 6 ships, a submarine and five aircraft during the exercise. The work-up phase was conducted from April 6-8, 2004, followed by the exercise phase from April 10–14, 2004.

4.21 VARUNA 2005: The focus for Varuna 2005 would be on Mine Counter Measure Exercise (MCMX). Two FN Tripartite Mine Hunters led by their support ship are likely to participate.

4.22 USA : Exercise MALABAR CY-04:

(a) The joint Indo-US Navy bilateral exercise MALABAR CY-04 (Calendar Year 04) was held off Goa from October 1st to 10th, 2003.

(b) IN ships *Mysore, Brahmaputra, Shankul* (SSK submarine) and *Aditya* participated in the exercise from the Indian Navy side. From the US Navy side, USS *Cowpens* (Ticonderoga Class Destroyer), US Ships *Gary* (Oliver Hazard Perry Class Frigate) and US Ships *Alexandria* (Los Angeles Class Nuclear Submarine) participated in the exercise. In addition, P3C Orion, Maritime Patrol Aircraft (MPA), TU 142 M Maritime Reconnaissance Anti-Submarine Warfare Aircraft (MRASW),

Dornier (MPA), Sea Harrier fighters and integral helicopters also participated.

(c) The thrust of the exercises this year was on Advanced Anti-Submarine Warfare (ASW), Sea Control Missions, Fleet Air Defence, Surface Firings, Maritime Interdiction Operations (MIO) and Visit Board Search and Seizure (VBSS) operations.

(d) In order to streamline interoperability and derive maximum training value from such exercises, Standard Operating Procedures (SOPs) between the two navies have been finalised, which were also tried out during Exercise MALABAR CY-03.

4.23 Special Forces Exercise SANGAM 04: Two weeks naval Special Forces Exercise, SANGAM 04, was held at Ganpatipule, India from October 8 to 24, 2004. The thrust of this exercise was on VBSS operations.

4.24 MILAN 05: The annual multi-national exercise and interaction, involving navies of South Asia and South East Asia, generically named 'MILAN 05', is planned to be held at Port Blair. Warships/delegations from Indonesia, Sri Lanka, Thailand, Australia, Malaysia, Myanmar and Singapore are expected to attend.

4.25 The details of other interaction with foreign navies, during the year, are tabulated below: -

S.No	Dates	Event	Country	Place
1.	May 20th, 2004	Ninth International Maritime Boundary Line (IMBL) Meeting	Sri Lanka	Palk Bay
2.	June 10th-12th, 2004	Indo-French Navy-to-Navy Operational Staff Talks	France	Reunion Island
3.	June 07th-11th, 2004	WPNS Workshop 2004	WPNS	Singapore
4.	August 16th-19th, 2004	Indo-South Africa Navy to Navy Staff Talks	South Africa	Pretoria
5.	September 01st-04th, 2004	IN/SLN Ninth Operational Review Meeting (ORM)	Sri Lanka	Colombo
6.	September 28th-30th, 2004	Indo-UK Navy to Navy Staff Talks	UK	New Delhi
7.	November 14th-15th, 2004	IN/US Eighth Executive Steering Group (ESG) Meeting	USA	Guam
8.	November 30th , 2004	Tenth International Maritime Boundary Line (IMBL) Meeting	Sri Lanka	Palk Bay
9.	November 17th-20th, 2004	9th Western Pacific Naval Symposium (WPNS)	WPNS	Singapore

4.26 Transfer of INS Tarmugli to Seychelles: As a gesture of good-will aimed at furthering our friendly relations with Seychelles, the Gov-

ernment of India has approved the transfer of INS *Tarmugli* a Fast Attack Craft (FAC) to the Seychelles Coast Guard (SCG). The ship is likely to be handed over to the SCG shortly.

TRAINING

4.27 Training of Foreign Personnel: Training of foreign naval personnel is undertaken to enhance our defence co-operation, especially with the littoral nations. A majority of allocations are made under Indian Technical and Economic Cooperation/Special Aid Programmes. During the training year 2004 - 2005, sanction has been accorded for 210 Officers and 199 Sailors from friendly foreign countries to be trained in India. Details are as follows:-

Sl No	Country	Officers	Sailors
(a)	Sri Lanka	158	152
(b)	Nigeria	04	-
(c)	Bangladesh	09	09
(d)	Malaysia	03	-
(e)	Myanmar	03	-
(f)	Mauritius	02	06
(g)	Kenya	03	-
(h)	Vietnam	04	-
(j)	Tanzania	02	-
(k)	Cambodia	01	01
(l)	Indonesia	03	-
(m)	Singapore	01	-
(n)	Maldives	12	18
(p)	South Africa	04	07
(q)	Ghana	01	01
(r)	Seychelles	-	05
	Total	210	199

4.28 Deputation of IN Personnel for Courses Abroad: 23 personnel have been deputed abroad for training courses till end October 2004 including 12 personnel under United

Indo-US Joint Naval Exercise 'Malabar CY 2004'

States International Military Education and Training programme.

4.29 First Training Squadron: A total of 141 cadets were trained onboard INS *Tir* and *Krishna* of First Training Squadron. During the course of sea training, besides visiting all major ports of India, the cadets also visited ports of Suez, Palermo, Alexandria, Port Said, Bandar Abbas, Al Fujaira and Muscat during the overseas deployment.

4.30 Implementation of Ajai Vikram Singh Committee (AVSC) Report: The recommendation of AVSC (Phase-I) in respect of non-select ranks of Naval Officers was approved by the Government along with their counterparts in Army and Air Force.

4.31 Civilian Personnel: Indian Navy continues to focus on the training and development of civilian personnel, in line with the National Training Policy. This is particularly relevant, as civilians comprise approximately 50% of the Naval strength and unlike the sister Services, are involved in operational, maintenance and logistic support functions. A number of courses have been scheduled at the induction and mid-career phases, as stipulated in Cadre Training Plans. These courses have made the man in uniform and his civilian counterpart appreciate each other better.

ADVANCEMENT IN INFORMATION TECHNOLOGY

4.32 The Navy has identified two key thrust areas in the field of IT - Networking and e-enabled solutions. A large number of IT applications have been initiated during the year. These initiatives aim at enhancing efficiency in the fields of maintenance, health care management and human resource and material management, which have a direct bearing on our resource planning and war fighting capability.

ADVENTURE AND SPORTS

4.33 Adventure and sports activities play an important role in the integral development of Naval personnel. These activities are not only necessary to develop technical, managerial and administrative skills, but also to develop higher levels of physical fitness, stamina, determination, agility, team work and *esprit de corps*. Special emphasis is given to participation in water based sports, *viz.* yatching, rowing, kayaking, canoeing, swimming and water polo.

4.34 Mountaineering: The Navy undertook major mountaineering expeditions during 2004 creating several records in the process. An expedition to Mt Everest from the Northern side (Tibet) was undertaken during March-June 2004 and the following records were set: -

(a) First all Navy team in the world to climb Mt Everest.

(b) First Indian Armed Forces team on Everest from North.

(c) Most successful Indian Team from North (11 summiteers).

(d) First Indian leader and doctor to summit Everest.

4.35 Soon after summitting Mount Everest, a virgin and un-named peak (21,648 ft) in Eastern Ladakh was scaled by the IN team. The peak was extremely difficult, which was the primary reason for it being unclimbed till date. Six Naval mountaineers, braving hazards and technical difficulties, summitted the peak on October 9, 2004. The Navy, in order to mark the first ascent of the peak and as a tribute to the mountain, has named the peak as "Konchuk Tsoo" which in Ladakhi language means 'God of water'.

4.36 White Water Rafting: White Water Rafting camps are organized regularly at Shivpuri (Uttranchal) and Godavari rivers for developing basic skills in this sport. Progressively more challenging camps and expeditions have been planned in the NE region and Himalayas.

4.37 Aero Adventure Sports: The Navy has created its own 'Sky Diving Team' which undertook demonstration jumps during the Navy Week in December 2004 at Vizag and Kochi. This team would also participate in the forthcoming National Sky Diving Championship and various other international events being organised subsequently.

4.38 38th Military Sailing Championship at Marin (Spain): This Championship was conducted from May 27 to June 5, 2004, wherein a total of 18 countries participated. The races were conducted in SNIPE class of boats that are not sailed in India. The Navy team comprising Lt Cdr AS Patankar and Lt SS Korti represented India and were placed 8th on completion of the championship.

4.39 Enterprise World Championship 2004: This Championship was conducted from August 16 to 21, 2004 in Cork (Ireland). There were a total of 77 boats. Eight races in all were held in varying wind and sea conditions (wind upto 25 knots and swell upto 2.5 mtrs was experienced). The overall results of the four teams fielded by the Navy were as follows:-

(a) A Mongia/Lt Amit Arvind - Third

(b) SS Chauhan PO/N Sharma LMA - Fourth

(c) NK Yadav MCPO I/ GL Yadav MCPO II - Eighth

(d) Lt Cdr AS Patankar/ - Ninth
Lt SS Korti

4.40 Achievements of Naval Sportsmen:

4.41 National Shooting Championship 2004-05: National Shooting Championship 2004-05 was held at Indore from October 5 to 15, 2004 where Naval personnel won three gold, five silver and three bronze medals.

S. No	Name	Rank	Event	Achievement
1.	M Surajoy Singh	PO	World Junior Boxing championship held at South Korea from June 11th to 20th, 2003.	Bronze
2.	CPR Sudhir Kumar	CPO PTI	Commonwealth weight lifting Championship held at Malta from June 25th to 28th, 2004	1 Gold and 2 Silver
3.	AL Lakra	PO PTI	35th Grand Prix Boxing championship held at Czech Republic during June 7th to 14th, 2003.	Silver Medal
4.	AL Lakra	AG. PO	National Boxing championship held at Hissar from August 3rd to 8th, 2003.	Gold Medal in 57 Kg
5.	Jonathan	NAH-II	National Boxing championship held at Hissar from August 3rd to 8th, 2003.	Silver Medal in 48 Kg

5

Indian Air Force

Airmen with their Aircraft

Indian Air Force

5.1 The Indian Air Force (IAF) is today, a modern, technology-intensive force, with a proven record of excellence and professionalism. It is poised at the threshold of a new paradigm of modernization in keeping with the new security challenges faced by the nation which the IAF may need to attend to.

5.2 With the ever-escalating costs of operations, great emphasis is being placed on cost-effective training, optimising output and minimising wastage. The IAF has implemented a number of measures to enhance the quality of life of its personnel in key welfare areas of housing, education and hostel facilities.

5.3 In addition to peacetime training for traditional wartime roles, the IAF has provided significant aid to civil authorities during the flood relief operations in Assam, Arunachal Pradesh and Bihar during the year. The IAF was also the first to react after the Tsunami struck in December 2004. Over and above the extensive relief operations in Andaman & Nicobar Islands, aid was also extended to Sri Lanka and Maldives. The Siachen Glacier lifeline continues to be maintained by the Indian Air Force, alongwith the additional areas along the Line of Control (LoC), fully supporting the operations/exercises of the Indian Army in the world's highest battlefield.

Advanced Light Helicopter (ALH) of Sarang Team in flight

CEREMONY

5.4 Defence Investiture Ceremony: Defence Investiture Ceremony was held at Rashtrapati Bhawan on July 5, and July 8, 2004, at which the President of India decorated the recipients of higher distinguished service awards announced on the eve of Republic Day 2004. 6 PVSM and 11 AVSM awards were conferred on Air Force officers.

5.5 Independence Day Flag Hoisting Ceremony: Flag hoisting ceremony was conducted on August 15, 2004 at Red Fort, Delhi on the occasion of 57th year of India's independence. The flag was hoisted by the Hon'ble Prime Minister. The ceremony was attended by cabinet ministers, service Chiefs and a host of dignitaries besides school children. Air Force being the coordinating service this year, a combined inter-services and police guard of honour was presented to the Prime Minister by the contingent comprising 132 personnel including four officers of the rank of Squadron Leader and their equivalents from three services and Delhi Police.

5.6 72nd Anniversary of Air Force Day: The Air Force Day-cum-Investiture Parade was held at Air Force Station, Palam on October 8, 2004, at which Air Chief Marshal S Krishnaswamy, PVSM AVSM VM & Bar, ADC, Chief of the Air Staff (CAS) received the salute. Prior to the parade, the three Service Chiefs laid wreaths at Amar Jawan Jyoti at India Gate and Air Force War Memorial at AF Station Palam. The parade was witnessed by the Marshal of the Air Force, COAS, CNS and AOC-in-C, WAC amongst other senior service dignitaries and MN & AAs of foreign missions. During the Investiture ceremony, a total of 46 awardees were invested with the awards which included VM(G), VM, Bar to VSM, VSM and Jeevan Raksha Padak Award. The parade was followed by a fly past and a first time 'Sarang Display' by Advanced Light Helicopters (ALHs), besides an aerobatics show by Surya Kiran Aerobatic Team (SKAT). In the evening on October 8, 2004, the CAS hosted a reception at Air House which was attended by the President, Vice President, Defence Minister, Leader of Opposition, Marshal of the Air Force, other service Chiefs and the distinguished invitees.

ALH 'Dhruv' helicopter airlifting a Jeep

5.7 AWSO Concert at Bangkok - February 13, 2004 : A historical event was achieved when Air Warrior Symphony Orchestra (AWSO) presented a concert at Bangkok on February 13, 2004. The chief guest for the occasion was the Deputy Commander in Chief, Royal Thai Air Force, Air Chief Marshal Chlern Chum Cherin Suk. The distinguished audience consisted of Indian Ambassador Smt. LK Ponappa, Ambassadors and Defence Attaches of various countries, local civilian dignitaries and Royal Thailand Army and Air Force Personnel. The performance of AWSO was so enthralling that the Indian Ambassador desired to have AWSO concert again in July 2004.

5.8 IAF AWSO Concert at Finland: It has been a great honour for AWSO to represent as the sole Asian military band at Hamina Tattoo 2004, a biennial event held at Finland. The AWSO had participated alongside military bands from Great Britain, Germany, Russia, Estonia and Finland. The melodies played by the AF band, particularly the original scores and the popular western pop, jazz and western classical were highly appreciated by the audience and the musicians of the other bands. Indian classical scores presented by the AWSO were specially appreciated by the Finnish people.

5.9 Standard/Colour Presentation Ceremony: Standard/ Colour Presentation Ceremony was held on November 1, 2004 at AF Station Kanpur. During the ceremony, the President of India presented Standard/Colour to Air Crew Examination Board (AEB) and 1 Base Repair Depot (BRD) respectively. The ceremony was attended by various other dignitaries like Chief Minister and Governor of UP.

FLIGHT SAFETY

5.10 A concerted effort has resulted in an improvement in the overall flying environment and a reduction in accident/incidents. The accident rate in the current year is lower as compared to last year. This has been achieved by identifying problem areas in technology and design. Modifications have been carried out to overcome technological problems related to MiG-21 engines. This has vastly reduced accidents in the current financial year. In addition, weak areas in training of aircrew have been addressed by constant review of operational syllabus and close supervision. Units involved in training flying have been relocated to areas with better weather conditions. Combating bird menace in the vicinity of airfields and adjoining areas have resulted in a better flying environment and there has been no accident in the last two years due to bird hit. Additional thrust has been given to provisioning of modern navigation and recovery aids leading to a safer flying environment. To further improve the Flight Safety

record of IAF, the Government of India has also constituted an Expert Committee on December 30, 2004 to identify the causes of aircraft accidents and recommend remedial measures. This Committee is in the process of identifying high accident prone technology not conducive to safe operations, rationalising the selection and placement policies of personnel, reviewing the existing training system and flying environment so as to build operational efficiency. The Expert Committee will also provide a comprehensive action plan so as to minimise losses due to aircraft accidents. This Committee would also follow up the implementation of the recommendations made by the earlier committees, the La Fontaine Committee and the Committee on fighter Aircraft Accidents (COFAA), and their impact on flight safety. The Expert Committee is expected to submit its report by May 2005.

COMMUNICATION

5.11 IAF Wide Area Network (WAN) Project: Existing Air Force Air Defence Ground Environmental Systems (ADGES) and other Communication networks need to be strengthened so that practically any foreseeable eventuality should be handled in time. A study team formed at Air HQ analysed various communication needs of Air Force and proposed a solution which is scalable, reliable and secure. The team interacted with user directorates and Command HQs to assess their bandwidth requirements. Based on these interactions the team proposed an architecture for IAF WAN which is scalable and highly reliable to meet both peace and wartime needs of IAF.

5.12 Unmanned Aerial Vehicle (UAV) Communication: UAV Squadrons have already been inducted in IAF. A communication network of mobile Satcom Very Small Aperture Satellite (VSAT) terminals has been planned to provide live video streaming data from a Ground Control Station (GCS) to Squadron base and Command HQ. The data will be uitilised by the field/theatre commander to plan for further action in case of war scenario. In peace time, this would provide strategic data.

5.13 Digital Voice and Data Recorder: Air Force has procured state of the art digital voice and data recorder of 32 channels for recording ground to Air R/T and Ops communication. This will be replacing the old Airfield Tape Recorder (AFTR) of Meltron make, which has already been declared obsolescent.

5.14 Procurement of INMARSAT for Search and Rescue (SAR) Helicopter: Indian Air Force is acquiring state of the art satellite telephones for the helicopter employed in SAR duties. This will be able to meet long outstanding need of the Aircrew

involved in SAR activities. The system will be capable of providing reliable and quick communication to the aircrew from any SAR location to the desired authorities/subscribers any where in the world, for quick SAR operation as well as faster effective liasioning and thereby providing timely help to the affected parties.

5.15 Upgradation of airfields: Upgradation of airfields is an ongoing process: Nav-aids such as Instrument Landing system (ILS)/Distance Measuring Equipment (DME), Visual Optical Range (VOR)/Distance Measuring Equipment (DME), Surveillance Radar Equipment (SRE)/Precision Approach Radar (PAR), Combined Automatic Direction Finder (CADF), Arrester Barrier etc. are being procured to cater for the replacement of old/obsolete equipment.

RECRUITMENT OF AIRMEN

5.16 Central Airmen Selection Board (CASB) under Air HQ is the agency responsible for recruitment of PBORs. The endeavour is to provide quality human resources to man sophisticated weapon systems in the inventory of IAF. Thirteen Airmen Selection Centres (ASCs) across the country in association with CASB are responsible for selection of PBORs.

5.17 On an Average, the IAF inducts about 7000 trainees in a year. CASB conducts scheduled tests at All India level by inviting applications through advertisements published in Employment News/Rozgar Samachar. Additionally, in order to give opportunities to candidates from remote, far flung and border areas, recruitment rallies are conducted by CASB in association with ASCs and concerned state Govts. Recruitment of Airmen in IAF is purely based on Merit. Candidates are tested at the ASCs/rallies and results are announced on the same day. Thereafter, results are compiled at CASB and All India Select List is prepared.

5.18 Implementation of Ajai Vikram Singh Committee (AVSC): The recommendation of AVSC Phase-I in respect of IAF Officers was approved by the Government on March 12, 2005 along with their counterparts in Army and Navy. The implementation was with retrospective effect, with effect from December 16, 2004, the date on which recommendations pertaining to Army (AVSC-1) were implemented to maintain parity with other services. This resulted in a total of 4445 promotions in various ranks from Flying Officer to Wing Commander.

5.19 The proposal of IAF for manpower requirement and restructuring is under consideration of the Government.

An IL-78 Aircraft refuelling Mirage 2000 Fighter Aircraft

6

Coast Guard

Coast Guard : Lean, Visible and Efficient Force

Coast Guard

6.1 The Indian Coast Guard (ICG) was set up on August 19, 1978 with the enactment of the Coast Guard Act 1978. The Act provided for the constitution of the Coast Guard as an Armed Force of the Union for ensuring the security of the maritime zones of India with a view to protecting maritime and other national interests. The Coast Guard is responsible for keeping India's Exclusive Economic Zone (EEZ) measuring over 2.02 million sq. kms. under regular surveillance to prevent poaching/smuggling and other illegal activities. Besides, Coast Guard's charter of duties include search and rescue (SAR) efforts/ operations and protection of marine environment (anti-pollution measures at sea).

ORGANIZATION

6.2 The Command and Control of the Coast Guard is exercised by the Director General, from the Coast Guard Headquarters at New Delhi. The entire coastline of India and the maritime zones are divided into three Regions with Regional Headquarters situated at Mumbai, Chennai and Port Blair. The Regions are further divided into Coast Guard Districts, each representing a

A Coast Guard helicopter demonstrating the Oil Pollution Control Unit

coastal state, under a District Commander. There are two Air Stations at Daman and Chennai and four Air Enclaves at Goa, Mumbai, Kolkata and Port Blair.

FORCE LEVEL

6.3 From a small beginning in 1978, the Coast Guard has made steady progress in developing its force levels with regular induction of ships and aircraft. Presently, Coast Guard has a force level of 38 ships, 20 interceptor boats/craft, 6 hovercraft, 24 Dornier aircraft, 17 Chetak helicopters and 3 Advanced Light Helicopters.

DUTIES AND FUNCTIONS

6.4 As specified in Section 14 of the Coast Guard Act 1978, the duties and functions of Coast Guard are as under:-

- Safety and protection of artificial islands, offshore oil terminals, and devices,
- Protection of Indian fishermen,
- Assistance to fishermen in distress at sea,
- Preservation and protection of the marine environment,
- Prevention and control of marine pollution,
- Assisting the Customs and other authorities in anti- smuggling operations,
- Enforcement of maritime laws in force,

Pollution Response Operations

- Safety of life and property at sea,
- Collection of scientific data,
- Other duties as and when prescribed by the Government of India.

AREAS OF MARITIME INTEREST TO INDIA

6.5 India's maritime interests are wide-ranging. India has 7,517 kms. coastline and 2.02 million sq. kms. of Exclusive Economic Zone (EEZ). The maritime perimeter of India is likely to expand by another million sq. kms. approximately with the legal continental shelf (LCS) regime, expected to be in place by the end of 2005. The maritime zone has 598 islands near the shore, 572 islands in the Andaman & Nicobar group and 27 islands in the Lakshadweep. Additionally, under the Seabed Treaty, India has been allocated an area of 1,50,000 sq. miles seabed mining block in the Indian Ocean around 13 degrees south latitude. These are besides its scientific interests in the Antarctica.

6.6 India has seven maritime neighbours. The eighth will be the Sultanate of Oman, once the legal continental shelf is accepted and brought into force. India has demarcated its boundaries among its maritime neighbours except for Pakistan and Bangladesh where economic and historic interests are at play.

ACTIVATION OF NEW COAST GUARD STATION

6.7 Coast Guard station at Jakhau near Sir Creek was activated on November 24, 2004. Two hovercrafts have been based at Jakhau for operations in the shallow water and creeks of the area.

SEARCH AND RESCUE (SAR) EFFORTS

6.8 Distress situations at sea demand rapid response: Coast Guard ships and aircrafts undertook various search and rescue missions and were instrumental in saving 125 lives, 4 ships and 12 boats during the year. The major search and rescue operations are as given below.

Investigation of suspect Vessel during Search and Rescue Operation

6.9 Sri Lankan Fishermen: On June 30, 2004, Maritime Rescue Coordination Centre (MRCC), Chennai received a message from a merchant vessel (MV) SBS Nimbus operating in Kaveri Basin off the coast of Andhra Pradesh. A fishing boat FV Ayosa Baby with five Sri Lankan crew was adrift 115 miles

southwest of Kakinada. The crew was reported to be in a dehydrated state as the fishing boat was adrift for 20 days due to a defect on its main propulsion machinery and there was no food onboard. MRCC, Chennai assumed coordination for SAR and directed the ship to provide food and water to the fatigued crew. MV, SBS Nimbus was directed to tow the fishing boat to Kakinada. The fishing vessel arrived at Kakinada port under tow. All five crew members were provided first aid on arrival. The Maritime Rescue Sub Centre (MRSC), Vizag of the Coast Guard coordinated the operation.

6.10 Assistance to Maldivian Coast Guard: On July 10, 2004, the MRCC, Mumbai received a distress message from the Maldivian Coast Guard regarding a missing fishing boat with four persons onboard. The fishing boat "Mush Tharee" was on passage from Naifaru Island to Kaashidhoo Island in the Maldivian group of islands and was last sighted on July 9, 2004. The Coast Guard initiated a safety net message on INMARSAT. The concerted efforts of the Coast Guard resulted in sighting of the boat by a merchant vessel MV Bonthi on July 12, 2004 about 270 nautical miles southwest of Trivandrum.

6.11 SAR in Sri Lankan Search & Rescue Region (SRR): On July 23, 2004 MRCC, Chennai received information that the crew members of MV Setia Jaya had abandoned the vessel consequent to a fire on board. The tanker was on passage from Male to Singapore. MRCC, Chennai was requested to assume responsibility for coordination of the SAR operations by the owners on account of the inability expressed by the Sri Lankan authorities. Accordingly, an INMARSAT safety net message was activated for attention of the ships in vicinity of 300 nautical miles(NM) from the datum. Thereafter, on July 24, 2004, the master of MV British Pride contacted MRCC, Chennai and intimated that nine crew members were rescued and the dead bodies of six others were recovered. MV British Pride was on passage from Oman to Long Beach, USA when she was alerted by the Coast Guard activated safety net message.

6.12 SAR off Agatti Island: An information regarding missing of two tourists (British nationals) along with an Indian diving instructor was received at MRSC, Kochi from Agatti Port Officer on September 15, 2004. A search operation was launched by the local administration by utilising available fishing boats in the area. Both the British nationals were found floating in water and were rescued successfully. However, the missing diving instructor could not be located.

6.13 MV Prabhu Parvati: Coast Guard MRCC, Mumbai received a

distress alert from the Master of MV Prabhu Parvati on October 17, 2004 regarding an engine room cadet; reportedly fallen overboard from the vessel. Accordingly, a SAR mission was launched immediately by deploying two dedicated Dornier sorties from Daman on October 17 and 18, 2004, which carried out search in the most probable area in coordination with Coast Guard surface units. To augment the search, two interceptor boats ex Porbandar also participated in the operation. In the meantime, MRSC, Porbandar received an information regarding rescue of the missing person by a fishing boat Ishwar VRL-10812 and brought to Veraval harbour on October 22, 2004.

6.14 Sri Lankan Vessel Chatura Putha: On November 3, 2004 a distress message was received by the MRCC, Mumbai regarding capsizing of a Sri Lankan vessel, Chatura Putha. There were five persons on-board. The MRCC, Mumbai immediately assumed coordination for SAR. An International Safety Net (ISN) message was activated on November 3, 2004 by the MRCC, Mumbai requesting merchant vessels in the vicinity to render assistance. On receipt of ISN message, out of the five persons onboard, four were rescued by a merchant ship MT Alcamar on November 4, 2004 and brought to Galle, Sri Lanka.

6.15 Assistance to MV Fresh Market: On November 6, 2004, MRCC, Mumbai received a distress alert from MV Fresh Market. There were ten crew onboard. The MRCC, Mumbai coordinated the operation and a merchant ship in the vicinity MV Kodaijisan (HPLL) rescued the crew of the distressed vessel. The vessel was thereafter directed towards Kochi, where the crew was disembarked to a Coast Guard vessel and brought safely to harbour.

MEDICAL EVACUATION (MEDEVAC)

6.16 MV Teign Bank: On July 13, 2004, the MRCC, Mumbai received a request from the MRCC, Falmouth (UK) for medical evacuation of an injured crew onboard MV Teign Bank. The MRCC, Mumbai assumed coordination immediately. The vessel was directed to approach Kochi so as to effect an evacuation using a Coast Guard helicopter. Continuous communication was maintained with the Master of the vessel and medical advice was provided over phone. The patient was evacuated safely on July 14, 2004 and admitted to a civil hospital at Kochi for treatment.

6.17 MV Iran Deyant: The MRCC, Mumbai received an information on July 5, 2004 about a patient suffering from acute abdominal pain, onboard MV Iran Deyant. The vessel was

about 15 NM south west of Mumbai. Reacting to the urgent nature of distress, a helicopter was immediately launched from Mumbai and the patient was evacuated and admitted in Messina Hospital, Mumbai.

6.18 MV Anatoly Kolesni Chenko: On August 18, 2004, MRCC, Mumbai received a message from MV Anatoly Kolesni Chenko, a Russian vessel requesting medical evacuation of a crew who had severed his left hand in an accident onboard. MRSC, New Mangalore assumed coordination and C-131 was sailed for medical evacuation. The ship entered the inner harbour on August 19, 2004 and the patient was evacuated and taken to AJ Hospital at Mangalore on a Coast Guard ambulance.

6.19 MT German Sun: A request was received from a German oil tanker MT German Sun for medical evacuation of a crew onboard who had met with an accident. A Coast Guard interceptor boat was sailed on September 23, 2004 from New Mangalore and the crew was evacuated and taken to the hospital.

FIFTH INDO-JAPAN COAST GUARD JOINT EXERCISE

6.20 The Fifth Indo-Japan Coast Guard combined exercise was conducted at/off Mumbai from November 1 to 6, 2004. Japanese Coast Guard ship Mizuho with two integral helicopters participated in the exercise. The aim of the exercise was to promote co-operation and coordination between Indian Coast Guard and Japanese Coast Guard with a view to enhance mutual capabilities and practice joint working procedures for SAR operations and combating piracy at sea.

OVERSEAS DEPLOYMENT

6.21 Two Indian Coast Guard ships viz., CGS Sarang with integral helicopter and CGS Durgabai Deshmukh and one CG Dornier were deployed to Colombo, Sri Lanka for a joint exercise conducted with the Sri Lankan Navy between December 14 to 18, 2004.

MANPOWER RECRUITMENT AND TRAINING

6.22 During the financial year 2004-05, the Coast Guard recruited 16 officers and 79 enrolled personnel. Coast Guard officers were also deputed for the courses under United States International Military Education Training Programme. Under this programme, the vacancies in the following courses were availed in addition to one vacancy under counter terrorism funding programme.

(a) Naval Staff Course

(b) Boarding Officers Course

(c) Port Operations Course

(d) Prospective Commanding Officer Course

(e) Maritime Search Planning

(f) Seaport Security and Anti-Terrorism

(g) International Maritime Officer Course

6.23 The Coast Guard has also been deputing its officers for courses at Defence Service Staff College (DSSC) Wellington, College of Defence Management (CDM) Secunderabad and Naval High Command Course, Mumbai. This year two new courses namely SDMC at Hyderabad and NDC (National Defence College) have also been allotted to the Coast Guard. Government has also approved the introduction of short service scheme for Commercial Pilot License (CPL) holders to make up the shortfall in the pilot cadre. Besides these courses, pre-release courses for enrolled personnel are also being availed from institutes sponsored by Directorate General, Resettlement from this year onwards.

7

Defence Production

Visitors at the 'Aero India 2005'

Defence Production

7.1 The Department of Defence Production (DDP) has a substantial infrastructure developed over the years, consisting of 39 Ordnance Factories and 8 Defence Public Sector Undertakings. It also draws upon supplies from the Indian civil/ private sector wherever feasible and forms the backbone of the country's defence production. For administrative and functional reasons, the Directorate General of Quality Assurance and Aeronautical Quality Assurance and the Directorate of Standardisation have also been placed under the Department of Defence Production. The genesis of having this intensive infrastructure under the government control was to achieve self-reliance in defence production by independent India.

7.2 Department of Defence Production, by the very nature of the work assigned to it, is the interface between the user services, i.e. the Armed Forces at the one end and the Defence Research Development Establishments (DRDEs) at the other. Accordingly, the vision of the users and the DRDEs would be dovetailed with this role of DDP by taking complete steps for:

(a) Synergy amongst the Defence Production Units, DRDEs, Services and Private Industry for mutual sharing of infrastructure and technologies to harness the best out of the existing capacities and also to shorten the time period for the development of new products and induction thereof in the Defence Forces.

(b) Modernisation of the existing infrastructure with the objective of improvement in productivity and developing versatility for diverse product profile; enhanced utilization of IT based management tools.

(c) Redefine the role of Quality Assurance, graduate towards self-certification by the production agencies and strengthen test laboratories and proof ranges.

(d) Standardisation: - Graduate to Joint Services Specifications, increased use of commercially available off-the-shelf (COTS) products.

(e) Increased role of private enterprise in defence production.

(f) Initiatives for enhancing exports of products and services: Emphasize buy-backs in defence imports, pursue joint design and development, co-production, joint ventures for producing world class products and joint marketing.

(g) Restructuring of Ordnance Factories and Defence PSUs to be able to respond faster to the emerging needs.

7.3 To achieve these objectives, the Department of Defence Production oversees the following:

i. Thirty nine Ordnance Factories – one more Ordnance Factory is being set up at Nalanda (Bihar) – under the Ordnance Factory Board (OFB);

ii. Eight Defence Public Sector Undertakings (DPSUs):

- ❑ Hindustan Aeronautics Limited (HAL);
- ❑ Bharat Electronics Limited (BEL);
- ❑ Bharat Earth Movers Limited (BEML);
- ❑ Mazagon Dock Limited (MDL);
- ❑ Goa Shipyard Limited (GSL);
- ❑ Garden Reach Shipbuilders & Engineers Ltd. (GRSE);
- ❑ Bharat Dynamics Limited (BDL);
- ❑ Mishra Dhatu Nigam Limited (MIDHANI);

iii. Quality Assurance (except naval armament):

- ❑ Directorate General of Quality Assurance (DGQA);
- ❑ Directorate General of Aeronautical Quality Assurance (DGAQA);

iv. Directorate of Standardisation;

v. Directorate of Planning and Coordination;

vi. Defence Exhibition Organisation (DEO);

vii. Indigenisation;

viii. Private Sector Participation in Defence Production; and

ix. Defence Production Board.

ORDNANCE FACTORIES

7.4 Ordnance Factories are an integrated base for indigenous production of defence hardware and equipment. Defence production is highly specialized, complex and poses unique challenges. Products have to be safe, reliable, consistent and capable of operating under

varying terrains as well as climates and in extreme conditions. Accordingly, the technologies applied, which cover a wide spectrum of engineering, metallurgy, chemical, textile, leather and optical technologies, should ensure high quality and productivity, apart from meeting the primary objective of self-reliance. Ordnance Factories also fulfil certain requirements of Paramilitary and Police Forces for arms, ammunition, clothing and equipment. Ordnance Factories endeavour to enhance their capacity utilization not only by securing work load from the defence forces but also through sustained efforts in diversification to non-defence customers and exports.

7.5 Indian Ordnance Factories Organisation has completed 200 years of its existence. The Ordnance Factories Organisation is a fine blend of old and state-of-the-art factories, with the first Ordnance Factory established in 1801 at Cossipore, near Kolkata, and the 40th factory being set up with modern technology at Nalanda, Bihar for production of Bimodular Charges. The 40 Ordnance Factories are geographically distributed all over the country at 25 different locations. The pre-independence factories had capacities not only for production of finished stores but also for supply of basic and intermediate materials, for which indigenous industrial infrastructure in the civil sector were then inadequate. With the gradual development of civil industrial infrastructure in public and private sectors, the factories set up after independence have progressively given up the concept of backward integration. The emphasis shifted from production of basic, intermediate inputs to production of finished stores by outsourcing intermediate sub-assemblies from the private sector.

7.6 Organisation: Ordnance Factories are divided into 5 operating divisions, based on the main products/technologies employed:

(a) Ammunition & Explosives (A&E)

(b) Weapons, Vehicles and Equipment (WV&E)

(c) Materials and Components (M&C)

(d) Armoured Vehicles (AV)

(e) Ordnance Equipment Group of Factories. (OEF)

7.7 The Ordnance Factory Board comprises of DGOF & Chairman and nine other members. Five Members of the Board in the rank of Additional DGOF, head five of the above group of factories. The four remaining Members are responsible for staff functions, viz. Personnel, Finance, Planning & Material Management, Projects & Engineering and Technical Services. An extended board has been constituted by the Government, with representation from the Army,

Defence Research and Development Organisation and Ministry of Defence. The extended board meetings are held periodically to provide appropriate inputs and perspective for planning resources, upgrading technology of products and process and on various other critical issues, necessary for the efficient functioning of Ordnance Factory Board (OFB).

7.8 Product Profile and Technology: Ordnance Factories continuously upgrade their products and the manufacturing technologies, to meet the emerging needs of Defence Forces. They produce a wide range of arms and ammunitions for the Infantry, Artillery, Air Defence Artillery and Armoured Corps of the Army. Ordnance Factories produce ammunition for Navy and Air Force and have taken up indigenous development of naval armaments. The factories produce military transport vehicles, infantry combat vehicles, armoured vehicles, optical and opto-electronic instruments, summer and winter uniforms, parachutes, miscellaneous leather goods and general stores.

7.9 Growth: The sales of Ordnance Factories have grown steadily over the years and have reached a record sale of Rs 6150.29 crore during 2004-05, representing an increase of about 100% over a span of last six years (Rs.3071 crore in 1997-98). In 2005-06, the sales of Ordnance Factories are expected to touch about Rs. 7200 crore. Ordnance Factories have endeavoured to keep pace with the recent developments in arms, ammunition and other equipment by updating/upgrading technology.

7.10 As a policy, major thrust is being given in Ordnance Factories to achieve optimum capacity utilization not only by securing additional workload from the Defence Forces

Rifle 5.56 MM INSAS Excalibur

but also through sustained efforts in diversification to non-defence customers and exports. Equal thrust is also being given to strengthening 'in-house' R&D capability aimed at product and process development within the OFB.

7.11 Ordnance Factories are gradually increasing their sales to non-defence customers, including exports. During 2004-2005, 15.5% (Rs.953.65 crore) of the total sales was to non-defence customers. In 2005-2006, the sales to non-defence customers is expected to be much higher at Rs.1325 crore.

7.12 Highlights: Some of the significant achievements of Ordnance Factories in last year have been as follows:

(i) All 39 Ordnance Factories have switched over to Quality Management Systems compliant to ISO- 9001:2000. The upgraded version gives special emphasis on customer satisfaction and continuous quality improvement.

(ii) Ordnance Factory, Bhandara has successfully produced for the first time, a trial propellant batch of 470 kg. for 23 mm air defence gun 'Schilka'.

(iii) Ordnance Factory Project Medak (OFPM) has successfully developed Aluminium Pod Assembly, required for storing PINAKA rockets, along with Lock Assembly. OFPM is also manufacturing Mine Protected Vehicles with 'state-of-the-art'

Mine Protected Vehicle with RCWS

equipment Remote Controlled Weapon Station (RCWS) for Army and for exports.

(iv) Gun Carriage Factory, Jabalpur has developed the first prototype 'Kavach' (Chaff launcher) for use of Navy and test fired successfully.

(v) Small Arms Factory, Kanpur has manufactured a prototype Carbine.

(vi) Demonstration firing of artillery ammunition was conducted successfully at Pokhran in June 2004. The ammunition has been manufactured under MoU with IMI, Israel, at Ordnance Factory Chandrapur (OFCH), Ordnance Factory Ambajhari (OFAJ), and Ordnance Factory Kanpur (OFC). The ammunition developed through co-production route will be cheaper.

(vii) Significant improvements have been achieved by the Ordnance Factory, Itarsi in stability of Nitroglycerine (NG) on quality front. With persistent efforts the "Heat Test Value" has increased to 15 minutes (avg.) from earlier level of 10 to 12 minutes.

(viii) Ordnance Cable Factory, Chandigarh has developed 48/0.2 strands twin twisted firing cable for Mine produced by Ammunition Factory, Khadki (AFK).

(ix) Ordnance Parachute Factory, Kanpur will be supplying 5000 numbers of Light Bullet Proof Jackets in near future.

(x) Field Gun Factory, Kanpur (FGK) has successfully developed Super Rapid Gun Mount (SRGM) ordnance required to prove the ammunition, under development at Ordnance Factory, Kanpur. FGK has successfully developed the barrel and breech mechanism, which was proof-fired successfully at PXE Balasore. OFB plans to supply this ordnance to Navy and BHEL, as an import substitute.

7.13 Self-Certification in Ordnance Factories: Ordnance Factories have started the process of self-certification since April 1, 2002, thereby, standing guarantee to its products supplied to the Defence Forces. Presently, self-certification extends to seven fast moving clothing and general store items accounting for about 20% of the overall turnover of the Ordnance Equipment Group of factories. Further, twelve clothing items and four types of ammunition boxes are also being supplied under Revised Inspection Procedure where input material and inter-stage inspection is being carried out by Ordnance Factories. Many more items are

being planned to be covered under self-certification in due course of time.

7.14 'In-house' Research & Development Activities towards Product & Process improvements are receiving great thrust in Ordnance Factories. Techniques of solid modeling and sensitivity analysis are being used to meet the design needs of defence stores. Some of the notable products developed during current year through 'in-house' R&D are:

- Armoured Ambulance
- Mine Protected Vehicle (MPV)
- Recoil System for Field Howitzer
- Integration of Global Positioning System in CMT.
- Driver's Sight for tanks.

7.15 A host of new products and upgrades have also been identified based on interaction with the potential users. Off the shelf availability of technology required to develop these products/ upgrades is explored for having synergy with advance technology provider for co-development/ co-production.

7.16 The computerized CAD/ CAM centers (Design centers) are being set up in factories to modernize drawing/ design offices at the factories so as to enhance the design and development capabilities and to increase the efficiency in the area of product design and development.

7.17 Diversification in Civil Trade and Exports: Ordnance Factories produce a large variety of chemicals for commercial use by industries in the civil sector. They also manufacture a wide range of textiles, leather goods and sporting arms and ammunition for the civil sector. During the year 2004-05, a target of Rs. 268 crores has been set for civil trade. OFB has opened outlets in six factories for sale of .32" revolvers and pistols. A new sporting weapon .3006" Rifle has been developed, which will be released in the market after getting clearance from Ministry of Home Affairs.

7.18 Ordnance Factories are making vigorous marketing efforts to boost exports by participating in International Exhibitions, product promotion through advertisements in the international media, interaction with visiting delegations from target countries, agents and the customer's representatives, both in India and abroad. Product catalogue Compact Discs (CDs) that are e-mail-able and printable, have been developed to enable customers immediate access to the desired information. Online Internet site has been set up to cut down response time to a few hours.

7.19 Safety: The safety policy, reviewed during 1996, was structured to make safety standards more stringent, safety consciousness in the Ordnance Factories with special emphasis on accident

prone and hazardous areas. The safety manuals and standing instructions were updated to supplement safety policies. A disaster management plan is in existence for contingent measures and safety committees (central and shop level) have been constituted. A three-tier safety audit and monitoring system ensures strict implementation of the laid down safety norms. Safety audits are carried out at level-I by the factory on monthly basis, at level-II by a team of Safety Officers from other Factories on half yearly basis and at Level-III by Regional Controller of Safety (RCS). Rectification of the deviations reported in the audit is closely monitored by the respective RCS and at Corporate level by the Controller of Safety (COS)/OFB.

7.20 Energy Conservation: Efforts aimed at energy conservation are a continuous process in Ordnance Factories. The conservation measures encompass all spheres of activities. Economizing energy consumption is pursued through increased efficiency utilization, technological upgradation and use of renewable sources of energy in appropriate areas. Consequent to the energy conservation measures adopted by Ordnance Factories, total energy consumption in the year 2003-04, as a percentage of cost of production, reduced to 3.99% as against 4.22% in 2002-03.

7.21 Quality Management: Implementation of Total Quality Management (TQM) concepts has been given a major thrust in all Ordnance Factories. All the 39 Ordnance Factories have switched over to Quality Management System conforming to ISO-9001: 2000. 52 laboratories in 29 Ordnance Factories are accredited to National Accreditation Board for Laboratories (NABL) and conform to ISO/IEC 17025 new standards. The quality of product in Ordnance Factories is monitored through various mechanisms, such as, working to predetermined process schedule and quality plans, introduction of Statistical Process Control - Statistical Quality Control techniques for controlling the process/ products towards improving the products and minimizing the rejection in processes, testing in Ordnance Factory Laboratories, Internal Quality Audits and monthly interaction meetings at unit level with Quality Assurance Establishments.

7.22 Customer Satisfaction: To get feedback from customers, teams from Ordnance Factories regularly visit depots and forward areas to attend to customer complaints, understand the problems faced by the users and also understand their expectations from the products. Joint teams comprising officers from OFB and DGQA also visit forward areas to

get user feedback with a view to improve quality of products.

DEFENCE PUBLIC SECTOR UNDERTAKINGS

Hindustan Aeronautics Ltd. (HAL)

7.23 Hindustan Aeronautics Limited was formed in October, 1964 by merger of Hindustan Aircraft Limited and Aeronautics India Limited. The Company has 16 divisions located in six states. All the divisions of HAL have ISO 9001-2000 accreditations and 12 divisions have also obtained ISO 14001-1996 Environment Management System certification. HAL is a MoU signing company and is declared as Mini Ratna (Category I) Company.

7.24 Since its inception, Hindustan Aeronautics Limited has evolved into a large multi-disciplinary Aeronautics Complex. It has built up comprehensive skills in design, manufacture and overhaul of Fighters, Trainers, Helicopters, Transport Aircraft, Engines, Avionics and System Equipment. Over the years HAL has produced 10 types of aircraft and Advanced Light Helicopter (ALH) Dhruv from 'in-house' R&D and 13 types under licenced production, inclusive of 8 types of Aero Engines, and over 1000 items of Aircraft System Equipment (Avionics, Mechanical and Electrical).

7.25 HAL's major supplies/ services are to the IAF, the Navy, the Army, the Coast Guard and the BSF. As a spin-off, Transport aircraft and helicopters have been supplied to Airlines as well as State Governments. The company also supports fully the Space Vehicle programme of Indian Space Research Organisation (ISRO) and participates in the missile development and manufacture programme.

7.26 In order to meet the challenges of the 21st Century, HAL's mission is "To become a global player in the aerospace industry". The Company is aiming at expanding its customer base through exports of its indigenously developed Advanced Light Helicopter (ALH), overhaul and maintenance of military and civil aircraft, aero-structure & engine components and IT based services. It also has plans of business co-operation and strategic alliances with major aerospace companies.

7.27 Significant achievements of HAL during the year are highlighted below:

(i) The company recorded an all time high turnover and profit before tax (PBT) of Rs. 4425 crore and Rs. 630 crore respectively during the year 2004-05.

(ii) Two SU-30MKI were produced for the first time at HAL for IAF.

(iii) Upgraded Cheetah Helicopter, fitted with TM-333-2M2 engine, landed at Sasser Kangri (Ladhakh) at altitude of 25150 ft, setting a record.

(iv) ALH (Dhruv) set the record for an intermediate weight class helicopter flying at an altitude of 25000 ft.

(v) Facilities for repair/ overhaul of Sea King Transmission assembly components set up at Bangalore.

(vi) A contract for supply of 1000 sets of Airbus A-320 forward passenger doors, worth US$ 80 millions, was signed with Airbus Industries.

(vii) The company received the Golden Peacock award for "Innovation 2004" from Institute of Directors, New Delhi for re-engining Chetak helicopters.

(viii) HAL bagged the "World Quality Commitment International Platinum Star Award – Paris 2004". The award was presented to HAL in recognition of the corporate commitment to quality, leadership and innovation in technology.

7.28 The indigenous development programmes – namely the Intermediate Jet Training (IJT), the Light Combat Aircraft (LCA) and the several upgrade programmes progressed well during the year. The indigenous Advanced Light Helicopter under series production and licenced production programmes, the SU 30 MKI and HAWK AJT, also progressed as per schedule.

Bharat Electronics Limited (BEL)

7.29 Having celebrated its Golden Jubilee in April 2004, Bharat Electronics Limited is the leading professional electronics company in the country. Engaged in the design, development and manufacture of sophisticated state-of-the-art electronics equipment/ components for the use of defence services, paramilitary organizations and other infrastructure providers in the telecom sector; BEL secured top ranking amongst aerospace/ defence companies in the prestigious Top Performing Companies Study for 2004, carried out by Aviation Week & Space Technology (AWST), a McGraw-Hill publication.

7.30 With its 9 production units and 31 manufacturing divisions spread across 7 states, the company's focus on Research and Development to generate business using the 'state-of-the-art' manufacturing and testing facilities, has been recognized. The company's subsidiary BEL Optronics Device Limited (BELOP), which manufactures Image Intensifier Tubes, has also turned around and it

is expected to improve its performance in the coming years.

7.31 Significant achievements of BEL during the year are highlighted below:

(i) BEL has developed Integrated Fire Control Systems (IFCS) with sub-systems like Gunner's Main Sight, Fire control computers and servers for the MBT Arjun.

(ii) BEL has supplied 275 Nos. of Battlefield Surveillance Radars - Short Range (BFSR-SR) during the year. BEL has also got order of 1171 Nos. of BFSR-SR from the Indian Army. This radar has high potential for exports.

(iii) The company's contribution towards society has been recognized by the Greentech Environment Excellence Gold Award by Greentech Foundation and ELCINA Award by Electronic and Industries Association of India.

(iv) Director General of Quality Assurance (DGQA) conferred the self-certification status to three products of BEL viz. STARS 'V' 25W VHF Equipment (manufactured at Ghaziabad & Panchkula Units), Lithium Sulphur Dioxide Batteries (manufactured at Pune Unit) and RRF VHF Radio Relay Equipment (manufactured at Bangalore unit).

(v) Two joint ventures with General Electric, USA, viz., GE-BE Pvt. Ltd and M/s Multitone PLC, UK, viz., BEL Multitone Ltd. add to company's reach in the market.

(vi) Kotdwara and Panchkula Units of Bharat Electronics Limited were awarded Excellence Award - "Commendation for Strong Commitment to Excel". Kotdwara Unit is getting this award for the second consecutive year.

(vii) BEL paid an all time high dividend of 100% for the year 2003-04, amounting to Rs. 60.68 crores to Government of India. A maiden Interim Dividend of 40% was paid to the shareholders for the year 2004-05.

(viii) BEL Software Technology Centre in Bangalore, which develops Radars, Electronic Warfare System, Control System, Global Positioning System etc., has been assessed at Level 4 of the Software Engineering Institute's Capability Maturity Model Framework.

(ix) During the last six years, BEL has been achieving 'Excellent' rating on MoU score. The MoU Award for 2002-2003 was re-

ceived from the Hon'ble Prime Minister of India.

Bharat Earth Movers Limited (BEML)

7.32 Bharat Earth Movers Limited was established in May 1964 and commenced operations from January 1965. Presently, Government of India holds 61.23% of equity capital of the company and the rest is held by financial institutions, employees and public. BEML is primarily engaged in the design, manufacture, marketing and after-sales-support in the earthmoving and construction equipments, defence and railway sectors.

7.33 The company has six fully integrated manufacturing divisions located at Bangalore, Kolar Gold Fields (KGF) and Mysore, including a subsidiary steel foundry – M/s Vignyan Industries Limited - at Tarikere. All the production units of BEML are equipped with necessary general-purpose machines as well as special purpose machines, fabrication equipment, handling and storage facilities required for the manufacture of an entire range of products. The company has a strong R&D set up that draws its strength from a pool of qualified and experienced personnel. It has facilities for product design and development, testing and evaluation laboratories for materials, structural engineering, hydraulics, engine and transmission laboratories and a computer aided design centre. BEML's products have been exported to more than 30 countries including Syria, Tunisia, South Africa, Jordan, Sri Lanka, Surinam, Bangladesh and UAE. BEML is adopting new strategies to promote its brand image in the international market for its products and is poised to increase its export turnover significantly in the coming years.

7.34 Significant achievements of BEML during the year are highlighted below:

(i) The Bangalore Complex of BEML has crossed a major land mark this year by successfully manufacturing and supplying to the Delhi Metro Rail Corporation (DMRC), the first batch of metro coaches with state-of-the-art features, under technical collaboration with M/s. Rotem, Korea. Regular production of DMRC coaches is under way.

(ii) Development of the Sky Bus System – an innovative concept of light rail cars suspended from overhead via-ducts was another challenging achievement for the company. The first proto type conceived and manufactured by BEML was supplied to the Konkan Railway Corporation, and is under extensive user trials at Goa.

This innovative system has the potential to develop into a modern, efficient and cost effective alternative for urban mass transportation in the coming years.

(iii) BEML received the second batch of orders for 160 rail coaches from the Indian Railways valued at Rs.42 crore, in addition to the supply order for 200, already received during the last quarter of 2003-04.

(iv) Defence product, Pontoon Bridge System developed by the company, has successfully completed rigorous Army trials and batch production of further sets is under way.

(v) The products developed by BEML include Dump Truck (BH100), Pipe Layer (BP100), Side Discharge Loader (BL10C), Back Hoe Loader (BL9H) and Hydraulic Excavator (BE71). These were successfully launched in market during the current year.

(vi) The Company received 2nd Fastest Growing Construction Equipment Company award institutes by Construction World – NICMAR. The Government of India awarded National Safety Award to Equipment Division Mysore Complex for achieving the lowest average frequency rate of accidents.

Dump Truck

Mazagon Dock Limited (MDL)

7.35 The leading Warship building yard in the country, Mazagon Dock Limited was taken over by Government of India in May 1960. Over the years, it has developed indigenous design capabilities and expanded its product range to include destroyers, frigates, missile boats, corvettes, submarines and patrol vessels for the defence sector and merchant vessels and dredgers for the civil sector. It is the only shipyard in the country to have built submarines, a feat achieved by very few companies worldwide. MDL has to its credit crucial contributions towards infrastructure in the oil exploration sector.

7.36 Significant achievements of MDL during the year are highlighted below:

(i) The Second frigate of Project 17 was launched on June 4, 2004.

(ii) 9th Border Out Post Vessel "Seema Prahari Trishul" was commissioned on June 21, 2004.

(iii) Repairs were carried out to 2 Naval Ships, 1 Coast Guard Ship and 1 merchant ship.

(iv) The company has orders for construction of 3 Frigates and 3 Destroyers.

Goa Shipyard Limited (GSL)

7.37 The youngest and smallest of the Defence shipyards, Goa Shipyard Limited, has the privilege of having implemented the first successful enterprises planning system amongst the Defence Public Sector Undertakings. The company has grown from strength to strength while setting up new standards in project management. Its delivery of two Extra Fast Attack Craft to the Indian Navy, six months ahead of the contracted 24 month's period, is an indication of what can be achieved.

7.38 Significant achievements of GSL during the year are highlighted below:

(i) One Survival at Sea Training Facility delivered to ONGC.

(ii) Keels were laid for 1 Advance Offshore Patrol Vessel and 2 Extra Fast Patrol Vessel between June and August 2004.

(iii) GSL have entered into collaboration agreements with four foreign companies for securing orders/ manufacturing in shipbuilding projects.

(iv) The Company has embarked upon an export promotion drive through bidding for global tenders and participating in exhibitions abroad, seminars and presentations relating to shipbuilding capacities of the company.

Garden Reach Shipbuilders and Engineers Limited (GRSE)

7.39 After being taken over by the Government of India on April 1, 1960, Garden Reach Shipbuilders and Engineers Limited has gradually extended and modernized to improve its growing maritime needs – particularly those of the Navy and the Coast Guard. GRSE is among the leading shipyards in the country and the premium yard in the East. To meet the emerging needs, GRSE builds a wide range of ships, from sophisticated warships to ultra modern commercial vessels, from small harbour craft to fast and powerful patrol vessels. India's first ever fleet tanker too was built at GRSE. The latest on the list is new generation hovercraft.

7.40 Range of products alone, of course, does not show GRSE's versatility. Today, it is among the few shipyards in the world with its own engineering and engine manufacturing divisions.

7.41 Significant achievements of GRSE during the year are highlighted below:

(i) The Company has paid dividend of Rs.10.28 crore being 35% of the Profit after tax (8.30% on equity paid up capital of Rs.123.84 crore) for 2003-04.

(ii) The second Frigate of the series in Project 16A (INS

Off-shore Patrol Vessel manufactured by GRSE

Betwa - Yard No. 3010) was commissioned on July 7, 2004.

(iii) The first two Fast Attack Crafts (Yard No. 2051 & 2052) were launched on December 11, 2004 and December 14, 2004, respectively.

(iv) The first of the three LST(L) (Yard No. 3014) was launched on April 3, 2004.

(v) The keels of the 3rd and 4th Fast Attack Crafts (FACs) (Yards 2053 & 2054) were laid on September 28, 2004.

(vi) The Company has got orders for construction of three Landing Ship Tank (Large) [LST(L)], four Fast Attack Crafts (FACs) and four Anti-Submarine Warfare (ASW) Corvettes, scheduled for delivery during 2005-2011.

Bharat Dynamics Limited (BDL)

7.42 BDL was set up in 1970 to manufacture Guided missiles. It is amongst a few strategic industries in the public sector and possesses the capability to produce advanced Guided Missile systems. The Company has two units, one at Kanchanbagh, Hyderabad and the other at Bhanur, Medak District. Besides the indigenous Prithvi missile, it produces Konkurs, Konkurs-M and Invar (3UBK-20) missiles and other 'in-house' developed products like FLAME launchers and simulators. The Company is working in close association with DRDO for technology absorption of other missiles under Integrated Missile Development Programme.

7.43 Significant achievements of BDL during the year are highlighted below:

(i) The Milan, Konkurs, Prithvi and Information Technology Divisions of the company have ISO 9001: 2000 certification. BDL attaches utmost importance to customer satisfaction. The company regularly participated in field firings conducted by the users. BDL regularly implements various improvements in manufacturing process, inspection procedures regards. Efficiency in the process has increased by way of computerization. These have resulted in increasing value addition, per employee, steadily.

(ii) As part of its efforts to increase exports, BDL has exported sub-assemblies worth Rs.13.76 crore in 2003-2004.

(iii) It has signed an MoU with MBDA for formation of joint ventures for development and production of Milan ER/Indian.

Mishra Dhatu Nigam Limited (MIDHANI)

7.44 Mishra Dhatu Nigam Limited was incorporated as a Public Sector

Undertaking in 1973 to achieve self-reliance in areas of Super-alloys, Titanium alloys and Special Purpose Steels required for strategic sectors like Aeronautics, Space, Armaments and Atomic Energy as well as for special products like Molybdenum wires and plates, Titanium and Stainless Steel tubes, alloys for electrical and electronic application like Soft Magnetic alloys, Controlled expansion alloys and Resistance alloys.

7.46 Significant achievements of BDL during the year are highlighted below:

(i) Based on the provisional figures, the company has achieved an "Excellent" MoU rating for its overall performance in 2003-04.

(ii) The Purchase Policy and Procedures that have been in vogue since 1983 have been thoroughly examined and revised keeping in view guidelines issued by Chief Vigilance Commission from time to time and has been promulgated with effect from April 1, 2004.

(iii) The company, jointly with ISRO, has developed NIOBHAT-101, a Niobium Hafnium alloy, for the space sector.

(iv) The Company bagged a prestigious high value order from Vikram Sarabhai Space Centre (VSSC) to the tune of Rs. 71 crore during the year for the manufacture of MDN 250 plates and rings, Superco sheets and Ti-31 plates.

(v) Production and supply, for the first time, of low alloy electrode of 5 dia. x 450 m length meeting all the specification requirements and quality parameters of the Indian Navy.

(vi) Production of 48XN4 grade electrodes, meeting all the requirements of Directorate of Navel Architecture (DNA) for welding of ABA class steels.

(vii) Successful establishment/ development of 'in-house' facility for proof testing of Air Bottles for supply to DRDL for Akash Project, with provision for strain gauging.

(viii) MIDHANI has obtained quality certification for its products from DGCA, DGAQA, DGQA and customers.

7.47 Operational Efficiency: Following measures were taken to improve the operational efficiency:

(i) Indigenous development, installation and commissioning of dynamic vacuum seal for Vacuum Arc Refining-I furnace in Titanium shop.

(ii) Replacement of mechanical variable speed drive in 'Amada' band saw cutting machine at Hot Rolling Mill, with indigenous electronic variable speed drive.

(iii) Indigenous development of electronic controls for 2 Hi-finishing mills at Hot Rolling Mill entry and exit.

(iv) Indigenous development of cutting and clamping hydraulic drive cylinders for hydraulic sheet shear machine at Hot Rolling Mill.

(v) The total import content in the value of production was 25% as compared to 30% in the previous year thereby increasing the indigenous content in the value of production.

(vi) Recycling of scrap obviating the purchase of virgin raw materials valued at Rs 13.76 crore as compared to Rs 10.78 crore in the previous year.

7.48 Following are new products/ grades taken up for development during the year 2004-05:

(i) Nitriding Steel 38xMUAW for MIG engine Program

(ii) Stainless Steel 15-5 PH for LCA Program

(iii) Ultra High Strength and High Toughness Steel for armour applications

(iv) Grade 91 SMAW electrodes for critical welding applications

(v) High toughness Ferritic Stainless Steel for Nuclear applications.

Sales Of Ordnance Factories And Defence PSUs

7.49 The total value of sales/ issues by Ordnance Factories and Defence Public Sector Undertakings during the last three years is as follows:-

Year	Ordnance Factories Total Sales	Public Sector Undertakings Total Sales	(Rupees in crore) Grand Total
2002-2003	6508.05	8788.31	15296.36
2003-2004	6523.87	9892.73	16416.60
2004-2005 (Prov)	6150.30	11120.38	17270.68

7.50 Defence Public Sector Undertakings and Ordnance Factories have exported items worth US $ 68.342 million for the year 2004-05.

INDIGENISATION

7.51 In the quest for self-reliance in the crucial sector of Defence, continuous efforts are being made to indigenise defence equipment wherever technologically feasible and economically viable. It has been a part of our indigenisation effort to locate and develop broad-based

indigenous supply sources both in the public sector as well as in the civil trade for many complicated and intricate equipment. There has been a complete paradigm shift in the role of private sector/ civil trade in the field of indigenisation, i.e., from the role of supplier of raw-materials, components, sub-systems, to a partner in the manufacture of complete defence equipment/ system. The defence industry sector, which was hitherto reserved for the public sector, has now been opened for participation by the Indian Private sector. The Indian companies are now eligible to apply for licence to set up defence industry for manufacturing all types of defence equipment under licence. Such companies could also have foreign direct investment, upto 26% of the equity. Detailed guidelines have already been issued by the Department of Industrial Policy & Promotion (DIPP) in consultation with Ministry of Defence regarding the modalities for consideration of applications for grant of licence. Today, the private sector can manufacture any defence item under licence from DIPP.

7.52 For indigenisation of the spares of the Defence Equipment, an institutional framework has been in existence in the form of 8 Technical Committees, consisting of officers from the Directorate General of Quality Assurance. Each Committee is headed by a Technical Officer of the rank of Major General/Brigadier or equivalent. These committees maintain a compendium of civil industries capable of undertaking the task of indigenisation of defence equipment/ stores after conducting surveys and assessing their capabilities. After identifying items in consultation with the user services for indigenisation and keeping in view the commercial viability and the strategic needs, these Committees undertake indigenisation and ensure timely supply of defence equipment/ stores. During the year 2003-2004, supply orders of Rs. 210.81 crore for ab-initio development and indigenisation of 1101 items were placed. During 2004-2005, 709 items have been taken up for development valuing Rs. 6.94 crore. Since February 2002, production agencies like Ordnance Factories, Defence PSUs, have taken over responsibility of indigenisation of equipment under their manufacturing range.

7.53 For ensuring enhanced and meaningful interaction, conferences/ exhibitions are held from time to time with civil industry. During the year 2003-2004, 16 exhibitions-cum-Vendor Awareness Programmes, with DGQA participation were held at various locations all over the country. During 2004-2005, 9 such programmes have been held.

7.54 In order to encourage civil industry for indigenous development of Defence stores, a scheme of

National Awards for excellence in indigenisation was introduced in the year 1993-94. The efforts made by the industry in substituting the inputs of defence equipment and stores are duly recognized and deserving units are presented with suitable awards.

7.55 After the opening up of the Defence Industry Sector for private participation, 22 Letters of Intent/ Industrial Licences have been issued upto 31.3.2005 to the private companies for manufacturing various types of Defence Equipment. Companies such as Larsen and Toubro Ltd., Mahindra & Mahindra Ltd., TIL Ltd and Automotive Coaches & Components Ltd. have obtained Letters of Intent to enter the Defence Industry Sector as full fledged manufacturers and suppliers of Defence equipment.

7.56 A Committee under the Chairmanship of Dr. Vijay Kelkar has also been constituted in the Department of Defence Production to examine and make recommendations on changes required in the procedure of acquisition/ procurement of Defence equipment. The Committee would suggest an approach based on "Product Strategy" and suggest modalities for integration of user services, Ministry of Defence and the Indian Industry (including Private Sector). The Committee would further suggest measures to increase Defence exports, incorporation of offsets in Defence acquisition and changes required to facilitate Ordnance Factories and Defence PSUs to assume the role of designer and integrator of large defence equipment and platforms.

OTHER ORGANISATIONS IN DEPARTMENT OF DEFENCE PRODUCTION

Directorate General Aeronautical Quality Assurance(DGAQA)

7.57 The DGAQA has its Headquarters at New Delhi with Resident Inspection Establishments at various production centers in the country, viz. Hindustan Aeronautics Limited, Bharat Electronics Limited, Indian Telephone Industries, MIDHANI, ECIL, Bangalore and also at various Ordnance Factories engaged in the production of Air Armament stores and Airfield Lighting equipment.

7.58 Missile System Quality Assurance Agency (MSQAA), comprising of officers from DGAQA, DGQA & Directorate of Naval Armament Inspection (DNAI), set up during 1991-92 to provide quality assurance coverage during development and production, and functions under the administrative control of Director General Aeronautical Quality Assurance (DGAQA). Apart from being the nodal agency, DGAQA is providing quality coverage for all primary systems of IGMDP projects. The role of MSQAA has been extended to provide quality assurance coverage

for non-IGMDP Missiles projects like SF&D and PJ-01 Brahmos.

7.59 During the year 2004-05 successful flight trials were carried out in respect of Prithvi, Trishul, Nag, Akash, Agni, Brahmos, AD and Astra Missile system.

7.60 Major activities, for the period April 2004 to Oct 2004 are:

(a) Value of Aeronautical Stores inspected - Rs.4230 crore.

(b) Technical Committee is processing the indents for indigenous development of stores, details are as under:

Sl. No.	Stores	Qty on Order	Unit Price (in Rs.)	Value (Rs. in lakh)
1	Cover outer Main Wheel	400	5000	20
2	Nose Tyre	250	3000	10
	Outer Rigger	400	4000	12
3	Automatic Inflatable life jacket	200	16065	32.13

(c) Active participation in IGMDP projects like Prithvi/ Akash/ Trishul Missiles, both as the overall Nodal Agency and Quality Assurance Agency for most major systems.

(d) DGAQA is actively associated in the QA of the following sophisticated indigenous projects:-

(i) Light Combat Aircraft (LCA) TEJAS

(ii) Kaveri engine for TEJAS (LCA)

(iii) Intermediate Jet Trainer (IJT-36)

(iv) Advanced Light Helicopter (ALH)

7.61 Organisation Improvement Programmes are:

(a) Specifications/ drawings are being updated to include additional essential features/ requirements of users, based on their feedback reports. A Computer-aided Design & Drafting (CADD) system has been installed and commissioned in the Drawing Office at the Headquarters.

(b) Greater emphasis is being laid on quality surveillance affected through the periodic Quality Audits conducted in the various areas of production/ overhaul facilities.

(c) DGAQA has actively participated in the Aero India-2005 Exhibition Show wherein aeronautical stores developed under the guidance of DGAQA were displayed.

Directorate General of Quality Assurance (DGQA)

7.62 Directorate General of Quality Assurance is an Inter-Service Organization working under the Department of Defence. DGQA is responsible for Quality Assurance of all defence stores and equipment, both imported and indigenous, for the Army, Navy (excluding Naval Armaments) and common user items for the Air Force procured from all sources viz Private Sector, Public Sector Undertakings and Ordnance Factories. It has, therefore, a vital role to play in the defence preparedness of the country.

7.63 Organisational Structure and Functions: DGQA Organisation is divided into seven Technical Directorates, each of which is responsible for a distinct range of equipment. The Technical Directorates are vertically structured in three-tiers for functional purposes, comprising their respective Headquarters, Controllerates, Field Quality Assurances Establishments and Proof Establishments (in case of Armament Discipline only). The tasks performed by them are complementary and are integrated to achieve maximum efficiency.

7.64 The major achievements of DGQA are as follow: -

(a) Inspection of Stores: DGQA ensures that stores are accepted strictly as per laid down specifications and performance parameters. The value of stores inspected during the last three years is given below: -

Year	Value of stores inspected (Rs. in crore)
2002-2003	16001
2003-2004	14692
2004-2005	13137 (Upto 31.1.2005)

(b) Quality Assurance of Imported Equipment: DGQA is performing a vital role in inspection of Imported Equipment and Weapon Systems being acquired by the Armed Forces.

(c) Self-Certification: DGQA Organisation has been awarding Self-Certification status to quality conscious firms/ manufacturers who have well established Quality Management System and demonstrate consistent product quality during the execution of successive Defence Supply Orders. 52 firms have been awarded Self-Certification status so far.

(d) Training Initiatives: The Defence Institute of Quality Assurance, Bangalore, has been training DGQA personnel in the field of Quality Assurance, Management/ Human Resource Development and Information Technology. Courses have been conducted for Services

and personnel from Outside Organizations like Defence PSUs and OFB. Details of Officers trained in the last 2 years are as follow:

Year	DGQA	Other Organisations
2003-2004	391	92
2004-2005	449	90

Directorate of Standardisation

7.65 Directorate of Standardisation was constituted in 1962 with the objective to control proliferation of items within Defence Services. Nine Standardisation Cells and six Detachments have been located at Nodal Stations in the country to give boost to the standardisation activity. The primary objective of the Directorate of Standardisation is to establish commonality in equipment and components among the three Services so that the overall inventory of the Defence Services is reduced to a minimum. This objective is sought to be achieved through: -

(i) Preparation of Standardisation documents such as Joint Services Specifications, Joint Services Preferred Ranges, Joint Services Rationalized Lists, Joint Services Guides, Joint Services Policy Statements and Joint Services Qualitative Requirements;

(ii) Codification and Cataloguing of Defence Inventory

(iii) Entry Control.

7.66 Standardisation activities are done through 13 Standardisation Sub–Committees, Panels/ Working Groups under these Sub–Committees, several Specialist Technical Panels (STP) and Defence Equipment Codification Committee (DECC).

7.67 Achievements: Directorate of Standardisation has achieved the following tasks during the year 2004-2005:

(i) The Five Year Roll-on-Plan (2004-09) was introduced.

(ii) The number of standard documents prepared during the year 2004-05 was 765 as against the target of 658.

7.68 Codification and Cataloguing: 13,527 items were codified and 7810 items were updated during 2004-05.

7.69 Entry Control: (i) 356 statement of cases for introductions, scaling and declaring the items obsolescent/ obsolete have been cleared upto March 31, 2005.

(ii) 323 Departmental Specifications were uploaded on the website thus a total of 2108 Departmental specifications have been loaded on website upto March 31, 2005.

7.70 Information Technology: The official website of the Directorate has

been upgraded by the Centre for Advanced Computing & System Application (COCOSA) Group of Directorate of Standardisation with the development of Web based online software in Oracle 9i for accessing the information on codification by all the cells. In addition, six leased line channels have been established connecting all Defence Standardisation Cells and Detachments across the country.

7.71 Training: The Institute of Standards Training, Pune, conducts courses on Standardisation, Codification, Management Development programme, Total Quality Management and Database Management System. The Institute has conducted 13 courses/ capsule during the year 2004-05 in the following areas:

(i) Networking Metropolitan Area Network (MAN) and LINUX.

(ii) Basics of e-Governance and Information Security.

(iii) Orientation, foundation and capsule course on Standardisation and Codification.

(iv) Database orientation course.

Directorate of Planning & Coordination

7.72 The Directorate of Planning and Coordination was set up in 1964 with the primary objective of preparing overall plans for the production of defence equipment in the country. The Directorate is responsible for monitoring and implementation of major indigenisation projects being pursued by the Ordnance Factories like the Arjun and T-90 Main Battle Tanks, product improvement of various artillery guns and armoured vehicles, augmentation of overhauling capacity of tanks and engines. Development programme of armaments for the army and navy are other key activities of the Directorate. The Directorate also monitors the critical projects in the electronics sector for the three services.

7.73 The Directorate is the nodal point in the Department of Defence Production for international cooperation in defence production and defence exports. The Directorate supports the Export wing of the Department during its deliberations with the various Bi-lateral Defence Policy Groups and Joint Working Groups with other countries.

7.74 The Directorate coordinates within the Department of Defence Production the interaction with the Integrated Defence Staff Headquarters, regarding classification of the respective capital acquisition plans of the three Services into “BUY”, “BUY” & “MAKE” and “MAKE”

categories. The Directorate serves as the secretariat for the Defence Production Board, which is charged with the function of monitoring progress emanating out of all "MAKE" decisions taken by the Defence Acquisition Council (DAC). It also assists the DAC to arrive at optimum decisions regarding licence production, transfer of technology (TOT) and ab-initio production/ development.

7.75 The Directorate represents the Department for Defence Production in the General Staff Equipment Policy Committee, Standardisation Committee, Task Forces and various monitoring committees.

Defence Exhibitions Organisation (DEO)

7.76 The Defence Exhibitions Organisation, established in 1981, is primarily responsible for organising and coordinating Defence exhibitions in India and abroad. It maintains the permanent Defence Pavilion at the Pragati Maidan, New Delhi, which peaks out during India International Trade Fair (IITF) held every year from November 14 to 27. Products manufactured/ developed by Ordnance Factories, Defence Public Sector Undertakings (DPSUs) & Defence Research and Development Organisation (DRDO) are displayed at the pavilion. In addition, the Armed Forces, Directorate General of Quality Assurance (DGQA), Coast Guard and the National Cadet Corps (NCC) are also represented in the exhibition.

7.77 As a part of export promotion effort, DEO organises international defence exhibitions in India and coordinates participation of DPSUs in exhibitions abroad. During the financial year, DEO coordinated participation of the DPSUs in the Africa Aerospace & Defence (AAD-04) in Pretoria, South Africa from September 21 to 23, 2004. For the first time, two private sector companies also participated as part of the India Pavilion.

International Aerospace Exposition - AERO INDIA

7.78 Conceived as an event to provide an interface for exhibitors to promote and showcase their products to leaders in the aerospace industry, Aero India is now one of the premier expositions of the sector in the region. It provides for its participants, opportunities for meaningful collaborations and interactions with global players.

7.79 The fifth International Aerospace Exposition – AERO INDIA 2005 was held at Yelahanka, near Bangalore, from February 9 to 13, 2005. This time the show was spread over a larger area and a more

number of countries/ companies participated in the show. 32 Delegations from 29 countries visited during Aero India-2005.

7.80 A new hangar with annexes has been constructed at Air Force Station, Yelahanka (AFSY) at a cost of Rs. 1108.69 Lakh. The entire length of the runway at AFSY has been resurfaced at a total cost of Rs.13,52,47,951.22. In addition, the runway has been extended up to 8000 ft as part of overall long term plan of extension of runway upto 9000 ft. The exposition registered a significant increase in terms of participation by the Indian companies (100%), foreign companies (32%) and the overall exhibition areas (35%) as compared to Aero India 2003.

7.81 The International Seminar on "Aerospace Technology – Development and Strategies" was organized by DRDO from February 7 to 9, 2005 at Jnana Jyothi Auditorium, Bangalore. The Aero India Civil Aviation Seminar was organized by the CII on February 10, 2005. This seminar in the backdrop of better a performance by Indian aviation industry and covered issues like the Indian aviation scenario, Airports and route network, co-relation of defence and civil aviation sectors, impact of low cost airlines on domestic aviation growth and lessons of international best practices.

7.82 Following are the details of investment, value of production & sales and profits after tax of eight Defence Public Sector Undertakings.

INVESTMENT

(Rs in Crore)

Name of the PSUs	2002-2003		2003-2004		2004-2005	
	Equity	Govt. loans	Equity	Govt. loans	Equity	Govt. loans
HAL	120.50	-	120.50	-	120.50	-
BEL	80.00	-	80.00	-	80.00	-
BEML	36.87	-	36.87	-	36.87	-
MDL	199.20	-	199.20	-	199.20	-
GRSE	123.84	-	123.84	-	123.84	-
GSL	19.40	-	19.40	-	19.40	-
BDL	115.00	-	115.00	-	115.00	-
MIDHANI	137.34	-	137.34	-	137.34	-
TOTAL	832.15	-	832.15	-	832.15	-

WORKING RESULTS

VALUE OF PRODUCTION AND SALES

(Rs in Crore)

Name of the PSUs	2002-2003		2003-2004		2004-2005 (Prov)	
	Value of Production	Value of Sales	Value of Production	Value of Sales	Value of Production	Value of Sales
HAL	3477.84	3120.42	3756.14	3799.78	5332.42	4425.00
BEL	2536.39	2508.02	2807.83	2798.59	3305.00	3268.00
BEML	1740.16	1681.17	1691.86	1765.75	1860.04	1862.21
MDL	539.52	569.27	495.77	191.00	450.00	77.39
GRSE	523.09	153.69	486.90	390.76	460.21	868.74
GSL	232.14	386.50	200.83	296.92	152.00	24.00
BDL	330.38	277.72	522.47	524.80	489.37	463.75
MIDHANI	93.50	91.52	116.42	125.13	136.52	131.29
TOTAL	9473.02	8788.31	10078.22	9892.73	12185.56	11120.38

PROFIT AFTER TAX

(Rs. in crore)

Name of the PSUs	2003-2004	2004-2005 (Prov.)
HAL	409.79	428.90
BEL	316.10	451.00
BEML	24.17	172.57
MDL	7.92	8.26
GRSE	29.30	24.67
GSL	31.88	8.20
BDL	47.61	22.50
MIDHANI	6.89	5.40
TOTAL	872.66	1120.50

8

Defence Research and Development

LCA Tejas in flying formation

Defence Research and Development

8.1 Defence Research and Development Organisation (DRDO) was set up in 1958 by amalgamating the then existing Technical Development Establishments (TDEs) of the Indian Army and the Directorate of Technical Development and Production (DTDP) with the Defence Science Organisation (DSO). The activities of DRDO laboratories encompass R&D in high technology disciplines like aeronautics, armaments, electronics, combat vehicles, engineering systems, instrumentation, missiles, advanced computation and simulation, special materials, naval systems and life sciences. Defence R&D Organisation is dedicated to the formulation and execution of programmes on design & development of the state-of-the-art weapon systems and equipment for the Armed forces.

MISSION

8.2 A separate Department of Defence Research and Development, was formed in 1980, within the Ministry of Defence, dedicated to the mission of progressive enhancement of self reliance in defence systems and development of world class defence technologies. To facilitate the accomplishment of this mission, there is a mission-mode structure headed by the Scientific Adviser to Raksha Mantri, who is the Secretary, Department of Defence Research and Development and also the Director General, Research and Development.

ORGANISATIONAL STRUCTURE

8.3 Under the Department of Defence R&D, DRDO headquarters is organised into technical directorates and corporate directorates. The technical directorates address a specific technology area. These directorates facilitate the laboratories working in the specific technology area under a single window system and help in obtaining approvals for new programmes/projects and facilitate monitoring and review of the on-going projects. The corporate directorates on the other hand address the well defined functions such as personnel, human resource development, material management, planning & coordination, management services, Rajbhasha, Organisation and Methods (O&M), budget, finance & accounts, security & vigilance, civil works and estates and extramural research. Recruitment & Assessment Centre and Personnel Assessment Centre

undertake new inductions and assessment on periodic basis for promotions of scientists and technical staff for all laboratories and headquarters of DRDO under Defence Research Development Service cadre and Defence Research Technical cadre respectively.

8.4 The programmes and projects, undertaken by DRDO, are executed through a network of fifty R&D laboratories/establishments. These laboratories are situated all over India from Tezpur in the East to Jodhpur in the West and Leh in the North to Kochi in the South.

MONITORING AND REVIEW MECHANISM

8.5 The mission mode programmes/ projects are executed in close partnership with user services. In order to harness the best available resources in terms of talent, expertise and resources, DRDO interacts with defence public sector undertakings, academic institutions, research laboratories and private entrepreneurs, to execute its projects and programmes. The 'concurrent engineering' approach is followed in technology-intensive projects to reduce the time-lag between development and 'productionisation' of weapon systems & platforms.

8.6 DRDO is monitoring and reviewing programmes and projects on a regular basis through an institutionalised mechanism. There is an in-house apex level body called 'DRDO Research Council', chaired by Scientific Adviser to Raksha Mantri, to review progress of major projects of all the laboratories once a year. In addition, a high level committee also carries out corporate reviews covering techno-managerial aspects. The staff projects for Army are reviewed by the Vice Chief of Army Staff, twice a year. For all major programmes/projects, there are multi-tier 'programme management boards', having representation from the Services, DRDO laboratories and in some cases, from academic institutions and other national research laboratories. These Programme Management Boards periodically monitor and review the programmes and give mid-course corrective directions.

8.7 DRDO is involving users in project peer reviews, project progress reviews to cut short delays and to know their views in advance including General Staff Qualitative Requirements and also to continuously monitor the projects. Cluster meetings are arranged with representations of all concerned agencies. To bring in synergy between developing agencies/laboratories, user services and production agencies, interaction meetings with private industries through their apex bodies

like FICCI, CII and ASSOCHAM are also organised.

CONTRIBUTION OF DRDO TO SERVICES

8.8 The Organisation has made great strides since 1980 towards making our Armed Forces self reliant. On the one hand this has enabled our Armed Forces to face the arms export control regimes of advanced countries, whereas on the other hand, DRDO has progressively enhanced their combat effectiveness through development of state-of-the-art indigenous defence systems. During last few years, a number of defence systems and equipment has been productionised. These include :

- Lakshya - Pilotless target aircraft (aerial target practice system)
- Nishant - Remotely piloted vehicle (for aerial surveillance)
- Prithvi - Surface-to-surface tactical battlefield missile
- Agni-I & Agni-II - Surface-to-surface missile
- BrahMos - Supersonic cruise missile
- Arjun - Main Battle Tank
- Sangraha - Integrated EW system for Navy
- Samyukta- Integrated EW system for Army
- Mihir - Helicopter based dunking sonar
- Nagan – Towed array sonar
- AERV - Armoured Engineer Recce Vehicle for crossing water obstacles
- Bridge layer tank on T-72 chassis
- Ajeya - Combat improved T-72 tank
- Sarvatra - Bridge assault mechanically launched
- Mat ground surfacing, a trackway expedient for smooth movement in marshy terrain, shallow water and soft soil
- Mobile decontamination system for decontaminating nuclear, biological and chemical agents and personnel, equipment and terrain
- Safari [Mk-I] - Muting system for deactivating remotely controlled explosive device
- Pinaka - Multibarrel rocket system
- Armoured ambulance on BMP II
- Carrier mortar tracked on BMP II
- 105 mm and 81 mm illuminating ammunition
- 125 mm ammunition, Fin stabilised armour piercing discarding sabot Mk-I&II

- INSAS - 5.56 mm Indian small arms system
- Tranquil - Radar warning receiver for MiG 23 aircraft
- Tempest - Radar warning receiver and self protection jammer for MiG aircraft
- Catch - Airborne signal intelligence systems
- Command information decision support system
- Combat net radio
- Sansar - Bulk secrecy equipment with high grade digital secrecy
- Samvahak - Artillery combat command and control system
- Mission computer for Jaguar
- Mission computer, display processor and RWR for Sukhoi aircraft
- Aircraft arrester barrier
- Bheema - Aircraft weapon trolley
- Relocatable balloon barage system
- Parachutes for various types of aircrafts
- Avalanche victim detector
- Meals-ready-to-eat etc.
- Data concentrator
- De-gaussing and acoustic ranges for measurement of noise and magnetic signature of naval ships
- Humsa – Hull mounted sonar system
- Ushus sonar system
- Processor based moored mine and processor based exercise mine
- Advanced torpedos / Light weight torpedo
- Sectel - Speech secrecy telephone
- 3D central acquisition & surveillance radar
- Weapon locating radar
- BFSR-SR : Battle field surveillance radar - short range.

PROGRESS MADE IN R&D PROGRAMMES/PROJECTS DURING THE YEAR

8.9 Maiden flight of technology demonstrator (TD1) of Light Combat Aircraft (LCA) 'Tejas' took place on January 4, 2001 at Bangalore. Since then, two technology demonstrators and a prototype vehicle (PV1) of LCA are undergoing flight testing. The second technology demonstrator (TD2), joined testing programmes on June 6, 2002. The reduced weight standard LCA prototype vehicle (PV1) joined the testing fleet on

November 25, 2003. Till December 2004, Tejas had completed 321 flight tests including supersonic flights. The equipping of the fourth Tejas aircraft (PV2) is under progress, which is the production standard and is likely to start flying shortly. Design activities on trainer variant LCA (PV5), ensuring commonality with LCA (Navy) are being progressed. The production arrangements to support induction of aircraft are also being planned in parallel, at HAL. Initial Operational Clearance of the Tejas will be obtained by 2007.

8.10 Kaveri engine has undergone development test of more than 1300 hours at Gas Turbine Research Establishment and has successfully completed phase I and II of high altitude testing at M/s CIAM, Russia. First HAL manufactured engine K6 has run to maximum capacity. The compressor surge margin was also demonstrated in testing of core engine (C4) during June 2004. Conversion of current K9 series engines to interim flight standard is presently under progress at GTRE, so as to integrate it with LCA by December 2006. Government has further sanctioned Rs 2800 crore for Kaveri engine programme for all the three variants of LCA and efforts are being made to realise the configuration of Kaveri Engine for production release by 2007.

8.11 The spin-off project ''Kaveri Marinisation" has been taken up and detailed design of the sub-systems had been completed. Kaveri Marine Gas Generator Testing commenced on April 9, 2004 and achieved repeatability in light up within 4-6 seconds and acceleration to idle speed. Performance at idle speed was comparable with design intent. It has generated about 8 Mega-Watt power. The engine has completed 7 hours of testing in the first build and has run upto 100% rpm on November 10, 2004.

8.12 Lakshya – a pilotless target aircraft, has an aerial target system remotely operated from ground to provide aerial target for training of gun and missile crew to air defence pilots for training of all the three services. Five Lakshyas under the limited series production (LSP) scheme, were handed over to Indian Air Force in 2001-02. They have conducted more than 32 flights. Three Lakshya have also been delivered to the Navy. Navy has conducted a total of fourteen flights. Lakshyas have also been handed over to Army and in-service campaigns are being assisted by DRDO.

8.13 Defence Avionics Research Establishment (DARE), Bangalore, a laboratory of DRDO, has made rapid progress in the areas of airborne electronic warfare, airborne processors and testing and evaluation of

electronic warfare (EW) systems. The laboratory has designed and developed radar warning and EW suites for various fighter aircraft of MiG variants, Jaguar and Sea Harrier, to enhance their survivability and mission accomplishment. These systems are under manufacture at Bharat Electronics Limited (BEL). DARE has also pioneered indigenous development in the area of mission avionics which include mission computer for LCA, SU-30 and Jaguar aircraft which have been developed and delivered in required quantities.

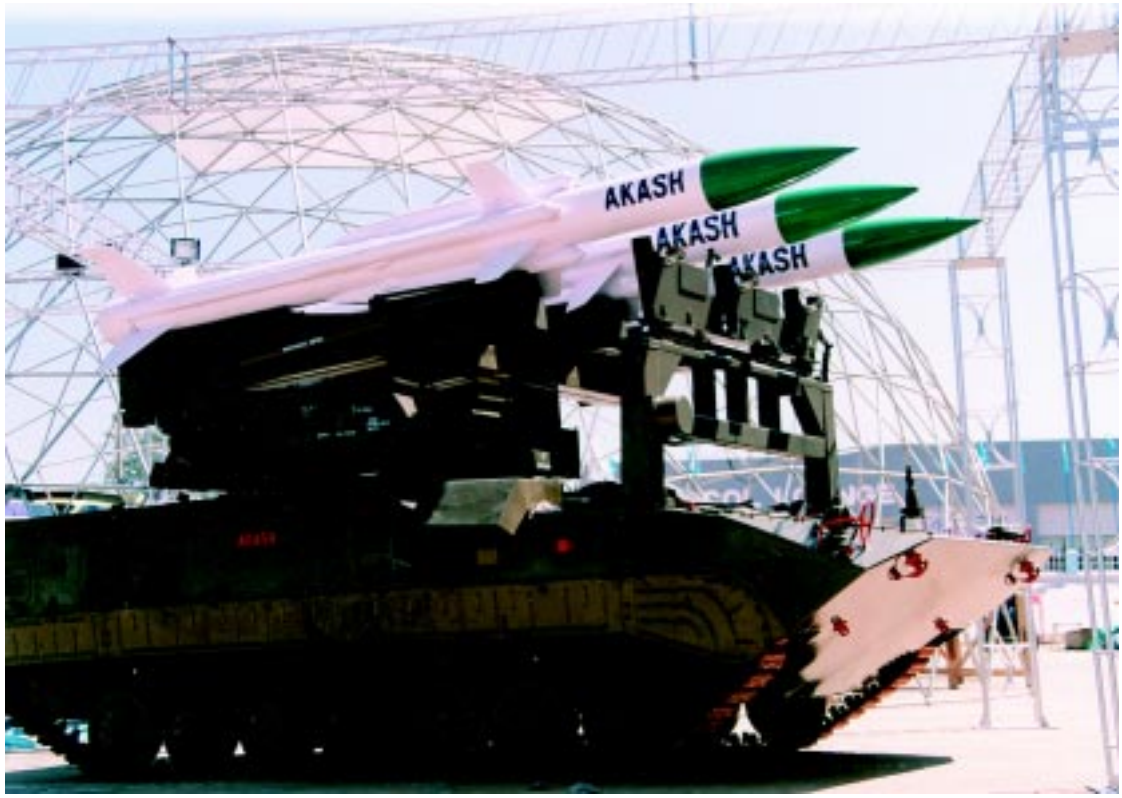
8.14 Centre for Military Airworthiness and Certification (CEMILAC) established in 1994, functions from Bangalore, and is a nodal point for certification and airworthiness clearance of military aircraft and airborne systems. There are fourteen regional centres for military airworthiness (RCMA) spread all over the country and are located at various divisions of HAL, R&D establishments and Base Repair Depots (BRDs) to ensure concurrent airworthiness during design, manufacture and overhaul of aircraft and its systems. CEMILAC carries out the design evaluation and airworthiness certification at par with similar organisations world wide.

8.15 Airborne Early Warning and Control (AEW&C) Programme costing Rs. 2000 crore has been sanctioned by Government to Centre for Air Borne Systems (CABS), Bangalore. Development of one laboratory prototype and one engineering prototype with operational AEW&C systems capability is envisaged. Public Sector Undertakings (PSUs), academic institutions and private firms are participating in the development activities. Lightning test facility has also been established at CABS, where systems of indigenous programmes like Tejas, Advanced Light Helicopter (ALH), Intermediate Jet Trainer (IJT) and Saras have been successfully tested.

8.16 Aerial Delivery Research and Development Establishment (ADRDE), a DRDO laboratory at Agra, has supplied and installed 4 sets of aircraft arrester barriers (20 ton class), as a part of an IAF indent. Pilot parachutes (for different types of IAF aircraft), brake parachute for MiG-29 (high altitude version) and weapon delivery parachutes were developed/delivered. A state-of-the-art combat free fall parachute system has been developed. For the first time, ADRDE, Agra, has developed a parachute recovery and floatation system for recovery of the re-entry capsule for space recovery experiment programme of ISRO. The system has proven itself during various phases of trials, like dummy drops from AN-32 aircraft, high altitude trials from helicopter with actual capsule weight. The final and complete system trial is planned in December 2005.

8.17 Trishul is a low level quick reaction surface-to-air missile for all the three Services. During 2003-04, seven consecutive successful flight tests were conducted, amply demonstrating the accuracy of the guidance system. The landmark achievement was total destruction of a remotely piloted aircraft target through detonation of warhead on March 25, 2004. The production version of launcher and radar vehicle 'Trishul ground electronics and radar vehicle' (TGERV) for Air Force has been realised. The TGERV has been upgraded during the last few months and maiden flight using these production version of ground systems was successfully conducted on September 15, 2004. As per requirements of IAF, the range of Trishul has been enhanced.

8.18 Flights of Akash, air-to-air weapon system with warheads in missions against single targets, have been conducted successfully. Subsequently, simultaneous multi-target engagement capability of Akash weapon system was also demonstrated against two live targets. Consistent performance of propulsion, control and guidance systems has been demonstrated in the last ten consecutive flight trials. Group control centre has been realised. The missile and various ground systems have been sourced from production work centres in public and private sector. The qual-



Akash missile system on Display at Aero India 2005

ity requirements for these systems have been finalised.

8.19 Nag, the third generation anti-tank guided missile has undergone five guided flight tests during the year 2004. One flight test conducted on October 11, 2004 was in full operational configuration with live warhead. Performance of the target acquisition system was also conclusively established during the year. Development of prototype ALH-Nag launcher has been completed.

8.20 Agni-I and Agni-II, medium range missiles have been successfully flight tested in July-August 2004. Both the missile systems have been accepted for induction into the Armed Forces.

8.21 BrahMos, the world's best supersonic cruise missile, has been developed by the joint effort of Indian and Russian scientists. This missile is the leader in the family of cruise missiles, and is unique to fly at a speed of 2.8 times the speed of sound. The missile can be launched from multiple platforms – ship, submarine, land mobile launchers and aircraft against ship and land targets. Land version of BrahMos was test fired successfully in December 2004. BrahMos is being inducted into the Indian Navy and has entered serial production phase.

8.22 Processor for Aerodynamic Computation and Evaluation (PACE++), a 128-node parallel processing system has been designed by ANURAG, a laboratory of DRDO, for Indian Institute of Science (IISc), Bangalore. It was dedicated to the nation by the President of India, in January 2004 at IISc, Bangalore. An indigenous desktop computer has been realised based on general-purpose microprocessor, called Abacus. A 16-node Abacus processor based prototype parallel processing system has also been developed.

8.23 After the successful development and evaluation by users, the Artillery Combat Command and control system (ACCCS) is undergoing in limited series production at BEL for 6 regimental systems for the Army. The Army has placed an order for one test-bed corps-level mark II system on BEL under project Shakti.

8.24 125 mm fin stabilised armour piercing discarding sabot (soft core, Fsapds) ammunition Mk-I for use with tank T-72 is under production. Development of Mk-II version of this ammunition with enhanced fire power (lethality) has been completed and user trial has been successfully conducted.

8.25 Armament Research and Development Establishment (ARDE), Pune has also developed a under barrel grenade launcher (UBGL) compat-

ible with rifle 5.56 mm INSAS and AK-47. Based on the performance, the user has recommended its introduction into Service.

8.26 The present generation of strategic missiles require composite propellant grain in case bonded mode for enhanced performance of the propulsion system. Technology for the processing of case bonded motor has been developed with better burning characteristics.

8.27 In air-to-air missiles, low temperature properties of propellant become highly critical for reliable performance of the missiles. To meet both energetic and elongation parameters solid propellant formulations have been developed.

8.28 Naval Science and Technological Laboratory, Visakhapatnam, has developed helicopter fire control system and torpedo electronics for ALH.

8.29 Design and development of torpedo detection and decoy system has been taken up jointly by Naval Physical Oceanographic Laboratory (NPOL) and Naval Scientific and Technological Laboratory (NSTL). NPOL has completed the design of the towed decoy and array. The system would be ready by December 2005. Acoustic, radar cross-section and infra-red signature prediction and management facility have been established. Design and development of low frequency dunking Sonar has been taken up.

8.30 Heavy Vehicle Factory (HVF), Avadi, has produced and delivered five MBT Arjun tanks out of the 124 ordered under the guidance of CVRDE, which is the authority holding sealed particulars (AHSP). These five tanks have been handed over to the Chief of Army Staff by the Raksha Mantri on August 7, 2004. Transfer of technology is at an advanced stage. Nine more Arjun tanks are likely to be produced by mid 2005.

8.31 Production of combat improved Ajeya (CIA) tanks, with various modernisation schemes is in full swing at HVF. About 40 CIA Ajeya tanks, fitted with explosive reactive armour (ERA) for enhanced protection and accurate GPS navigation system have rolled out from HVF. Sustained efforts are underway to integrate other improvement schemes like integrated fire detection and suppression system.

8.32 Ordnance Factory, Medak (OFMK), have produced 168 number of carrier mortar tracked vehicle out of the 198 ordered. An indent for production of 50 number of armoured ambulance, developed by DRDO on BMP II chassis, has been placed on OFMK. All technical assistance is being provided by CVRDE to production and inspection agencies for production of pilot sample of armoured ambulance.

8.33 Semi-active laser homing missiles have been successfully demonstrated from the main gun of MBT Arjun. Mobile telemetry station, generator vehicle, special target fixture and other test equipment required for the firing demonstration of Lahat missiles in MBT Arjun were developed for the purpose. Firing capabilities of the experimental tank 'Tank X' were confirmed during its evaluation in summer of 2004. It is being integrated with higher HP engine for improved automotive performance.

8.34 First prototype of futuristic infantry combat vehicle (ICV)- Abhay, as a technology demonstrator, has been realised with indigenous automotive systems including state-of-the-art hydro-pneumatic suspension system. Indigenously developed composite, titanium and high hardened armour steel have been used for desired protection levels. The turret incorporates a mix of weapon systems backed up by indigenous fire control and gun control systems to destroy potential targets.

8.35 First pilot vehicle of armoured amphibious engineer reccee vehicle on BMP-II, has been cleared by the Army. Three vehicles are expected to be ready for handing over to Army by mid 2005, out of the ordered 16 Recce vehicles. Order for six vehicles of armoured amphibious dozer (AAD) on BMP-II has been placed by Army. Vehicles will be offered to Army for clearance by the middle of 2005.

Futuristic Infantry Combat Vehicle 'ABHAY' (Armoured Prototype)

8.36 Five sets of Sarvatra and four numbers of BLT on T-72 tanks, ordered for limited series production, have been completed and handed over to the Army. Balance 6 numbers of BLT will be made ready after receipt of BLT Carrier Vehicles from HVF, Avadi.

8.37 Snow and Avalanche Study Establishment (SASE) of DRDO has upgraded conventional observatories to the state-of-the-art weather stations. Fifteen new automatic weather stations have been installed in western Himalaya. Techniques based on neural network, fuzzy logic etc have helped in accurate meteorology and avalanche forecasting for the civilian population and army troops deployed in snow bound regions. Issue of regular avalanche forecast and avalanche safety/awareness programmes has helped in saving precious lives. SASE has prepared avalanche hazard 'Data Cards' using remote sensing and GIS techniques for the Army. These cards are handy, easy to refer and contain track profile duly marked with avalanche sites and salient information about the area, including digital terrain model.

8.38 Samyukta is an electronic warfare (EW) programme for Army. The first production series unit of control center (CC) block on the communication segment has been fielded. The non-communication (non-com.) entities have been evaluated and demonstrated. The unit is being shifted for field evaluation.

8.39 Sangraha is an indigenous EW programme for Navy. Various EW systems have been productionised by BEL and installed on various platforms. Ellora, electronic support measure (ESM) system has also been completed.

8.40 Samvahak is a Core to Battalion level decision support system to collect, collate, process and disseminate intelligence and logistic information to Army Commanders. The software has been ported at field stations and is under exploitation.

8.41 A new generation Nuclear Biological and Chemical (NBC) permeable suit based on the state-of-the-art technology and having three times more absorption capacity than the MK-I version has been developed. The suit is intended to be used by the troops operating in chemical warfare agent contaminated environment. Salient features include its light weight and flame retardation and fluorocarbon treatment. Its trials have been completed successfully.

8.42 Defence Metallurgical Research Laboratory, Hyderabad, have established processing route for semi-finished products and also standardised the technologies for production of the finished components for Kaveri engine. The platinum alloy Ti-600 developed, is at an advanced stage of type certification.

The finished components are being evaluated. Two indigenous types of steel for naval applications have also been developed. The laboratory has developed an industrial processing cycle keeping SAIL's existing facilities and perspective planning in view. The Indian Navy has placed an order worth Rs. 200 crore for above steel.

8.43 The NBC recce vehicle based on BMP-II has been developed by DRDO for conducting survey of radiological and chemical contaminated areas. This vehicle has nuclear sensors as roentzenometer, portable dose rate meter, pocket dosimeter, Radio Photo Lumiscence (RPL) locket etc. The chemical warfare agent detection is performed with M-90 and portable gas chromatograph. This vehicle has the provision to collect samples from contaminated area for laboratory analysis purpose.

TECHNOLOGY DEVELOPMENT / INNOVATION

8.44 The Photonics phase II programme for development of devices and systems based on photonics technologies has been taken up by DRDO. The technology up-gradation will include development of laser diode arrays, tunable infra-red laser source, adaptive-optical imaging, pointing & tracking of targets and target recognition .

8.45 A maritime patrol radar for Naval use has been designed and developed for detection of sea surface and airborne targets like boats, ships, frigates, sea skimming missiles, low flying aircrafts and submarines under sea clutter and rain. Qualification trials with calibrated targets has been completed, and the radar met all qualitative requirements in terms of target detection. Integration of the radar on Dornier is under progress.

8.46 Focal plane array (FPA) imager at millimeter wave frequencies for detection of targets in severe atmospheric conditions like fog/smoke/dust has been developed by DRDO.

8.47 Aqueous extracts from ash of two indigenous edible plant materials, *Musa albasianaa* and *Phaseolus mungo* (HK-1 & HK-2) has been used by DRDE, a DRDO laboratory for removal of fluoride content in ground water. Results showed removal of 60-62% fluoride content by these extracts. A new system for *Vibrio cholerae* strain type has been developed which is extremely useful for molecular epidemiological investigation of cholera outbreaks. Leptospirosis disease diagnostic kits were successfully evaluated by WHO and orders were placed by WHO for procurement of these kits. Polymerase chain reaction (PCR) based detection system has been developed for *B.mallei,* a causative agent of glanders disease in equines. Test kit developed for the detection of

cold slaughtered meat and to test the microbial quality of meat has been supplied to different units for evaluation and found to be very useful at Remount Veterinary Corps (RVC) units.

BASIC RESEARCH

8.48 Four research boards are functioning in DRDO to provide thrust to basic research in areas of strategic importance. The boards are: Aeronautics Research and Development Board (AR&DB); Armament Research Board (ARMREB); Naval Research Board (NRB) and Life Sciences Research Board (LSRB). These boards promote research in collaborative mode with academic institutions and other national R&D laboratories, through approval, funding and monitoring of grants-in-aid projects.

8.49 The AR&DB started functioning in February 1971 and has funded around 1280 projects to 35 institutions since inception. It is currently funding 100 projects at 25 academic and research institutions. It has a funding ceiling of Rs. 5 crores per year in upstream areas of aeronautics R&D. Three centres of excellence have been set up at Indian Institute of Technology, Mumbai, National Aerospace Limited, Bangalore, and Indian Institute of Science, Bangalore, in the area of systems design and engineering, composite structures technology and Computational Fluid Dynamics (CFD) with its associate centres at the IITs at Kanpur, Mumbai and Kharagpur. AR&DB website can be accessed through drdo.com.

8.50 Under Armament research board, 53 projects have been sanctioned, covering the field of high energy materials, sensors, ballistics, combustion and detonics, modeling/ simulation and other fields related to armaments, to various academic institutions and other R&D organisations. Out of these, 26 projects have been successfully completed and the remaining are being pursued.

8.51 Life sciences research board is continuing its policy of supporting, expanding and deepening the knowledge base of life sciences. A total of 14 projects have been sanctioned to academic institutions taking the total number of sanctioned projects to 73. Some of the projects supported by LSRB are for rapid diagnosis of infectious diseases, engineering resistance to pod borer in pigeonpea, mycorrhizal technology for tropical tuber crops, hospital waste, anti-fouling strategies of marine organisms etc.

8.52 Naval research board continued its support of basic research applicable to naval technologies. Eight new grants-in-aid projects were

sanctioned to academic institutions at a cost of Rs.2.42 crore. Twenty two out of forty eight projects have been completed.

EXTRAMURAL RESEARCH & INTELLECTUAL PROPERTY RIGHTS

8.53 To enhance availability of research opportunities to young science and technology researchers for widening knowledge base, interaction of DRDO with academic community has been vastly strengthened. The enhanced extramural funding coupled with intellectual resources available in academic institutions will catalyse the generation and growth of new ideas leading to innovative technologies. The increased flow of funds will galvanise research and scientific temper in the country. Imagination driven research projects form the focus of extramural research scheme and are supported under the scheme.

8.54 With the above in view, the extramural research scheme has enlarged its academic reach and due care has been taken to ensure availability of intellectual and infrastructural resources. During the current year, 21 new projects with an aggregate value of Rs. 5 crore have been sanctioned. The projects are spread over 19 academic/research institutions of repute in the country. During the remaining part of the financial year, approximately 25 more projects are expected to be approved at an estimated cost of Rs. 11 crore. These projects are likely to be spread over several academic/ research institutions.

8.55 To accord selective protective legal cover to intellectual property generated through research activities of DRDO, 85 IPR applications (including 12 in foreign countries) were filed on products/processes in the field of materials, electronics, bio-medical sciences and food technology.

8.56 During the last one year, 27 patents (including three in foreign countries) were granted and 28 patents were accepted for grant. In addition, one copyright was registered in India. To promote IPR awareness, seven awareness programmes/ workshops/patent-clinics were held in different laboratories.

SUPPORT TO SERVICES

8.57 DRDO has developed a smart vest with the capability to monitor ECG, EMG, GSR and body temperature with the integrated sensor and it is under the process of demonstration in field conditions.

8.58 Combat Free Fall (CFF) protective clothing and equipment consisting of jump suit, gloves, boots, goggles, helmet, jack knife and CFF oxygen system have been developed

by DRDO for paratroopers. These have undergone technical trials and are expected to be handed over to the users by mid 2005.

8.59 The simulation trials of the integrated life support system (ILSS) for Tejas (LCA) have been completed successfully and the system is ready for airworthiness tests. The acceptance trials of the submarine escape set (SES) have also been conducted. The indigenous test equipment for SES, developed for the first time in India has been successfully demonstrated to Naval Commands.

8.60 Bulk order for production of Canister (6.68 Lakhs), Personal decontamination kit (3.34 Lakhs) and Tri Colour Detector Paper (TCD) (3.34 Lakhs) for the Army has been completed.

8.61 A multi-insect repellent spray formulation developed by DRDO has been accepted and recommended by Director General Armed Forces Medical Services for use in Defence services for personnel protection from the painful bites of blood sucking insects.

8.62 DRDO has fabricated and supplied temperature controlled biodigesters and metal biodigesters to the Services.

8.63 Different types of traditional ragi food products viz., sweetened millet mix, spice millet mix and nutra cereal mix chapatis have been developed and tried at different units.

8.64 Different types of appetizers viz., pepper munch, lemon munch and jeera munch have been developed by DRDO. Trials have been conducted at units located at high altitude. These appetizers have been liked by the troops.

HUMAN RESOURCE DEVELOPMENT

8.65 DRDO has adopted a dynamic and systematic approach for manpower development. A human resource consultative body has been constituted in DRDO to achieve an integrated approach for the development of HRD related policies and strategies for implementation in organisational systems.

8.66 A manpower planning board is functioning to look after the management of scientific, technical, administrative and allied cadres. Manpower requirement in all categories for various DRDO projects has been reviewed through various mechanisms like rationalisation of cadre structure, incentive schemes, training policies, enhanced promotional opportunities, exit interviews. The organisation has endeavoured to ensure optimum utilisation of human resource, apart from attracting and retaining best talents.

8.67 To cater for the present and futuristic scientific and technical

knowhow requirements for its projects, various technical and non-technical programmes/courses have been organised. Under research and training scheme, a total of 42 personnel were sponsored to undergo M.E/ M.Tech courses in various disciplines at IITs and other institutions of repute.

8.68 Similarly, under the continuing education programme, 152 courses have been organised in different disciplines for various categories and 19 more are to be conducted by March 2005. DRDO has two training institutes namely, Institute of armament technology which is now a deemed university at Pune, to meet the advanced technological training needs in the area of armament, and the Institute of Technology Management at Mussoorie to meet the requirement of advanced managerial training for scientists. Currently, a centre at Jodhpur is under development to meet the training needs for administration and allied cadre. To implement the policies, result oriented HRD cells have been set up in all Laboratories/ Establishments of DRDO.

INTERACTION WITH INDUSTRY AND TRANSFER OF TECHNOLOGY

8.69 DRDO maintains close liaison with the industry by way of transfer of technology. The problems faced by industries in the processing and production of various products are solved by giving proper advice/ guidance. Analytical and test facilities available at the laboratories are also being extended to industries to upgrade the industrial base in the country.

8.70 In its resolve to making the defence technologies accessible to common man in addition to their use by defence services, DRDO, during the year 2004-05 transferred a large number of its state-of-the-art technologies, in the fields of NBC - canisters, gloves, overboots, auto-injectors, filters; life sciences – herbal products namely anti-leucoderma, anti-eczema, anti-toothache, herbal beverage from seabuckthorn, herbal tea from herbs; arsenic removal filters, mosquito repellant spray and cream, 2 deoxy-D-glucose 2DG, field stretchers, critical care ventilator, retort pouch process, nutri bar, preserved and flavoured chapaties. These dual use technologies have been transferred to over 40 entities in the private sector for productionisation and commercialisation.

9

Inter-Service Organisations

Lamp Lighting Ceremony of School of Nursing Army Hospital, Delhi Cantt.

Inter–Service Organisations

9.1 The following Inter-Service Organisations function directly under the Ministry of Defence :-

(i) Military Engineer Services

(ii) Armed Forces Medical Services

(iii) Directorate General of 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) School of Foreign Languages

(x) History Division

(xi) National Defence College

(xii) College of Defence Management

(xiii) Defence Services Staff College

(xiv) Ministry of Defence Library

MILITARY ENGINEER SERVICE (MES)

9.2 The largest construction agency of the country, the Military Engineer Services (MES) provides works cover in 450 stations spread across the country in peace areas as well as in forward areas. It is the Premier Engineering wing of the Defence Services which provides works services to Army, Navy, Air Force, Defence Research and Development Organisation, Directorate General of Quality Assurance, Ordnance Factories, Coast Guard, Kendriya Vidyalaya Sangathan and Central and State Government undertakings. Today, it handles annual workload, which exceeds Rs.3300 crores.

9.3 MES functions under the overall control of Engineer-in-Chief, who is the adviser to the Ministry of Defence and the three Services on construction engineering. It is structured to design works, which are executed under the management of Directorate General Of Works. It has an integral multi-disciplinary team of architects, civil, electrical and mechanical engineers, structural designers, quantity surveyors and contract specialists for planning, designing and supervision of works.

9.4 MES has specialized in the wide spectrum of civil works, ranging from conventional buildings and factories to sophisticated complex

laboratories, marine works, jetties, dockyards, wharves, workshops, slipways, air fields, roads, blast pens, etc. It also provides sophisticated infrastructural services like air conditioning, cold storage, water supply, compressed air, sewage treatment plants, lifts, cranes, etc. for the Defence Services.

9.5 Following important time bound projects were executed by the MES during the year:

(a) INHS ASHVINI: The modernization works of Hospital facilities in INHS ASHVINI were executed in two phases at a cost of Rs.93.27 Crores. The hospital was handed over to users on December 4, 2004.

(b) NAVAL ACADEMY, EZHIMALA: Naval Academy Ezhimala is one of the major projects currently being executed by MES on the Western Coast. The project envisages construction of administrative buildings, classrooms, laboratories, auditorium and library, cadets' mess and living / married accommodation and other OTM buildings at a cost of Rs.503 Crores. Cadets' mess and living accommodation have already been completed and other works are in various stages of progress.

(c) PROJECT EVE DAT: MES has been entrusted with the work of resurfacing and repairs of the runway alongwith allied services at Aini Airfield in Tajikistan at a cost of Rs.55.26 Crores. The work is to be completed in two working seasons and is being executed satisfactorily.

9.6 Thrust Areas: The following have been the thrust areas during the year:-

(a) Replacement of Bulbs by Fluorescent Tubes & CFL: Provision of fluorescent tube lights including Compact Fluorescent Lamps in lieu of incandescent lamps has been taken up in residential accommodation. This will result in substantial savings in electricity consumption.

(b) Rain water harvesting: In order to conserve water, rain water harvesting has been introduced in MES and this will help in recharging ground water and raising existing water table.

9.7 Married Accommodation Project (MAP): Phase 1 of Married Accommodation Project sanctioned for construction of 60302 dwelling units for the three services, currently under way, has entered the construction phase in sixteen stations, with an estimated construction cost of Rs.637.89 Crores. Of the 60302 houses scheduled for construction in Phase I, 50197 dwelling units will be

for Army, 2808 for Navy and 7297 for Air Force.

ARMED FORCES MEDICAL SERVICES (AFMS)

9.8 The primary aim of the Armed Forces Medical Services is to preserve and promote the health of the Armed Forces personnel and their families, by prevention of diseases and care and treatment of the sick and wounded personnel.

9.9 The Armed Forces Medical Services (AFMS), consisting of the Army Medical Corps (AMC), the Army Dental Corps (ADC) and the Military Nursing Services (MNS), provide comprehensive health care to the serving Armed Forces personnel, their families and dependents, numbering approximately 6.6 million.

9.10 In addition, para military organizations like Assam Rifles, Rashtriya Rifles, Coast Guard, DRDO and Border Road personnel, while posted in the field and other central police/intelligence forces operating in the disturbed areas of the country, are provided treatment by the Armed Forces Medical Services. The Armed Forces Medical Services are also providing medical care to the Ex-servicemen and their dependents to the extent possible, especially during the transitional period before the establishment of the Ex-Servicemen Contributory Health Scheme (EGHS).

9.11 The Armed Forces Medical Services have an impressive record of rendering aid to civil authorities, whenever called upon, during epidemics, natural calamities especially in inaccessible and difficult areas. In addition to this, the well trained force of medical, dental and paramedical personnel provide first aid to the civilians in emergency before referring them to the nearest civil medical establishment.

Infrastructure of AFMS

9.12 The Armed Forces Medical Services are the largest and amongst the best organized health care delivery systems in the country. There is a network of Regimental Aid Posts manned by doctors, supported by 89 field ambulances. Apart from the facilities made available in combat zones, 127 hospitals of varying sizes are spread over the length and breadth of the country, with a highly organized referral system. While the peripheral hospitals have basic specialized facilities, the eight Command/Army Hospitals are equipped with super specialty facilities and with state-of-the art equipment.

Medical Research

9.13 The Directorate General Armed Forces Medical Services looks after the research activities in the Armed Forces Medical Services (Army, Navy and Air Force). The Armed Forces

Medical Research Committee meets every year at Armed Forces Medical College, Pune in the month of February, to discuss and select new research proposals and also to review progress of on-going projects.

Conferences and Continued Medical Education Programmes

9.14 (i) The Asia Pacific Military Medicine Conference-XIV was held in Brisbane, Australia during May 9-14, 2004. Director General, Armed Forces Medical Services, along with two other officers, participated in the Conference and presented papers.

(ii) The Annual International Committee of Military Medicine Conference was held at Washington DC during September 12-17, 2004. Director General Armed Forces Medical Services, along with two other officers, attended the same.

(iii) 64 'in-house' Continuous Medical Examinations, updates, workshops, seminars etc., approved by this Directorate, were organized at various Armed Forces Hospitals.

(iv) Armed Forces Medical Officers attended various conferences and Workshops of 127 approved civil bodies all over the country in their official capacity and as member delegates.

Publication of the Directorate General Armed Forces Medical Services Memorandum/ DGAFMS Publication

9.15 (i) One new DGAFMS medical memorandum is under publication.

(ii) Two new draft DGAFMS medical memoranda have been proposed.

(iii) Two revised draft DGAFMS medical memoranda are under publication

Interactive Reciprocal Exchange of Medical Journal Armed Forces India (MJAFI) with AFMS of other Countries

9.16 Presently, Medical Journal Armed Forces India (MJAFI) brought out by the Armed Forces Medical College, Pune is dispatching the medical journal of Armed Forces in India to nine countries. Proposal for making arrangements for reciprocal exchange of MJAFI with some more countries has been initiated.

DIRECTORATE GENERAL OF DEFENCE ESTATES (DGDE)

9.17 The Directorate General Defence Estates are the nodal executive agency of the Ministry of Defence for procurement of immovable properties for defence purposes, by way of

acquisition, transfer, requisitioning and hiring. Presently there is a large number of acquisition/transfer of land proposals at hand in different states.

9.18 There are 62 Cantonments in India, which are located in 19 states and the National Capital Territory of Delhi. The Cantonment Boards are autonomous bodies functioning under the control of Ministry of Defence as per the provisions contained in Cantonments Act, 1924. Cantonment Boards comprise elected representatives besides ex-officio and nominated members and a balance is maintained between elected and official members. The Station Commander is the President of the Cantonment Board. Supervision and control over the working of these bodies is exercised through the General Officer-in-Chief of the Commands at the intermediate level and by the Central Government through Director General Defence Estates/ Ministry of Defence at the apex level.

9.19 The resources of the Cantonment Boards are very limited as the bulk of the property in the Cantonment is Government owned, on which no tax can be levied. Boards, however, receive service charges in respect of Central Government properties. Due to restrictions neither industries can come up nor can trade and business achieve any significant growth in cantonment areas. The Central Government provides financial assistance by way of grant-in-aid to a certain extent to augment its revenues.

9.20 To improve the overall performance and to inculcate a spirit of unity, a cultural meet of all Cantonment Board Schools was organized during the year. Children from different parts of the country studying in Cantonment Board Schools participated enthusiastically in the meet.

9.21 To improve the human development aspect, most of the Cantonment Boards are maintaining hospitals or dispensaries. These hospitals cater to the needs of civil population of the Cantonment as well as the adjoining areas. The total number of hospitals / dispensaries maintained are 69. Maintenance of Primary Schools is also undertaken by the Cantonment Boards according to local requirements. A number of Cantonment Boards are also maintaining Higher Secondary Schools and Intermediate/Junior colleges. Total schools and colleges maintained by Cantonment Boards are 189 in number.

9.22 The Director General, Defence Estates functions as an adviser to the Ministry of Defence on land and Cantonment Board matters. DGDE is an attached office of Ministry of Defence, responsible for executive functions relating to hiring, requisition or acquisition of land and buildings to meet the defence require-

ments. The defence land considered temporarily/permanently surplus is also disposed of by way of licence, lease or transfer to other Central Government Departments/State Government / PSUs or to reputed schools/institutions or to ex-servicemen. While the functions of the Directorate General, Defence Estates in regard to the Cantonment Boards relate to the municipal administration of the Cantonments through Principal Director/Directors, the Command and Cantonment Executive Officers, management of its land, custody of land records, procurement of immovable property is carried out through Defence Estates officers. Out of the 17.31 lakh acres of defence land, 0.68 lakh acres of land is under direct management of DGDE.

OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER (CAO)

9.23 The office of Chief Administrative Officer is responsible for providing civilian manpower and infrastructural support to the Services Headquarters and the Headquarter offices of Inter-Services Organisations (ISOs) under the Ministry of Defence. Joint Secretary (Training) discharges the functions of the Chief Administrative Officer (CAO) and Director (Security) as well. In relation to security, he oversees the work of the Chief Security Officer.

9.24 The functioning of CAO's Office is discharged by the following six Divisions:

(i) Administration Division

(ii) Personnel Division

(iii) Manpower Planning and Recruitment Division

(iv) Training Coordination and Welfare Division

(v) Finance and Materials Division

(vi) Estates and Works Division

9.25 The Administration Division provides administrative cover to about 10,000 civilian employees employed in Armed Forces Headquarters and 26 Inter-Services Organisations. A Grievances Cell is functioning within the Administration Division to examine the grievances of serving/retired Armed Forces HQs civilian employees and to ensure their speedy redressal.

9.26 The Personnel Division provides civilian manpower to the Service Headquarters and Inter-service Organisations and deals with the management of their manpower.

9.27 Manpower Planning and Recruitment Division is responsible for framing policy on recruitment rules in consultation with DOP&T and effecting direct recruitment against all vacant civilian posts in the Service Headquarters and ISOs through prescribed channels.

9.28 Finance and Material Division provides material support which includes procuring and provisioning of office equipment, stores, furniture and stationery to all offices of Army Headquarters and ISOs.

9.29 The Defence HQ Training Institute functioning under the Training Coordination and Welfare Division of CAO's Office caters to the training needs of the civilian personnel posted in Service Headquarters and in Inter-Service Organisations.

9.30 Estates & Works Division performs the Estate functions in respect of residential accommodation of Service Officers posted at Armed Forces Hqrs.

9.31 The welfare of Civilian employees in Service Headquarters and Ministry of Defence is being looked after by CAO's office. Armed Forces Headquarters/Inter-Services Organisations Welfare Fund and Defence Civilian Medical Aid Fund (DCMAF) provide financial help to the employees, during acute distress.

9.32 The Chief Security Officer and the personnel under his command ensure the physical security of the office buildings in the Defence Security Zone under the supervision of JS(Trg) and CAO. Security of the buildings has to be ensured to preclude breach of any physical security in the Zone. Efforts are also made through briefings to sensitize officers and personnel on guarding of security of information.

DIRECTORATE OF PUBLIC RELATIONS (DPR)

9.33 The Directorate of Public Relations is responsible for the dissemination of information to the media about the landmark events, achievements and major policy decisions of the Ministry, Armed Forces and Inter Services organizations under the Ministry of Defence. The Directorate with its headquarters in New Delhi and 25 regional offices across the country is the nodal agency for providing media support and services so as to ensure adequate publicity in print as well as 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.

9.34 The Directorate is responsible for bringing out a fortnightly journal, *Sainik Samachar* for the Armed Forces in 13 languages (Assamese, Bengali, English, Gorkhali, Hindi, Kannada, Malayalam, Marathi, Oriya, Punjabi, Tamil, Telegu and Urdu) and the Broadcasting section of the Directorate coordinates *'Sainikon Ke Liye',* a 40 minute programme that is broadcast daily on All India Radio for the Armed Forces personnel. The Directorate's Photo Section provides

photographs of all defence-related events in the print media.

9.35 Among the major events covered by the Directorate in 2004-2005 were the massive relief and rescue operations carried out by the Army, Navy and Air Force in the wake of the *Tsunami* disaster in December 2004. A number of aircraft, helicopters and sea vessels were pressed into service at short notice. Tonnes of relief material including food, clothing, medicines, tentage and drinking water were airlifted to bring succour to the affected populace. Visits of media persons to *Tsunami* affected areas in India and neighbouring countries were also facilitated ensuring adequate publicity to the disaster management response of the Armed Forces and the efficiency displayed in monitoring all relief measures.

9.36 Wide publicity was given to the Government's decision to reduce troops in Jammu & Kashmir as a confidence building measure following some improvement in the security situation in the region as a result of measures taken by the armed forces, and with particular reference to relations with our neighbours.

9.37 Other important events that were publicized were the creation of the Department of Ex-Servicemen Welfare, induction of (Main Battle Tank) MBT Arjun, rolling out of indigenously assembled Sukhoi-30 MKI aircraft, Bhishma T-90S tanks and the successful test flights of Agni-II, Prithvi-III and Brahmos missiles.

9.38 Major events that were covered pertaining to the Army ranged from de-induction of the troops in Jammu & Kashmir, Major R.S. Rathore's winning feat at the Olympics, the participation of Indian troops in peacekeeping operations in Eritrea and Ethiopia, joint exercises with US troops and the expedition to Antarctic which were given adequate publicity. Other events such as the Army Commanders' Conference and the visit of women military observers to Congo got satisfactory coverage in the print media. Media tours were organized to Thoise to cover the President's visit there and also to the Counter Insurgency & Jungle Warfare School at Vairangte in Mizoram.

9.39 The Indian Navy's main events were duly publicized by the Directorate. The circumnavigation voyage by INS Tarangini, Joint Exercises with the navies of Singapore, France and US and the commissioning of Talwar class ships, INS Betwa were publicised well. Another widely publicized event was scaling of Mount Everest from the north side by the all-navy team that set a world record.

9.40 As far as the highlights of the Indian Air Force are concerned wide coverage was given to the IAF teams

participating in Exercise Cope Thunder in Alaska and the Asian Aerospace Air Show at Singapore, Exercise Golden Eagle in South Africa and UN Peacekeeping Mission to Congo. Wide publicity was also ensured for other major events such as the new world record set by Cheetal helicopter, Fire Power Display *Vayu Shakti* at Pokhran and the rescue of stranded pilgrims due to landslides between Joshimath & Badrinath and also the rescue of 400 school children caught in Brahmaputra floods.

ARMY PURCHASE ORGANISATION (APO)

9.41 Army Purchase Organization in the Ministry of Defence is entrusted with the responsibility of the procurement and timely supply of dry ration items for the consumption of Defence Forces. APO procures rice and wheat through the Food Corporation of India; sugar is allotted by the Directorate of Sugar out of levy quota allocated to various sugar mills. Other items like pulses, animal rations, edible oils, vanaspati (hydrogenated edible oil), tea and milk products are purchased from the Central and State Public Sector Undertakings and various National/State Level Cooperative Consumer Federations, whole milk powder, skimmed milk powder, butter and ghee are purchased through negotiated contracts from National Cooperative Dairy Federation of India. Tinned items like vegetables, fruits, jams, tinned milk, meat and fish products, coffee, egg powder, etc., are procured from registered suppliers including private parties/dealers through open tenders. The indented quantities are procured specially during the flush season when availability is high and prices are low. During the year 2004-05, Rs.772-48 crore was provided to the Army Headquarters for procurement of above items.

9.42 Quality control of the contracted items is ensured by the Composite Food Laboratories under the charge of the Army Headquarters, which, after inspection and acceptance of the tendered commodities, supervises dispatch of goods to different Supply Depots according to requirement.

SERVICES SPORTS CONTROL BOARD

Services Championships

9.43 Services Sports Control Board (SSCB) conducts and co-ordinates various sports activities in the three Services. A total of four teams (Army Red, Army Green, Indian Navy and Air Force) participate in 19 Services championships conducted under the aegis of SSCB.

National Championship

9.44 SSCB is affiliated to 28 National Sports Federations and participates

in 38 national championships including 10 in junior section. Services stood first in athletics, junior hockey, water and polo, triathlon. They were runners-up in boxing and wrestling (Grenadier), and stood third in swimming/diving, kabaddi and taekwondo.

International Championships

9.45 Olympic Games 2004: Olympic Games 2004 were held at Athens, Greece from August 13 to 29, 2004. Five Services' sportsmen and two officials were deputed as part of the Indian contingent. Major Rajyavardhan Singh Rathore won a silver medal in shooting double trap competition.

Major Rajyavardhan Singh Rathore

International Military Sports Council (CISM)

9.46 Board of Directors Meeting: Board of Directors Meeting of International Military Sports Council (CISM) was held at Gaborone, Botswana from November 3 to 8, 2004. During the meeting, preliminary contract for staging 4th Military World Games in India in 2007 at Hyderabad was signed.

Best Services Sportsman

9.47 On the basis of performance in Inter-Services, National and International championships of the preceding year, Naib Subedar Ignance Tirkey of Madras Engineering Group & Centre, Bangalore was adjudged "Best Services Sportsman" for the year 2003-04, and the AVM Jaswant Singh Trophy was presented to him during the Combined Commanders' Conference 2004.

Arjuna Awardees

9.48 Two Services sportsmen namely Major R.V.S. Rathore and Captain Rajesh Pattu, were awarded Arjuna Awards in August 2004 in shooting and equestrian disciplines respectively.

ARMED FORCES FILMS & PHOTO DIVISION (AFFPD)

9.49 The Armed Forces Films & Photo Division is primarily responsible for meeting the requirements of Service Headquarters and other

Defence Organisations with regard to production, procurement and distribution of training films, production of photographs, art work etc to meet the needs of training, weapon trials, security, defence research, intelligence, records and photo & video coverage of ceremonial functions of the Ministry of Defence.

9.50 FFPD has a very rich collection of rare films and photographs dating back to pre-independence years. This material inherited from Britishers is of great historical value and is maintained & preserved in the Central Defence Film Library of this Division. The photographs depict Indian forces in action in various theaters of Second World War, Parades, Ceremonies, Festivals, Personalities and training activities etc. Some important films like, Battle of Britain, Battle of Russia, Battle of China, Desert Victory, Japanese Surrender, Nazis Strikes, Burma Campaign, Churchil the Man, London Victory Parade etc are also held along with many other important films.

9.51 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. The Library holds 570 titles in 35 mm format, 1010 in 16 mm format and 310 in Video formats. During the year, 4031 training Films/Video Cassettes have been distributed to the troops. Till date, 18,429 Colour/ Black & White negatives have been exposed and 26,141 Colour/Black & White photographs have been made. This year Central Reserve Police Force (CRPF) has also made use of 17 training films on various subjects, for training of their personnel. The Vertical Helical Scan (VHS) cassettes were supplied to CRPF authorities on payment basis.

9.52 Keeping the experiences gained during Kargil Operation, three films have been specially made for High Altitude Warfare School this year, to train troops to engage enemy occupying cliff tops in high altitude mountain terrain, operations in glaciated terrain with glacial hazards and skills of warfare in snow bound terrains. Currently, out of elevan training films under production, six films are already completed and five films are at final stages of completion.

9.53 The Mobile Cinema Unit of this Division also procures/distributes Documentary films/ News Magazines of information, cultural and family welfare values to the troops in the forward areas.

SCHOOL OF FOREIGN LANGUAGES (SFL)

9.54 The School of Foreign Languages is an Inter-Services

Organisation under the aegis of the Ministry of Defence. It 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 personnel of the three Services of Indian Armed Forces. 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 Organisations, viz., Border Security Force, Central Reserve Police Force, Into-Tibetan Border Police etc. Besides, civilian students are also admitted for Certificate of Proficiency, Advanced Diploma and Interpretership Courses as per the laid down Government rules.

9.55 The languages taught on regular basis at the SFL are: Arabic, Bahasa Indonesia, Burmese, Chinese, French, German, Persian, Pushto, Russian, Spanish, Sinhala, Tibetan, Japanese, Thai, Malay, Hebrew, Vietnamese and Pak Urdu (on request).

9.56 The courses offered by the SFL are as follows:

(a) Interpretership Course

(b) Certificate of Proficiency Course

(c) Short-term Course.

(d) Advanced Diploma Course

9.57 The Intepretership Course is a full time course. The students are sponsored by the Armed Forces, Ministry of Defence, the Cabinet Secretariat and other Government Departments. School of Foreign Languages is the only Institute in the country where courses in Bahasa Indonesia, Pushto, Thai, Sinhala and Burmese are offered.

9.58 The duration of the Interpretership Course is as follows:

(a)	Bahasa Indonesia	16 ½ months
(b)	Burmese	16 ½ months
(c)	French	16 ½ months
(d)	German	16 ½ months
(e)	Persian	16 ½ months
(f)	Japanese	22 months
(g)	Pushto	16 ½ months
(h)	Sinhala	16 ½ months
(i)	Spanish	16 ½ months
(j)	Tibetan	16 ½ months
(k)	Russian	20 months
(l)	Arabic	20 months
(m)	Chinese	23 ½ months

9.59 The Certificate of Proficiency Course is followed by the Advanced Diploma Intensive Course. Both are part-time courses and of one year duration each. Together, this two year

course is equivalent to the three year Diploma Courses of the Universities.

9.60 Short-term courses are purely need-based programmes. They are conducted as and when necessary, especially for Military Attaches Designates and officers being sent on UN Missions or as per specific needs of user directorates.

9.61 The SFL is the mother organisation of foreign language teaching wings of Defence Institutions where foreign languages are taught. It conducts examinations and issues diplomas to the successful candidates. For IFS probationers, it is obligatory for them to qualify in the Advanced Diploma (IFS) examination conducted by the Institute. The SFL conducts examination in Regimental languages, viz., Nepali at various service units all over the country. Examinations are also held for Dhivehi language. Special proficiency examinations in various foreign languages are conducted for the three services exclusively to assess the assimilation and retention of the languages learnt.

9.62 During the year, the number of personnel who qualified in various examinations conducted by SFL is as follows:

Certificate of Proficiency	88
Advanced Diploma Intensive Course	72
Interpretership	93
Special Proficiency	11
Indian Foreign Service (Prob)	9

HISTORY DIVISION

9.63 Combined Inter Services Historical Section: A Combined Inter Services Historical Section was created on July 13, 1945 to write a detailed official history of World War II, with particular reference to the operations conducted by the Indian Armed Forces. After partition, it served as the Combined Inter Services Historical Section (India and Pakistan). The official history of the Indian Armed Forces in World War II (1939-45) was brought out in 24 volumes by the Combined Inter Services Historical Section (India and Pakistan). On completion of the work it was wound up in 1963.

9.64 Historical Section (India)/History Division: In the meanwhile, Historical Section (India) was established on October 26, 1953, to write and publish the official accounts of the post independence military operations of the Indian Armed Forces. The history of the operations in Jammu and Kashmir (1947-48) was its first assignment. Till now, it has brought out 19 volumes. The Historical Section was re-designated as History Division w.e.f. April 1, 1992.

9.65 Activities: The History Division functions as the record and reference office of the Ministry of Defence and the Indian Armed Forces. Dur-

ing the year 2004-05, about 4000 operational records were received from the Services Headquarters, Units and Formations for permanent retention in the History Division. About 325 service officers and scholars visited the record room to consult records and books in connection with research assignments pertaining to military history. The Division has provided information relating to military history in respect of over 280 queries received from various Units and Formations, and scholars from India and abroad.

9.66 Special Task: During the year 2004 History Division assisted the three editorial teams constituted for updating and editing the histories of Conflict with China 1962 and Indo-Pak Wars of 1965 and 1971.

9.67 Member, Battle Honors Committees: A senior officer of the History Division serves as a member of the Battle Honors Committees of the Indian Army and Air Force.

9.68 Research Fellowships: The Division also provides two Research fellowships for conducting research in military history under the Research Fellowship Scheme of the Ministry of Defence.

9.69 Heraldic Cell: The Heraldic Cell of the History Division assists the three Services Headquarters and the Ministry of Defence by suggesting names for new establishments, designing of crests and badges and coining suitable mottoes for Units/ Formations.

NATIONAL DEFENCE COLLEGE (NDC)

9.70 The National Defence College (NDC) was inaugurated on April 27, 1960 by the first Indian Prime Minister, Pandit Jawaharlal Nehru. Located in the heart of Delhi, the College has grown from strength to strength in the last 44 years and has established a name for itself as a centre of excellence on matters pertaining to National Security and Strategic Studies. It has evolved into an institution that seeks to comprehend and interpret the dynamics of India's security strategy in a world of transition. The institution endeavors to provide an academic and professional setting that is conducive to higher learning and mental stimulation. As a pre-eminent joint military educational institution of the Defence Forces, it explores every domain of National Security.

9.71 The NDC runs a 47-week Course every year for selected senior Defence and Civil Services officers from India and Defence officers from friendly foreign countries. The endeavor is to prepare the future policy makers for increased responsibility through a programme of studies in Strategies and Structures for National Security. The Course is struc-

tured to cover socio-political, economic, science, technology, international security environment, global issues, India's strategic/immediate neighbourhood and military dimensions of national security. It is a matter of great pride that, Alumni of the NDC have risen to high positions in India as also in foreign countries.

COLLEGE OF DEFENCE MANAGEMENT (CDM)

9.72 Institute of Defence Management, Secunderabad, was establishment in 1970. It was renamed as the College of Defence Management (CDM) in 1980. The CDM conducts training programmes oriented towards the application of management concepts and techniques to defence situations in all facets: operations, logistics, intelligence and training. The prominent programmes conducted by CDM are Long Defence Management Course, Senior Defence Management Course, Defence Management Seminar and Assignment Oriented Management Training Programme. The College also undertakes management consultancy studies. The college is equipped with modern and state-of-the-art training aids.

DEFENCE SERVICES STAFF COLLEGE

9.73 The Defence Services Staff College (DSSC) is one of the oldest military institutions in India. It was established in 1905 in Deolali and has been functioning at Wellington since 1950. The DSSC imparts training to middle level officers of the three Services besides a few civilian officers and officers from friendly foreign countries. The college conducts a 45-week training programme from June to April every year. The Staff Course at DSSC aims at imparting training in operational and staff functions in an Inter-Service as well as Joint Service environment. The training enables the officers to effectively perform any staff/operational duties as Major/Lieutenant Colonel and equivalent ranks in other Services.

MINISTRY OF DEFENCE LIBRARY

9.74 The Ministry of Defence library provides literature on subjects relevant to planning and policy formulation in the 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. A Book Selection Sub-Committee, headed by a Joint Secretary, selects the reading material for the library. During the year, the library added 3050 books, subscribed to 124 journals and 23 newspapers.

10

Recruitment and Training

Commissioning Ceremony at IMA

Recruitment and Training

10.1 The Armed Forces epitomize the ideals of service, sacrifice, patriotism and our country's composite culture. The recruitment to the Armed Forces is voluntary and every citizen of India, irrespective of his caste, class, religion and community, is eligible for recruitment to the Armed Forces provided he meets the laid down physical, medical and educational criteria.

RECRUITMENT BELOW OFFICER RANK

10.2 Every citizen irrespective of caste, class, religion and domicile is eligible for recruitment in the Army, provided he meets the laid down physical, age, medical and educational criteria. The recruitment of Other Ranks in the Army is carried out according to the percentage of Recruitable Male Population (RMP) of the State/Union Territories. The Recruitable Male Population includes all males of the State/Union Territories who meet the laid down qualitative requirements and it is reckoned as 10% of the total male population. 11 Zonal Recruiting Offices, one Gorkha Recruiting Depot, Kunraghat and an Independent Recruiting Office at Delhi Cantt in addition to 47 Regimental Centres carry out recruitment. During recruiting year 2003-2004, recruiting organizations enrolled 1,04,169 recruits for the Army.

RECRUITMENT OF SAILORS

10.3 Naval Recruitment Organisation (NRO) of the Directorate of Manpower Planning and Recruitment at Naval Headquarters is responsible for recruitment of sailors in the Indian Navy. Recruitment of sailors is carried out for the following entries:- (a) Direct entry artificers with three years diploma (DEDH), (b) Artificer apprentices (AA) – (10 + 2), (c) Matric entry recruits (MER), (d) Non-matric entry recruits (NMER), (e) Direct entry petty officers (outstanding Sportsmen).

10.4 Recruitment into the Navy is carried out on All-India basis. The recruitment tests are carried out at 30 centres located throughout the country. The number of personnel recruited depends on the number of eligible applicants who are able to

qualify in the written examination, physical fitness test and medical examination. No preference is given on the basis of caste, religion or area.

RECRUITMENT OF AIRMEN

10.5 Unmarried male Indian citizens irrespective of caste, creed and religion and domicile (subjects of Nepal) are eligible for recruitment to the Indian Air Force provided they meet the laid down physical, age and educational criteria. The selection of suitable candidates for enrolment in the IAF is carried out through a centralized selection system on All India basis.

REVISION OF ELIGIBILITY STANDARDS FOR RECRUITMENT OF PERSONNEL BELOW OFFICER RANKS (PBORs)

10.6 Revision of Entry Age Limit: The UN Protocol to the convention of the rights of the child stipulates that personnel below the age of 18 years will not take part in hostilities. In view of the aforesaid, the minimum age for recruitment of PBOR has been raised from 16 to 17 years and 6 months.

10.7 Revised Physical Standards: An enhancement of Physical Standards for Recruitment of PBOR from August 1st, 2004 as per the following prescribed minimum height has been introduced:-

(a) Eastern Himalayan Region from 157 Cms to 160 Cms.

(b) Western Himalayan Region from 163 Cms to 166 Cms.

(c) Central Region from 167 Cms to 168 Cms.

(d) Southern Region from 165 Cms to 166 Cms.

(e) Gorkhas from 157 Cms to 160 Cms.

(f) Present reduction in height of 2 Cms for all regions for tradesmen removed.

10.8 Revision of Educational Standards: To keep pace with the progressive modernization in the Army and the need to ensure effective handling of sophisticated weapon/equipment systems of the future there is a need to regularly review the educational standards. From April 1st, 2002 Matriculates with second division only (45% marks) are being enrolled into the Army for Soldier General Duty category except Soldier Clerk/Store Keeper Technical/Technical/ Nursing Assistant categories who are also upgraded to minimum education qualification of 10+2 with 50% marks in aggregate. The details of educational standards for various categories in the Army are given below:-

	Category	Education	Age
(a)	Soldier General Duty	SSLC/Matric with 45% marks in aggregate. No percentage required if higher qualification then only pass in Matric.	17-1/2 to 21 Yrs
(b)	Soldier/ Technical	10+2 Intermediate exam pass in Science with Physics, Chemistry, Maths and English with minimum 50% marks in aggregate and minimum 40% in each subject specified for the trade. No weightage for higher qualification.	17-1/2 to 23 Yrs
(c)	Soldier Clerk/ Store Keeper Technical	10+2 Intermediate exam pass in any stream (Arts, Commerce, Science) with 50% marks in aggregate and minimum 40% in each subject. Weightage for higher qualification.	17-1/2 to 23 Yrs
(d)	Soldier Nursing Assistant	10+2 Intermediate exam pass in Science with Physics, Chemistry, Biology and English with minimum 50% marks in aggregate and minimum 40% in each subject. No weightage for higher qualification.	17-1/2 to 23 Yrs
(e)	Soldier Tradesmen	Non Matric	17-1/2 to 23 Yrs
(f)	Soldier (General Duty) Non Matric	Non Matric	17-1/2 to 23 Yrs
(g)	Surveyor Auto Cartographer	BA/BSc with Maths having passed Matric and 10+2 with Maths and Science	20-25 Yrs
(h)	JCO Religious Teacher	Graduate in any discipline. In addition qualification in his own religious denomination	27-34 Yrs
(i)	JCO Catering	10+2, Diploma/Certificate Course of a duration of one year or more in Cookery/Hotel Management and Catering Tech Recognized by AICTE	21-27 Yrs
(j)	Havildar Education	Graduate with B Ed/Post Graduate with B Ed	20-25 Yrs

Dispensation in education for enrolment as Soldier (GD) is permissible to some Selected States/Region/Class and Community.

10.9 Dispensation in Educational Standards for Soldier General Duty Category: The qualifying education standards for various trades in the Army are laid down. Dispensations in education standards for recruitment in Soldier General Duty category for certain regions/communities are granted keeping in view the socio-economic conditions and remoteness of the regions. The present review is effective from April 1st, 2004 to March 31st, 2007.

COMMISSIONING OF OFFICERS

10.10 Recruitment of Commissioned Officers in the Armed Forces is mainly done through the Union Public Service Commission (UPSC), where there is a written examination conducted by the UPSC followed by a Services Selection Board (SSB) interview and a Medical Board. Recruitment is made directly through the respective Recruiting Directorates for the Army, the Navy and the Air Force for Technical Branches, Women Special Entry Scheme, NCC Special Entry Scheme and Service Entries. These are called Non UPSC entries. Recruitment through SSB is done for induction of candidates as officers in all Arms and Services except Army Medical Corps (AMC) and Army Dental Corps (ADC).

10.11 Intake: During the year 2004, intake of candidates for pre commissioning training as officers was as under:-

(a)	NDA				607 (Army-392)
(b)	IMA				626
	(i)	IMA (DE)		444	
	(ii)	ACC		108	
	(iii)	SCO		27	
	(iv)	PC (SL)		47	
			Total	626	
(c)	OTA				409
	(i)	OTA		305	
	(ii)	NCC		104	
			Total	409	
(d)	Technical Entries				455
	(i)	UES		61	
	(ii)	SSC (T)		100	
	(iii)	10+2 TES		169	
	(iv)	TGC		125	
			Total	455	

RECRUITMENT THROUGH THE UPSC

10.12 The UPSC holds an all-India competitive written examination, known as the Combined Defence Services Examination (CDSE), twice a year. University graduates including those studying in the final year, are eligible to appear in the examination. Successful candidates are put through the Service Selection Board (SSB) interviews followed by Medical Board. Finally selected candidates join the respective training academies, viz., the Indian Military Academy (IMA)/Officers Training Academy(OTA) for the Army, the Naval Academy for the Navy and the Air Force Academy for the Air Force.

10.13 Similarly, the UPSC also holds a written examination for entry into the National Defence Academy (NDA) twice a year. Candidates on completion of the 10+2 Examination or while in the 12th standard, are eligible to compete. Successful candidates are put through the Service Selection Board (SSB) interview and a Medical Board before induction into NDA. Training at NDA is for three years. On completion of the NDA course, candidates (cadets) are sent to the respective Service Academies (IMA/NA/AFA), depending on the Wing chosen, for their pre-commission training. NDA also gives a graduation degree to the successful cadets.

10.14 University Entry Scheme (UES): Final/Pre-final year students in the notified Engineering disciplines are eligible to apply for Permanent Service Commission into the technical Arms of the Army as commissioned officers under the University Entry Scheme. Eligible candidates are selected through a campus interview under the Screening Teams deputed by the Army HQ. After SSB and the Medical Board, the finally selected candidates are required to undergo one year's pre commission training at IMA, Dehradun before being commissioned. Cadets through this entry are also entitled for two years' antedate seniority on commission.

Technical Graduates (Tg) Entry

10.15 Engineering graduates/Post graduates from Notified disciplines of Engineering including those studying in the final year are eligible to apply for permanent service commission into technical arms through this entry. Selected candidates are commissioned after one year training at IMA, Dehradun. Cadets through this entry are also entitled for two years antedate seniority on commission.

10.16 Short Service Commission (Technical) Entry: The Short Service Commission (Technical) Entry Scheme provides for recruitment of eligible technical graduates/post graduates into technical Arms. After

SSB and Medical Board, the finally selected candidates are required to undergo 11 months pre commission training at OTA, Chennai. On completion of training, successful candidates are inducted as Short Service Commissioned Officers (SSCOs) in the technical Arms. Cadets through this entry are also entitled for two years ante-date seniority on commission.

RECRUITMENT THROUGH SELECTION BOARDS

10.17 Recruitment through Service Selection Boards/Air Force Selection Board is made for the following branches of the Army, the Navy and the Air Force:-

ARMY All Arms and Services except Army Medical Corps and Army Dental Corps.

NAVY Electrical Engineering, Engineering (Naval Architects), Logistics, Law, Education, Air Traffic Control, Executive, Hydro, Naval Armament Inspection.

AIR FORCE Flying Pilot (FP), Aeronautical Engineering (Electronics), Aeronautical Engineering (Mechanical), Education, Administration, Logistics, Accounts and Meteorology.

Aeronautical Engineering Course (AEC)

10.18 Aeronautical Engineering Course envisages recruitment of qualified technical graduates through the Air Force Selection Boards (AFSBs), to attend training at the Air Force Academy, Hyderabad, followed by Air Force Technical College (AFTC), Bangalore. On successful completion of training at the AFTC, they are inducted in Electronics and Mechanical streams of the Technical Branch.

RECRUITMENT OF WOMEN OFFICERS

10.19 Women Special Entry Scheme (Officers) (WSES-O) is open to eligible women in three streams, namely, Technical, non-Technical and Specialist. On selection they undergo six months training at OTA Chennai and are commissioned as Short Service Commissioned Officers in the following Arms/Services of the Armed Forces:

ARMY Corps of Electrical and Mechanical Engineers, Corps of Signals, Army Education Corps, Army Ordnance Corps, Army Service Corps, Corps of Military Intelligence and Judge Advocate General's Branch

NAVY Engineering(Naval Architects), Logistics, Law, Education, Air Traffic Control

AIR FORCE Flying, Aeronautical Engineering (Electronics), Aeronautical Engineering (Mechanical), Education, Administration, Logistics, Accounts and Meteorology

10.20 Increase in intake of WSES (O): Women candidates are inducted in the Indian Army through Women Special Entry Scheme (Officers) (WSES(O)). The scheme has been a success. Consequently the planned intake of WSES (O) has been increased from 50 to 75 per course and 150 per annum from September 2003. At present approximately 921 Lady Officers are serving in the Indian Army.

10.21 Extension of Tenure of SSCOs/WSESOs: As a measure to address the shortage of junior officers in the units the Government increased the tenure of Short Service Commissioned Officers as well as Women Special Entry Scheme Officers (WSESOs) in the Army from 10 to 14 years.

NCC SPECIAL ENTRY

10.22 University graduates possessing NCC 'C' Certificate with a minimum 'B' grade and 50% marks in graduation are eligible to apply for commission into the Navy and the Air Force as Regular Commissioned Officers and as Short Service Commissioned Officers in the Army. They are exempted from appearing in the written exam (CDSE) conducted by the UPSC and are directly put through the SSB interview. Candidates meeting the Qualitative Requirement (QR) have to apply through various NCC Directorates at state level. Screening is done by the DGNCC who forward the applications of deserving cadets to the Recruiting Directorate.

10.23 Commission through ACC Entry: The eligible Other Ranks (ORs) from the three Services, after 10+2 examination, can apply for regular commission through the Army Cadet College (ACC) Entry. After selection through SSB and a Medical Board, the cadets are trained at Army Cadet College, 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. Permanent Commission is granted in all arms/services.

SPECIAL COMMISSIONED OFFICERS

10.24 Government had approved the creation of a Support Cadre of Special Commissioned Officers. Eligible Junior Commissioned Officers(JCOs) and Other Ranks (ORs) fill up these posts. Under this entry, JCOs/NCOs/ORs in the age group of 30-35 years, with an Army Senior School Certificate Pass (Class 10+2 CBSE Pattern) qualification, are eligible for Commission after screening/selection through Service Selection Board and a Medical Board. They have to undergo a pre-commission training of one year duration at IMA, Dehradun. The officers so commissioned earn promotion upto the rank of Colonel. The

rules for substantive promotion and acting promotion are the same as for regular officers. These officers are employed in units as sub unit Commanders/Quarter Masters and on various Extra Regimental Employment (ERE) appointments upto the rank of Major. They retire at the age of 57 years after serving about 20-25 years as officers. The scheme not only improves the career prospects of the existing JCOs/NCOs/ORs but also helps in making up the deficiency of officers in the Army to a considerable extent.

10.25 Induction through Permanent Commission(Select List) Cadre: The eligible PBORs are granted Permanent Commission Special List (PC SL) after selection by the SSB into various arms/services. This entry has improved motivation level of the PBORs.

10.26 SNCO Commissioning in IAF: Under this entry, serving personnel with minimum 10 years of service (of technical and non-technical trades) of the rank of Sergeant and above upto the age of 36 years and minimum educational qualification as 10 + 2, are eligible for Commission in the Indian Air Force after screening at unit level followed by AFSB selection tests and medical examination. However, candidates possessing higher education qualification are preferred. Service personnel of technical trades are inducted in the Technical Branch and personnel from non-technical trades are inducted in the Ground Duty Branches.

10.27 Branch Commissioning: Under this entry, serving personnel of technical and non-technical trades of the rank of Sergeant and above in the age group of 37 to 42 years with minimum educational qualification as 10^{th} pass, are eligible for Commission in the Indian Air Force after clearing a written exam, followed by AFSB 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.

10.28 Technical Entry Scheme (10 + 2 TES): Qualified 10+2 Central Board of Secondary Education/ Indian Certificate for Secondary Education/State Board candidates with Physics, Chemistry and Maths are eligible for commission in the Army under the Technical Entry Scheme (TES). On selection, they undergo one year basic military training at IMA Dehradun and thereafter undergo three years Engineering degree course. On being commissioned they are further put through one year specialized training of the Arms. Through this entry volunteer cadets can also seek admission in the combat Arms.

10.29 10+2 Technical Entry Scheme of the Navy: Under the

scheme, candidates with PCM in class XII are selected through the Services Selection Board, and are sent to INS Shivaji for four years B.Tech degree course in Marine Engineering/Electrical Engineering. 12 cadets from each batch are nominated for Naval Architecture degree course at Cochin University of Science and Technology (CUSAT). These cadets are granted Permanent Commission (PC) as Sub Lieutenants. The aim of this scheme is to provide well trained technical officers to meet the requirement of PC officers in the Technical Branch.

RECRUITMENT OF MEDICAL AND DENTAL OFFICERS

10.30 Medical graduates from the Armed Forces Medical College, Pune are directly inducted as Permanent Commissioned Medical Officers in the Armed Forces. For recruitment of Regular Commissioned/Short Service Commissioned Medical Officers from the Graduates/Post Graduates of Civil Medical Colleges can also apply to the Directorate General of the Armed Forces Medical Services (DGAFMS) who conducts an all-India competitive examination and interview before induction as Medical Officers.

PUBLICITY FOR RECRUITMENT

10.31 Measures have been taken to make the youth of our country more aware of the opportunities in the Army for the officers cadre. The means of publicity adopted to attract better talent are as follows:

(a) Press Advertisements: Advertisements are released through the Directorate of Advertising and Visual Publicity (DAVP) in the Employment News/Rozgar Samachar and in newspapers in different languages for various entries viz –UPSC and non-UPSC entries. UPSC entries include the National Defence Academy(NDA), Indian Military Academy(Direct Entry) and Officers Training Academy{Short Service Commission(Non-technical)}. Non-UPSC entries include Technical Graduate Commission(TGC), University Entry Scheme(UES), 10+2 Technical Entry Scheme(TES), Short Service Commission(Technical), Women Special Entry Scheme (Officers), Short Service Commission(NCC Special Entry) and Judge Advocate General(JAG) Branch for law graduates. Advertisements are also released for Other Rank categories viz. Havildar Instructors and Junior Commissioned Officers (Catering and Religious Teachers) etc. Concerned Zonal Recruitment Offices (ZROs)/Branch Recruit-

ment Offices (BROs) also publish advertisements on recruitment of Other Ranks in the local regional newspapers. Advertisements are also published in Journals brought out by educational Institutions.

(b) Hoardings: Hoardings are erected at selected places in the country to attract best young men and women to join the Armed Forces.

(c) Printed Publicity: Information folders, leaflets, brochures, data cards, posters and blow-ups, prepared through the DAVP and private professional agencies, are widely distributed.

(d) Exhibition and Fairs: Every year, at the Defence pavilion at the India International Trade Fair, New Delhi, a stall is established where information regarding recruitment is provided to visitors. This is also done in other organized fairs, which are career oriented and meant for students.

(e) Image Projection Campaign: To make young persons aware of the opportunities available as commissioned officers, the following Image Projection Campaigns (IPC) were launched in print, audio, visual and audio-visual media :-

(i) IPC-I - September 1997 to March 1998

(ii) IPC-II - August 1999 to August 2000

(iii) IPC-III - June 2002 to May 2003

Based on the positive inputs received from the above three campaigns, the fourth phase of the Image Projection Campaign (IPC-IV) is likely to be launched by mid 2005.

TRAINING FOR DEFENCE SERVICES

10.32 Several features distinguish Human Resource Management in the Defence Sector. The aim of the training is to equip the officers and soldiers with necessary inputs to make them efficient fighting men and also well-informed on national and international developments. The environment in which the defence officers have to work, demands a holistic approach to training. The training requirements are properly matched for the freshly recruited officers, for officers in need of advanced and specialised training, and for Other Ranks (ORs). Accordingly, a large number of training institutions in the Defence Sector work in coordination with one another to achieve these objectives.

SAINIK SCHOOLS

10.33 Sainik Schools were established as joint venture between the Central and State Government and under the overall governance of Sainik Schools Society. At present there are 20 Sainik Schools. The Sainik Schools aim at developing in cadets sound character, team spirit, patriotic outlook and desire to serve the country. The Sainik Schools have been the major institutions for preparing boys to enter the Armed Forces through National Defence Academy (NDA).

10.34 The objectives of Sainik Schools include bringing quality public school education within the reach of the common man, all round personality development of a child and to remove regional imbalance in the officer's cadre of the Armed Forces.

10.35 Sainik Schools admit boys in classes VI and IX. Their age should be 10-11 years for class 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 Entrance Examination held in January each year. The forms for admission are available with the schools normally in the month of November and Entrance Tests are held on 3rd Sunday of January every year.

10.36 The entrance examination consists of a written examination and an interview. Admission is further subject to the candidates being found medically fit according to medical standards prescribed for entry to National Defence Academy.

10.37 Sainik Schools are wholly residential schools run on public school lines. All the Sainik Schools are also members of the All India Public Schools Conference. They offer a common curriculum and are affiliated to the Central Board of Secondary Education, and follow the 10+2 pattern of education. As on date more than 6000 officers of the Defence forces are alumni of Sainik Schools.

MILITARY SCHOOLS

10.38 The Five Military Schools in the country at Ajmer, Bangalore, Belgaum, Dholpur and Chail are affiliated to CBSE. The Military Schools admit boys in class VI, based on an all India Entrance Examination. In the Military Schools, 67% seats are reserved for the wards of JCOs/ORs called "entitled category". Out of 33 % non-entitled category seats, 20% are reserved for wards of service officers and 13 % for wards of civilians.

10.39 The aim of the Military Schools is to impart quality education to enable the students to take All

India Secondary School Examination and Senior Secondary Certificate Examination conducted by CBSE and also to facilitate their entry into the NDA.

RASHTRIYA INDIAN MILITARY COLLEGE (RIMC), DEHRADUN

10.40 The Rashtriya Indian Military College (RIMC), Dehradun was founded on March 13th,1922, with the objective of providing the necessary preliminary training to the boys of Indian birth or domicile, wishing to become officers in the Armed Forces of India. The Institution now serves as a feeder institute to the National Defence Academy, Khadakvasla (Pune), where cadets of the Army, Navy and Air Force receive their initial training.

10.41 Selection 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 intake into RIMC is biennial, in January and July, wherein 25 cadets per term are admitted with maximum strength of RIMC being 250. The intake is at Class VIII for boys in the age groups 11 ½ to 13 years. The college runs classes in science stream on 10+2 CBSE pattern.

NATIONAL DEFENCE ACADEMY, KHADAKVASLA

10.42 NDA is a premier Joint Services Institution for training of young cadets as future officers of the Defence Services. Entry into NDA is based on a competitive examination conducted by the UPSC. Cadets of all three services viz Army, Navy and Air Force undergo combined training at NDA for three years. After passing out from NDA, the cadets go to their respective service academies for specialized training before being commissioned in the Armed Forces. The Academy is a unique institution where Inter Service aspects are developed right from the formative stages of an officer, thus developing a bond of friendship and respect for each other's service.

10.43 The academic curriculum of NDA is in tune with the National educational format of 10+2+3. The syllabus of the Academy has been approved by the Jawaharlal Nehru University for grant of BA or BSc. degree at the time of passing out from the Academy. Presently cadets from Bhutan, Maldives, Lesotho, Krygstan and Palestine are also undergoing training at NDA.

INDIAN MILITARY ACADEMY, DEHRADUN

10.44 The Indian Military Academy, founded in 1932, has a glorious and colourful history. It aims at the fullest development of intellectual, moral and physical qualities with basic military training and broad academic education. IMA also imparts training to Gentlemen Cadets from friendly

Chetwode Building : IMA

countries like Maldives, Mauritius, Lesotho, Palestine and Bhutan.

10.45 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 join on qualifying in the Union Public Service Commission Examination and the Services Selection Board; (d) Technical Graduate; (e) University Entry Scheme(UES) for engineering college students in final/ pre-final year of studies; and (f) 10+2 Technical Entry Scheme(TES) for candidates who have passed 10+2 with more than 70% marks in Physics, Chemistry and Mathematics.

OFFICER TRAINING ACADEMY, CHENNAI

10.46 The Officers Training Academy was established in 1963 as Officers Training School(OTS) to meet the increased demand of officers in the Army. It was re-designated as Officers Training Academy (OTA) from January 1st, 1988 on completion of 25 years of its existence. Its main task was to train Gentlemen Cadets for grant of Emergency Commission but from 1965 onwards, after which the Emergency Commission was dispensed with, the Academy started training cadets for Short Service Commission.

10.47 Since September 21st, 1992 the Indian Army has opened up its

Passing out parade in OTA

portals for entry of women as commissioned officers. Initially 50 lady cadets were commissioned every year, with the entries limited to Army Service Corps, Army Education Corps, Judge Advocate General's Department, Corps of Engineers, Signals and Electrical and Mechanical Engineers. Approximately 100 Lady Officers get commissioned from OTA every year.

10.48 The OTA imparts pre-commission training to the following courses:-

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

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

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

ARMY WAR COLLEGE, MHOW

10.49 Army War College, earlier known as College of Combat was created out of Infantry School and established as an independent institution on April 1st, 1971. The re-designation as Army War College was implemented with effect from January 15th, 2003. It is a premier All Arms Tactical Training Institution for officers and performs the important functions of evaluation of new concepts and doctrines in the fields of tactics and logistics.

10.50 COURSES

(a) Higher Command Course: Aims to train officers for higher command, with particular reference to command of a division and for holding senior staff appointments. One course of 40 weeks duration is run only for Indian officers from all three

services. 55 officers are trained every year.

(b) Senior Command Course: Aims to train selected Majors/Lieutenant Colonels of all arms and services in the tactical employment of a Battalion/Combat Group as part of a Brigade or Combat Command in cooperation with air and other arms and services, as also, in the training and administration of a unit in peace and war. Each course of 13 weeks duration trains 150 officers and approximately 10% vacancies are offered to friendly foreign countries, Para Military Forces and Central Police Organisations. Three such courses are run every year.

(c) Junior Command Course: Aimed at training officers of all arms and services in the tactical employment of a Rifle Company/Combat team as part of a Battalion Group or a Combat Group, in cooperation with air and other arms and services, as also in the training and administration of a sub unit in peace and war. Each course of 10 weeks duration trains 400 officers and approximately 10% vacancies are offered to friendly foreign countries, Para Military Forces and Central Police Organisations. Four such courses are run every year.

(d). Formation Commanders Orientation Programme (FCOP): The aim of this 4 weeks programme is to prepare potential divisional commanders for command of their formations in field and peace.

JUNIOR LEADERS WING, BELGAUM

10.51 The Junior Leaders Wing at Belgaum imparts training to 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 operations and make 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, BAREILLY

10.52 Junior Leaders Academy(JLA) was set up in 1998 with the aim of imparting institutionalised training in leadership and related subjects to the Junior Leaders i.e. JCOs and Senior NCOs of all arms and services with a view to make them more effective.

10.53 The following courses are conducted for JCOs/NCOs of all Arms and Services:-

(a) Junior Leaders Course (JLC): It is a six weeks course for newly promoted JCOs and Senior NCOs (approved for promotion to be JCOs). Six courses are run annually to train 3,240 students.

(b) Potential Subedar Majors (PSMs) Orientation Course: It is a four weeks course for 108 newly promoted Subedar Majors or Senior Subedars (approved for promotion to Subedar Majors). Six courses are run annually to train 640 students.

JUNIOR LEADERS ACADEMY, RAMGARH

10.54 Considering the gigantic magnitude of our Army, the requirement of training Junior Leaders was felt to raise another JLA. It was decided to raise the JLA at an interim location at Ramgarh in Bihar in 2001. JLA Ramgarh has been organized on the same lines as JLA Bareilly. The institution has commenced training from February 2003 for 648 students every year.

DEFENCE SERVICES STAFF COLLEGE, WELLINGTON

10.55 The Defence Services Staff College (DSSC) is a premier tri-service training establishment imparting training to the middle level officers of the three wings of Indian Armed Forces, friendly foreign countries and Indian Civil Services. The alumni of this college have risen to great eminence in the country and abroad. On its inception in 1905, the Staff College was temporarily set up at Deolali. By 1950 the Army Staff College was progressively transformed into a fully integrated Defence Services Staff College at Wellington. The College now trains 430 student officers annually, including officers from friendly foreign countries and Indian Civil Services.

10.56 The aim of the Staff Course is to train selected officers of the three Services in command and staff functions in peace and war, in own service, inter-service and joint service environment, as also to provide related general education to enable them to perform effectively in command and staff appointments tenable by Majors to Colonels and equivalent ranks.

10.57 The course is of 45 weeks duration, sub divided into six tutorial periods each of five to nine weeks. The course normally commences in the third week of June and ends in the last week of April of the following year. The DSSC awards the symbol of PSC (Passed Staff Course) on successful completion of training. The DSSC is affiliated to the University of Madras which awards MSc (Defence and Strategic Studies) degree to all students who qualify on the course.

HIGH ALTITUDE WARFARE SCHOOL(HAWS), GULMARG

10.58 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 terrain. The School functions as the army nodal instructional facility for specialised training and dissemination of approved doctrines in HA, mountain and snow warfare. It is a center for developing inputs on HA, mountain and snow warfare to HQ Army Training Command.

10.59 HAWS conduct two series of courses, Mountain Warfare (MW) and Winter Warfare (WW) at Sonmarg and Gulmarg respectively. Combined training is conducted for all courses for officers, JCOs and NCOs. The training period broadly consists of January to April, (WW Series) and May to October (MW Series). In the field of adventure sports, especially skiing and mountaineering, the School has excelled itself. Personnel from the School have scaled most of the important peaks in the world including Everest, Kanchenjunga and Mt Mckinley in the USA.

COUNTER INSURGENCY & JUNGLE WARFARE SCHOOL, EIRANGTE

10.60 The Counter Insurgency & Jungle Warfare (CIJW) conducts courses for Officers, JCOs/NCOs in Counter Insurgency techniques, Language Courses in Assamese, Bodo, Nagamese, Manipuri/Tangkhul and Pre-induction Training (PIT) for all units prior to induction into insurgency areas. It evolves and reviews tactical doctrine and techniques for operations in Counter Insurgency & Jungle Warfare and keeps abreast with all tactical and technical aspects of insurgency in other parts of the world by studying foreign publications.

10.61 A number of students from Para Military Forces and friendly foreign countries like Sri Lanka, Nepal, Singapore, Kenya, Iraq, Bhutan and USA also attend the above courses. Specialised training for Royal Nepal Army has also been conducted at the CIJW School.

COUNTER INSURGENCY PRE-INDUCTION TRAINING BATTLE SCHOOLS

10.62 Due to escalation of insurgency problem in Jammu & Kashmir and in the East, a need was felt to impart pre-induction training to all units being inducted into counter insurgency environment. Capacity of CIJW School was limited, besides peculiar operational situation and administrative problems of movement of units, it was necessary to impart training to units in areas closer to their areas of operation. To overcome these problems, three 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. Pre-induction training in these schools has benefited all the units, as they were able to understand the peculiarities of the insurgency problem in their locality. Besides training for counter insurgency, these schools especially in the Northern Command are training units for their role along line of control and high altitude.

INFANTRY SCHOOL, MHOW

10.63 The Infantry School is one of the largest and the oldest Military Training Institution of the Indian Army. The origin of the institution can be traced back to 1885. The present Infantry School owes its origin to a decision taken shortly after independence to amalgamate various tactical and weapons training institutions of the infantry into one single Infantry School of instruction at Mhow.

10.64 Courses conducted at Infantry School are Young Officers Course, Platoon Weapon Course, Mortar Course, Anti Tank and Guided Missile Course, Medium Machine Gun and 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 besides Para Military Forces and Civil Police Organisations. The institution is presently training more than 7,000 officers, JCOs and NCOs in a year.

10.65 Army Marksmanship Unit is part of the Infantry School and has earned great laurels in India and Asia. The Army Marksmanship Unit is involved in training Army and National Shooting Teams. The aim of this unit is to achieve excellence at International Level Precision Shooting Competitions. The institution has produced shooters like Major Rajya Vardhan Singh Rathore who won the Silver Medal in Athens Olympics in 2004.

COLLEGE OF DEFENCE MANAGEMENT, SECUNDERABAD

10.66 The College is entrusted with the responsibility of conducting the under mentioned courses/capsules,

as 'In House' and 'External' Capsules :-

(a) In-house Programmes/Courses:

Name of the Course	No of Courses Per Year	Duration (Weeks)	Strength Per Course	Total Per Year
(i) Long Defence Management Course	1	44	90	90
(ii) Senior Defence Management Course	2	6	33	66
(iii) Defence Management Programme	1	2	20	20
(iv) Assignment Oriented Management Training	5	1	35	175
			Total	351

(b) External Capsules:

(i) Management capsules for Army War College, College of Naval Warfare, College of Air Warfare, Institute of Armament Technology and Defence Services Staff College.

(ii) External leadership capsules for training of trainers, at National Defence Academy, Indian Military Academy, Officers Training Academy and Air Force Academy.

(iii) External capsule on Effective Decision Making for the three Services, separately for each Service.

10.67 The College of Defence Management is a Tri Service Organisation commanded by a two star flag officer. Mission of the College of Defence Management is to evolve the process of development of management thought that leads to enlightened leadership, efficient resource management and effective decision making ability to meet the challenges to national security.

COLLEGE OF MATERIALS MANAGEMENT, JABALPUR

10.68 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, it became the Army Ordnance Corps (AOC) School. With the changing doctrines of training and the advanced concepts introduced, the AOC School was renamed as College of Materials Management (CMM) in 1987. Decades of dedicated commitment in the field of management education impelled the College getting affiliated to the University of Jabalpur (Rani Durgavati

Vishwa Vidhyalaya) in 1987 and soon its proven excellence earned the CMM an autonomous status in 1990. The College is also registered as a 'Government College' with the University Grants Commission. The approval of All India Council of Technical Education (AICTE) was another milestone in the achievements of the College.

10.69 The College is accredited with National Assessment and Accreditation Council (NAAC), an autonomous body constituted under the UGC Act. NAAC 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

10.70 The School of Artillery, Deolali is the academic centre for various sub-disciplines of the science and methodology of artillery warfare. It imparts technical training to officers, JCOs and NCOs of the regiment of Artillery 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.

10.71 The School of Artillery has trained a large number of Officers, JCOs and NCOs in the year to help them to imbibe and develop technical skills and expertise in operating and employing artillery weapon systems. During the year, several officers and personnel from various foreign countries were also imparted training.

ARMY AIR DEFENCE COLLEGE, GOPALPUR

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

10.73 The Army Air Defence College conducts a number of courses, such as, 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 CENTRE AND COLLEGE, BANGALORE

10.74 Army Service Corps Centre (South) and Army School of Mechanical Transport were merged with ASC Centre at Bangalore to establish Army Service Corps (ASC) Centre and College at Bangalore on May 1st, 1999. The Centre and College(C&C) 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. Since 1992 the ASC College is affiliated to Rohilkhand University, Bareilly for award of diplomas/degrees in Logistics and Resource Management.

ARMY EDUCATION CORPS TRAINING COLLEGE & CENTRE, PACHMARHI

10.75 The Army Education Corps (AEC) Training College & Centre, Pachmarhi is a Defence Seat of Excellence in Educational Training in the Armed Forces. Only one of its kind, it is both a Category 'A' establishment and a Category 'A' Regimental Centre. 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.

10.76 The Department of Map Craft runs the Map Reading Instructors Course for AEC Officers and PBORs of all Arms and Services of Indian Army, Para Military Forces personnel and personnel from friendly foreign countries. The duration of Map Craft Instructors Course is of 10 weeks and is structured to impart sound knowledge in Map Craft and all its applications.

10.77 The Unit Education Instructors (UEI) Course is an invaluable course in training of ORs from all Arms and Services of the Indian Army to be effective instructors in their Units. The Course duration is of 12 weeks.

10.78 The Foreign Language Wing (FLW), which is one of the three Divisions of the AEC Training College & Centre, has today established itself as one of the premier nodes of foreign language training, not only in the Armed Forces but in the national academic environment too. The FLW has two digitised language labs, each with a capacity of 20 students. Recently, a Computer Aided Language Learning Lab has been established at FLW for training in regional and foreign languages.

MILITARY MUSIC WING, PACHMARHI

10.79 The Military Music Wing (MMW) was raised in October 1950 under the patronage of the then C-in-C General (later Field Marshal) KM Cariappa, as a part of the AEC Training College & Centre, Pachmarhi. It is the only institution of its kind in India. The Military Music Wing 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 or drummers, starting from the rudiments of music till they attain a state of perfect musical proficiency.

REMOUNT AND VETERINARY CORPS CENTRE & SCHOOL, MEERUT

10.80 The Remount and Veterinary Corps (RVC) Center and School, located in Meerut, is the alma mater of all RVC personnel. The aim of the School is to train officers and personnel below officer rank of all Arms and Services on animal management and veterinary aspects. Eleven courses for officers and six for PBORs are conducted. The total strength of students being trained is 250.

ARMY SPORTS INSTITUTE, PUNE

10.81 To restore national pride in the hearts of our fellow countrymen and to project a winning image of the Army, Government had approved the establishment of an Army Sports Institute at Pune and Army Sports Nodes in selected disciplines at various places in the country. Army Sports Institute, Pune started functioning with effect from July 2nd, 2001. 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

10.82 Army School of Physical Training (ASPT) is a premier institution imparting systematic and comprehensive instruction to personnel of the Army regarding the conduct of Physical Training in units and sub units. It also imparts basic training in Sports and Games with a view to improve 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 from friendly foreign countries. ASPT has started six allied sports courses in collaboration with National Institute of Sports in Boxing, Volleyball, Basketball, Swimming and Life

Saving, Judo and Yoga Courses for PBORs.

COMBAT ARMY AVIATOR TRAINING SCHOOL(CAATS)

10.83 Combat Army Aviator Training School(CAATS) was raised at Nasik Road in May 2003 to train aviators in aviation skills and handling of aviation units in various operations of war, and also to train aviation instructors, develop Standard Operating Procedures(SOPs) and assist Army Training Command in development of Aviation Tactical Doctrine in synergy with ground troops. The courses 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, PUNE

10.84 The College of Military Engineering(CME) at Pune is a premier technical institution. The training is conducted 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 Jawahar Lal Nehru University(JNU) for the award of B. Tech and M. Tech degrees. All India Council for Technical Education (AICTE) also recognises the graduate and post graduate courses run by the CME. The College trains on an average 1500 officers and 800 personnel below officer ranks every year.

MILITARY COLLEGE OF ELECTRONICS & MECHANICAL ENGINEERING SECUNDERABAD

10.85 The role of Military College Of Electronics & Mechanical Engineering (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 a range of 13 officers courses and 61 different courses for PBORs.

CORPS OF MILITARY POLICE CENTRE & SCHOOL, BANGALORE

10.86 The aim of the School is to train officers and PBORs on military and police duties in legal, investigation, traffic control etc. Four courses for officers and fourteen courses for PBORs are being conducted. Total strength of students being trained is 910.

ARMY AIRBORNE TRAINING SCHOOL, AGRA

10.87 The Army Airborne Training School (AATS) is located at Kilometer Stone 05 on the Agra - Jaipur highway. It was previously designated as Army Air Transport Support School (AATSS). Based upon the directive given by the Chief of Army Staff in response to a long time felt need to concentrate all Airborne training under one single agency, the Army Air Transport Support School was redesigned as Army Airborne Training School with effect from January 15th, 1992.

10.88 Presently five types of army courses and a total of 9 courses in a training year are being conducted by the school. These courses are subscribed by Indian Army (All arms/ services), Para Military Forces as well as by the students from friendly foreign countries.

MILITARY COLLEGE OF TELECOMMUNICATION ENGINEERING, MHOW

10.89 Military College of Telecommunication Engineering (MCTE), Mhow is the Alma Mater of all Signal Officers. They are trained 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 given an opportunity to study and train in a formal setting with a view to imbibe and inculcate in them the requisite skills, knowledge and abilities necessary to perform tasks at their current and future levels of responsibility.

MILITARY INTELLIGENCE TRAINING SCHOOL & DEPOT

10.90 The Military Intelligence Training School and Depot 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. The School also imparts training to personnel of friendly foreign armies. Apart from the above, civilian officers of the Department of Revenue Intelligence are also trained at this establishment. The School trains approximately over 350 Officers and 1100 Junior Commissioned Officers / Non Commissioned Officers every year.

ELECTRONICS AND MECHANICAL ENGINEERING SCHOOL, VADODARA

10.91 Consequent to the re-designation of the Corps of Electrical and Mechanical Engineering (EME) to Corps of Electronics and Mechanical Engineers, the EME School has been re-designated as 'Electronics and Mechanical Engineering School' with effect from June 1st, 2001.

10.92 The EME School conducts post-graduate level courses for officers and diploma and certificate level courses for PBOR. A number of foreign officers and PBOR from friendly countries have been attending various courses conducted at EME School.

INSTITUTE OF MILITARY LAW, KAMPTEE

10.93 In the Army, justice is administered by the Commanders at various levels. Minor offences can be disposed of summarily by powers vested in them under the provisions of the Army Act. For grave offences, Courts Martial are assembled on the orders of superior commanders. Commanding Officers are empowered to hold Summary Courts Martial, decision of these Tribunals are not appeal-able. It is, therefore, essential to judiciously exercise these powers and adhere to the laid down procedures. With this background, the Institute of Military Law was established at Shimla. On August 26th, 1989 the institute was shifted to Kamptee.

10.94 The Charter of Duties of the School is to cater for a comprehensive system of legal education for officers of all Arms and Services of the Army and to undertake wide ranging research, development and dissemination work in the field of Military and allied laws.

ARMOURED CORPS CENTRE & SCHOOL, AHMEDNAGAR

10.95 In 1948, after partition, the Training Wings, the Recruits Training Centre and Armoured Corps Depot and Records were shifted to Ahmadnagar where the fighting Vehicles School was already functional 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.

TRAINING OF FOREIGN ARMY PERSONNEL

10.96 After Operation Vijay and Operation Parakram, the interest of foreign armies for training in Indian

Army establishments has increased tremendously. Army personnel from neighbouring countries, South East Asia, Central Asian Republic (CAR), African continent and a few developed countries are being trained in India.

10.97 The Government of India provides assistance to the developing and under developed nations under the International Technical and Economic Cooperation (ITEC) programme of Ministry of External Affairs. Courses are also availed by Nepal and Bhutan under Special Aide Programme of Ministry of Defence. Under this programme, personnel from developing countries get training in service institutions free of cost or at subsidized rates. Developed western countries also send their officers for training to our institutions on reciprocal basis and on self-financing basis by paying cost of training and other related charges.

11

Resettlement and Welfare of Ex-Servicemen

Raksha Pension Adalat

Resettlement and Welfare of Ex-Servicemen

11.1 In order to maintain a youthful profile of the Armed Forces, approximately 60,000 service personnel are retired/released every year at a comparatively younger age. At the time of retirement, majority of service personnel are at an age where they have numerous unfinished responsibilities which necessitate their taking up a second occupation. As per statistics maintained, a total of 18,94,962 Ex-Servicemen (ESM) and 4,01,319 widows have been registered and reported to be surviving as on September 30th, 2004. The Ex-Servicemen population is mainly concentrated in the States of Punjab, Uttar Pradesh, Haryana, Maharashtra, Kerala, Rajasthan, Uttaranchal and Tamil Nadu. Kendriya Sainik Board (KSB) under the chairmanship of the Raksha Mantri lays down general policies for the welfare of ex-servicemen and their dependents, for administration of welfare funds, and also for coordinating the work of the Sainik Boards in the country. Similarly, at the State level the Rajya Sainik Boards (RSBs) and at the district level the Zila Sainik Boards (ZSBs) have been established. The Government of India bears 50% of the expenditure incurred on the organisation of Rajya Sainik Boards while the remaining expenditure is borne by the respective State Governments. The Directorate General of Resettlement (DGR) under the Ministry of Defence looks after all matters connected with the resettlement and welfare of ex-servicemen and their dependants.

11.2 Resettlement: The primary thrust of the Directorate General of Resettlement, Kendriya Sainik Board, Rajya Sainik Boards and Zila Sainik Boards is on dignified resettlement and efforts are made to explore various avenues for employment of ex-servicemen. With a view to resettle/re-employ ex-servicemen, the Central Government arranges the following:-

(a) Training programmes to re-orient retiring Defence personnel towards civil employment;

(b) Reservation of posts for providing employment opportunities in government/semi-government/public sector organizations and assistance in employment with corporate sector;

(c) Schemes for self-employment; and

(d) Assistance in enterpreneurship and setting up small scale industries.

TRAINING PROGRAMMES

11.3 Training for preparing both ex-servicemen and retiring service personnel for their resettlement in civil life is one of the major functions entrusted to the Directorate General of Resettlement. This year the Directorate General of Resettlement has introduced some new courses which will provide nationally/internationally accepted certification to facilitate retired persons to get quick employment within/outside the country. The programme includes courses on information technology, managerial science, technical skills and agro based industries. Constant endeavour is made to improve the quality of training by regular monitoring. The courses are reviewed every year to include courses in new fields based on the participation in current requirements of civil market and corporate world and also to delete obsolete courses.

11.4 Officers' Training: The Directorate General of Resettlement organises employment oriented training programmes for officers to enhance their qualifications and enable them to seek suitable employment after retirement. The Resettlement Training Programmes range from vocational courses of three months' duration to degree/diploma courses, via distant learning programme, of one to three years duration. The courses are conducted in subjects like Information Technology, Security Services, Entrepreneurship Development, Business Administration, Personnel Management, Hotel Management, Tourism, Human Resource Development, Law, Insurance and miscellaneous topics. Recently, management courses of six months duration have been introduced at Management Development Institute, Gurgaon and Indian Institute of Management, Lucknow. Computer diploma courses for six months have also been introduced in various institutions across the country. Details of officers' courses are published each year and distributed down to each unit and Zila Sainik Board.

11.5 JCOs/ORs Equivalent Training: Resettlement Training Programmes for Junior Commissioned Officers/Other Ranks and their equivalent from the other services are carried out under three different schemes, viz. Vocational Training, On the Job Training (OJT) and ITI Training. Details of courses are published each year through a brochure distributed down to each unit and Zila Sainik Board.

(i) Vocational Training Programmes : Under Vocational Training Programmes, courses in

diversified fields are conducted for a duration of upto one year in government, semi-government and private institutes spread all over the country. Courses are conducted in fields like Security Services, Management, Information Technology, Travel and Tourism including Adventure Tourism, Entrepreneurship Development, Technical (including medical) trades, non-technical trades, secretarial support services, agro based industry and many other miscellaneous trades. Under this scheme more than 350 courses are conducted in a year. This year courses offered by the Confederation of Indian Industry(CII) under the City and Guilds banner, with internationally accepted certification, have been introduced for Personnel Below Officer Rank (PBOR) to improve their employment avenues within/outside the country.

(ii) "On the Job" Training : Under this scheme, retiring servicemen are trained in more than 60 workshops of 27 Public Sector Undertakings (PSUs) and Central/State Government departments. The training is provided in nine different trades for a period of nine months. On completion of this training, successful candidates are awarded National Trade Certificate (NTC).

(iii) ITI Training: All ITI courses commence on 1st of August each year and are of one to two years duration. Under this scheme, retiring ex-servicemen begin to acquire their chosen skills while still in service. During the first year, the individual continues to draw his full pay whereas in the second year he receives a stipend from Rajya Sainik Board of the State. On completion of the course the individual is awarded a National Trade Certificate on passing an examination held by Central Training Institute.

11.6 Ex-Servicemen (ESM) Training: 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.

11.7 The details of personnel imparted training in various fields during the last five years till November 30, 2004, are as follows :-

SCHEME	2000-01	2001-02	2002-03	2003-04	2004-05
Officers' Training	387	409	353	583	679
PBOR Training	5718	3518	2958	4019	3016
'On the job' Training	1452	1363	1027	1027	1103
ITI Training	2675	1510	1510	2821	2905

RE-EMPLOYMENT

11.8 The central and state governments provide a number of concessions to ex-servicemen for their re-employment in central/state government posts. These include reservation of posts/relaxation in age and educational qualifications, exemption from payment of application/examination fees, and priority in employment to the disabled ESM and dependants of deceased service personnel on compassionate grounds.

11.9 Reservation in Government Jobs: The Central Government has reserved 10% of Group "C" posts and 20% of Group "D" posts for ESM, while central PSUs and nationalised banks provide 14.5% reservation in Group "C" and 24.5% in Group "D" posts. 10% posts of Assistant Commandants in paramilitary forces are also reserved for ESM. In Security Corps, 100% vacancies are reserved for ESM. In addition, most state governments are providing reservations to ESM in state government jobs. It has, however, not been possible to have statutory backing to the scheme of reservations being provided, due to the overall ceiling of 50% imposed by the Supreme Court, and 49.5% reservation already reserved in government jobs for SC/ST/OBCs.

11.10 Security Agencies: The DGR registers/sponsors security agencies for providing security guards to various PSUs and industries in the private sector. The scheme offers good self-employment opportunities to retired officers and adequate employment opportunity to ex-PBORs in a field where they have sufficient expertise. The Department of Public Enterprises (DPE) had issued instructions to all PSUs to get security personnel through DGR sponsored Security Agencies. The scheme has shown good results. The DGR has also written to the Chief Secretaries of all the States urging them to issue suitable instructions to all concerned under their jurisdiction to obtain security cover through DGR empanelled agencies, thereby furthering the cause of resettling ex-servicemen.

11.11 Placement of JCOs/ORs: The details of ex-servicemen, who have been provided employment through Directorate General of Resettlement (DGR) and Zila Sainik Welfare Offices in the States during the last seven years is as follows:

PLACEMENT OF JCOs / ORs

	1998	1999	2000	2001	2002	2003	*2004*
Central Govt	5188	3992	4035	4982	5153	5503	*3508**
State Govt	2825	2540	2219	2136	2162	3092	*2177**
Private Sector	3304	3068	2766	3221	3051	3064	*2579**
Security Agencies	7140	13810	8717	5650	8679	9543	*11920**

*upto December, 2004(Data for the States of Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Gujrat, Haryana, Jharkhand, Nagaland, Punjab, Rajasthan, UP, West Bengal, Andman & Nicobar, Chandigarh, Delhi and Pondicherry have not yet been received)

11.12 Officers' Employment: During the current year, a total number of 604 officers have been registered with the DGR for employment assistance. Till date 4285 officers have been sponsored for various employment opportunities. To spread awareness about potential of ex-defence personnel, seminars are being organised in conjunction with the Confederation of Indian Industries or PHD Chamber of Commerce and Industry at Lucknow, Chandigarh, Bangalore, Chennai and Mumbai. The response to the seminars and subsequent employment has been satisfactory.

SCHEMES FOR SELF-EMPLOYMENT

11.13 As it is not feasible to provide Government jobs to all ex-servicemen after their retirement from the Armed Forces, government has formulated several schemes for encouraging and giving financial support by way of loans to ex-servicemen entrepreneurs intending to set up small and medium industries. Major self-employment schemes are SEMFEX-II, SEMFEX-III and National Equity Fund Scheme. Applications for sanction of loans are submitted by ex-servicemen directly to concerned Zila Sainik Boards in the States. These applications are scrutinised and those which satisfy eligibility criteria and other terms and conditions are recommended for sanction of loan through Small Industries Development Bank of India (SIDBI), Central Cooperative Banks, State Land Development Banks and Regional Rural Banks aided by National Bank for Agriculture and Rural Development (NABARD) and the State KVIB/Banks aided by the Khadi and Village Industries Commission (KVIC).

11.14 SEMFEX-II Scheme: The scheme has been promoted with the assistance of NABARD to set up agriculture and allied activities, including State Road Transport Operators (SRTO), and also for setting up of village, cottage, tiny and small scale industries in rural areas. The financial assistance in case of

non-farm sector activities is available upto SSI limit, for setting up industries in rural areas. This scheme is operative from the year 1988-89.

11.15 SEMFEX-III Scheme: The scheme is operative in collaboration with the Khadi and Village Industries Commission (KVIC). The maximum loan limit for individual entrepreneurs, cooperative societies/institutions and trusts is Rs. 25 lakh per project to establish industries in rural areas. This scheme is operative from the year 1992-93.

11.16 National Equity Fund Scheme (NEF): The scheme has been launched in collaboration with SIDBI. The financial assistance is available to set up projects in tiny/ small scale industrial sector, service enterprises and also for undertaking expansion, technology upgradation, modernisation and revival of viable sick units in SSI Sector. The maximum loan limit is Rs 50 lakh per project. This scheme is operative from the year 2000-01.

11.17 CNG Stations in National Capital Region (NCR): The scheme for management of CNG stations, belonging to Indraprastha Gas Limited (IGL), was launched as a pilot project in July 2001. On the success of the pilot project, the scheme has been extended to management by retired officers. As on date, there are 60 retired officers including 3 women, managing 70 CNG stations.

11.18 Coal Transportation Scheme: DGR sponsors Ex-Servicemen Coal Transport Companies for the execution of loading and transportation of coal in various coal subsidiaries of Coal India Limited (CIL). Unemployed retired officers and JCOs registered with DGR, are

CNG Station being managed by Ex-Servicemen

selected to form ESM Coal Transport Companies and are sponsored to respective coal subsidiaries for five years, extendable by another four years. Presently, nearly 94 such companies are operating under the various coal subsidiaries of CIL. The functioning of these companies is monitored by DGR.

11.19 Coal Tipper Scheme: The widows of Defence personnel, who died while in service due to causes attributable to military service, can be sponsored by DGR for attaching one tipper truck in their name with an ESM Coal Transport Company. Eligible widow/disabled soldier is required to make a deposit of Rs.85,000/- with any of the nominated coal transport company. The company pays them Rs.3000/- per month for a period of five years, after which the deposited amount of Rs.85,000/- is paid back. At present 262 widows and 27 disabled Ex-Servicemen are availing the benefit of this Scheme.

11.20 Allotment of Oil Product Agencies: Ministry of Petroleum and Natural Gas has reserved 8% of the Oil Product Agencies, i.e. LPG dealership, petrol pumps, kerosene distributorship etc. for widows and dependants of those who died due to causes attributable to military service, and for disabled soldiers with disability attributable to military service. Eligible persons can apply as and when such a vacancy under 'Defence Category' is advertised in the newspapers. The DGR sponsors eligible candidates. Subsequently an interview is conducted by a Dealer Selection Board constituted by the Ministry of Petroleum and Natural Gas. Final allotment is made by the concerned oil company to the selected candidates. During 2004, 763 eligibility certificates have been issued by DGR till November 30th, 2004.

11.21 Allotment of Army Surplus Vehicles: Ex-Servicemen and widows of Defence personnel, who died while in service, are eligible to apply for allotment of an Army surplus phased out Class V-B vehicle. The application forms are routed through Zila/Rajya Sainik Boards, in case of retired personnel, and through units for those in their last six months of service, to DGR for registration and onward submission to Army Headquarters for allotment on the basis of depot-wise seniority maintained by them.

11.22 Reservation in CSD : The Canteen Stores Department of India (CSDI) has reserved 15% of the 30 selected CSD items and the Ministry of Defence has reserved 10% of the 262 selected items manufactured by Ex-Servicemen Entrepreneurs under the Defence Purchase Programme for which Ex-Servicemen manufacturing units alone are eligible.

11.23 Mother Dairy Milk and Fruit & Vegetable Shops: Junior Commissioned Officers (JCOs)/Other Ranks (ORs) are allotted Mother Dairy milk shops and fruit & vegetable shops in the National Capital Region. 684 milk shops and 280 fruit & vegetable shops are being operated by ex-servicemen (ESM). Dependant sons (where the ex-servicemen are not eligible) are also considered for allotment of fruit & vegetable shops in and around Delhi.

PUBLICITY

11.24 Wide publicity of policies and various schemes sponsored by DGR is of paramount importance so as to reach each unit and ex-servicemen/ widows across the length and breadth of the country. This is done by the DGR by means of publication of its periodical magazines "PUNARVAS", brochures, leaflets, articles in Sainik Samachar and Baatcheet. The electronic media is also used for the above purpose.

11.25 The DGR had put up a stall at the Aero-India 2005 at Bangalore to spread awareness about schemes concerning Ex-Servicemen. Various other forums provided by Command HQs, RSBs and Sainik Sammelans are also being utilised for publicity purpose.

11.26 A film on Armed Forces Flag Day was telecast on the National Channel of Doordarshan on December 6th and 7th, 2004. A live telecast of interview of DGR was telecast on Doordarshan on December 6th and 7th, 2004, alongwith a resume of schemes being run by DGR. These are also being publicised through CD-ROMs forwarded down to ZSBs and Units.

WELFARE

11.27 The Kendriya Sainik Board (KSB) under the chairmanship of Raksha Mantri, is the nodal agency to look after the welfare of ex-servicemen and their families in liaison with Rajya Sainik Boards/Zila Sainik Boards. The KSB also administers various welfare activities through the Armed Forces Flag Day Fund, which are financed from interest earnings of the fund. The fund has a corpus of Rs 18.29 crores. Financial assistance is provided to institutions, such as, paraplegic homes at Kirkee and Mohali, the Red Cross Society, Cheshire Homes, Military Hospitals, St. Dunstan's After Care Organisation and Homes for taking care of old and physically handicapped ex-servicemen and their dependents. Financial assistance is also provided to individual ex-servicemen and their families who are in a state of penury to meet their specific needs. DGR also funds the running of Armed Forces Hospitals, War Widows Hostels, scholarships to ex-servicemen's orphans and other such philanthropic activities.

11.28 Assistance from Raksha Mantri's Fund: A portion of the earnings of Armed Forces Flag Day Fund is set apart as Raksha Mantri's Discretionary Fund which is used to provide financial assistance to poor and needy ex-servicemen for various purposes, viz, medical treatment, daughter's marriage, house repair and education of children. Monthly financial assistance, upto a period of two years, is also provided to old and infirm ex-servicemen and widows of ex-servicemen living in penury.

11.29 Concessions and Facilities Under-mentioned concessions and facilities are available to eligible personnel:-

(a) Free educational facilities to Children of Defence personnel killed or disabled in action, in schools/ colleges recognised by the Central or State Governments.

(b) 28 seats in the MBBS, one seat in BDS and one seat in engineering stream are available through KSB to dependants/wards of certain categories of defence personnel through Ministry of Health and Family Welfare.

(c) 25% seats are reserved for the wards of serving and ex-servicemen personnel in Sainik Schools.

(d) States/UTs have made reservation of seats in professional colleges/ ITIs/polytechnics for wards of serving and retired defence personnel.

(e) Two educational grants where (i) Rs 600/- per month are provided to the wards of war bereaved and (ii) Rs 300/- to the wards of disabled (attributable/non-attributable) and peace time casualties, housed in 35 War Memorial Hostels to enable them to pursue their studies.

(f) Medical Facilities to Ex-Servicemen: Presently, ex-servicemen, their families and families of deceased Service personnel drawing pension of any kind are entitled to free out-patient treatment in 127 Military Hospitals and more than 1000 Medical Inspection (MI) Rooms including 24 exclusively reserved for ex-servicemen. In-patient treatment is also provided subject to availability of beds. Ex-servicemen who are not availing medical facilities from Military Hospitals may choose to draw Rs. 100/- every month for medical treatment. Henceforth, only non-pensioner ESM/dependents will be provided financial assistance from Armed Forces Flag Day Fund for treatment of specified serious diseases. From April 1st, 2005, medical support from DGR/KSB will only be available for non-pensioners. Pensioner ex-servicemen and widows drawing pension will have to depend upon Ex-Servicemen Contributory Health Scheme.

(g) Ex-Servicemen Contributory Health Scheme (ECHS): A new medical scheme for providing comprehensive medical care to ex-servicemen, War widows and their dependents on the pattern of Central Government Health Scheme (CGHS) introduced with effect from April 1st, 2003 is being implemented in a phased manner in five years. The details of the scheme are as under:-

(i) The ECHS covers complete spectrum of ESM pensioners, war widows and dependents settled in far flung areas of the country through a network of 227 poly clinics in 104 military and 123 non-military stations.

(ii) The ESM and their dependents are required to make a contribution at the same rate at which the Central Government pensioners are required to make such contribution for availing medical facilities under the CGHS after retirement. To ameliorate the financial hardship of ESM, the Government has decided to allow remittance of contribution in three consecutive yearly installments.

(iii) Enrolling into the ECHS is optional for ESM pensioners who retired on or before March 31st, 2003. Those who opted not to join the scheme will continue to draw medical allowance of Rs. 100/- per month. This option of joining the ECHS has to be exercised latest by March 31st, 2008. The ECHS is, however, compulsory for all Service pensioners retiring with effect from April 1st, 2003.

(iv) In addition to existing service hospitals/poly clinics, good and qualified civil hospitals/diagnostic centres are being empanelled. They will provide back-up support for in-patient hospitalization/treatment/ investigations where and when service hospitals do not have bed space or facilities.

(h) Travel Concession: The following concessions are available to War Widows/Gallantry Award Winners, which can be availed on production of identity card issued by KSB:-

Rail Travel Concession:

(i) 75% concession in rail fare for travel in II class is available to widows of personnel killed in war and action against terrorist and extremists.

(ii) Free Rail travel is available in I Class /AC 2 tier to the recipients of Param Vir Chakra, Maha Vir Chakra, Ashok Chakra, Vir Chakra, Kirti Chakra and Shaurya Chakra alongwith companion;

(iii) Param Vir Chakra, Maha Vir Chakra and Vir Chakra awardees are also allowed for free Rail travel in AC II tier/AC III tier of Rajdhani and Chair Car of Shatabdi/Jan Shatabdi Express trains alongwith a companion in the same class.

Air Travel Concession:

(i) 75% concession is allowed to recipients of Gallantry Awards of Level I and Level II viz. Param Vir Chakra, Ashok Chakra, Maha Vir Chakra and Kirti Chakra, Victoria Cross, George Cross, Distinguished Service Cross, Military Cross, distinguished Flying Cross and George medal.

(ii) 75% concession is available to permanently war disabled officers who have been invalidated of service and the dependent members of their families;

(iii) 75% concession to war widows of post-Independence era.

(i) Reservation of House Sites/ Houses: Majority of States have made reservations for serving/retired Armed Forces personnel in allotment of house sites/houses.

(j) Grant for Repair of Houses: Financial assistance is provided especially to War Widows/War-disabled for repair of houses on 50% cost sharing basis with State Governments upto an extent of Rs 10,000/-.

(k) Sainik Rest House Facilities: Over 252 Sainik Rest Houses have been built in the country, which provide transit facilities to ex-servicemen and their dependants at nominal rates.

(l) Cash Award/Annuity/Cash, in lieu of Land for Gallantry/Non Gallantry Award Winners: The States/UTs provide Cash Award/ Annuity/Cash in lieu of land for Gallantry/Non gallantry Award winners.

PENSION TO ARMED FORCES PERSONNEL

11.30 As on December, 2004 the number of Defence pensioners is estimated to be about 20.93 lakh. Every year approximately 55,000 more pensioners are added to this number. The estimated budget provision for the year 2004-05 is Rs.11250.00 crore. The pension is disbursed through 35000 branches of Public Sector Banks, 534 Treasuries, 61 Defence Pension Disbursing Offices (DPDOs) and 5 Pay and Accounts Offices (PAOs) scattered all over India. The eligibility conditions, rates etc. of different types of pension are detailed in the succeeding paragraphs.

RETIRING/SERVICE PENSION

11.31 For Commissioned Officers the retiring/service pension is calculated at 50% of the average reckonable emoluments drawn during the last 10 months. In the case of Personnel Below Officers Rank (PBOR), it is calculated with reference to the maximum of the scale of pay of the rank and group held for 10 months preceding retirement. Retiring pension shall be

subject to a minimum of Rs.1275/- p.m. and maximum of upto 50% of the highest pay applicable to Armed Forces personnel. For pre- 1996 pensioners, as per the formula evolved under the modified parity, with effect from January 1st, 1996, pension would not be less than 50% of the minimum pay in the revised scale of pay for the corresponding rank, held by the pensioners.

11.32 Weightage: Considering the early age of retirement of Armed Forces personnel, they are given weightage for computing service pension. In the case of Commissioned Officers, the minimum period of qualifying service required for earning retiring pension is 20 years. The officers are given benefit of weightage ranging from 3 to 9 years depending on the rank. The minimum period of qualifying service for Personnel Below Officers Rank for earning retiring pension is 15 years. They are given a uniform weightage of 5 years. For calculating gratuity, a uniform weightage of 5 years is given to all ranks.

COMMUTATION OF PENSION

11.33 Armed Forces personnel are permitted higher commutation of their pension at 43% for officers and 45% for PBORs as compared to 40% for civilians.

FAMILY PENSION

11.34 Families of Armed Forces personnel who die during service or after retirement with pension, are granted family pension at a uniform rate of 30% of reckonable emoluments. With effect from January 1st, 1996, the amount of minimum family pension has been raised to Rs.1275/- p.m. from Rs.375/- p.m. With effect from January 1st, 1998 ordinary family pension is also admissible to dependant parents, widowed/ divorced daughters who fulfill the prescribed eligibility criteria.

11.35 With effect from July 27th, 2001, family pension admissible under the Employees Pension Scheme, 1995 and the Family Pension Scheme, 1971 have been allowed in addition to the family pension admissible under the relevant Pension Regulation.

DISABILITY PENSION

11.36 A person who is released or retired from service on account of a disease or injury which is attributable to or aggravated by military service, is entitled to disability pension if the disability assessed by the Medical Board is 20% or more. On invalidment from service on account of causes attributable to or aggravated by military service, the extent of disability or functional in-capacity is determined at 50% if the disability is less than 50%, 75% if it is between

50 and 75% and 100% if it is between 76% and 100%. This is an improvement introduced with effect from January 1st, 1996 on the recommendations of the 5th Central Pay Commission.

11.37 Disability pension consists of two elements viz., the service element and disability element. Service element is related to the length of service rendered by the individual at the time of invalidation and the disability element is paid in the form of compensation for the disablement and depends on the degree of disablement. The rate of disability pension is Rs. 2600/- p.m. for Commissioned Officers, Rs.1900/- p.m. for Junior Commissioned Officers and Rs.1550/- p.m. for other ranks. For individuals who are retained in service despite disability and retire/ are discharged on attaining the age of retirement or on completion of tenure, the same rates are applicable with effect from January 1st, 1996 if the disability is assessed as 100%.

WAR INJURY PENSION

11.38 Considering the supreme sacrifice made by the Armed Forces personnel during war or war like situations or action against extremists, anti-social elements etc, War Injury Pension is granted to the personnel who sustain injury or disability during such operations. Service element is equal to retiring/ service pension to which he/she would have been entitled to on the basis of his/her pay on the date of invalidment but counting service upto the date on which he/she would have retired in that rank in the normal course including weightage as admissible. War Injury element payable is equal to reckonable emoluments last drawn for 100% disablement. However, in no case, the aggregate of service element and war injury element will exceed the last pay drawn.

11.39 In case a person is found to have a disability which is sustained during war or war like situations and the disability is assessed at 20% or more for life but the individual is retained in service despite such disability and opts for lump sum compensation, he shall be paid the lump sum compensation in lieu of war injury element. The rate for calculation of lump sum compensation in lieu of war injury element for 100% disability for life will be Rs.5200/- per month for Commissioned Officers, Rs.3800/- p.m. for Junior Commissioned Officers and Rs.3100/-p.m. for Other Ranks.

CONSTANT ATTENDANCE ALLOWANCE

11.40 Personnel with 100% disability are paid a Constant Attendance Allowance at the rate of Rs.600/- per month on the recommendation of the Medical Board.

SPECIAL FAMILY PENSION

11.41 If the death of a Service personnel has occurred on account of causes attributable to or aggravated by military service the family is paid special family pension at the rate of 60% of reckonable emoluments drawn by the deceased subject to a minimum of Rs.2550/- per month. Widows who got remarried on or after January 1st, 1996 are also eligible for special family pension subject to certain conditions.

LIBERALISED FAMILY PENSION

11.42 In the event of death of Armed Forces personnel in war or war like operations, counter insurgency operations, action against terrorists, extremists etc. the families are granted Liberalised Family pension at the rate equal to reckonable emoluments last drawn by the deceased personnel at the time of death. If the personnel is not survived by widow, but is survived by children, they are entitled to liberalised family pension at the rate equal to 60% of reckonable emoluments last drawn by the deceased subject to fulfillment of prescribed conditions.

11.43 With effect from January 1st,1996 on remarriage of widow, full liberalized family pension would continue to her subject to certain prescribed conditions.

REVISED PROCEDURE FOR ASSESSMENT OF DEGREE OF DISABILITY

11.44 As per the revised procedure introduced on the basis of the recommendations of the 5th Central Pay Commission, periodical reviews by Re-Survey Medical Board for reassessment and continuance of disability pension has been dispensed with. In injury cases, the percentage of disability as recommended by Invaliding/ Release Medical Board is treated as final unless the individual himself requests for a review. Similarly, in case of diseases of permanent nature, the assessment of degree of disability as recommended by the Medical Boards is treated as final unless the individual himself asks for a review.

EX-GRATIA AWARDS IN CASES OF DEATH OF CADETS (DIRECT)

11.45 The following ex-gratia awards are payable subject to certain conditions in the event of death of a cadet due to causes attributable to or aggravated by military training:

(a) Ex-gratia lumpsum of Rs. 2.5 lakh

(b) An ex-gratia of Rs. 1275/- per month in respect of both married and unmarried personnel, to Next of Kin (NOKs) in addition to (a) above.

11.46 The ex-gratia lumpsum is admissible in cases of death of cadets occurring on or after August 1st, 1997. However, the benefit of revised monthly ex-gratia amount as mentioned at (b) above, is admissible to pre August 1st, 1997 cases also with financial effect with effect from August 1st, 1997.

EX-GRATIA AWARDS IN CASES OF DISABILITY OF CADETS (DIRECT)

11.47 The following ex-gratia awards are payable subject to certain conditions in the event of invalidment of cadet (Direct) on medical grounds due to causes attributable to or aggravated by military training :

(a) Monthly ex-gratia of Rs. 1275/- per month

(b) Ex-gratia disability award @ Rs 2100/-per month for 100 % disability during the period of disablement. The amount is reduced proportionately from the ex-gratia disability award in case the degree of disablement is less than 100 %.

(c) Constant Attendance Allowance (CAA) of Rs. 600/-per month for 100 % disability on the recommendation of Invaliding Medical Board.

11.48 The ex-gratia disability awards are applicable with effect from August 1st, 1997. However, the benefit is admissible to pre August 1st, 1997 cases also, with financial effect from August 1st, 1997.

EX GRATIA AWARD IN THE EVENT OF DEATH WHILE PERFORMING MILITARY DUTY

11.49 In pursuance of the recommendations of the 5th Central Pay Commission, in addition to Special Family Pension/Liberalised Family Pension, Ex-gratia is granted to the family of a deceased service personnel in the event of death occurring on or after August 1st, 1997 as under: -

(a)	Death occurring due to accidents in the course of performance of duties	Rs. 5.00 Lakh
(b)	Death occurring in the course of performance of duties attributable to acts of violence by terrorists, anti-social elements etc.	Rs. 5.00 Lakh
(c)	Death occurring during (i) border skirmishes and (ii) action against militants, terrorists, extremists etc.	Rs. 7.50 Lakh*
(d)	Death occurring during enemy action in international war or such war like engagements which are specifically notified by the Govt.	Rs. 10.00 Lakh* *(with effect from May 1st,1999)

STEPS TAKEN FOR REDRESSAL OF GRIEVANCES OF DEFENCE PENSIONERS

11.50 It has been the constant endeavour of Ministry of Defence to strengthen the mechanism for redressal of the grievances of the Defence pensioners promptly and effectively. In order to achieve this end, several steps were initiated in the recent past. Some of the steps taken in this regard are as under:

(i) Various agencies involved in handling the pension matters of Defence pensioners have initiated action to computerise the records so that the delay in processing the pension matters is reduced.

(ii) PCDA(P), Allahabad has placed the relevant orders and instructions relating to pension on their web site.

(iii) The procedure for assessment of disability for grant of disability pension has been simplified and now there is no need for repeated assessment of the disability by the Medical Boards.

(iv) In order to address the legitimate grievances of the Armed Forces pensioners, Defence Pension Adalats are organised in different parts of the country where redressal is provided in a time bound manner.

(v) In order to reduce the hardship for the pensioners, it has been decided that all the banks having Defence pensioners' accounts would issue the Annual Life Certificate without charging any fees.

(vi) A single window system for issue of first payment cheques has been introduced in DPDOs for hassle free and prompt release of first payment cheques.

(vii) Henceforth, entitlement to pension of Armed Forces pensioners will remain unaffected on change of nationality and their pension will not be stopped by the Pension Disbursing Offices as was done earlier.

8.51 With the adoption of the aforesaid steps, it is expected that the grievances of the pensioners would be reduced considerably, and even if there are grievances, those would be attended to promptly and expeditiously.

8.52 The annual expenditure on Defence pensions, during last three years, is as follows: -

Year	Pension Disbursed (Rs. Crore)
2002-03 (Actual)	10091.64
2003-04 (Actual)	10999.67
2004-05 (BE)	11250.00
2004-05 (RE)	11922.00
2005-06 (BE)	12452.00 (Proposed)

12

Cooperation Between the Armed Forces and Civil Authorities

Army shows its humane face by providing help to the needy

Cooperation Between the Armed Forces and Civil Authorities

12.1 Besides ensuring inviolability of the borders of our country, the Armed Forces are also mandated to assist the civil authorities for maintenance of law and order and/ or essential services as well as for rescue and relief operations during natural calamities. Besides providing actual relief, the Armed Forces continue to maintain regular liaison with the civil authorities to refine contingency planning and ensure timely response. The details of assistance provided by the Armed Forces during the period are outlined in the succeeding paragraphs.

ARMY

12.2 Tsunami Disaster - Assistance Provided by Indian Army: An earthquake measuring Nine on Richter Scale, largest in the last 40 years, struck Andaman and Nicobar Group of islands at 0629 hours on December 26, 2004. The epicentre of the earthquake was reportedly West of Sumatra (Indonesia). The earthquake generated tsunami waves, which besides causing widespread damage in Indonesia, Thailand, Sri Lanka and Maldives, caused extreme damage to the Andaman and Nicobar Islands and the coastal states of Tamil Nadu and Kerala.

12.3 The Armed Forces have since been committed in one of the largest relief operations. Response to the disaster was launched on a war footing and the tri-service coordination team under HQ IDS was set up immediately on December 26, 2004. The relief not only included assistance within the country, but also to Sri Lanka, Maldives and later to Indonesia. The response was coordinated through the Interim National Command Post (INCP).

Army in relief operation in the Tsunami affected area

ARMY RELIEF AND RESCUE EFFORTS

12.4 Sri Lanka (OP RAINBOW):

(a) One Field Ambulance comprising 9 doctors and 130 paramedics was airlifted to Sri Lanka on December 31, 2004. The Field Ambulance provided aid in Hambantota and Matara Districts in Southern Sri Lanka. Aid has been provided to approx 7,846 patients. Mobile hygiene and sanitation teams visited relief camps and villages.

(b) The Army has provided 66 tonnes of rations, 4.5 KL of kerosene oil, 7 tonnes of medicines and 30,000 pairs of socks.

(c) Two Composite Task Forces carried out relief and rehabilitation tasks in Galle and Hikaduwa, to help in distribution of relief material, restoration of power supply, telephone communications, water supply, construction of temporary toilets and assistance in construction of a bridge at Televatha.

12.5 Andaman and Nicobar Islands (Op SEA WAVES)

(a) One Infantry Brigade and four Engineer Task Forces were pressed to carry out relief and rescue operations in Car Nicobar, Trinkat, Chowra, Hut Bay and Tarasa since December 26, 2004.

(b) Following assistance has been provided :-

(i) Assistance in evacuation of 9345 persons and burial of 922 bodies.

(ii) Establishment of 50 relief camps, catering for 15,000 people. Debris clearance and improvement in living and sanitary conditions of colonies of Car Nicobar.

(iii) Distribution of 168 tonnes of rations and relief material.

(iv) Establishment of a field kitchen in Car Nicobar and distribution of cooked food to 900 persons daily.

(v) Road opening/repair/construction. Total of 19 km of road/track has been cleared/repaired in Carnic. A new road alignment of 12 km length is under construction from Carnic to Arong Camp.

(vi) Restoration of electricity in 25 colonies in Car Nicobar, District Headquarters and Village Malacca, including installation of 25 generators.

(vii) Restoration of telephone connectivity between Carnic and Port Blair with STD facility.

(viii) Water supply, including establishment of one water well and five water points in Car Nicobar.

(ix) Provision of medical aid to 5,770 persons. Hygiene and sanitation drive was carried out in a number of villages.

(x) Construction of one temporary helipad at Arong Camp.

12.6 Tamil Nadu and Pondicherry (Op MADAD). Four infantry columns and three engineer columns were deployed immediately in the districts of Nagappattinam, Cuddalore, Kanchipuram and Kalpakkam. Following assistance has been provided :-

(a) Evacuation of 8500 persons and burial of 68 dead bodies.

(b) Assistance in recovery of 172 stranded boats and 23 trawler boats.

(c) Distribution of cooked food to 14,400 persons.

(d) Provision and distribution of rations and relief material.

(e) Medical treatment to 6,002 patients, including arrangement for counseling of trauma cases.

(f) Road opening and clearing of debris. A total of 15 km road length and 25 streets have been cleared in various locations.

(g) Repairing of civil boats and motor boats.

(h) Construction of two causeways in Nagappattinam District.

(j) Assistance in construction of temporary shelters.

(k) Conduct of informative classes on employment opportunities / recruitment in Cuddalore District.

(l) Construction of a 100 feet bailey bridge in Karaikal.

12.7 Kerala (Op MADAD): Five Army relief columns carried out relief and rescue operations in Thiruvananthapuram, Alleppey, Karunagappally and Allapapputura.

12.8 Flood Relief Operations

(a) Bihar: Commencing July 9, 2004, the flood situation in Bihar worsened rapidly, rendering the districts of Sitamarhi, Madhubani and Darbhanga totally cut off by surface means from the rest of the mainland. Later, the flood waters spread to the neighbouring districts of Khagaria, Samastipur and Kishanganj, leading to large scale floods. A total of 10 flood relief columns were deployed in a progressive manner in Bihar for flood relief operations with effect from July 9, 2004. Army carried out rescue and relief operations on a large scale, wherein 5,712 marooned civil-

ians were rescued /evacuated and 9,047 persons were provided medical aid. Besides, the Civil Administration was assisted in distribution of 802 tonnes of rations.

(b) Assam: During the first week of July 2004, Assam witnessed large-scale floods. The flood situation worsened, particularly in the Districts of Kokrajhar, Barpeta, Goalpara, Nalbari, Kamrup, Darrang, Morigaon, Nowgaon, Dhemaji, Tinsukia and Cachar. A total of 24 columns were deployed in the above districts for flood relief operations. Apart from the relief columns, special medical camps were also set up in the affected areas. During relief and rescue operations, 10,779 persons were rescued /evacuated and 1,01,715 persons were provided with medical aid and relief. Apart from this 232.49 tonnes of relief rations were also distributed. Army again conducted relief reserve missions during the October floods.

(c) Due to flash floods,large areas in the states of Punjab, Haryana, Gujarat, Rajasthan were affected. Nearly 34 army columns were employed to carry out the flood relief operations and nearly 5000 people were rescued and shifted to safe areas.

(d) Flood Alert : Himachal Pradesh. The Kinnaur District in Himachal Pradesh faced an impending disaster on July 29, 2004, when a major landslide in the Chinese territory near Karak blocked the flow of water into River Pare Chu. The Army undertook a proactive role in planning the management of the impending disaster, in conjunction with the Central Government and the State Civil Administration. Liaison was maintained with the Chinese authorities through the hot line at Chushul, as also through flag meetings. In response to the Army's request, the Chinese provided timely and progressive warning notices of the impending disaster. All civilians and Army / Indo Tibetan Border Police (ITBP) units, located in the danger zone, were evacuated to safe areas, well in time.

(e) Landslide in Chamoli District of Uttaranchal.On July 6, 2004, a major landslide occurred at Lambagarh (18 km South of Badrinath) on Joshimath – Badrinath Road, creating a 100 metre breach along the Alaknanda River. This resulted in approximately 1600 pilgrims getting stranded at

Badrinath. In another incident on the same road, three vehicles including a bus were involved in an accident due to boulders falling on the road. About 31 persons were feared killed or missing in the fast flow of the river. Based on a requisition from the State Government, the Army Formation and units located in Joshimath – Badrinath were activated, for immediate rescue and relief operations. Army personnel facilitated the movement of stranded people from Badrinath and ensured their safe passage through a three km long hydel-project tunnel, located near the site. A total of 2345 persons were evacuated during the period July 7 to 9, 2004. Apart from this, Army provided necessary transport for the movement of pilgrims and for restoration of BSNL mobile links at Badrinath and Joshimath.

NAVY

12.9 Medical Camps: Medical and Blood donation camps are regularly organised by various naval Commands and outlying units.

(a) Two medical camps were conducted at village Chapala-Uppada and at SOS children's village. Around 300 patients were treated and free medical check-up of all the children was carried out.

(b) The destitute children of Nehru Seva Sangh Orphanage at Banpur were given basic logistic support in the form of medical aid and food through the Naval Wives Welfare Association (NWWA) Centre at Chilka.

(c) With a view to provide medical aid to the nearby poor and needy villagers and to create health awareness amongst them, medical camps were organised at Vadakkankulam village on October 6, 2004 and at Kanmaniyin Kudiyiruppu at Parappadi village on November 1, 2004. More than 850 villagers benefited from these camps.

12.10 Communal Harmony Week: Debates with the theme of 'National Integration' were organised by the Western Naval Command to encourage communal harmony.

12.11 Other Initiatives: Various other initiatives taken by the Navy to promote healthy relations with civilians are:-

(a) Employment of physically challenged.

(b) Programmes like medical check-ups.

(c) HIV awareness workshops.

(d) Running schools for physically challenged children and providing mid-day meal to under privileged children.

12.12 Welfare of Senior Citizens, Tuticorin: The MI Room of the unit regularly undertakes medical check-ups of Senior Citizens residing in the Base. Besides this, nature walks to nearby temples are also organised.

AIR FORCE

12.13 Aid to Civil Power: IAF IL-76 and AN-32 aircraft rushed para military forces into the troubled North Eastern States during July 19-22, 2004 to bring the situation under control. Approximately 1250 troops were airlifted.

12.14 Flood Relief Operations: Indian Air Force undertook flood relief operations in Bihar, Assam, and Arunachal Pradesh. Floods in Bihar had been unprecedented and IAF helicopters carried out the largest ever relief operations with over 10 helicopters, in July 2004. During the 25 days of flood relief operations, the helicopters carried out 1000 hours of flying, carrying 1100 tons of food material / medicines and rescuing over 1400 people. In addition, extensive relief work was also undertaken in the states of Assam and Arunachal Pradesh. A total of 270 hours were flown airlifting 496.77 tons of material and 1934 civilians during these relief operations. IAF IL-76 and AN-32 moved the bulk supplies, relief equipment and Army columns into the major hubs from where further coordination was undertaken.

12.15 Operation Seawave: Tsunami struck the Indian Ocean on December 26, 2004. The IAF immediately launched a search and rescue mission by Mi 8 helicopter from Carnic airfield. Everyday, five IL-76, fifteen AN 32, two HS-748 and six helicopters took part in relief operations in Andaman & Nicobar Sector. The airlift included carrying relief material from mainland to Carnic & Port Blair, inter island shuttles evacuating personnel and providing search & rescue. Additional five helicopters reached Carnic on January 04, 2005 to assist in relief operations from Carnic. Relief operations in Colombo and Male' sector were also carried out using two HS-748 and six Helicopters (Mi-8 & Mi-17) operating daily and airlifting approximately 17 Tons and evacuating the required personnel. A total of 2100.873 tons of load and relief material and 14415 passengers were airlifted from affected areas on January 14, 2005.

12.16 Casualty Evacuation: Casualty evacuation was undertaken in Northern and Eastern sectors for civilians, military and paramilitary forces. A total of 128 persons were airlifted including 11 foreign tourists from inaccessible mountainous terrain.

Army bulldozer clearing deadly snow cover on National Highway in Jammu and Kashmir

12.17 Election Duties: IAF was pressed into Lok Sabha and State election duties in the country. A total of 2429 personnel and 3565 tons of load was airlifted to forward areas in North/Eastern sectors and sensitive areas in the country, for carrying out the election duties. The flying effort contributed greatly towards efficient conduct of elections in the year 2004.

12.18 Air Maintenance Operations: The IAF continues to provide air logistic support to the Army and other civilian agencies operating in the difficult and far flung areas in the northern and eastern sectors. Both fixed wing aircraft and helicopters continue to operate round the year, airlifting approximately 37000 tons of load. The IAF provides a life-line to the troops and other personnel in these areas through air landing and airdrop operations.

12.19 Co-Operation between Armed Forces and Civil Authorities. Trained manpower is being provided on a regular basis to Aviation Research Center (ARC), Border Security Force, Defence Research and Development Organisations and various Tri-Services organisations including NCC units. Presently, about 400 personnel below Officer's rank have been provided to Tri-Services Organisations. Similarly, NCC units have been provided 788 personnel.

13

National Cadet Corps

NCC Cadets during Republic Day Parade

National Cadet Corps

13.1 The National Cadet Corps (NCC) was established under the NCC Act, 1948. It has completed 56 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 good leaders and useful citizens. The motto of NCC is "Unity and Discipline". The progress and quality of training is reviewed periodically and changes incorporated to bring about improvements.

13.2 The total sanctioned strength of NCC cadets is about 13 lakh. The wing-wise distribution of the cadet strength is as under: -

(a)	Army Wing	-	9,70,549
(b)	Air Wing	-	67,000
(c)	Naval Wing	-	66,251
(d	Girls Wing	-	1,81,853

The NCC's presence can be felt in almost all the districts of the country covering 8,029 schools and 4,816 colleges.

TRAINING OF CADETS

13.3 Training Camps: Camp Training is an important part of NCC curriculum. The camps help in developing camaraderie, teamwork, dignity of labour, and self-confidence. These camps also inculcate the value of unity and discipline among the cadets. The camps conducted during the year 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% of enrolled strength of cadets, numbering approximately 6.5 lakhs, attend at least one camp per year. On an average, 900 such camps are conducted in a training year. 2,48,920 cadets have attended these camps during the training year commencing 1st July, 2004.

(b) National Integration Camps (NIC): Out of 37 National Integration Camp (NIC) planned for the year 2004-05, 36 camps were held in which cadets from all States and Union Territories participated. In addition, special NICs were conducted at the following places: -

(i) NIC Leh: From July 1st to 16th, 2004 in which a total of 180 cadets from all parts of the country participated.

(ii) NIC CHAKABAMA: The special national integration camp in the North East was conducted at Chakabama (Nagaland) from October 1st to 12th , 2004 where 200 cadets from the North East Region and 600 cadets from the rest of India participated.

(iii) NIC Srinagar: A special NIC was conducted at Srinagar from May 20th to 31st, 2004 and a total of 300 cadets from all parts of the country participated.

(iv) NIC Port Blair: A special NIC Port Blair (Andaman & Nicobar Island) was held from March 2nd to 13th, 2005 in which 130 cadets, including 80 cadets from the mainland, participated.

(c) Vayu Sainik Camp (VSC): Every year an All India Vayu Sainik Camp for Air Wing Senior Division/Senior Wing cadets is organised for a period of 12 days. This year the camp was conducted at Air Force Station Jalahalli (Bangalore) from October 4th to 15th, 2004 in which 420 Senior Division and 180 Senior Wing cadets participated.

(d) Nau Sainik Camp (NSC): This camp is also organised once a year for 12 days. 400 Senior Division cadets and 160 Senior Wing cadets attended the camp which was conducted at Visakhapatnam from October 25th to November 5th, 2004.

(e) Thal Sainik Camps (TSC): Two TSCs are conducted at Republic Day Parade ground, Delhi every year i.e., one for Senior Division/Junior Division boy and the other for Senior Wing /Junior Wing girls. 640 boy and 640 girl cadets take part in these camps. This year the camps were conducted from October 8th to 19th, 2004.

(f) Leadership Camps: These camps are conducted on an All India basis. There are four Advance Leadership Camps (ALC), one each for Senior Division, Junior Division, Senior Division Naval Wing boys and Senior Wing girls and three Basic Leadership Camps, one each for Senior Division boys, Senior Wing and Junior Wing girls. These camps conducted during the months of September and October, 2004, imparted training to 2950 boy and girl cadets.

(g) Rock Climbing Camps: During the months of November and December, 2004 two NCC

Horse Show by NCC Cadet

Directorates viz., Kerala and Lakhshadweep Directorate and Madhya Pradesh and Chhattisgarh Directorate organised rock climbing camps for Senior/Junior Division boys and Senior/Junior Wing girls.

(h) Republic Day Camp –2005: Republic Day Camp-2005 was conducted from January 1st to 29th, 2005 at Delhi. The Camp was attended by 1800 cadets from all over India, besides cadets of friendly foreign countries with whom NCC has a Youth Exchange Programme. Inter Directorate competitions connected with institutional training, cultural competitions and National Integration awareness presentations were conducted during the month long Camp. The Camp was inaugurated by the Vice-President of India on January 8th, 2005 and the Prime Minister's Rally was held on January 27th, 2005. The Camp culminated with tea for selected cadets hosted at Rashtrapati Bhawan.

13.4 Attachment Training: The NCC cadets gain first hand experience of immense value by attachment to the Armed Forces units. During the year, attachments conducted were as under: -

(a) 364 Officers and 17132 cadets were attached to the regular Army units. This included Women Officers and Senior Wing girl cadets.

(b) 120 cadets were attached to Indian Military Academy, Dehradun during June 2004 and 48 girls to Officers Training Academy, Chennai during September, 2004. Both attachments were for a duration of two weeks.

(c) 1000 girl cadets were attached with various Military Hospitals during the year.

(d) 38 Senior Division and 12 Senior Wing cadets of Air Wing were attached to Air Force Academy, Dundigal (Dindigul) from October 9th to 21st, 2004.

(e) Naval Attachment – INS Mandovi : Third attachment training camp for Naval Wing (Senior Division) cadets was conducted at Naval Academy, INS Mandovi, Goa for a duration of 12 days from December 20th, 2004 to January 2nd, 2005. 25 Senior Division cadets from all 16 Directorates attended the training.

13.5 Gliding and Microlite Flying: Gliding facilities are provided at 38 NCC Air Squadrons, which carried out 18818 launches during the year. Microlite flying is being conducted in NCC as an adventure activity with a view to give air experience to the Air Wing NCC cadets (Senior Division). A total of 3262 hours of microlite flying was undertaken during the year.

13.6 Sea Training: NCC cadets of the Naval Wing, during their sea training and attachment, are imparted intensive training in Naval subjects like Navigation Communication, Gunnery, Seamanship, Damage control & Ship safety, First aid, and Ship's husbandry. During the year, 295 cadets were attached to ships of the Eastern and Western Naval Command and Coast Guard for sea training.

13.7 Screening Courses at Officers Training Academy: Two Services Selection Board Screening Courses for Senior Division cadets aspiring to join the armed forces were held at Officers Training Academy, Kamptee from May 17th to 26th, 2004 and from October 25th to November 3rd, 2004. 187 Senior Division cadets from all State Directorates attended the course. Services Selection Board Screening Course to train Senior Wing cadets was held at Officers' Training Academy, Gwalior from January 19th to 29th, 2004. 94 Senior Wing cadets from all State Directorate attended this course.

13.8 Foreign Cruise: The following foreign cruises were undertaken:-

(a) Coast Guard Cruise: Five Naval Senior Division cadets proceeded to Colombo (Sri Lanka) on December 12th, 2004 and returned on December 19th, 2004.

(b) Naval Cruise: Ten Naval Senior Division cadets and one Naval Permanent Instructions Staff attended the cruise organised from September 12th to October 14th, 2004 from Kochi to Port Victoria, Mombassa, Male and back.

13.9 Adventure Training

(a) Mountaineering Courses: NCC nominates boy and girl cadets from all NCC Directorates to attend various courses at Nehru Institute of Mountaineering, Uttarkashi, Himalayan Mountaineering Institute, Darjeeling and Directorate of Mountaineering & Allied Sports, Manali every year. For the year 2004-2005, 320 cadets were nominated for these courses.

(b) Mountaineering Expeditions: NCC has been conducting two mountaineering expeditions every year, one for the Senior Division boy cadets and the other for Senior Wing girl cadets. Since 1970, NCC has conducted 54 mountaineering expeditions, of which 29 were for boys and 25 for girls. This year the boys team successfully undertook expedition to the Bhagirathi Peak II (6510 Metres) in May/June, 2004 and the girls team undertook the expedition to Manali Peak (5640 Metres) in September/October, 2004.

(c) Cycle and Motor Cycle Expeditions: During the current year, a motor cycle rally was organised by Gujarat Directorate from September 26th to October 12th, 2004 to the Base camp of Siachin. A motor cycle rally commenced on December 16th, 2004 under the aegis of West Bengal & Sikkim Directorate and traversed the length and breadth of the country spreading AIDS awareness.

(d) Trekking Expedition: A total of 10 trekking expeditions were conducted during the year 2004-2005 where 10,000 cadets participated.

(e) Para Sailing: Para Sailing is conducted at each Group level as a part of adventure activity for boy and girl cadets of NCC. During the year, 10,904 cadets were trained in this activity. A total of 76,868 cadets have been trained so far.

(f) Para Basic Courses: During the year, 19 boy cadets and 18 girl cadets of NCC were trained at Army Airborne Training School, Agra.

(g) Slithering Demonstration: 10 Senior Division and 10 Senior

Sl. No	Directorate	From	To	Distance	Date	No. of Cadets
1.	Bihar	Patna	Raj Mahal	418 kms	Oct 5 –16, 04	20 SD+10 SW
2.	Delhi	Yamuna River		756 kms	Sep20- Oct 1, 04	18 SD & 7 SW
3.	Gujarat	Tilakwada	Bhadboot	405 kms	Oct 20-30, 04	56 SD
4.	Karnataka	Karwar	Malpe	405 kms	Dec 15-31, 04	21 SD & 13 SW
5.	Maharashtra	Wai	Kathapur	467 kms	Aug 16-30, 04	33 SD & 12 SW
6.	West Bengal	Farakka	Kolkata	430 kms	May 17- Jun 5, 04	52 SD
7.	Tamil Nadu	Pondicherry	Kodiakarai	436 kms	Jul 26- Aug 6, 04	30 SD & 05 SW
8.	Orissa	Kamaladha	Kujang	435 kms	Oct 26–Nov 6, 04	40 SD & 20 SW
9.	Madhya Pradesh	Dhua Dhar	Hoshanga-bad	410 kms	Sep 28– Oct 4, 04	40 SD
10.	Uttar Pradesh	Kanpur	Allahabad	360 kms	Feb 1-10, 04	40 SD
11.	Jammu & Kashmir	Govindsagar Lake		434 kms	Sep 28- Oct 9, 04	11SD+22SW
12.	Punjab	Govindsagar Lake		420 kms	Sep 1-12, 04	12 SD
		Govindsagar Lake		479 kms	Sep 8-20, 04	40 SD&SW
			TOTAL			413SD + 89SW

(SD: Senior Division boy cadets; SW: Senior Wing girl cadets)

Wing cadets took part in a slithering demonstration during Prime Minister's Rally in January, 2005.

(h) Desert Camel Safari: Desert Camel Safari involving NCC cadets and foreign cadets from Singapore was conducted from November 19th to 30th, 2004.

(i) White Water Rafting: White Water Rafting Node has been established at Raiwala (Haridwar). NCC is in the process of finalising establishment of three more White Water nodes in Punjab, West Bengal and Gujarat.

(j) Sailing Expeditions: The following major Whaler sailing expeditions were conducted during the year :-

YOUTH EXCHANGE PROGRAMME (YEP)

13.10 The following visits were undertaken during the year as part of YEP: -

(a) Visit of one Officer and six cadets (Naval Wing) to Singapore to participate in International Sea Cadet Exchange programme from May 29th to June 12th, 2004.

(b) Visit of one Officer and four cadets (Air Wing) to Singapore to participate in International Air Cadet Exchange Programmes from May 29th to June 12th, 2004.

(c) Visit of one Officer and twelve cadets to UK from July 20th to August 4th, 2004.

(d) Visit of two Officers and ten cadets to Russia from September 16th to 26th, 2004.

(e) Visit of one Officer and six cadets to Sri Lanka from October 15th to 22nd, 2004.

(f) Visit of two Officers and eight cadets to Singapore from December 3rd to 11th, 2004.

(g) Visit of two Officers and thirteen cadets to Vietnam from December 5th to 14th, 2004.

13.11 Incoming YEP Visits: The following incoming YEP visits by foreign delegations took place during the year:-

(a) Visit of one Officer and eight cadets from Singapore for Nau Sainik Camp at Vishakhapatnam from October 25th to November 5th, 2004.

(b) Visit of two Officers and ten cadets from Singapore for Desert Safari at Jaisalmer (Rajasthan) from November 19th to 30th, 2004.

(c) Visit of twelve Officers and ninety two cadets from eight countries during RDC 2005.

(d) Visit of one Officer and six cadets from Bangladesh NCC who attended All India Yachting Regatta from January 20th to 27th, 2005 under the aegis of NCC Directorate, Orissa.

SOCIAL SERVICE AND COMMUNITY DEVELOPMENT

13.12 NCC has adopted community development activities with the aim of imbibing the cadets with a spirit of selfless service to the community, dignity of labour, importance of self help, need to protect the environment and to assist weaker sections of the society in their upliftment. NCC cadets participate in the following community development activities:-

(a) Tree Plantation: NCC cadets plant sapling and look after them in association with the State Department / Colleges / Schools and Villages concerned. This year, as part of NCC Day celebrations, all NCC units undertook 'plant a sapling by each cadet', thereby, planting 1.3 million saplings.

(b) Blood Donation: Cadets donate blood as voluntary service whenever needed by Hospitals/Red Cross. As part of NCC Day celebration, NCC cadets donated 4 lakh units of blood.

(c) Old Age Homes: Old Age Homes in the country are patronised and regularly visited by NCC cadets.

Aids Awareness Rally by NCC cadets

(d) Adult Education: NCC cadets visit remote areas, villages and underdeveloped areas to emphasise the need for education and to assist in the conduct of the Adult Education Programme.

(e) Community Projects: Cadets of NCC participate in the rural and urban community projects and other development works like village track improvement, well cleaning etc.

(f) Disaster Relief: NCC has extended their helping hand during natural and other calamities and accidents. Over the years, NCC cadets have rendered outstanding service in the wake of floods, earthquakes, cyclones, train accidents etc. and have provided the 'healing touch' in riot affected areas. NCC cadets rendered exemplary service during the Tsunami relief operation carried out in December, 2004 and January, 2005.

(g) Anti Leprosy Drive: NCC cadets have launched anti-leprosy drive throughout the country and are helping various voluntary organisations.

(h) AIDS Awareness Programme: NCC also participates actively in the AIDS awareness programme. The NCC is working alongwith UNAIDS and Directorate General Armed Forces Medical Service in carrying out AIDS Awareness programmes throughout the country. A motorcycle rally was conducted

by NCC wherein cadets from West Bengal & Sikkim Directorate traversed the length and breadth of the country to spread AIDS awareness.

(i) Cancer Awareness Programme: NCC cadets actively participated in Cancer Awareness Programmes organized in various cities. Cancer Care India (CACI), an NGO and NCC have joined hands to launch Cancer Awareness Programmes, (CAPS) throughout the country. So far 13 such CAPS have been conducted. Cancer Awareness Day on November 7th, 2004 was observed in a big way.

ACTIVITIES AT NATIONAL LEVEL

13.13 The NCC cadets also participated in the following activities conducted at the national level: -

(a) Jawaharlal Lal Nehru Hockey Tournament: Jawaharlal Nehru Hockey Tournament was held from October 7th to November 13th, 2004 at New Delhi. Four teams viz two junior (boys), one junior (girls) and one sub junior (boys) from NCC participated in the tournament.

(b) Subroto Cup Football Tournament: NCC has been participating in this tournament for the last 26 years. NCC teams, one each from Karnataka and Goa and North-Eastern Region Directorate, participated in the tournament held from September 1st to 30th, 2004 at New Delhi.

(c) All India GV Mavlankar Shooting Championship: The 14th All India G V Mavlankar Shooting Championship was held at Coimbatore from September 5th to 15th, 2004. 32 NCC cadets (16 boys and 16 girls) took part in the event. This year the NCC cadets won five gold, five silver and five bronze medals in the championship.

(d) National Shooting Championship Competitions (NSCC): The 48th National Shooting Championship Competition (NSCC) was conducted at Indore from October 5th to 15th, 2004. Thirteen cadets from NCC participated in the event. The cadets performed commendably well and won one gold and one bronze medal in the Championship competitions. Two cadets were selected to participate in the selection trials I & II to be conducted at Hyderabad.

(e) All India NCC Yachting Regatta-2005: All India NCC Yachting Regatta was conducted at INS Chilka from

January 20th to 27th, 2005. 48 Senior Division and 48 Senior Wing cadets from all the NCC Directorates participated. In addition 6 cadets from Bangladesh also participated.

(f) National Team Sailing Championship: Team from NCC Directorate Maharashtra participated in the National Team Sailing Championship-2004 at Indian Navy Watermanship Training Centre (IN WTC), Mumbai, from December 1st to 5th, 2004 conducted by Yachting Association of India (YAI).

(g) Equestrian Competition: NCC participated in Punjab Horse Show 2004 organised in Ludhiana from April 23rd to 24th, 2004 and won two gold and two silver Medals. NCC team from Punjab Directorate also participated in Shivalik Horse Show 2004 at Chandimandir.

PLANNING SECTION

13.14 During the year the following important activities were also undertaken:-

(a) Formulation of Mixed Battalion concept: In order to give boost to the girl cadets enrolment, mixed battalion concept has been formulated with a view to increase the strength of girl cadets from 13% of the overall strength to 30 % over a span of three years. During the current training year, the girl strength has increased from 164524 to 181853.

(b) Additional authorisation of man power and other resources: In view of the enhanced cadet strength from 11 lakh in 1976 to present 13 lakh, for assessing the requirement of additional man power and other resources, a Study Group has been formed under the Additional Director General (B) of Directorate General NCC to present a consolidated case for all increased requirements.

(c) Encouragement of Air and Naval Training activities in remote areas: Action is underway to provide an Air Squadron at Pantnagar in Uttaranchal State and a Naval unit at Lansdowne in Garhwal region in order to give exposure to the youth of remote areas.

(d) Providing NCC to deserving Schools and Colleges: Efforts are on to reach out to all deserving schools and colleges that are desirous of having NCC and at the same time measures are being taken to withdraw from schools/colleges that are not conducting NCC activities of the desired level.

LOGISTICS DIRECTORATE

13.15 Purchase of Rafting Equipment for NCC: Two sets of Rafting, Safety, command and control equipment have been procured along with accessories for white water rafting.

13.16 Authorisation of Generator Sets to NCC Group HQ: Generator sets have been provided with accessories at the scale of two each for every NCC Group Headquarter.

13.17 Procurement of Computers and Peripherals: 319 computers each alongwith modem, inkjet printer and MS Office Professional, have been procured and allotted to the NCC establishments up to unit level.

14

Defence Relations with Foreign Countries

Prime Minister and Raksha Mantri with Uzbek President and Defence Minister signing an MoU on Defence Co-operation

Defence Relations with Foreign Countries

14.1 A closer security dialogue and strengthening of defence cooperation with friendly countries remains an important objective and component of our overall defence and foreign policies. These have been reinforced by the major changes that have taken place in recent years in the global security, political and strategic environment. The emergence of a new and virulent brand of international terrorism as one of the primary threats to domestic and international security has brought about a greater convergence in security perceptions among nations and prompted closer security and defence-related contacts, exchanges and cooperation with a widening group of countries. Concerns about the leakage and proliferation of weapons and technologies that can be used for mass destruction and threats to the security of transport, travel and the sea-lanes, have also served to bring countries closer and to cooperate for their mutual security.

14.2 India too has responded to this scenario by developing an expanding web of defence relations with a wide-range of countries. These have taken the form of increased defence diplomacy in the form of exchanges of high-level defence-related visits and dialogues on security challenges, port calls etc. and defence cooperation through training exchanges, combined exercises, meetings at various levels, seminars, sourcing, development, production and marketing of defence equipment, and other forms of cooperation.

14.3 There were several visits to India at the level of Defence Ministers. Since March 2004, the Defence Minister of China (March 2004), the Minister of State for Defence & National Security of Maldives, Shri Abdul Sattar Anbaree (August 2004), the UK Secretary of State for Defence, Mr. Geoff Hoon (October 2004), the Russian Defence Minister, Mr. Sergey B. Ivanov (November-December 2004), the Defence Minister of Switzerland, Mr. Samuel Schmid (November-December 2004), the US Secretary for Defence, Mr. Donald Rumsfeld (December 2004), the Defence Minister of Tajikistan, Mr. S. Khairulloev (January 2005), the Defence Minister of Ghana (February 2005), and the Defence Minister of Vietnam (March 2005) have visited India on bilateral visits. Outgoing visits have included the visit of Raksha Mantri Shri Pranab Mukherjee to Poland in November 2004. Secretary Rumsfeld's visit was followed by a visit by the US Secre-

tary of State, Dr. Condoleeza Rice, in March 2005. The visits touched on the global priorities of President Bush's second term and the prospects of expanded defence cooperation.

14.4 Defence relations and cooperation also formed the agenda of the State visits of the Sri Lankan Prime Minister (July 2004) and President (November 2004), the Chairman of Myanmar's State Peace and Development Council, Senior General Than Shwe (October 2004), the Russian President Vladimir Putin (December 2004), President Dr. Ivan Gasparovic of the Slovak Republic (December 2004), the King of Bhutan, Jigme Singye Wangchuk (January 2005), and the Afghan President Hamid Karzai (February 2005).

14.5 Over the years India has developed robust institutionalized security dialogues and defence consultative mechanisms at the Defence Secretary level with a growing number of countries. Those that have met since April 2004 included the India-Japan Defence Dialogue led by the Japanese Administrative Vice Minister, Mr. Takemasa Moriya, in India (May 2004); the 8th meeting of the India-UK Defence Consultative Group (DCG) led by the UK Permanent Under Secretary of Defence, Sir Kevin Tebbit, at New Delhi (April 27-28, 2004); the India-US Defence Policy Group headed by the US Under Secretary of Defence for Policy, Mr. Douglas Feith, (June 1-3, 2004); the 7th India-France High Commission on Defence Cooperation led by the French Defence Minster's Personal Representative, J. F. Thibault, at Paris (November 2004); and the 3rd meeting of the India-Israel Joint Working Group on Defence headed by the Director General of the Israeli Ministry of Defence, at Tel Aviv (December 2004).

14.6 Other high level interactions and visits in the field of defence cooperation included the visits of former Defence Secretary, Shri Ajay Prasad to Germany and Romania (April 2004) and Singapore (June 2004) for the International Institute for Strategic Studies' 'Shangri-la' Dialogue, and the visit of the German State Secretary of Defence Dr, Peter Eickenboom (December 2004).

14.7 Visits at the level of Chiefs of Defence/General/Joint Staff or Services form a vital part of our military-to-military relationship expanding the framework of professional interaction and exchanges and enhancing mutual understanding. The Chief of Defence Forces of the Australia, Mr. Peter Cosgrove, visited India in August-September 2004. From India, Admiral Madhavendra Singh, then Chief of Naval Staff and Chairman, Chiefs of Staff Committee visited Turkey in May 2004. Admiral Raman Puri, the Chief of Integrated Defence Staff visited the US in October 2004. Visits at the level of Service Chiefs include the visits of the Major Gen-

eral Ng Yat Chung, Chief of Defence Forces, Singapore (April 2004), Vice Admiral Chris Ritche, Chief of Naval Staff, Australia; Lt. General Ahmed bin Harith bin Harith Nasser Al-Nabhani, Chief of Staff of the Sultan's Armed Forces (COSSAF), Oman; Rear Admiral Abbas Mohtaj, Commander of the Iran Naval Forces (May 2004); Lt. General L. M. Fisher, Commander, Botswana Defence Forces (CDF) (August 2004); Admiral Dato Sri Mohd. Anwar bin H. J. Mohd Nor, Chief of the Royal Malaysian Navy; Rear Admiral Ronnie Tay, Chief of Singapore Navy (September 2004); Rear Admiral Shah Iqbal Mujtaba, Chief of Naval Staff, Bangladesh; Major General Lim Kim Choon, Chief of Singapore Air Force (October 2004); Major General Khalid Bin Abdulla Mubarak Al Buinnain, Commander, Air Force & Air Defence, UAE; Lt. General Peter F. Leahy, Chief of the Australian Army; General Pyar Jung Thapa, Chief of the Army Staff, Royal Nepal Army (November 2004); the Japanese Coast Guard Commandant, Hiroki Ishikawa, in January 2005; and Lt. General N. C. Gregson, Cdr, US Marine Forces Pacific, USA, and Major General Mohamed Benslimani, Chief of Air Force, Algeria, in February 2005.

14.8 From India, Chief of Army Staff (COAS) visited Austria in August 2004, Sri Lanka & Maldives in November 2004, and China in December, 2004. The Chief of Air Staff visited France in April 2004, the UK in June-July 2004, Japan in July 2004, Israel in September 2004 and Myanmar in November 2004. The Chief of Naval Staff paid visits to Sri Lanka in September 2004, UK in October 2004, Italy in January 2005, Seychelles in February 2005 and the US in March 2005.

14.9 A growing feature of our defence cooperation with foreign countries this year has been an increased frequency of activities such as joint and combined exercises with friendly armed forces. These exercises are growing in scale and complexity. Joint air exercises were conducted during the year with the US, Singapore, South Africa, France and other countries. India and the US held five joint exercises, including Ex 'Co-operative Cope Thunder' in Alaska from July 15-31, 2004 (between the Air Forces); Ex 'Yudh Abhyas' in Hawaii July 12-31, 2004 and Ex 'Balance Iroquois' / Ex 'Vajra Prahar' in Leh from September 5-15, 2004 (between the Armies); and Ex 'Malabar' from October 5-10, 2004 and Ex 'Flash Iroquois' in October 2004 (between the Navies). Nine countries participated in a multinational air Exercise 'Co-operative Cope Thunder-2004' held in Alaska from July 15-30, 2004. This was the first time that in the history of the Indian Air Force (IAF), the fighter aircraft of the IAF have participated in a multinational exercise held outside India.

14.10 The Republic of Singapore Air Force (RSAF) and the IAF participated in a bilateral Dissimilar Air Combat Training Exercise 'Ankush/ SINDEX-04' at Air Force Station, Gwalior, from October 11-26, 2004. An IAF contingent ferried across the Indian Ocean to participate in an Air Defence Exercise 'Golden Eagle' with the South African Air Force. The Indian Air Force also participated in the Africa Aero Space Defence Exhibition during their stay at South Africa, at which two Mirage 2000 aircraft carried out formation aerobatics. The Surya Kiran aerobatic team performed along with the French Air Force aerobatic team Patrouille-de-France on November 7, 2004 at Hindon Air Base. The Army conducted artillery and armour exercises with the Singapore army in Deolali and Babina ranges in India in March 2005. These exercises helped partner countries test skills and equipment, learn from each other's experience and develop professional bonds.

14.11 The Indian Navy has institutionalized joint exercises with USA, France, Singapore, Oman and the UK, and joint patrols with Indonesia. Naval exercises took on an increasingly diversified and complex character. The annual Indo-US naval joint exercise 'MALABAR-CY-04' was conducted off the west coast of India from October 1-10, 2004. From the US side, USS Cowpens, USS Gary, USS Alexandria and one P3C Orion participated in the exercise. The Indian participation included INS Mysore, INS Brahmaputra and INS Shankul. A two-week naval Special Forces Exercise, SANGAM 04, was held at Ganpatiphule, India from October 8-24, 2004. The annual Indo-French exercise VARUNA 04 was held from April 7-14 2004. The French Carrier Battle Group, including aircraft carrier 'Charles de Gaulle', amphibious ships and frigates participated. VARUNA 05 held in March 2005 focused on Mine Counter Measures (MCMEX). The eleventh IN-Singapore Navy annual exercise was held off Kochi from March 7-19 2004. The 12th exercise was held in the South China Sea in March 2005. The first bilateral joint exercise with the Royal UK Navy codenamed KONKAN 04 was held off Chennai from April 17-19, 2004. HMS Exeter and RFA Gray Rover participated in the basic level exercise. An Indo-Oman Joint Exercise Thammar-Al-Thayib was held off Oman from February 20-22 2005. INS Karwar participated in the 2nd Western Pacific Mine Counter Measures Exercise held off Singapore from April 21– May 7, 2004. One diving team also took part in the Diving Exercise which was conducted simultaneously.

14.12 Naval goodwill visits are a conventional instrument of defence diplomacy. Major overseas deployments of the Indian Navy on good will visits during this period have included the visit of three Indian Naval Ships to Pusan (RoK) from

October 2004; and the INS Mumbai, INS Aditya, INS Talwar and INS Pralaya to Abu Dhabi from September 19-23, 2004. Also, as part of our programme of cooperation with Djibouti, the Indian Navy ship, INS Dunagiri, visited Djibouti in May 2004. There were other naval ship visits to ports in the Persian Gulf and the South China Sea.

14.13 The Navy also performed some operational, training and joint security activities together with partner navies. The 4th India-Indonesia Coordinated Patrol, called 'INDINDOCORPAT' was conducted from September 1-30, 2004. IN Ships Tarasa and Tarmugli participated from the Indian side. IN Ships Sujata and Savitri were deployed at Maputo, Mozambique, from June 2-27 2004 to provide maritime security during the 'World Economic Forum Summit' and the 'Africa-Carribean-Pacific Heads of State Summit' held at Maputo. More than 100 Mozambican naval personnel were also imparted training during the period of deployment.

14.14 The Indian Navy's Sail training ship, the INS Tarangini, which sailed from Kochi on Jan 23, 2003 on a circumnavigation voyage, returned to Kochi on April 25, 2004. During the voyage, the ship touched 37 ports in 18 countries and covered a distance of 34,923 NM. 19 foreign officers embarked the ship during various legs of the voyage.

14.15 The role of the Indian Armed Forces in disaster responses in the South Asian region was manifested in their response to requests for assistance after the December 26, 2004 Tsunami. The Indian Navy, Air Force, Coast Guard and Army deployed some 20,000 troops, 40 ships and 32 aircraft (including helicopters) in the national and international effort that included Sri Lanka, Maldives and Indonesia. For the international effort alone, the Air Force lifted 500 tonnes of relief material and 1,750 personnel by air; Navy delivered 735 tonnes and conducted 1063 sorties by sea, and the Armed Forces as a whole, provided medical aid to nearly 15,000 people. Indian Air Force helicopters set off for Sri Lanka within hours and an Indian naval ship set sail from Kochi equipped with relief supplies within four hours of a request from Sri Lanka. The logistics trail for the effort extended in most cases over thousands of miles. The Indian Armed Forces were able to demonstrate speed, man-power intensive tasks, specialized skills and a humanitarian approach in responding to the crisis that included search and rescue, evacuation, relief supplies including food and water, shelter, medical, diving and salvage operations, clearing of harbours, repair, restoration or services, and rehabilitation and reconstruction activities, including the laying of bailey bridges.

15

Ceremonial, Academic and Adventure Activities

An illuminated view of the South Block which houses the Ministry of Defence

Ceremonial, Academic and Adventure Activities

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 Defence Studies and Analyses, New Delhi;

(ii) Mountaineering Institutes at Darjeeling and Uttarkashi; and,

(iii) The Jawahar Institute of Mountaineering and Winter Sports (JIM) at Aru, Kashmir.

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 was established in November, 1965 to initiate studies and research on problems of national security and the impact of defence measures on economic, political and social developments. Over the years, the Institute has evolved as a premier research institution, carrying out authoritative policy-related studies on national and international security issues. The Institute is a registered body under the Societies Act of 1860 (Punjab Amendment Act, 1957) and is governed by an Executive Council elected by the members of the Institute. The Institute is accessible to political leaders, scholars, the media, service officers and others who have an interest in problems of national security.

15.4 The Research Faculty: The Institute has a well qualified and a multi-disciplinary research faculty of over 50 scholars drawn from the academia, the defence forces, the para military organisations and the civil services. Presently, there are 16 researchers under the 2003-04 Fellowship programme who are engaged in individual research projects. Their collective efforts ensure an all encompassing and an Indo-centric assessment of various regions, countries and issues that affect our current and futuristic security environment. The Institute also offers facilities to foreign scholars' for their research. To enrich the quality of research work of the scholars, IDSA has bilateral ties with a number of similar Institutes across the globe.

15.5 Activities: The Institute organized major international conferences such as the 7th Asian Security conference on "Changing Security Dynamics in Eastern Asia" from January 27-29, 2005. The Conference was attended by a large number of scholars, diplomats and members of government representing several countries. 28 papers were presented in six sessions. Seminars were also held on specific issues such as "9-11 Revisited", the "Current Developments in Iraq" and the "Nuclear Proliferation Treaty (NPT) Review Conference" in the course of the year under review. The Institute organized more than 50 Round Table Discussions with visiting scholars, diplomats and foreign delegations/ teams.

15.6 Bilateral and Multilateral Interactions: The Institute has bilateral ties and multilateral interactions with the Bangladesh Institute of International and Strategic Studies (Bangladesh), the Council for Security Cooperation in Asia Pacific (CSCAP), Institute of International and Strategic Relations (France), Institute of Political and International Studies (Iran), Begin-Sadat Centre for Strategic Studies (Israel), Japan Institute of International Affairs and National Institute of Defence Studies (Japan), Kazakhstan Institute for Strategic Studies (Kazakhstan), South Africa Institute of International Studies (South Africa), Emirates Centre for Strategic Studies & Research (UAE) and Institute for National Strategic Studies (USA).

15.7 Research Orientation: The research output of the faculty is mainly published in the Institute's journal 'Strategic Analysis' or as monographs and books. The researchers frequently present their papers in various national and international seminars and also contribute articles and chapters to foreign journals and publications. Besides, the IDSA also brings out the 'Strategic Digest' which is a monthly compendium of information from the open sources on nuclear and disarmament issues, military doctrines, arms transfer and technology developments. It has been found useful by many institutions and the defence departments of various universities and colleges in India.

15.8 Training Programmes: The Institute is also engaged in training programmes for the Government officers drawn from the Indian Administrative Service, Indian Foreign Service, the Armed Forces and the Para-Military Forces. During the year under review, a five day training capsule was organized by the IDSA for IAS Officers. The faculty members of IDSA were also invited as guest speakers at various training establishments and universities around the country including the National Defence College and the Foreign Service Institute.

15.9 Information Resources: The Institute is constantly upgrading its Information Resources, which has a sizeable resource base on national security and defence strategy subjects. It has a collection of over 50,000 books and a number of CD-ROM database. In addition, more than 300 current journals are received, in print as well as electronic/ online versions. Apart from its referred quarterly journal, 'Strategic Analysis' and the monthly compendium Strategic Digest', IDSA also publishes a monthly bulletin called 'Current Journal Contents' that lists the contents of about 140 core journals received in the Library. The Institute maintains a web-site (address: http://www.idsa-India.Org). Details of new activities as well as progress in the ongoing activities are posted on the site.

MOUNTAINEERING INSTITUTES

15.10 The Ministry of Defence administers jointly with the concerned State Governments three Mountaineering Institutes namely Himalayan Mountaineering Institute (HMI), Darjeeling, in West Bengal, Nehru Institute of Mountaineering (NIM), Uttarkashi, in Uttranchal and Jawahar Institute of Mountaineering & Winter Sports (JIM), Aru (presently located at Pahalgam in J&K). The expenditure on the institute is shared by the Central and respective State Governments as per agreed funding pattern. These Institutes are run as private Registered Societies and have been conferred the status of autonomous bodies. Raksha Mantri is the President of these Institutes. The Chief Minister of the respective State is the Vice-President of the Institute. These Institutes are governed by separate Executive Councils consisting of members elected by the General Bodies, nominees from amongst donors and/or persons who are likely to promote the cause of the Institute and representatives of Central and State Governments. A representative each of the Ministry of Defence and State Government acts as Secretary of the Institute.

15.11 The HMI, Darjeeling, was founded in November 1954 by the then Prime Minister Pandit Jawaharlal Nehru, to commemorate the historical ascent of Mount Everest by Late Tenzing Norgay along with Sir Edmund Hillary on May 29, 1953. With the establishment of this Institute, an impetus to mountaineering as a sport was provided in India. To give further boost to mountaineering and to inculcate the spirit of adventure in youth, the NIM, Uttarkashi, was set up in October 1965 and the JIM at Aru in J&K, in October 1983. Due to disturbances in the valley, students were reluctant to come to Aru for training. Accordingly, it was decided to shift the Institute temporarily to

Batote on the Jammu side of Banihal in August 1990. However, in view of certain adverse reports regarding law & order, regular training courses conducted by the Institute were temporarily suspended from April 1996. The Institute is now conducting some courses on ad-hoc basis. The Headquarters of the Institute has now been shifted to Pahalgam since October 2003.

15.12 The broad objectives of the Mountaineering Institutes are: (a) to impart theoretical 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.

15.13 The Institutes conduct Basic and Advance Mountaineering Courses, Method of Instruction Course (MOI), Search & Rescue Course (S&R) and Adventure Courses. The syllabi, duration, age limit of participants and grading system for various types of courses are almost uniform at all the Institutes. During the lean period, the Institutes detail their Instructors to conduct rock-climbing courses at the request of Mountaineering Clubs/ Organisations around the country. The Instructors also join various expeditions.

15.14 Trainees for these courses come from all parts of the country and include Army, Air Force, Navy, ITBP and BSF Personnel, NCC Cadets and private students. Foreigners are also now permitted to join the courses. The Institutes conducted the following courses during the year upto March, 2005 :-

Courses	HMI	NIM
Basic	06	05
Advance	03	03
Adventure	05	05
MOI	01	01
S&R	-	01

15.15 The number of students trained in these courses are as under:-

Courses	Men	W0men
Basic	463	129
Advance	100	38
Adventure	309	94
MOI	31	05
S&R	18	02

15.16 HMI also conducted 23 Special Adventure and four Rock Climbing Courses, in which 1339 men and 129 women were trained during the period. NIM also conducted 14 special courses for various organizations in which 435 men and 179 women were trained during the year. JIM has trained a total number of 604 men and women in various ad-hoc training courses conducted by it during the period.

15.17 The Institutes at Darjeeling and Uttarkashi have separate stores of mountaineering equipment for loan to the Indian Mountaineering Expedi-

tions on nominal hire charges. The construction of the Museum Project at HMI Darjeeling has been completed. An Artificial Climbing Wall of international standards was completed at NIM Campus and the first International Sport Climbing Competition – 'Asia Cup'- was held from November 19-21, 2004 on this new facility under the aegis of the Indian Mountaineering Foundation (IMF) in which 11 Asian countries participated.

CEREMONIALS, HONOURS & AWARDS

15.18 The responsibility for the organization of National functions like the Republic Day Parade, the Beating Retreat Ceremony, Martyrs' Day and the Independence Day is entrusted to the Ministry of Defence. The Ministry also organises Defence Investiture Ceremonies for presentation of Gallantry and Distinguished Service Awards at Rashtrapati Bhawan in association with the President's Secretariat. The organisation of these ceremonies requires coordination of a large number of activities amongst various Ministries/Departments and a large number of other agencies. The Ceremonial functions organized during 2004-2005 are detailed in the following paragraphs.

INVESTITURE CEREMONY, 2004

15.19 The Defence Investiture Ceremony, 2004, was held at Rashtrapati Bhawan on July 5th and 8th, 2004 when the following Gallantry Awards and Distinguished Service Awards, announced on the Independence Day 2003 and Republic Day-2004, were presented by the President to the awardees:

Gallantry Awards

Bar to Shaurya Chakra	01	(1 posthumous)
Shaurya Chakra	67	(32 posthumous)
Kirti Chakra	09	(7 posthumous)

Distinguished Service Awards

Param Vishisht Seva Medal	29
Bar to Ati Vishisht Seva Medal	03
Ati Vishisht Seva Medal	48
Uttam Yudh Seva Medal	05

15.20 Other awards like Vishisht Seva Medal, Sena Medal, Nao Sena Medal, Vayu Sena Medal and Bar to these Medals were presented by the respective Chiefs of Staff and Senior Commanders at separate Investiture Ceremonies.

INDEPENDENCE DAY CEREMONY, 2004

15.21 Beginning of the celebrations of the Independence Day was marked with the choir singing of patriotic songs by school children in different Indian languages at Red Fort on August 15, 2004 in the early morning. Later, the three Services and Delhi Police presented Guard of Honour to the Prime Minister. Thereafter, the Prime Minister un-

Jawans during Republic Day Parade

furled the National Flag on the ramparts of the Red Fort, to the accompaniment of the National Anthem played by the Services Band. A 21 gun salute was also presented on the occasion followed by the Prime Minister's address to the Nation. The ceremony concluded with the singing of National Anthem by the children and the NCC Cadets from schools of Delhi and release of balloons. After the functions at Red Fort, the President laid wreath at the Amar Jawan Jyoti at India Gate paying homage to the memory of those who sacrificed their lives for the freedom of the nation.

15.22 The following gallantry awards were announced on the Independence Day of 2004:-

Award	Total	Posthumous
Kirti Chakra	03	02
Shaurya Chakra	33	22
Bar to Sena Medal (Gallantry)	03	-
Sena Medal (Gallantry)	200	45
Vayu Sena Medal (Gallantry)	04	-

AMAR JAWAN CEREMONY, 2005

15.23 The Prime Minister laid a wreath at the Amar Jawan Jyoti Memorial, under the arch of the India Gate on the early morning of January 26, 2005 and two minutes silence was observed while paying homage to the memory of those who sacrificed their lives in safeguarding the freedom of the nation.

REPUBLIC DAY PARADE 2005

15.24 Unfurling of the National Flag at the Rajpath gave a glorious beginning to the Republic Day Celebrations. The President's Body Guards presented the National Salute which was followed by the National Anthem played by the Service Bands and 21 gun salute. His Majesty Jigme Singye Wanchuck, King of Bhutan was the Chief Guest on the occasion.

15.25 Army's mounted columns of 61 Cavalry, mechanized columns comprising of Tank T-90, Airborne Gunners, Tungushka Weapon System, missile systems like Prithvi and Agni I & II, Hydrema Demining Vehicles, Mi-25 attack helicopter, marching contingents and band of Services, Para Military Forces, Delhi Police, RPF and NCC were part of the parade. The DRDO equipment column included Brahmos Autonomous Launcher with command post, 'Pinaka' Launcher etc. National Bravery award Winning Children on elephants, tableaux and cultural items were other attractions of the parade. The tableaux and items for children reflected the cultural diversity of the nation. The parade ended with dare-devil motor cycle display by ASC Tornadoes followed by Fly Past by aircraft of the Indian Air Force.

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

In addition to the above, 49 awards of Mention-in-Despatches were also announced on the Republic Day.

Unmanned Aerial Vehicle Searcher MK-II on Display

Award	Total	Posthumous
Kirti Chakra	02	01
Shaurya Chakra	08	04
Bar to Sena Medal/ Nao Sena Medal/ Vayu Sena Medal (Gallantry)	02	-
Sena Medal / Nao sena Medal/ Vayu Sena Medal (Gallantry)	112	26
Param Vishisht Seva Medal	28	-
Uttam Yuddh Seva Medal	03	-
Bar to Ati Vishisht Seva Medal	01	-
Ati Vishisht Seva Medal	49	-
Yuddh Seva Medal	15	-
Bar to Vishisht Seva Medal	05	-
Vishisht Seva Medal	115	-
Bar to Sena Medal (Gallantry)	01	-
Sena Medal / Nao sena Medal/ Vayu Sena Medal (Devotion to duty)	60	01

BEATING RETREAT CEREMONY, 2005

15.27 The 'Beating Retreat' is a centuries old military tradition dating back to the days when troops disengaged from battle at sunset. The Beating Retreat Ceremony denotes departure of the troops assembled at Delhi to participate in the Republic Day Celebrations. This year the Ceremony was organised at Vijay Chowk on January 29, 2005. This brought the curtain down on the Republic Day festivities. Bands of the three Services participated in this Ceremony. The conclusion of the ceremony coincided with the illumination of the Rashtrapati Bhawan, North Block, South Block and Parliament House.

MARTYRS DAY CEREMONY, 2005

15.28 On January 30, 2005, the President placed a wreath at Mahatma Gandhi's Samadhi at Rajghat. Floral tributes were also paid by the Vice President, Prime Minister and some of the Cabinet Ministers. This was followed by observance of two minutes' silence at 1100 hours as a mark of respect to the memory of the Father of the Nation.

OFFICIAL LANGUAGE DIVISION

15.29 It is the responsibility of the Official Language (OL) Division of Ministry of Defence to implement the Official Language policy of the Government of India in the Ministry of Defence, its subordinate offices, defence undertakings, etc. Implementation of orders/instructions regarding the use of Hindi in official work is monitored through quarterly progress reports, quarterly meetings of Official Language Implementation Committees, Hindi Salahakar Samities and inspections of the subordinate offices. The other main functions of this Division are :

(1) to translate the material received from various offices/ sections of the ministry;

(2) to impart training to the staff in Hindi, Hindi stenography and Hindi typing through the Hindi Teaching Scheme of the Ministry of Home Affairs; and,

(3) to propagate and promote the use of Hindi in official work by organizing Hindi workshops, seminars, etc. and encouraging the staff members through various incentive schemes.

15.30 Annual Programme: Efforts continued to achieve the targets laid down in the Annual Programme for the year 2004-05 formulated by the Department of Official Language, Ministry of Home Affairs. The main thrust was on the targets regarding Hindi correspondence, compliance of the provisions of the section 3(3) of the Official Language Act as also of rule 5 of Official Language Rules, operation of various incentive schemes to do more and more official work in Hindi, training of Hindi stegnography and Hindi typing to the offices/staff of Ministry of Defence. The progress in this regard was reviewed in quarterly meetings on a regular basis. The following steps taken by the Ministry further boosted the use of Hindi in official work and brought awareness among officers/ staff of the Ministry of Defence about the Official Language policy of the Union and the various measures required to be undertaken for its implementation:-

(i) Organising Hindi workshops on a regular basis. These workshops were aimed at motivating the officials to use Hindi in their official work. For this purpose, the participants were provided practice exercises in their respective subjects and were also apprised of the provisions of Official Language Act and the Rules to facilitate them to work in Hindi with more confidence.

(ii) Holding quarterly meetings of two departmental Official Language Implementation Committees in the Ministry of Defence i.e. one for the Department of Defence and the Department of Defence Research and Development and the other for the Department of Defence Production.

(iii) Conducting joint official language inspections of various headquarters/subordinate offices of three services, inter-service organisations, defence undertakings etc. Under a time bound Programme made for the purpose at the very beginning of the year, 36 offices covered upto January 1, 2005. More inspections will also be carried out during the remaining part of the financial year. Official Language inspections of various sections within the Ministry of Defence were also continued like previous years.

(iv) Attending meetings/special meetings whenever arranged by the Department of Official Language, Ministry of Home Affairs and implementing decisions taken therein.

(v) Bringing to the knowledge of all concerned the important orders, instructions etc. issued by the Department of Official Language.

15.31 Translation Work: The Division remained engaged in translation work throughout the year. The material for translation from Hindi to English and vice-versa included general orders, notifications, resolutions, administrative and other reports, Parliament Questions, etc. Besides, material relating to Public Accounts Committee matters, audit paras, Consultative Committee meetings, papers to be laid in the Parliament, VIP references, Republic Day, Independence Day and Investiture ceremony programmes were also translated into Hindi during the year.

15.32 Hindi Training: Keeping in view the targets fixed for imparting training to the staff in Hindi stenography and Hindi typing, efforts were made to nominate the maximum number of officials to these classes. The position/progress was reviewed in quarterly meetings of the departmental Official Language Implementation Committee.

15.33 Hindi Salahakar Samities: Steps were initiated to reconstitute the two Hindi Advisory Committees, one for the Department of Defence and Department of Defence Research and Development and the other for the Department of Defence Production. The work relating to their reconstitution is almost in the final stages. After the reconstitution meetings will be organized as per the instructions of the Department of Office Language, Ministry of Home Affairs.

15.34 Scheme for writing Hindi Books: An exclusive scheme for encouraging writing of books originally in Hindi on various defence subjects has been in vogue in the Ministry of Defence for quite a number of years. That scheme has been reviewed this year and a fresh, more attractive scheme is now ready for being introduced. Under this scheme, the amounts of various cash prizes have been increased. As against the existing amount of Rs.15,000/-, Rs.10,000/- and Rs.7,000/-; the revised cash prizes have been raised to Rs.50,000/-, Rs.30,000/- and Rs.20,000/- respectively for first, second and third prizes respectively. The scheme, which is open to all citizens of India, is expected to bring in better response in the shape of more and useful Hindi Books written originally in Hindi on defence subjects. After revision, the scheme has certainly

become more attractive as compared to several other schemes presently being run by various other Ministries/Departments of Government of India. The above scheme is in addition to several other incentive schemes being run by this Ministry which inter-alia include a cash award scheme for best in-house Hindi magazine brought out by any office/ organization/unit of the three Service Headquarters, Inter-Service Organizations, defence undertakings, Ordnance Factory Board and C.D.A. under the Ministry of Defence.

15.35 Monitoring: The overall monitoring regarding the progressive use of Hindi in the Ministry of Defence Secretariat, three Service Headquarters, Inter-Service Organizations and Defence Undertakings is done by two separate Departmental Official Language Implementation Committees. Four meetings each of the above Committees were held during the year, in which progress made in the use of Hindi was reviewed and remedial measures suggested. These Committees also provided necessary guidance to the subordinate offices to discharge their duties properly and effectively.

15.36 Inspection of various Defence Organisations by the Committee of Parliament on Official Language: During the year the First Sub-Committee of the Committee of Parliament on Official Language carried out official language inspections of a number of offices under the Ministry of Defence. For this purpose, the committee selected a number of Defence offices located at Delhi, Chennai, Mhow, Bangalore and Mumbai. The Official Language Division ensured adequate cooperation from the offices concerned for these inspection meetings. The Joint Secretaries in charge of the Official Language divisions and the Director(Official Language) represented the Ministry in these meetings. Appropriate action on the issues raised/decisions taken in these meetings was ensured and instructions issued to offices concerned for timely fulfillment of the assurances given by them to the Committee during such inspections.

16

Activities of Vigilance Units

16.1 The Vigilance Division in the Ministry of Defence deals with vigilance cases involving Group 'A' Civilian officers working in the Ministry of Defence. For administrative convenience, the vigilance work in respect of the Department of Defence and the Defence Research and Development Organisation is being looked after by one Chief Vigilance Officer and in respect of the Department of Defence Production by another Chief Vigilance Officer. The Vigilance Division looks after all vigilance matters and provides a link between the Ministry/Department and the Central Vigilance Commission (CVC). The Vigilance Division is responsible for regular and surprise inspection of sensitive spots, review and streamlining of procedures and initiation of measures for combating corruption. The complaints received through the Prime Minister's Office, Raksha Mantri's Complaint Box and CVC are also being dealt by the Vigilance Division. During the year 2004, 21 Group 'A' Officers (7 of DGQA, 10 of MES & 4 of DRDO) were awarded major penalty, 5 (1 of DGQA, 3 of MES & 1 of DGDE) were awarded minor penalty, and one officer was dismissed from service.

REDRESSAL OF PUBLIC GRIEVANCES

16.2 Public grievances pertaining to the Ministry of Defence as a whole are received by the Vigilance Division of the Ministry of Defence through the Department of Administrative Reforms and Public Grievances. These grievances are also received from the petitioners directly. All these grievances are reviewed on a fortnightly basis.

16.3 In accordance with the directives issued by the CVC, Vigilance Week commencing from November 1 to 6, 2004 was observed in the Ministry, Defence Public Sector Undertakings, Attached and Subordinate Offices. During the week various

measures to bring in a sense of awareness about Vigilance and to remind the employees about their role in ensuring a clean and efficient administration were taken. Pledge received from CVC was administered to the employees. Banners and Posters showing ill-effects of corruption were displayed. Debate and Snap Talks were organised on the menace and the various ways of fighting corruption.

DEPARTMENT OF DEFENCE RESEARCH & DEVELOPMENT

16.4 The main activities of the vigilance units in DRDO during the year are as under:

- Sensitization of officers and staff on vigilance aspects at various levels.
- Sensitization programmes to root out corruption and mismanagement of public funds and misuse of public resources.
- Vigilance inspections of Laboratories/Establishments to ensure that all instructions and orders are being implemented.
- Conducting confidential enquiries against malpractices and bringing the errant to book.
- Processing vigilance cases/ inquiries and preparation of documents for vigilance charge sheets.
- Ensuring compliance of procedures of purchase management laid down by DRDO through periodic vigilance inspection of laboratories/ establishments.

DEPARTMENT OF DEFENCE PRODUCTION

16.5 Ordnance Factories: In Ordnance Factories Organisation, probity and transparency in public dealings are considered as an integral part of the organizational mission. Instructions of CVC, vigilance awareness and measures of anti-corruption are being disseminated at all levels of employees and their implementation is being ensured. A few notable vigilance achievements during the year are listed below.

- During the year, about 80 complaints were processed for further vigilance action and 31 preventive vigilance inspections were conducted.
- CVC instructions regarding posting of open tender notices on the website of the Organisation have been fully implemented by all the Ordnance Factories.

16.6 Hindustan Aeronautics Limited (HAL): During the year, Vigilance Department continued its activities with emphasis on sensitive areas prone to corruption/malpractices. Based on the Action Plan

drawn for the year, a total of 1499 surprise/ random and regular inspections were conducted and 44 cases were instituted. During the year, 151 complaints were received out of which 120 were taken up for investigation. 40 Departmental Enquiry Committees were constituted and in 44 cases, Enquiry Officers submitted their reports. Fifty two cases were disposed of by the Disciplinary Authorities by imposing 15 major penalties, 13 minor penalties and in 23 cases Censure/Warning/advisory letters were issued and one exonerated. As a result of Preventive Vigilance activities, a direct saving of Rs.4.31 crore has been achieved during the year.

16.7 Bharat Electronics Limited (BEL): Unit Vigilance Committees, Chairman-cum-Managing Directors (CMDs) and Functional Directors took review meetings on monthly, quarterly and half yearly basis and imparted training on vigilance to activate the Vigilance Machinery in BEL. Over 82% of the executives of the level of Dy. Manager and above have been trained in “Domestic Enquiry and Principles of Natural Justice” programme.

16.8 Bharat Earth Movers Limited (BEML): Independent Vigilance cells were set up in all the Production Units under the overall supervision / control of the Corporate Vigilance Cell during the year.

16.9 Mazagon Dock Limited (MDL): During the year, emphasis was laid by the Vigilance Department on regular/surprise inspections as a preventive measure to plug the loopholes in the existing procedures and to streamline the system. Further, with a view to strengthening the system of checks and to improve organisational ethics, Vigilance Department laid emphasis on Preventive Vigilance covering aspects like rotation of officers/staff in sensitive departments, scrutiny of Property Returns and review of officers’ performance under the Premature Retirement Scheme.

16.10 Goa Shipyard Limited (GSL): In order to encourage employees and other persons having business and other relations with the Company to come forward with information and grievances with a vigilance angle, six Vigilance Complaint Boxes that are opened every Monday have been installed at various places in the premises of the Company. In addition, printed and framed notice boards have been placed at all offices and common places advising all outsiders to contact the officers of the Vigilance Department in case they come across any instance of corruption.

16.11 Mishra Dhatu Nigam Limited (MIDHANI): During the year, an overall vigilance awareness has been built up in the Company. A team of

Officers under the guidance of a full time Chief Vigilance Officer, at the level of General Manager has been functioning to ensure transparency and improvements in the systems and procedures. Vigilance Department actively participated in bringing out several manuals in the areas of Purchase and Civil works, contributing towards system improvements in the Company. Several circulars, guidelines are being issued for the benefit of the managers at the functional levels, with a view to implementing and adhering to the instructions of the Central Vigilance Commission on various issues in its true spirit and perspective.

16.12 Bharat Dynamics Limited (BDL): The vigilance activities of BDL are focused on preventive vigilance including measures like detailed examination of existing organisation and procedures, regular inspections, surprise inspections and surveillance. Revised Inventory Management Manual for better transparency in the area of material management has been issued. Recruitment and promotion rules and security manual were streamlined. A vigilance page was introduced on BDL's website. Based on investigations by CBI and Vigilance Department, punitive vigilance action was also taken against erring officials.

17

Empowerment and Welfare of Women

Women Naval Officers alongwith other officers practicing the small Arms Firing

Empowerment and Welfare of Women

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 as Doctors and Nursing Officers in the Armed Forces. With the induction of women in various non-combatant branches of the Armed Forces like logistics and law, a larger role is envisaged for them.

17.2 Women Special Entry Scheme (WSES) has been introduced for women to join as officers in non-combatant branches of the Army. WSES has also been extended to widows of Service officers killed in action. Eligible women are recruited as officers on Short Service Commission basis in various branches of the Navy and Air Force also.

17.3 Indian Army: Women candidates can be inducted in the Indian Army against certain identified vacancies in various Arms/Services through the Women Special Entry Scheme (Officers). Women are offered Short Service Commission for a period of 10 years, extendable

Girl Cadets during Tent Pitching Competition

by additional four years. The annual intake is 150 with effect from September, 2003. Presently, there are approximately 921 Women Officers serving in the Indian Army.

17.4 Indian Navy: The Indian Navy first inducted women in 1992. As on date, a total of 179 (including 58 Medical Officers) women officers are serving in various units in the Navy. These officers are assimilated into the mainstream and their promotion prospects, training as well as career progression are at par with their male counterparts during their tenure.

17.5 The Naval Wives' Welfare Association (NWWA), has been regularly conducting adult literacy and computer classes for women.

17.6 Information Technology (IT) complex have been opened for ladies and family members for computer and IT learning. It has been observed that a large number of women are benefitted through this facility.

17.7 Indian Air Force: Induction of women as Short Service Commission (SSC) officers in Flying, Technical and Non-Technical branches in the Indian Air Force also commenced in 1992. Presently there are 515 women officers in the IAF. Though women officers are presently not being granted permanent commission, they can serve upto 15 years in the IAF. The initial term of employment is 10 years. Extension upto 15 years is granted on a case-to-case basis depending on individual merit. The intake of women officers in IAF has shown an upward trend during last three years. In the years 2002, 2003 and 2004 a total of 68, 79 and 83 women officers were commissioned in the IAF.

17.8 Coast Guard: The Indian Coast Guard has recruited lady officers in the rank of Assistant Commandant through open direct recruitment. Presently, 14 such lady officers are in service. Some of these lady officers have since been promoted to the rank of Deputy Commandant.

17.9 In the Coast Guard, women officers are inducted in administration, logistics and pilot cadre on permanent commission for ashore duties. The selection procedure is same as applicable to their male counterparts. The training pattern is designed as per the cadre requirement, after completion of basic training which is common for all trades. As women officers are inducted for ashore billet, they are exempted from sea training, though an introductory capsule attachment is provided to them. They have similar career profiles as Gentlemen officers. Specialist courses are assigned to them as per cadre requirement, Long Logistics Management Course (LLMC), Long Elec-

tronic Data Processing course (LEDP) for administration branch and MET and ATC courses for pilots.

17.10 The Ministry of Defence has taken several steps to ensure that conducive work environment and appropriate working conditions are provided to women. The manpower/ human resource development policies followed in the Ministry of Defence make no distinction/discrimination on grounds of sex.

17.11 The guidelines of the Supreme Court to prevent sexual harassment at workplace for working women are being implemented in the Armed Forces, Inter Service Organisations, Defence Public Sector Undertakings and Defence Laboratories/Establishments as well as in the Ministry of Defence. 'Complaints Committees' have been constituted at the Headquarters as well as at Unit levels for redressal of complaints received from women employees and to review matters relating to the safety of women. Various rules and regulations have been amended as per the guidelines laid down by the Supreme Court.

17.12 The guidelines of National Commission for Women (NCW) are also being implemented by the Women's Cell of the Ministry of Defence, with assistance of 23 Nodal Women Cells spread all over the country.

17.13 Ministry of Defence has special pension schemes for the widows of Service personnel. Under this scheme, the widows of the Armed Forces' personnel who die in war/ war like operations/ counter-insurgency operations/ in incidents involving armed hostilities or on account of causes attributable to or aggravated by service, are granted Liberalised Family Pension/ Ordinary Family Pension/ Special Family Pension even after remarriage, subject to certain conditions.

17.14 Schemes for Civilian Defence Employees:

(i) For promoting the welfare of women civilian employees in the lower formations of Army, women cells have been established in units/establishments having sizeable number of women, in accordance with the guidelines issued by the National Commission for Women.

(ii) The women cells at the unit level undertake development activities for women employees as well as female family members of employees. Common room, crèche, ladies toilets manned by women safai karamcharis are provided in most of the Army units.

(iii) The work of the women cells at unit level is monitored at the Command HQ level as well as

at Army HQ. There is also a redressal mechanism for the prevention of sexual harassment at work places.

(iv) For social and economic development of female members of employee's families, employment assistance, non-formal education of girls, health care measures, family planning assistance, sports and recreation facilities are also available in most of the Army units.

17.15 Financial Assistance on demise of a soldier:

(i) On the demise of a soldier, a grant of Rs.30,000/- from Army Central Welfare Fund (ACWF) and Rs.5,000/- from Army Wives' Welfare Association Fund is released immediately to the next-of-kin. This grant enables the widow to overcome initial problems caused by the death of her husband. Even where there is a dispute between the widow and her in-laws, the grant from ACWF is still given to the widow.

(ii) If an Officer/Personnel Below Officers' Rank is married, his wife automatically becomes his next-of-kin even if the soldier had not furnished official details to this effect.

17.16 Financial Assistance – Fatal Battle Casualties of August 15, 1947 to April 30, 1999: As part of the welfare measures, next-of-kin of all battle casualties during the period from August 15, 1947 to April 30, 1999 are given Rs. 50,000/- each from the National Defence Fund and Army Central Welfare Fund. Even if the widow gets remarried, she continues to be eligible for the grant. Financial assistance upto Rs.25,000/- for Agro-based ventures/Dairy Development is provided to these war widows. Financial assistance of Rs.30,000/- is also provided for re-marriage of widows.

17.17 Scholarship for Wards: Children of battle casualties are eligible for reimbursement of full fees and other expenses incurred on education. Education scholarships are provided to the children of widows of soldiers who die in harness at the following rates: (a) Class 1 to Class XII, Rs. 5000/- per annum; (b) Graduation, Rs.10,000/- per annum; (c) Post Graduation, Rs.15,000/- per annum and (d) Professional Courses, Tuition Fee + Rs. 5,000/- per annum with a ceiling of Rs. 40,000/-.

17.18 Demise Grant: A demise grant of Rs.2,000/- is paid to next-of-kin of deceased Ex-Servicemen (Personnel Below Officers Rank only) through respective Record Offices. From August 1, 2004 this grant has been enhanced to Rs.3,000/-.

DEFENCE RESEARCH & DEVELOPMENT ORGANISATION (DRDO)

17.19 DRDO is sensitive to the empowerment and welfare of women. Government instructions and directives issued on the subject are being followed in both letter and spirit. It is ensured that women employees are accorded equal opportunities for enhancement of their skills and knowledge base for the nurturing of their potential. As per Government orders, DRDO laboratories have been instructed to set up the women's cell to look after the welfare of women employees. In compliance, a cell has been constituted in DRDO Headquarters for the purpose. Various welfare measures have also been undertaken for the Women employees in the organisation.

DEPARTMENT OF DEFENCE PRODUCTION

17.20 A separate forum of Women in Public Sector (WIPS) has been established in Defence Public Sector Undertakings (DPSUs) under the aegis of the Standing Conference of Public Enterprises (SCOPE) to assist the DPSUs in harnessing the full potential of women employees and also to play a catalytic role in improving the status of women in the DPSUs. DPSUs have provided certain facilities to working women, such as crèches for the children of working women, lunch and rest rooms for them and grievance cells.

17.21 Some of the important steps taken by the DPSUs for empowerment and welfare of women are as follows:-

(i) Hindustan Aeronautics Limited (HAL): The strength of women employees in HAL as on March 31, 2005 was 1638. A sizeable number of women employees are in supervisory and executive cadres. They are provided with equal opportunities for advancement of their career. Also, all statutory and welfare amenities have been extended to women employees.

(ii) Bharat Electronics Limited (BEL): BEL employs 2435 women in all its units and offices of BEL. Since electronic assembly work requires precision and women are considered to be the best exponents for meeting such demands. The various facilities and benefits provided to women employees include specially furnished exclusive rest rooms, creche facilities for nursing mothers, conducting awareness and training classes/ programmes, nomination of women employees for participating in meets/conferences organised by the "Women in Public Sector" (WIPS) etc.

"Akshya" run by the Bharat Electronics Ladies' Association (Bangalore) provides employment opportunities for destitute women.

(iii) Mazagon Dock Limited (MDL): A Women's cell comprising a senior manager and lady employees has been set up in MDL to deliberate on ways and means of promoting the growth and development of women employees towards harnessing their potential. A database has been prepared to collect information on women employees to evolve a meaningful policy in order to improve the status and position of women employees.

(iv) Garden Reach Shipbuilders & Engineers Limited (GRSE): In the light of Supreme Court judgement, suitable amendment in the Classification, Disciplinary and Appeal (CDA) Rules has been made incorporating provisions relating to prohibition of sexual harassment and penalties against offenders. A Complaint Cell has been formed to deal with complaints of sexual harassment. Convenor of an NGO has also been included in the Complaint Cell to prevent the possibility of any undue influence from senior levels. Programmes for gender sensitisation are organised from time to time at all levels.

(v) Bharat Dynamics Limited (BDL): There are 219 Women employees working in BDL of whom 32 are executives and 187 are Non-executives. The Company has amended its Standing Orders and Classification, Disciplinary and Appeal (CDA) Rules to include Sexual harassment of women employees at work place as misconduct. A Complaints Committee headed by a woman Additional General Manager, 5 other women members and one male officer has been appointed. Special empowerment programmes are being offered to the women employees.

(vi) Mishra Dhatu Nigam Limited (MIDHANI): The company continued its focus on empowering women employees by providing necessary platform to realize their potential and creating necessary environment at all work places with all statutory safeguards and amenities, enabling them to work safely, with pride and dignity. The facilities guaranteed to them under various welfare legislations applicable to the Company are being extended. A cordial atmosphere is being created for the

women employees wherein they can effectively contribute to achieving the organizational goals. Women employees are nominated for various in-house and external training programmes.

(vii) Bharat Earth Movers Limited (BEML): The Company has constituted a Women's Cell in all the Production Units and the Corporate Office to redress the grievances of its women employees. The total strength of women officers and employees in BEML is 76 and 218 respectively.

ORDNANCE FACTORIES

17.22 Women, at all levels, are actively involved in various activities of the Organisation. A number of women officers are presently holding senior positions in the Organisation. In many Ordnance Factories, women at the shop floor level operate even sophisticated CNC machines. Every effort is made to ensure that appropriate working conditions are provided for women. Factories and offices have provision for separate rest rooms for women employees.

MATTERS DEALT BY THE DEPARTMENTS OF THE MINISTRY OF DEFENCE

A. DEPARTMENT OF DEFENCE

1. Defence of India and every part thereof including preparation for defence and all such acts as may be required 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, 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. Territorial Army.

6. The National Cadet Corps.

7. Works relating to Army, Navy, Air Force and Ordnance Factories.

8. Remounts, Veterinary and Farms Organisation.

9. Canteen Stores Department (India).

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 house 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 foodstuff for military requirements and their disposal excluding those entrusted to Ministry of food and Civil Supplies (Department of Food).

16. All matters relating to Coast Guard Organisation, including :-

(i) Surveillance of maritime zones to locate 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 Coordinating 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.

(v) Prevention and control of oil spills, inspection of ships and offshore platforms in the country except within the limits of ports as empowered by the Merchant Shipping Act, 1958.

17. Matters relating to diving and related activities in the country.

18. The following inter-Service Organisations function under the Ministry of Defence:

(i) Military Engineer Services.

(ii) Armed Forces Medical Services.

(iii) Directorate General of 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 Sports Control Board.

(ix) Armed Forces Films and Photo Division.

(x) School of Foreign Languages.

(xi) History Division.

(xii) National Defence College.

(xiii) College of Defence Management.

(xiv) Ministry of Defence Library.

B. DEPARTMENT OF DEFENCE PRODUCTION

1. Ordnance Factory Board and Ordnance Factories.

2. Hindustan Aeronautics Limited (HAL).

3. Bharat Electronics Limited(BEL)

4. Mazgon docks Limited (MDL).

5. Garden Reach Shipbuilders & Engineers Limited(GRSE).

6. Goa Shipyard Limited(GSL)

7. Bharat Dynamics Limited(BDL)

8. Mishra Dhatu Nigam Limited(MIDHANI)

9. Bharat Earth Movers Limited (BEML).

10. Directorate General of Quality Assurance (DGQA) including Directorate of Technical Development & Production (Air).

11. Standardisation of defence equipment and stores including Directorate of Standardisation.

12. Development of aeronautics industry and Co-ordination among users other than those concerned with the Department of Civil Aviation and the Department of Space.

13. Indigenisation, development and production of items required for defence purposes.

14. Procurement exclusive to the defence services.

15. Defence exports and international Cooperation in defence production.

C. Department of Defence Research & Development

1. Apprising, assessing and advising Raksha Mantri on the influence on National Security of Emerging developments in Sciences and Technology.

2. Rendering advice to Raksha Mantri and to the three services and inter-services and inter-Services Organizations on all scientific aspects of weapons; weapon platforms; military operations; surveillance; support and logistics, in all likely theatres 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 Government 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 design, air worthiness of military aircraft, 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 acquisition and evaluation proceedings of all weapons, 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 & other material assistance to individuals, institutions and bodies for study and for the training of manpower on aspects of Science and Technology that have a bearing 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 the following.

(i) Matters relating to the 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) Arrangement with Universities, educational and research-oriented institutions or bodies abroad to provide for foreign scholarships and training of Indian scientists and technologies 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 or accepted by the Department through understandings or arrangements with any other Ministry, Department or Agency of the Government of India whose activities have a bearing on the scientific and technological aspect of national security.

D. DEPARTMENT OF EX-SERVICEMEN WELFARE

1. Matters relating to Ex-Servicemen including pensioners.

2. 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 (Parts 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

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 Service Headquarters.

3. To act as the integrated finance Division of Ministry of Defence.

4. To assist in the formulation and implementation of all Scheme/ 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 and to monitor the progress of the Schemes 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 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 Defence Accounts.

MINISTERS, CHIEFS OF STAFF AND SECRETARIES WHO WERE IN POSITION FROM APRIL 1, 2004 ONWARDS

RAKSHA MANTRI

Shri George Fernandes	From October 15, 2001 to May 22, 2004
Shri Pranab Mukherjee	From May 23, 2004 onwards

RAKSHA UTPADAN RAJYA MANTRI

Prof. O. Rajagopal	From January 29, 2003 to May 22, 2004
Shri B.K. Handique	From May 23, 2004 to November 30, 2004

RAKSHA RAJYA MANTRI

Shri Chaman Lal Gupta	From July 1, 2002 to May 22, 2004
Shri B.K. Handique	From November 30, 2004 onwards

Defence Secretary Shri Ajay Prasad *From July 14, 2003 to June 30, 2004*	Chief of Army Staff General N.C. Vij, PVSM, UYSM, AVSM, ADC *From January 1, 2002 to January 31, 2005*
Shri Ajai Vikram Singh *From July 1,2004 onwards*	General J.J. Singh, PVSM, AVSM, VSM, ADC *From February 1, 2005 onwards*
Secretary (Defence Production) Ms. Uma Pillai *From July 9,2003 to August 2, 2004* Shri Shekhar Dutt *From August 2, 2004 onwards*	Chief of Naval Staff Admiral Madhvendra Singh, PVSM, AVSM, ADC *From December 30, 2001 to July 31, 2004*
Secretary (DR&D and S.A. to Raksha Mantri) Dr. V.K. Atre *From December 29, 1999 to August 31, 2004*	Admiral Arun Prakash, PVSM, AVSM, VRC, VSM, ADC *From August 1, 2004 onwards* Chief of Air Staff
Shri M Natarajan *From August 31, 2004 onwards*	Air Chief Marshal S. Krishnaswamy, PVSM, AVSM, VM and Bar, ADC *From December 31, 2001 to December 31, 2004*
Secretary (Defence Finance) Ms. Somi Tandon *From August 10, 2004 onwards*	Air Chief Marshal S.P. Tyagi, PVSM,AVSM,VM,ADC *From December 31, 2004 onwards*

SUMMARY OF LATEST COMPTROLLER & AUDITOR GENERAL (C&AG) REPORT ON THE WORKING OF MINISTRY OF DEFENCE

DEPARTMENT OF DEFENCE

Injudicious authorization of winter clothing leading to their non-utilisation: Reduction in authorization of shirts Angola Drab and Trousers and Serge Khaki from 100 per cent in 1998 to 15 per cent in 2003 of enrolled National Cadets Corps rendered these items valued at Rs. 12.36 crore surplus in NCC Directorates of Rajasthan and Punjab. The prospect of their utilization in future was remote since the scales of other NCC Directorates also stood reduced.

(Para 2.1 of Report No.6 of 2004)
Army and Ordnance

Abnormal delay in detection of encroachment of Defence Land: Failure of Defence Estate Officer to detect the encroachment of defence land for over 16 years resulted in non-recovery of Rs. 79 lakh towards rent and premium.

(Para 2.2 of Report No.6 of 2004)
Army and Ordnance.

I-ARMY

Holding of defective ammunition: Due to use of wrong propellant by the Ordnance Factory, 17879 rounds of ammunition for Tanks valued at Rs.47.34 crore become unserviceable and had to be diverted for training purposes.

(Para 3.1 of Report No.6 of 2004)
Army and Ordnance)

Recoveries/savings at the instance of audit: An aggregate amount of Rs. 3.88 crore was recovered at the instance of audit due to certain errors in regulation of personal entitlement, retirement benefits & recovery towards liquidated damages/penalty from Canteen stores Department Supplies. An amount of Rs. 58 lakh was saved at the instance of audit due to cancellation or revision of irregular Administrative Approvals/ Technical Sanctions.

(Para 3.2 of Report No.6 of 2004)
Army and Ordnance

Avoidable extra expenditure on procurement of Jeeps: The reasonableness of the rates for the rims while placing orders for 3423 Jeeps in October 1999 & January 2000 was not examined by Director General of Ordnance Factories (DGOF) resulting avoidable extra expenditure of

Rs. 3.07 crore(including excise duties and taxes of Rs. 1.71 crore).

(Para 3.3 of Report No.6 of 2004)
Army and Ordnance

Incorrect payment of transport allowance: In violation of Govt. orders, transport allowance amounting to Rs. 69.93 lakh was paid to service personnel of Indian Military Academy, Dehradun (IMA), Equine Breeding Stud Hissar, Gorkha Training Centre, Sabathu and Officers Training Academy, Chennai, who were provided with Govt. accommodation within the campus housing both their place of work and residence.

(Para 3.7 of Report No.6 of 2004)
Army and Ordnance

II-WORKS AND MILITARY ENGINEER SERVICES

Avoidable expenditure on construction of married accommodation: Despite no demand even for the existing accommodation in the station, married Accommodation of Other Ranks was constructed at station resulting in infructuous expenditure of Rs. 1.17 crore.

(Para 4.3 of Report No.6 of 2004)
Army and Ordnance

Avoidable expenditure of Rs. 61.11 lakh on execution of works: Despite the cancellation of the Presidential Fleet Review at Air Force Station, Chandigarh, scheduled on October 17, 2001, seven works related to the event were sanctioned by Hqrs Western Air Command (Air Force) and Air Officer Commanding Air Force Station Chandigarh and executed by Garrison Engineer (Air Force), Chandigarh, in contravention of Air Hq instructions resulted in avoidable expenditure of Rs. 61.11 lakh.

(Para 4.4 of Report No.6 of 2004)
Army and Ordnance

III-BORDER ROADS ORGANISATION

Delay in construction of approaches to a bridge due to departmental lapses: Even after spending Rs. 1.66 crore and a delay of more than three years, the approaches to the bridge remain incomplete due to non-acquisition of land for construction of approaches before commencement of work.

(Para .1 of Report No.6 of 2004)
Army and Ordnance

IV-ORDNANCE FACTORY ORGANISATION

Working of Metal and Steel Factory, Ichapore: The Metal and Steel Factory, Ichapore, a metallurgical unit, manufactures ferrous and non-ferrous products like gun barrels for T-72 tank, 155 mm Field Howitzers and 30 mm Sarath Infantry combat vehicle, blanks and cartidge cases for 125 mm, 30 mm and 23 mm ammunition & various kinds of rolled

alloy-steel bars, billets and rods for supply to sister factories. The main production process involved are melting, casting, forging rolling, machining and heat treatment. Review by Audit of the working of the factory revealed that:-

- The under utilization of capacity in five shops ranged between 11 and 100 per cent which was attributed to non-availability of adequate orders from sister factories.
- Two costly plants costing Rs. 28.86 crore remained grossly underutilized in the range between 55 and 85 percent.
- Though the available man-hours were not fully utilized, the factory deployed personnel on overtime involving payment of Rs. 25.50 crore, out of which Rs. 2.11 crore was avoidable.
- No benefit could be derived from and investment of Rs. 2.70 crore towards procurement of two cooling pits, one mechanical press, one furnace and one face milling machine due to their non-commissioning/delayed commissioning even after a lapse of two to five years of their receipt.
- Overhead charges to the value of production ranged between 62 and 73 per cent as against the range of 29 and 37 per cent for the Ordnance Factory Organisation as a whole.
- There was unfruitful expenditure of Rs. 3.03 crore towards creation of facilities for shell forge plant at the factory due to change in product profile and inordinate delays due to indecision in procurement of the plant.
- Injudicious manufacture of steel, blooms and billets worth Rs. 22.66 crore in anticipation of orders had rendered the items obsolete and unusable.
- Against the normal life of six months, 53 manufacturing warrants valuing Rs. 7.71 crore were outstanding for more than one to four years.

(Para 7.2 of Report No.6 of 2004) Army and Ordnance)

Functioning of CNC machines in Ordnance Factories

Ordnance Factories inducted Computerized Numerically Controlled (CNC) machines in a phased manner from 1980 as a part of their modernization programme. CNC machines are designed and built to give superior performance and accuracy in operations such as machining, turning, grinding, milling, boring, gauging, drilling, gear making etc. in comparison to con-

ventional machines. Depending upon the nature of operations/jobs required, CNC machines are designed with multi axes mode. Review by Audit of the performance of the functioning of CNC machines in Ordnance Factories during 1997-2002 revealed that:-

- There was abnormal rejection amounting to Rs. 21.94 crore in manufacture of components at two factories due to the management's failure to contain the rejection percentage within the specified limits.
- In the absence of proper documentation particularly, machine-wise cycle time, annual rated capacity etc. and non-assessment of achievements of benefits accrued vis-à-vis that envisaged at the time of procurement of CNC machines, the factory managements were not able to effectively evaluate, monitor and control the utilization of CNC machines.
- Procurement of 49 CNC machines costing Rs. 8.50 crore in six ordnance factories between March 1993 and November 2001 lacked justification in view of either no workload or decrease in workload at the concerned factories.
- The management of seven factories could not derive any value for money out of investment of Rs. 15.56 crore on 16 machines due to various types of quality problems leading to their non-commissioning, remaining under continuous breakdown or their ultimate rejection etc.
- There was gross underutilization to the extent of 70 per cent and above in respect of 60 to 100 CNC machines in a year. Besides, the underutilization of 82 to 154 other machines ranged between 40 and 69 per cent in a year out of 349 machines selected for test check at 13 factories.
- At eleven ordnance factories, 41 to 94 machines remained under break-down for more than one month's duration in a year, 16 machines remained under break-down for more than six months in 2001-02. Besides, nine machines costing Rs. 5.99 crore were under continuous break-down for periods ranging from 20 months to eight and a half years as of April 2002 at six factories.
- Despite production capacity available through the CNC route at two factories, manu-

facture of components of 5.56 mm rifle and 9 m pistol through the conventional route led to an extra expenditure of Rs.9.71 crore due to higher cost of production.

- The management of three factories offloaded jobs amounting to Rs.5.32 crore to trade despite having CNC capacity.
- In two instances, the management of two ordnance factories paid Rs. 1.14 crore to the suppliers of CNC machines, who did not fulfill the contractual obligations.

(Para 7.3 of Report No.6 of 2004)
Army and Ordnance

Blocked inventory due to abrupt withdrawal of demand by user: Three Ordnance Factories were forced to hold blocked inventories worth Rs. 9.21 crore owing to abrupt decision of the army in withdrawing their requirement of High Explosive Extended Range version of 155 mm Bofors Ammunition in 1999-2000, for which there is no possibility of alternate use.

(Para 7.4 of Report No.6 of 2004)
Army and Ordnance

Receipt of defective stores due to incorrect specification in the supply order: Incorrect incorporation of specification in the supply order by Heavy Vehicles Factory, Avadi foreclosed the possibility of obtaining free replacement of Track assembly wraps imported at a cost of Rs.3.60 crore from a foreign firm.

(Para 7. of Report No.6 of 2004)
Army and Ordnance

Failure to develop a propellant: Failure of High Energy Material Research Laboratory, Hyderabad to indigenously develop Artus block propellants of Milan Missile in association with Ordnance Factory, Itarsi had resulted in nugatory expenditure of Rs.4.75 crore.

(Para 7. 10 of Report No.6 of 2004)
Army and Ordnance

Suppression of excess consumption of components: By working out rejection allowance based on total value of each warrant in assembling of 5.56 mm rifle and 9 mm pistol instead of calculating it with reference to ordered quantity provided in the estimate, the Rifle Factory, Ishapore suppressed excess consumption of components/sub-assemblies worth Rs.3.19 crore.

(Para 7.13 of Report No.6 of 2004)
Army and Ordnance

V-AIR FORCE AND NAVY

Modernisation of a submarine: Inadequate planning and tardy procurement in the modernization programme of a SSK submarine costing over Rs.800 crore have delayed the completion of the mod-

ernization schedule by two and half years, rendering the submarine unavailable for operational exploitation during this period, and entailing avoidable extra expenditure of Rs.9.39 crore.

(Para 4.1. of Report No.7 of 2004)
Army and Ordnance

Extra expenditure due to inadequate safety measures: Non-implementation of adequate safety measures in time by the Navy led to damage to underwater cables and equipment of two Degaussing Ranges. This resulted in avoidable extra expenditure of Rs.8.99 crore, and delay of over four years in the creation of Degaussing facilities.

(Para 6.2 of Report No.7 of 2004)
Air Force and Navy

Purchase of rubber tiles for submarines: Planning deficiencies in the purchase of rubber tiles for submarines led to avoidable expenditure of Rs.1.72 crore.

(Para 4.2. of Report No.7 of 2004)
Air Force and Navy

Unnecessary procurement of transmitters: Procurement of eleven transmitters in excess of authorization and requirement by the Air Force resulted in avoidable expenditure of Rs.5.26 crore. Attempts by the Air Force to backload these surplus transmitters to the manufacturer have not been successful.

(Para 3.1 of Report No. 7 of 2004)
Air Force and Navy

Import of defective missiles: Air Hq failed to get three defective missiles repaired/replaced at the cost of the foreign vendor within the warranty period. As a result, the missiles would complete their entire shelf life of eight years in an unserviceable condition, rendering infructuous the investment of Rs.1.26 crore on their procurement.

(Para 2.2 of Report No. 7 of 2004)
Air Force and Navy

Recoveries effected at the instance of Audit: At the instance of Audit, the Air Force recovered Rs. 8.02 crore towards interest on the amount that had been outstanding against the Hindustan Aeronautics Limited for over ten years. In another case, overpayment of Rs. 2.88 crore caused by erroneous application of rates in the bills preferred by HAL was recovered.

(Para 3.7 of Report No.7 of 2004)
Air Force and Navy

Irregular payment of Transport Allowance: Incorrect implementation of Government orders for the grant of transport allowance to Air Force and Naval personnel led to overpayment of Rs.20.29 crore in 26 Air Force and Naval formations.

(Para 2.1 of Report No.7 of 2004)
Air Force and Navy

Procurement of Aviation Bombs: Air Force concluded a contract with a

Romanian firm for supply of 3,775 Aviation Bombs without proper evaluation. The Bombs failed in flight trials. The contract had to be cancelled and procurement of 2,000 bombs from an alternative proven source(Russian) was entailed. This led to extra expenditure of Rs. 1.32 crore.

(Para 3.2 of Report No.7 of 2004)
Air Force and Navy

Avoidable procurement of equipment: Procurement of a High Density Data Recorder for the same end use by both the Project Coordinator and the Project Implementer of the AirForce resulted in unnecessary expenditure of over Rs.1.22 crore.

(Para 6.1 of Report No.7 of 2004)
Air Force and Navy

Procurement of ARC Spray System: Poor planning by the Air Force resulted in non-utilisation/sub-optimal utilization of six ARC Spray Systems procured at a cost of Rs. 1.22 crore.

(Para 3.3 of Report No.7 of 2004)
Air Force and Navy

Procurement of fuel feed pumps: Inadequate scrutiny by the Navy, of offers received from a foreign vendor for fuel pumps resulted in procurement of two fuel feed pumps at exorbitant rates, entailing avoidable extra expenditure of Rs.34.34 lakh.

(Para 4.3 of Report No.7 of 2004)
Air Force and Navy

Avoidable expenditure caused by failure of Air Hqrs: Failure of Air Hqrs to issue timely corrections to two draft contracts resulted in extra expenditure of Rs. 44.75 lakhs in the procurement of spares.

(Para 3.4of Report No.7 of 2004)
Air Force and Navy

Avoidable and infructuous expenditure in water supply arrangements with a municipal body: Over assessment of water requirements for a naval establishment and premature conclusion of an agreement with a municipal body resulted in avoidable and infructuous payment of Rs. 1.20 crore. Further, the failure of the Garrison Engineer to protect a pipeline constructed at a cost of Rs. 57.19 lakh led to its non-utilisation and rendered the investment unfruitful.

(Para 4.5 of Report No.7 of 2004)
Air Force and Navy

Non-crediting of revenue into Public Fund: Three Air Force Commands did not remit to Government revenue of Rs.1.77 crore earned from commercial complexes located in Government buildings/Government land.

(Para 3.6 of Report No.7 of 2004)
Air Force and Navy

Unauthorised and unnecessary expenditure: Execution of civil works after the cancellation of the event for which these were required resulted

in unathorised and unnecessary expenditure of Rs.51 lakhs.

(Para 3.5 of Report No.7 of 2004)
Air Force and Navy

Non-utilisation of a newly constructed technical building for the intended purpose: A building constructed at a cost of Rs.68 lakhs to house an Armament Repair and Maintenance Unit was diverted to other non-technical uses, by relocating the original users in unsuitable alternative accommodation.

(Para 4.4 of Report No.7 of 2004)
Air Force and Navy

Non utilization of prime land: The Coast Guard failed to establish a Coast Guard Air Squadron Complex in Kolkata despite acquiring prime land at a cost of Rs. 15.8 crore seven years ago.

(Para 5.1 of Report No.7 of 2004)
Air Force and Navy

DEPARTMENT OF DEFENCE PRODUCTION AND SUPPLIES

Bharat Earth Movers Limited paid penal interest of Rs.2.43 crore in July 2002 due to delayed payment of customs duty. In addition, due to non- availment of concessional customs duty, it also paid additional customs duty of Rs.68 lakh in July 2002 on domestic sales.

(Para 6.1.1 of Report No.3 of 2004)
Commercial

Bharat Electronics Limited failed in protecting its interest at the time of amendment of delivery terms resulting in blocking up of funds of Rs.58.37 crore and consequential loss of interest of Rs.9.89 crore from 1995-96 to 2001-02. It also incurred Rs.1.32 crore towards insurance premium for safeguarding the goods.

(Para 6.2.1. of Report No.3 of 2004)
Commercial

Hindustan Aeronautics Limited failed to fulfill its commitment for repair/ overhaul of MIG 21 M and 27 M Aircraft in time resulting in incurring of liquidated damages of Rs.11.33 crore from 1995-96 to 2002-03.

(Para 6.3.1. of Report No.3 of 2004)
Commercial

Review on Marketing Activities by Bharat Earth Movers Limited

The Company did not conduct any market survey during the last 5 years ending March 2003 resulting in procuring/manufacturing spares/ equipment which it could not utilise/ sell. The inventories as on March 2003 were 41 percent of the value of production. Due to inaccurate market projections, the production capacity created to manufacture diesel engines and cylinder blocks remained under utilised.

The Company's core activity comprises manufacturing and sale of earthmoving equipment, yet its share in the field declined due to its inability to offer competitive prices and to cope with competition. The main reason for incurring losses in manufacturing and sale of earthmoving equipment was its failure to take appropriate cost reduction measures.

Despite having full-fledged distribution network, with adequate manpower, the Company injudiciously engaged private agencies for securing orders for its products resulting in avoidable expenditure.

The Company has not evolved any policy with regard to taking up of R&D projects. As such it has not been able to successfully introduce R&D products in the market.

There were delays on the part of the Company in supplying equipment to the customers. As such the latter withheld payments/levied liquidated damages.

BCCL, a sick subsidiary, defaulted in making payment to the Company even though the Company continued to supply equipment/spares on credit to it.

(Report No.4 of 2004)
Commercial

DEPARTMENT OF DEFENCE RESEARCH AND DEVELOPMENT

Procurement and utilization of plant and equipment in DRDO

Defence Research and Development Organisation (DRDO) provides scientific and technical support to the Armed Forces through design and development of new and sophisticated equipment to meet operational requirements. A significant objective is the establishment of capacity for indigenous production of equipment which, hitherto, were imported i.e. self reliance in defence requirements. The mandate of DRDO is accomplished through a network of 50 laboraties/establishments.

A review on procurement and utilization of plant & equipment in DRDO carried out and revealed that:-

- There were abnormal delays in installation of six machines valuing Rs.13.78 crore in four laboratories/Establishments.
- There was under utilization of four equipment valuing Rs.5.60 crore in four Laboratories.
- In two Laboratories, there were four equipments valuing Rs.3.21 crore lying unutilized.

- Eight machines valuing Rs.1.75 crore required for specific projects were received in five laboratories either after closure or at the fag end of the project.
- A Laboratory procured equipment costing Rs.1.60 crore which was not envisaged in the project proposal.
- Non-realisation of cost of Rs.4.89 crore for the assets installed at Mishra Dhatu Nigam for over 11 years.

(Para 5.1 of Report No.6 of 2004)
Army and Ordnance Factories