

CONTENTS

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1.	National Security Environment	01
2.	Organisation and Functions of The Defence Ministry	17
3.	Indian Army	25
4.	Indian Navy	34
5.	Indian Air Force	42
6.	Coast Guard	48
7.	Defence Production and Supplies	53
8.	Defence Research and Development	70
9.	Inter-service Organisation	79
10.	Recruitment and Training	94
11.	Resettlement and Welfare of Ex-servicemen	108
12.	Cooperation Between The Armed Forces and Civil Authorities	121
13.	National Cadet Corps (NCC)	126
14.	General	131
15	Activities and Achievements of Vigilance Units	139
	Appendix 1	140
	Appendix 2	142
	Appendix 3	143

1 NATIONAL SECURITY ENVIRONMENT

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Army Vigil at Siachen Border Area

1.1 In the emerging global environment, India has adopted a comprehensive approach to security, encompassing economic strength, technological progress as well as internal cohesion necessary for exercise of the national will. However, given the security challenges confronting the country, India needs to maintain a desired level of military strength and preparedness to deter any aggression and to enable India to contribute positively to the promotion of peace and stability in the region.

1.2 Since Independence in 1947, India has had an enviable record of secular and democratic governance. Threats to national security have always brought to surface a strong wave of patriotism. Some recent examples when these waves swept through the length and breadth of the country are the Kargil war, hijacking of one of our aircraft by Pakistan sponsored terrorists, attack on our Parliament etc. This clearly brings home one point, that any attempt to disrupt India actually brings about strengthening of the people's will and the Government's resolve.

NATIONAL SECURITY OBJECTIVES

1.3 With this backdrop, our National security objectives have been evolved. Indeed, they are no different from those of any other democratic country. These are:

- Defending the country's borders as defined by law and enshrined in the Constitution.

- Protecting the lives and property of its citizens against terrorism and insurgencies.
- Maintaining a credible minimum deterrent against the use or the threat of use of weapons of mass destruction against India. The determination of the profile of this deterrent, including accurate and refined delivery systems, is a sovereign responsibility.
- Securing the country against restrictions on the transfer of material, equipment and technologies that have a bearing on India's security, particularly its defence preparedness. This involves a greater emphasis on indigenous research, development and production to meet the nation's requirements.
- Promoting further co-operation and understanding with neighbouring countries and implementing mutually agreed confidence building measures.
- Working with countries of the Non Aligned Movement (NAM) to address key challenges before the international community and engaging in co-operative security initiatives such as the ASEAN Regional Forum (ARF).
- Pursuing security and strategic dialogue with major powers and key partners; and

- Following a consistent and principled policy on disarmament and international security issues based on the principles of supreme national interest, universality, non-discrimination and equal security for all.

SALIENT FEATURES OF OUR NATIONAL SECURITY ENVIRONMENT

1.4 India's parameters of security clearly extend well beyond the confines of its conventional geographical land borders. Given its size, location, trade links and Exclusive Economic Zone (EEZ), India's security environment extends from the Persian Gulf in the west to across the Straits of Malacca in the east, and from the Central Asian Republics in the north to the equator in the south. Our links with most nations in this region are traditional and civilisational, supported by centuries of maritime trade and migration of people.

1.5 The length of Indian border with Pakistan, China, Bangladesh, Myanmar, Nepal, Bhutan and Afghanistan is 3244, 4056, 4351, 1643, 1751, 700 and 106 kms respectively. The total length of Indian borders is accordingly 15,851 kms. We share land borders with seven neighbours. However, few of them share borders amongst themselves. This obviously heightens the focus of their relations with us.

1.6 India's peninsular shape provides her a vast coastline of about 7600 kms. It has a

large number of far flung island territories, and an EEZ of over two million square kilometers. The island territories in the East are 1300 kms away from our mainland, and are virtually adjacent to our South East Asian neighbours. Here again, we share our maritime boundary with five neighbours, however our neighbours do not have to contend with sharing such boundaries between themselves. The seas surrounding India are likely to see the presence of extra-regional forces at least until the oil last.

- 1.7 This region has strategic and tactical missiles and has recently acquired the nuclear dimension. It is witnessing unprecedented narcotics trafficking and proliferation of small arms, which in turn threatens the stability of states and societies.

THE REGIONAL PICTURE

- 1.8 All countries of South Asia are developing and face internal instabilities that threaten social concerns and peace. Majority of the nations are under-developed and over-populated but are keen to catch up with the developed world.
- 1.9 The Gulf region possesses two-thirds of the world's oil reserves and the Central Asian Republics hold out further promise. These will continue to be the focus of the developed world's energy needs till well into the 21st century.
- 1.10 Many of the internal situations have the potential to become externalised. The

conflicts in Sri Lanka and Myanmar continue. Escalation of the Afghanistan conflict after the terrorist attacks in US on September 11, 2001, withdrawal of support to the Taliban regime by Pakistan, resultant impact of these developments on cross-border terrorism being inflicted in our country, future of Afghanistan and its impact on the strategic scenario in the region, are issues which are yet to crystallize. India is located near these areas of considerable turbulence.

- 1.11 India is fully committed to maintaining peace and stability with its neighbours through a continuous process of confidence building and substantive dialogue to expand the scope of bilateral interactions. CBMs or other means of formalising restraint have to be tailor-made to specific situations and have to be multi-dimensional, encompassing political, military, economic and cultural aspects. India's approach to confidence building has unilateral, bilateral and regional aspects. Examples of unilateral restraint practised by India include a defensive orientation of its defence policy and force postures; strict control over defence budgets; and, in the nuclear field, 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. Bilateral formalization of restraint has taken place both in the India-Pakistan as well as the India-China contexts.

CHINA

- 1.12 China continues to work towards the goal of strengthening and modernization of its armed forces. The budgetary allocation for the PLA has increased by 17.7 per cent (US\$ 18 billion according to the budget presented to the NPC) in the year 2001 over the previous year.
- 1.13 China has continued to develop its missile capability, including through further tests of long range missiles in the year 2001. China has also expressed its concern at the decision of the United States to unilaterally abrogate the ABM Treaty, and said that this will lead to an arms race.
- 1.14 China has, in the past, assisted Pakistan to develop its nuclear and missile capabilities. Despite denials by China, there are continuing reports of the transfer of missile parts and components technology to Pakistan in the year 2001.
- 1.15 China's relations with India have shown improvement in the year 2001-2002. During the visit of the Chinese Premier, Mr. Zhu Rongji to India from January 13-18, 2002, both sides have again reiterated their willingness to develop friendly and cooperative relations on the basis of Panchsheel.
- 1.16 Defence exchanges with China continued to grow in 2001-2002. The Chief of Air Staff and the Eastern Army Commander visited China in May and April 2001 respectively. A senior PLA delegation led by the Deputy Chief of General Staff of the PLA visited India in January 2002.

PAKISTAN

- 1.17 India and China have an unresolved boundary. China continues to occupy approximately 38,000 sq kms of Indian territory. In addition, under the so-called Sino-Pak Boundary Agreement of 1963, Pakistan has illegally ceded an additional 5,180 sq kms to China. China also claims approximately 90,000 sq kms in Arunachal Pradesh.
- 1.18 Both sides have agreed to seek a fair, reasonable and mutually acceptable settlement of the boundary question through peaceful dialogue and through established mechanisms like the Joint Working Group and the Expert Group of Diplomatic and Military Officials. The JWG has met once (July 2001) and the Expert Group has met twice (June and December 2001) to expedite the task of clarification and confirmation of LAC along its entire length, and also to discuss implementation of non-LAC related Confidence Building Measures. Both sides have reiterated their commitment to adhere to the provisions of the 1993 and 1996 Agreements. Although, the border areas have remained largely peaceful, from time to time, on account of differences of perceptions of the LAC, situations have arisen on the ground that could have been avoided had the LAC clarification been completed.
- 1.19 China continued to provide military assistance to Pakistan and Myanmar in the year 2001, and described such assistance as regular defence trade with these countries.

- 1.20 Pakistan has kept up its calls for resuming a dialogue with India, making it clear that the focus of any dialogue must be the issue of Jammu & Kashmir, while simultaneously continuing with its policy of sponsoring terrorism in J&K and in other parts of India. The duality of Pakistan's approach was most evident in the period just after the Agra Summit, when Pakistan sent formal invitations to Prime Minister and External Affairs Minister to visit Pakistan as a follow up to the Agra summit, even while Pakistan-based terrorist groups continued their daily attacks on innocent men, women, children, and on our security forces, in Jammu & Kashmir. The continued terrorist violence underscored the fact that Pakistan remains unwilling to give up its strategy of confrontation, violence and deception towards India. Prominent terrorist attacks during the initial period after the Agra summit included the massacre of Hindu pilgrims (August 3) and the attack against the Jammu Railway Station (August 7).
- 1.21 The terrorist attacks of September 11 in the United States, dramatically changed international perceptions and tolerance of state sponsored terrorism. Pakistan was made to join the international campaign against terrorism in Afghanistan. Several media analysts openly commented about the extent of international pressure that was brought to bear on Pakistan, before it agreed to join the campaign against

terrorism. While Pakistan joined the international campaign against terrorism in Afghanistan, its policy of sponsoring terrorism in India remained unchanged. In an address to the Pakistan nation, the President of Pakistan sought to justify his decision to join the international coalition against terrorism in Afghanistan, on the grounds that this was the only way Pakistan would be able to protect its so-called "Kashmir Cause". Prominent attacks during this period included the October 1 terrorist attack against the J&K State Assembly. Later in the month a similar desperate attempt was made against the Awantipura Air Force Station. Both the attacks were successfully foiled.

- 1.22 On December 13 elements of the Lashkar-e-Toiba (LeT) and Jaish-e-Mohammad (JeM), two Pakistan based terrorist groups attempted what is the most audacious, and also the most alarming act of terrorism against India in the nearly two decades of history of Pak-sponsored terrorism in India. This time the Pakistan based terrorists and their mentors across the border had the temerity to try and wipe out the entire political leadership in India. Much thought and reflection has been given as to why these groups, and their mentors, decided to raise the stakes so high, even while Pakistan was still professing its support to the international coalition against terrorism. The only answer that satisfactorily addresses this query is that Pakistan, a product of the indefensible Two Nation Theory, a

theocratic state with an extremely tenuous tradition of democracy is unable to reconcile itself with the reality of a secular, democratic, self confident and steadily progressing India, whose standing in the international community is getting inexorably higher with the passage of time.

1.23 Following the attack on Parliament, India made it clear to Pakistan, as also to the international community, there were limits to our patience. The Prime Minister in his address to the nation on December 13, 2001 has stated that our fight against terrorism will now enter a decisive phase. There has been widespread international support for India's position on terrorism, and several commentators have noted that Pakistan is once again under intense international pressure to reign in terrorist groups operating from its territories and territories under its control today.

1.24 On January 12, 2002, in an address to the Pakistan nation, the President of Pakistan announced that his government would take steps to crackdown on terrorist groups operating from Pakistan territories. Condemning the terrorist attacks of September 11 in the United States and the attacks of October 1 and December 13 in India, the Pakistan President stated that Pakistan would no longer allow its territory to be used for any terrorist activity anywhere in the world; no organization would be allowed to indulge in terrorism in the name of Kashmir; and, that Pakistan rejects and condemns terrorism in all its forms and manifestations. There were

some obvious ambiguities in the President's January 12 speech, but just three weeks later, in another public address by the Pakistan President it was made amply clear that Pakistan's real approach to cross border terrorism remained unchanged. In his February 5 public address, the President of Pakistan once again reiterated Pakistan's time-worn and untenable formulations on terrorism, including seeking to justify Pakistan sponsored terrorist violence in the Indian State of Jammu & Kashmir.

1.25 India has strongly rejected Pakistan's position on terrorism. The widespread international consensus today is that there is no justification for terrorism which must be eradicated wherever it exists. India is determined to take all necessary steps to preserve its security and territorial integrity, and will resist terrorism until it is decisively crushed.

OTHER NEIGHBOURS

1.26 As regards our other neighbours, relations with Nepal, Bhutan, Bangladesh, Myanmar, Maldives and Sri Lanka have qualitatively improved. Occasionally, minor irritants do spring up, as they do between most neighbours. These have been tackled with maturity and in a spirit of accommodation, and we foresee no security problems. A common concern with regard to Bangladesh, Bhutan, Nepal and Sri Lanka is the problem of refugees, both political and economic, and its impact on demographic patterns in the

neighbouring Indian states. Another relevant issue is the growth of Islamic fundamentalism, particularly in the border regions of Bangladesh and Nepal. Growing Maoist violence within Nepal is a recent development of concern. Myanmar, on the other hand, has been under considerable Chinese influence. The Indo-Myanmar border is rife with insurgency, and this has a bearing on our North Eastern States. Our relations with Sri Lanka are cordial; however, that country's Tamil problem has its resonance in the Southern Indian State of Tamil Nadu.

NEPAL

1.27 India and Nepal share traditionally close and friendly relations which are manifest in the free movement of people and goods across the open border, extensive people to people contacts and mutually beneficial cooperation in diverse fields. Frequent high-level interactions have provided both direction and momentum to our relationship with Nepal.

1.28 In the year 2001, Nepal faced unprecedented difficult times. In an unfortunate tragedy, some members of the Royal family, including King Birendra, Queen Aishwarya and Crown Prince Dipendra, were killed in a shoot out at the Palace on June 1, 2001. King Gyanendra was proclaimed the King on June 4, 2001

1.29 Shri Jaswant Singh, External Affairs Minister visited Nepal from August 17-19,

2001. The purpose of the visit was to personally convey to His Majesty King Gyanendra the deepest condolences of the President, the Prime Minister, the Government, and the people of India at the grievous tragedy that had struck Nepal in June. The visit was also undertaken to convey to the new king and the newly elected Prime Minister Shri Sher Bahadur Deuba, reaffirmation of India's commitment to building further on the existing friendship and cooperation between India and Nepal. The visit also provided opportunity to discuss issues of mutual interest to the two countries.

1.30 Following widespread violent attacks by the Maoist extremists, a State of Emergency was proclaimed in Nepal on November 26. India has extended its support to Government of Nepal for the steps taken by it to restore normalcy and maintain peace and security in the country. India has also offered such assistance as is desired by Nepal in addressing the situation. The Governments of both our countries are in touch with each other in this regard.

1.31 Consultations were held across a broad spectrum through existing bilateral mechanisms between India and Nepal. Some of the important Bilateral Meetings held include the Joint Working Group on Border Management (June 2001) and the Joint Technical Committee Meeting on Boundary (September 2001).

MALDIVES

1.32 The relations between India and Maldives have been close and cordial. The warmth of these relations have been kept up through regular exchange of high level visits between the two countries. Shri Omar Abdullah, Minister of State for External Affairs and Shri C. Vidyasagar Rao, Minister of State for Home Affairs paid official visits to the Maldives during the year 2001-2002. From the Maldivian side, Mr Abdullah Kamaludeen Minister of Human Resources, Employment and Labour and Mr Ahmed Abdullah, Minister of Health visited India in June 2001 and October 2001 respectively. During the visit of Maldives Health Minister, a fresh MOU concerning Manpower Requirements of Indira Gandhi Memorial Hospital, Male was also signed on October 15, 2001.

BHUTAN

1.33 India shares a close relationship with Bhutan encompassing mutual trust and friendship in the political arena and mutually beneficial economic cooperation. The year was marked by continuing close interaction between India and Bhutan.

1.34 The Health Minister of Bhutan Lyonopo Sangay Ngedup paid an official visit to India from April 4-9, 2001. The Crown Prince of Bhutan Dasho Jigme Khesar Namgyel Wangchuck paid an official visit from August 20-31, 2001. He also visited selected premier Defence and Civilian

Institutions in Dehradun, Mumbai, Hyderabad and Bangalore.

1.35 Foreign Secretary Smt Chokila Iyer, visited Bhutan from May 7-9, 2001 as part of the regular process of consultations between the two countries. Bhutanese Foreign Secretary Ugyen Tshering visited India from October 29 to November 1, 2001 for Development Cooperation talks between the two countries.

1.36 Bhutanese Foreign Minister Lyonopo Jigmi Y. Thinley, visited India from October 15-22, 2001 in connection with the inauguration of Bhutanese exhibition entitled "The Living Religious and Cultural Traditions of Bhutan" in New Delhi. The Kolkata leg of the exhibition was jointly inaugurated by the Bhutanese Home Minister and the Chief Minister of West Bengal on December 1, 2001.

1.37 The two Governments continued to be in close touch with each other on the issue of presence of ULFA-Bodo militants in Southern Bhutan. The Government of Bhutan reiterated that they would not allow their territory to be misused against the interests of India. In June 2001 Royal Government of Bhutan reached an understanding with ULFA militants to close down four of their camps in Bhutan by the end of December 2001 and to hold discussions thereafter, on winding down the remaining camps. The understanding was endorsed by the National Assembly which also reiterated that military action would be taken if the understanding was

not implemented within the agreed time frame. The four camps are since reported to have been closed.

BANGLADESH

- 1.38 India and Bangladesh share over 4,000 kms of common boundary over various geographical terrains. Given the length and porosity of this boundary, problems arise from time to time. Consequently, there are several institutional mechanisms in place for dialogue with Bangladesh on border related issues. One of the major border related incidents that occurred during the year was the April 2001 intrusion by the Bangladesh Rifles (BDR). The unprovoked and unwarranted intrusion by the BDR on April 15, 2001 in Pyrdiwah in the State of Meghalaya caused tension to flare up in other areas, including Assam where there was heavy exchange of fire between BSF and BDR on April 17-18, 2001. 16 BSF personnel died and shocking marks of injury and mutilation were found on their bodies when returned. Prime Minister had conveyed India's deep anguish to the Bangladesh Prime Minister, over the inhuman treatment so meted out to the BSF personnel. On her part, the then Bangladesh Prime Minister had expressed deep sadness and regret over the loss of lives. Subsequently, the delicate situation was defused by diplomatic action.
- 1.39 An official delegation from Bangladesh had visited India from June 11-14, 2001 for discussions on pending matters on the India-Bangladesh Land Boundary

Agreement of 1974. During the meeting, the terms of reference for the two Joint Boundary Working Groups were finalized. Later, these Groups met in Dhaka from July 2-4, 2001. The final reports are expected to be submitted to the two Governments by April 2002.

MYANMAR

- 1.40 In case of Myanmar, dialogue on security-related issues of mutual concern continued during the year. The 10th India-Myanmar Sectoral Level Meeting was held in September 2001 where the Indian delegation was led by Joint Secretary (NE), Ministry of Home Affairs. The representatives of armed forces of both countries also regularly interacted with one another during the year to discuss security related matters.
- 1.41 On the economic front, the two Governments signed an MOU for maintenance of the Tamu-Kalemyo Road on May 25, 2001. Later in July 2001 it was agreed to carry out the first phase of the project consisting of upgradation of port of Sittwe, improvement of navigability of river Kaladan upto Kaletwa and development of a modern highway from Kaletwa to the Indo-Myanmar border at the State of Mizoram. Again in July 2001 another Indian delegation visited Myanmar for a site-assessment for development of a deep-sea port of Kyaukphu. Government of India continued to offer assistance in training in defence-related areas to all the neighbouring countries.

SRI LANKA

- 1.42 Our policy towards Sri Lanka is aimed at maintaining close, cordial and cooperative relations with that country, building on the considerable legacy of historic links, common culture, shared commitment to democracy and a general orientation towards non-alignment in foreign policy. Our Sri Lanka policy consists of our three-fold commitment:
- (a) to the unity, sovereignty and territorial integrity of Sri Lanka;
 - (b) to the restoration of lasting peace in Sri Lanka;
 - (c) to a peaceful, political process being the only means of achieving a lasting peace, through a negotiated settlement which would meet the aspirations of all communities.
- 1.43 We are also working towards strengthening bilateral relations in all fields of mutual interest, especially, in the economic sector and in the multilateral context, increased cooperation with the Government of Sri Lanka on a positive and pragmatic basis.
- 1.44 Mr. Ranil Wickremesinghe was sworn in as the 17th Prime Minister of Sri Lanka on December 09, 2001. The new Cabinet was formed on December 12, 2001.
- 1.45 There have been frequent exchange of high level visits over the last few years. Apart from exchange of Ministerial visits, the
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President of Sri Lanka, H.E. Mrs. Chandrika Bandaranaike Kumaratunga, visited India from February 22-25, 2001 and met the President, the Prime Minister and the External Affairs Minister. The Sri Lankan Prime Minister Ranil Wickremesinghe visited India between December 22-24. The Sri Lankan Prime Minister met Indian leaders across the political spectrum. Substantive discussions were held with Prime Minister and External Affairs Minister. India reiterated its commitment to the sovereignty and territorial integrity of Sri Lanka.

AFGHANISTAN

1.46 The situation in Afghanistan could be categorized into pre and post September 11 terrorist attacks in the US. Prior to September 11, the Taliban ruled Afghan territory had become the epicenter of spread of terrorist and obscurantist forces, as well as narcotics, threatening the peace and stability of the region. Following the September 11 attacks, and specifically after the commencement of campaign by the international coalition against the Taliban, the situation changed rapidly. The forces of United Front (UF) commenced their major military gains from November 9, 2001, when they captured Mazar-e-Sharif. Bamyan, Faryab, Badgis, Samangan, Takhar, Ghor, Baghlan and parts of Kunduz fell on November 11, 2001. Herat fell on November 12 and UF forces entered Kabul on November 13, 2001. Immediately thereafter, the Taliban forces started withdrawing from southern Pushtoon

provinces of Nangarhar, Kunar, Logar, Farah and Paktiya. The Interim Administration is currently the overall in-charge for governance in all the provinces in Afghanistan.

1.47 The Political situation also evolved rapidly. The UN sponsored talks on Afghanistan held in Bonn, concluded on December 5, 2001 with the signature of agreement on provisional arrangements in Afghanistan pending the re-establishment of permanent government institutions.

1.48 The Interim Administration was sworn in on December 22, 2001 and Mr. Hamid Karzai was chosen as the Chairman of the Afghan Interim Administration. The internal situation in Afghanistan is, however, still far from stable. There have also been reports of factional clashes in southern and northern Afghanistan.

1.49 India actively participated in various UN sponsored international meetings regarding reconstruction and rehabilitation in post conflict Afghanistan.

1.50 **International Security Assistance Force:** On December 20, 2001, UN Security Council adopted Resolution 1386, authorizing the establishment for a period of six months of an International Security Assistance Force (ISAF) for maintenance of security of Kabul and its surrounding areas. The size of the ISAF is restricted to 4,500 troops. UK will command the ISAF for 3 months and then another country (Germany or Turkey) would take over.

1.51 **Bilateral Interactions with the Afghan Interim Administration:**

- **India's humanitarian Assistance to Afghanistan:** India has provided extensive humanitarian assistance to Afghanistan, specially in the field of medical relief and services. In addition, we have already pledged humanitarian assistance of one million tones of wheat for internally and externally displaced Afghans. As part of our commitment to the reconstruction and rehabilitation efforts in post conflict Afghanistan, Prime Minister Shri Atal Bihari Vajpayee has also announced our intention to offer a line of credit of US\$100 million, once the situation in Afghanistan has stabilized. A team of doctors and technicians concluded on February 10, 2002, a camp for artificial limbs (Jaipur Foot) for Afghan amputees.
- **Bilateral political interaction:** Mr. Qanooni, Interior Minister in the proposed Interim Authority for Afghanistan visited India in December 2001. During his meetings, issues of bilateral cooperation were discussed. India reiterated its commitment and support for the rehabilitation and reconstruction programmes of post conflict Afghanistan. Foreign Minister Dr. Abdullah visited India from December 13-19, 2001. General

Dostum, Deputy Defence Minister in the current Afghan Interim Administration visited India in January 2002. During meetings with leaders from Afghan Interim Authority, issues of bilateral cooperation, including India's assistance in reconstruction and rehabilitation in Afghanistan were discussed.

- The Chairman of the Afghan Interim Administration visited India on February 26-27, 2002, accompanied by 13 Ministers. During his visit, India announced project assistance in several areas, as also a grant of US\$ 10 million for immediate utilization by the Afghan Interim Administration.

JAPAN

- 1.52 India and Japan have established a Global Partnership for the 21st century on the basis of our economic cooperation and our strategic convergences. Defence exchanges reflected the mutual recognition that strengthened cooperation between the two countries is a positive factor for the maintenance of peace and stability. This was reaffirmed in the India-Japan Joint Declaration that was issued by the two Prime Ministers of India and Japan in Tokyo on December 10, 2001.
- 1.53 The two countries held the first comprehensive security dialogue in June 2001, as well as military-to-military

consultations. They have agreed to hold such dialogues annually in the future.

- 1.54 Defence exchanges with Japan continued in the year 2001 – 2002. In August 2001 the Chief of Army Staff visited Japan. This is the first such visit since the establishment of diplomatic relations. Both countries have also recognized the importance of cooperation in matters pertaining to the safety and security of international maritime traffic, and of active cooperation between the Coast Guards and related agencies in such areas as anti-piracy and search-and-rescue operations. The Director General of the Indian Coast Guard visited Japan in May 2001. The Coast Guard ship CGS Sangram visited Japan in May 2001 to participate in the Japan Coast Guard Fleet Review.

- 1.55 The year 2002 will mark the 50th anniversary of the establishment of diplomatic relations between India and Japan, and will provide a special opportunity to broaden and deepen sympathy and trust and build a solid foundation of partnership between the two countries.

CENTRAL ASIAN REPUBLICS

- 1.56 Central Asia is an area of political and strategic importance for India. The countries of this region have completed a decade of independence. India has historical and cultural linkages with the countries of this region and there is enormous goodwill for India in this part

of the world. Since the terrorist attack against the US on September 11, 2001, international attention has focussed on Central Asia and issues of terrorism, extremism and drugs trafficking. In the recent period, a number of regional associations and organisations have emerged which have stability in Central Asia as a major theme apart from other issues.

- 1.57 India's interest in the region is enduring and there is immense potential for cooperation with these countries, including in the exploitation of energy resources, cooperation in such areas as trade, industry, science & technology and culture. Our effort continues to be to introduce greater momentum in our relations with these countries.

SOUTH EAST ASIA AND SOUTH PACIFIC

- 1.58 India maintained its close relations with South-East Asian countries and countries in the South Pacific. Reciprocating the high level visits from the region in recent years as a renewal of India's "Look East" Policy, Prime Minister Vajpayee visited Malaysia in May 2001; Vice President Shri Krishan Kant visited Cambodia and Indonesia (in connection with G-15 Summit) in June 2001 and External Affairs Minister & Raksha Mantri visited Australia and New Zealand in June 2001. Important visits from South-East Asia included the visits of Prime Minister Dr. Thaksin Shinawatra from Thailand in November 2001 and the Thai

- Foreign Minister in July. There have also been a number of other ministerial level visits in both directions.
- 1.59 Being a Full Dialogue Partner of ASEAN and a member of ASEAN Regional Forum, (ARF), India engaged ASEAN in order to promote regional and international security by participating in the Post Ministerial Conferences and ARF meetings held in Hanoi in July 2001, where the Indian delegation was led by Shri K.C.Pant, Deputy Chairman, Planning Commission. This was followed by the Second Ministerial Meeting of Mekong-Ganga Cooperation in Hanoi. Minister of State, Shri Omar Abdullah attended the BIMST-EC meeting in Myanmar in December 2001.
- 1.60 As a result of the deliberations at the first Foreign Ministerial Framework Dialogue meeting held in Adelaide in Australia between EAM and FM Downer, a Security Dialogue at Senior Official Level was established between India and Australia in June 2001. The first meeting of this Dialogue took place in New Delhi on August 30 during which a wide range of bilateral, regional and international security related issues were discussed. The salient feature of this Dialogue was that, in addition to senior civil servants, uniformed military officers also took part at the inaugural meeting.
- 1.61 During the visit of Thai Prime Minister Dr. Thaksin Shinawatra in November 2001, the talks highlighted security issues of concern of the two countries, and the need to cooperate on matters relating to international terrorism, drug trafficking, smuggling and other areas. It was agreed that security cooperation between the two countries would be institutionalized. The appropriate modalities for this institutional security framework would be worked out at official level.
- 1.62 The security situation in some countries of the region viz. Indonesia, the Philippines, and Papua New Guinea, remain a matter of concern. Religious fundamentalism continued to pose some problems to Indonesia and the Philippines. Despite elections having been held in Fiji in September 2001, the constitutional Government is yet to be established and this has adversely affected the representation of all sections of the Fijian society in the Government.
- RUSSIA**
- 1.63 Prime Minister Shri Atal Bihari Vajpayee paid a highly successful State Visit to the Russian Federation from November 4-7, 2001. Documents issued/signed during this visit included, inter alia, a Joint Statement covering all important aspects and another specifically dealing with strategic issues; and Moscow Declaration on International Terrorism.
- 1.64 The Indo-Russian Working Group on Afghanistan held its second meeting in Moscow on June 25 and 26, 2001; third meeting in New Delhi on October 18 and 19, 2001; and fourth meeting in Moscow from February 14-16, 2002. The Foreign Secretary led the Indian side during the talks and First Deputy Minister of Foreign Affairs of the Russian Federation, Mr Vyacheslav I Trubnikov, led the Russian side.
- 1.65 Raksha Mantri and External Affairs Minister (RM/EAM) Shri Jaswant Singh visited the Russian Federation from June 4-6, 2001. During this visit the first session of the Indo-Russian Inter Governmental Commission on Military-Technical Cooperation (IRIGC-MTC) was held. The IRIGC-MTC was co-Chaired by RM/EAM on the Indian side and by the Deputy Prime Minister of the Russian Federation, Mr Ilya Klebanov, on the Russian side. RM/EAM also had meetings with Russian President Mr Vladimir Putin, Prime Minister Mr Mikhail Kasyanov, Foreign Minister Mr Igor Ivanov, Defence Minister Mr Sergei Ivanov and Secretary of the Russian Security Council Mr Vladimir Rushailo.
- 1.66 Shri Brajesh Mishra, Principal Secretary to the Prime Minister and National Security Adviser visited the Russian Federation from September 16-18, 2001 at the invitation of Mr Vladimir Rushailo, Security Council of the Russian Federation. The visit was in line with the Protocol of Cooperation signed in April 2000 between the National Security Council of India and the Security Council of the Russian Federation.
- 1.67 Prime Minister had a hotline conversation with President Putin on October 8, 2001 after the commencement of air strikes on Afghanistan. During these talks, the two

- leaders discussed about the situation in Afghanistan and in the region. External Affairs Minister also had telephonic conversation with Minister of Foreign Affairs of the Russian Federation Mr Igor Ivanov on October 8 and 16, 2001.
- 1.68 A six-member delegation led by Mr Oleg Chernov, Deputy Secretary of the Security Council of the Russian Federation visited India from January 12-16, 2002 and held Working Group level meeting with the National Security Council Secretariat of India.
- 1.69 The Minister of Foreign Affairs of the Russian Federation, Mr Igor Ivanov, paid an official visit to India on February 3 and 4, 2002. He held discussions with External Affairs Minister Shri Jaswant Singh on a wide range of bilateral, regional and international issues. A Joint Statement was issued on February 3, 2002 which, inter alia, noted the statement made by Pakistani President, Pervez Musharraf, on January 12, 2002, and Pakistan's recently declared commitment against terrorism. However, the Statement further noted that this commitment can only be judged by the concrete action Pakistan takes on the ground. In this context, the two sides emphasized the need for Pakistan to cooperate in stopping infiltration of terrorists into India, across the international boundary and the Line of Control, and ending the continued terrorist violence in the Indian state of Jammu & Kashmir, as also in other parts of India.
- 1.70 The Deputy Chairman of the Government of the Russian Federation and Minister of Industry, Science and Technology Ilya Klebanov visited India from February 5-8, 2002. He called on the President and the Prime Minister besides meeting the External Affairs Minister. Deputy Prime Minister Klebanov and Finance Minister co-Chaired the 8th Session of the Indo-Russian Inter-Governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation (IRIGC) on February 7, 2002. During this visit, DPM Klebanov and RM co-Chaired the Inter Session Review Meeting of the Indo-Russian Inter Governmental Commission on Military-Technical Cooperation.
- UNITED STATES OF AMERICA**
- 1.71 Progress in India-U.S. relations was sustained despite a democratic transition in the U.S. Administration in January 2001. President George W. Bush has repeatedly conveyed his commitment to accelerating the process of transforming the relationship.
- 1.72 The level of engagement in the first year of the Bush Administration has been both broad-based and intensive. This has included a visit by Prime Minister to Washington D.C. from November 7-9, 2001 at the invitation of President Bush, besides several ministerial level dialogues. The two countries further broadened their agenda of bilateral relations and agreed to resume and expand the wide-ranging bilateral Dialogue Architecture, established during the visit of President Clinton in March 2000. Security and strategic dialogue has developed beyond non proliferation issues to cover a wide range of international concerns and developments, including the common security and strategic goals in Asia-Pacific. In this context, the two sides have initiated an institutionalized dialogue on the New Strategic Framework of the United States, unveiled by President Bush on May 1, 2001.
- 1.73 There was considerable progress in defence cooperation, after a three-year period of limited contacts. Resumption of the existing institutional framework of defence cooperation – the Defence Policy Groups and the Joint Technical Group – has been supplemented by addition of new elements to this structure, such as the Security Cooperation Group to manage the defence supplies relationship between the two countries. The meeting of the Defence Policy Group in December 2001, co-chaired by the Defence Secretary of India Dr. Yogendra Narain and Under Secretary of Defence, USA Mr. Douglas Feith laid down the road map for intensive defence co-operation between the two countries.
- 1.74 The United States lifted the unilateral restrictions that it had imposed in response to India's nuclear tests in May 1998, which has paved the way for fuller development of economic, military and technology relations between the two countries.

1.75 Although the terrorist attacks in the United States on September 11 made the U.S. response to it, including the military campaign in Afghanistan, the immediate and overwhelming focus of its foreign and security policy, the two sides maintained the pace of bilateral engagement, both in response to the challenges arising out of the events of September 11 and to pursue the long-term development of India-U.S. relations.

1.76 The terrorist attack on the Parliament on December 13 has further strengthened India-U.S. cooperation against terrorism. The United States has proscribed under its domestic law a number of Pakistan-based organizations, including Jaish-e-Mohammed and Lashkar-e-Toiba, and has asked Pakistan to curb terrorism and take action against terrorist organizations operating out of Pakistan. India and the United States have taken a number of new initiatives in the area of counter-terrorism capacity building, including through military-military cooperation.

MARITIME DIMENSIONS IN INDIAN OCEAN

1.77 A review of global and regional trends is indicative of the fact that maritime matters are going to play an increasingly important and critical role in India's future. Nations with a vision have already diverted substantial energies and resources towards building up their assets in the form of coastal facilities, the merchant marine, ports, harbours and mining infrastructure.

Indeed, India is also moving in this direction.

TRADE

1.78 Every day about 300 ships traverse the Indian Ocean. On an average, 40 super tankers pass through the nine-degree channel daily. Annually, about US \$ 300 billion worth of oil passes through the Straits of Hormuz and Straits of Malacca. Japan has the most vital stake and their estimated trade flowing through our region is worth US \$ 260 billion which includes 80% of its oil imports from the Gulf. The value of Chinese trade passing through the Malacca Straits is US \$ 100 billion and her trade and oil demands are growing at the rate of 10% per annum.

INDIA'S LOCATION

1.79 India sits astride these major commercial routes and energy life-lines. The A&N Islands dominate the approaches to the Malacca Straits whilst Lakshadweep Group lies across the nine degree channel; and the Persian Gulf is only 600 miles from our shores. By virtue of our geography, we are in a position to greatly contribute to the secure movement of shipping along the Sea lanes of Communications in the Indian Ocean Region.

ECONOMIC AND ENERGY SECURITY

1.80 India's entire economic development process rests on the availability of energy resources, and therefore, energy

availability and affordability is absolutely vital to the country. Ninety percent of our oil comes either from off-shore oil fields or is transported over the sea from abroad, principally from the Gulf. If these are disrupted, the country's interests could be critically affected. India's dependence on the sea is clearly brought out by the fact that:-

- (a) Seaborne trade of \$ 70 bn annually, comprising 21% of our GDP and is growing at a rate of 20%.
- (b) 95% of India's overseas trade and 84% of its oil is carried across the sea. Offshore oil, fish and seabed minerals constitute vital and critical marine assets in the EEZ. All of these are key contributors to our national economy.
- (c) The Indian merchant fleet of 7 million tonnes is not very large, and can carry only 29% of our trade. Our merchant fleet is bound to increase along with increase in trade, export. Consequently, there is bound to be growth of our ports, harbours and related maritime infrastructure.

NEW TECHNOLOGIES

1.81 Technology today is a far more important factor than before and it underpins the security of sovereign nations in the non-military dimensions. In the military sector, the technology driven RMA will have a sweeping impact in the coming decade. India has been in the forefront of the IT

revolution and we are ensuring that this momentum does not slow down due to faulty policies and lack of encouragement. Likewise, adequate concern is being focussed towards information and space technology, advanced materials and biotechnology, as these are shaping everyday life and economy in a far more significant manner than is commonly realised. We firmly believe that nations that manage technology, that invest in it strategically and seek to control it, are going to be most influential in the decade to come.

INDIA'S NUCLEAR POLICY, DISARMAMENT AND INTERNATIONAL SECURITY

1.82 India remains a consistent proponent of general and complete disarmament and attaches the highest priority to global nuclear disarmament. India's policy on disarmament also takes into account changes that have taken place in the world, especially in the 1990s. The nuclear tests of May 1998 do not dilute India's commitment to this long-held objective. This sets the country apart from other nuclear weapon States, which reject global nuclear disarmament proposals because they refuse to visualise their security without nuclear weapons. As a nuclear weapon State, India is even more conscious of its responsibility in this regard and, as in the past, initiatives in pursuit of global nuclear disarmament continue to be taken by India both individually and collectively. The steps



Army Preparedness at Rajasthan Border

that were announced after the tests, and the initiatives that India has taken, strengthen this continued commitment. India has also unambiguously indicated its support to the establishment of an *Ad-hoc* Committee in the Conference on Disarmament in Geneva to negotiate a phased programme for global nuclear disarmament. India remains committed to co-operating with like-minded States to attain this goal.

1.83 India's nuclear weapons capability is meant only for self-defence and seeks only to ensure that India's security, independence and integrity are not threatened in the future. India is not interested in a nuclear arms race. This is the rationale behind the two pillars of India's nuclear policy—minimum deterrence and no-first-use.

1.84 India continues to maintain its opposition to the NPT as a discriminatory and flawed treaty. Its indefinite extension has merely

-
- reinforced these discriminatory aspects with a majority of the States being unable to persuade the original five nuclear weapon States to commit themselves to nuclear disarmament. The indefinite extension of the NPT has sought to legitimise the possession of nuclear weapons in the hands of these five nuclear weapon States. The Sixth NPT Review Conference took place in New York from April 24 to May 19, 2000. India has rejected the Conference's statements and prescriptions calling for a roll-back of its nuclear weapons programme. The understanding by the five nuclear weapon Parties to the NPT to pursue nuclear disarmament has also not so far been matched by any concrete actions.
- 1.85 India has maintained that lasting non-proliferation can only be achieved through disarmament. In the wake of India's nuclear tests, concerns have been expressed about transfer of these weapons or related know-how to other countries. India has an effective system of export controls and shall make it more stringent where necessary, including by expanding negative lists of equipment and technology to make them more effective in the context of a nuclear India. This was done in the EXIM policy announced on April 1, 2000. However, India's participation in various export control regimes would only be on the basis of equality.
- 1.86 After concluding the series of tests on May 11 and 13, 1998, India announced a voluntary moratorium on further underground nuclear test explosions. In announcing this moratorium, India accepted the core obligation of a test ban and also addressed the general wish of the international community. This moratorium continues, subject to the supreme national interests, a provision granted under the CTBT to every country. India has also announced its willingness to move towards a *de jure* formalisation of this voluntary undertaking, and is in the process of building a national consensus on signing the CTBT.
- 1.87 India supports efforts for negotiations on a universal, non-discriminatory and verifiable fissile material cut-off treaty that would prohibit the future production of fissile material for weapons purposes. This has been articulated by India in the UN through concrete proposals like the Action Plan which it presented in 1988. India also co-sponsored a UNGA resolution (48/75L) in 1993, which called for early commencement of negotiations for the prohibition of fissile material production for nuclear weapons or other nuclear explosive devices. India believes that this is an integral part of the nuclear disarmament process. It would also go a long way in arresting the problem of illegal transfers of nuclear material.
- 1.88 India's nuclear doctrine is based on maintaining a minimum credible deterrent and a no-first-use policy as opposed to nuclear war fighting doctrines or postures of launch on warning. It is, therefore, natural for India to take initiatives that aim to reduce the threat of breakout of nuclear war. Since 1998, India has regularly tabled a resolution at the UN to address the problem posed by the hair trigger alert level of nuclear weapons. This resolution has been approved by the UN General Assembly every year, in addition to the other traditional disarmament initiatives taken by India at the UN, in particular the resolution on a draft Convention to ban the use or threat of use of nuclear weapons.
- 1.89 India has consistently stood for prevention of an arms race in outer space and maintains that arms control treaties need to be implemented fully and in good faith to maintain stability. It is important to underline that actions of States Parties to the international arms control and disarmament treaties should serve to strengthen these instruments and further the prospects for further nuclear disarmament. Any response to the threat of ballistic missile proliferation would gain from a combination of dealerting, diplomacy and disarmament.
- 1.90 India remains committed to constructively participating in international efforts aimed at strengthening the norm against biological and toxin weapons by upholding the Convention on Biological and Toxin Weapons (BWC) and supporting international consensus to strengthen compliance with it. Participation of all States Parties to the BWC in this endeavour is absolutely necessary to uphold the international norms against biological weapons as well as against bio-terrorism.
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1.91 As an original Party to the Chemical Weapons Convention, India remains committed to discharging, fully and faithfully, its obligations under the Convention. The destruction schedule prescribed by the Convention is being fully met. India believes that all Parties to the Convention should ensure that they fulfil the obligations they have assumed under the Convention. In this context, the continued existence of *ad hoc*, export control regimes is contrary to the international legal commitments that States have undertaken to abide by under the Convention.

1.92 India has ratified the Amended Protocol - II of the Convention on Certain Conventional Weapons, which restricts the use of anti-personnel landmines, and the new Protocol -IV which prohibits the use of blinding laser weapons. India is fully committed to the eventual elimination of anti-personnel landmines (APLs) and achievement of the objective of a non-discriminatory and universal ban on APLs, while addressing the legitimate defence requirements of the States. Aware of the humanitarian crisis arising from the unrestrained transfers and indiscriminate use of APLs, India remains committed to its existing moratorium on transfers of APLs. India has also been contributing to several UN de-mining efforts since the Congo peacekeeping operations in 1962. India agreed, in December 2001, to the expansion of the scope of the CCW to include non-international armed conflicts.

India is also participating in ongoing discussions, within the ambit of this Convention, on the issues of Explosive Remnants of War and Anti-Vehicle Mines.

1.93 India is committed to strengthening the norm of transparency in conventional armaments in general, and greater participation in the UN Register of Conventional Arms, in particular. India has been submitting its reports to the Register annually since 1994. The issue of proliferation of and illicit trafficking in small arms has moved up the agenda of the international community on disarmament issues. India participated actively in the international search for effective solutions, including the Firearms Protocol finalized in March 2001, and the UN International Conference in July 2001 to discuss the issue of illicit trade in small arms and light weapons in all its aspects which adopted a Programme of Action to address the security challenges posed by such weapons.

1.94 At the Asia-Pacific level, India is an active participant in the regional security dialogue of the ASEAN Regional Forum, which has been focusing on building confidence and trust and has before it a basket of proposals on CBMs for future consideration. India sees the ARF as an experiment for fashioning a new pluralistic, cooperative security order in tune with the diversity of the Asia-Pacific region, and in consonance with the transition away from a world characterized by poses built

around military alliance. India's participation in the ARF demonstrates its increasing engagement in the Asia-Pacific region, both in politico-security and economic spheres, and of its commitment to the objective of sustaining regional peace and stability.

1.95 India also actively participate in the meetings of the Conference on Interaction and Confidence Building Measures in Asia (CICA) – an initiative taken by Kazakhstan. The Declaration of Principles guiding relations among CICA Member States signed in 1999 reaffirms the objective of promoting better relations among Asia States, while calling for a comprehensive, non-discriminatory and balanced approach towards international security. It also reiterates the Member States' determination to promote international and regional cooperation to counter and eradicate all forms of terrorism. A CICA 'Almaty Act' has also been negotiated and finalized, which sets a blueprint for CICA's future work.

SUB-CONVENTIONAL WAR

1.96 For the past nearly two decades, Pakistan has actively encouraged and supported terrorism against India. First in the state of Punjab, then in Kashmir, and now in various other parts of the country. Pakistan has been found to be an epicenter of Islamic fundamentalism and her actions had added a new dimension to State sponsored terrorism, resulting in the outbreak of a Low Intensity Conflict (LIC) in Jammu &

Kashmir. Pakistan had all along been the primary source of supply of arms and ammunition to Kashmiri militants and Taliban, sustained by smuggling and drug trafficking to a large extent. It is in this context that we have had to deploy the Army on internal security duties in Jammu & Kashmir.

1.97 However, after the terrorist attacks on the World Trade Centre building in New York and Pentagon in Washington, circumstances have radically changed. Pakistan, which was aiding and abetting terrorism has in a purported total reversal of its policy joined the global battle against it. Knowing Pakistan, their new realignment strategy needs to be watched very carefully as it impinges on our strategic interests.

1.98 Due to mounting international pressure and as a show of solidarity towards the coalition forces, Pakistan put up a facade that it was cracking down on the terrorist organisations located there. But the recent attacks on the J&K assembly building in Srinagar closely followed by a dastardly attack on the Indian Parliament on December 13, 2001 clearly brings home the intent of Pakistan leadership. The cosmetic action taken against Jaish-e-Mohammad and Lashkar-e-Toiba, the two Pakistan based terrorist organisations demonstrate double standards adopted by the Pak regime.

25 YEARS PERSPECTIVE

1.99 For India, the next 25 years are particularly crucial. A secure and stable environment

will help in ensuring a 6% to 7% annual growth of GDP, and in turn, will help in eradication of poverty, provide education and health for all, and ensure adequate housing. To achieve this growth rate, along with our internal and external strategy, the energy supply lines would also have to be continuously kept open and hence sufficient maritime deterrence has to be in place to prevent a misadventure by anyone.

PLANNING CONSIDERATIONS

1.100 The security environment that has so far been pointed clearly brings out four key elements that are fundamental determinants of our security planning. These are :-

- (a) The Indian Armed Forces have an obligation to safeguard the security of our borders from all sides.
- (b) India is not a member of any military alliance or strategic grouping, nor is this consistent with its policies. Therefore, it needs to maintain a certain independent deterrent capability.
- (c) Due to external abetment, India's Armed Forces are involved in internal security functions on a relatively larger scale than is normal. This requires a force structure that will be able to cope with it.
- (d) Our interests in the North Indian Ocean, including the security of our EEZ and island territories, highlight

the need for a blue water Naval capability commensurate with our responsibilities.

1.101 In conclusion, it may be stated that the 21st century would see India poised for economic stabilisation, have a firm growth pattern, and pursue a pragmatic policy of engaging our immediate and regional neighbours so as to achieve mutually beneficial Confidence Building Measures. This should create an environment of enhanced security and growth, leading to improvement in the quality of life of our people.

1.102 To this, a note of caution has to be added, that we cannot be complacent and have to fight international terrorism, narcotics trafficking and fundamentalism. Also, as a Nation we have to be prepared for a holistic and more inclusive approach to security, unlike in the past, where security was generally understood in pure military or nuclear terms.

1.103 In the last decade, India's foreign and security policies have matched our economic liberalization process. As a result, India has been a prominent partner in all UN and multi-national initiatives aimed at global prosperity, peace and security. As a large Nation with a billion plus population and growing industrial and economic infrastructure we are committed in our responsibility towards regional and global security matters.

2

ORGANISATION AND FUNCTIONS OF THE DEFENCE MINISTRY



Beating Retreat Ceremony

HISTORICAL BACKGROUND

- 2.1 A Military Department was created in the Supreme 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 passed in other Departments. The Military Department also maintained a list of Army personnel. Although headed by a separate Secretary to the Government from 1776 onwards, it continued to function as a branch of the Public Department for many years.
- 2.2 The Charter Act of 1833 brought about a number of changes in its administrative set-up under the East India Company. The Secretariat was reorganised in four Departments, including a Military Department, each headed by a Secretary to the Government. The Military Accounts Departments of Bengal, Bombay and Madras Presidencies were merged with the Military Department in 1864. The Army, however, continued to function as the Presidency Armies till April 1895, when they 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

were responsible for military affairs in the Council, 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 renamed as the Army Department after 1909 and was redesignated as the Defence Department in 1938. The Defence Department became the Ministry of Defence under a Cabinet Minister in 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 vested 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. 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.

- 2.5 The Government of India is responsible for ensuring the defence of India in all its aspects. The Supreme Command of the Armed Forces vests in the President. The responsibility for national defence rests with the Cabinet. This responsibility is discharged through the Ministry of Defence, which provides the policy framework and wherewithal to the Armed Forces to discharge their responsibilities in the context of the defence of the country. The Raksha Mantri (Defence Minister) is the head of the Ministry of Defence.

DEPARTMENTS

- 2.6 The Defence Secretary functions as head of the Department of Defence and is additionally responsible for co-ordinating the activities of the three Departments in the Ministry. The principal functions of all the Departments are as follows:
- (i) The Department of Defence deals with the three Services and with 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 and Supplies 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 for 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 used by the Services.

- 2.7 The Finance Division of the Ministry of Defence is headed by Secretary Defence (Finance). He 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).

COMMITTEES

- 2.8 A number of Committees dealing with defence related activities assist the Raksha Mantri. He holds weekly meetings which are attended by the Defence Secretary, Secretary (Defence Production & Supplies), Scientific Adviser to Raksha Mantri, Secretary Defence (Finance), Principal Secretary to



Raksha Mantri with Troops at Rajasthan Border

the Prime Minister, Cabinet Secretary, Foreign Secretary and the Chiefs of Staff of the three Services to review important developments and discuss issues concerning national security. The Raksha Mantri also chairs monthly meetings of the Defence Minister's Committee with the Secretaries in the Defence Ministry, and the Chiefs of Staff of the three Services to review and take coordinated decisions on various key programmes and issues.

- 2.9 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.
- 2.10 The principal task of the Defence 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. A list of items dealt with by the Departments in the Ministry of Defence is given in Appendix-I.

- 2.11 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.
- 2.12 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 01, 2001 onwards is given in Appendix II.

GROUP OF MINISTERS' REPORT ON 'REFORMING THE NATIONAL SECURITY SYSTEM'

- 2.13 The Government had constituted a Group of Ministers on April 17, 2000 to thoroughly review the national security system in its entirety and in particular, to consider the recommendations of the Kargil Review Committee and formulate specific proposals for implementation. The Group of Ministers consisted of the Home Minister, the Raksha Mantri, the External Affairs Minister and the Finance Minister. The Group of Ministers set up four Task Forces in the areas of (i) Internal Security, (ii) Border Management, (iii) Intelligence Apparatus and (iv) Management of Defence, which were multi-disciplinary in character and comprised of acknowledged experts to facilitate its tasks.
- 2.14 The Group of Ministers deliberated on the issues arising out of the Kargil Review Committee Report as well as the reports of the four Task Forces and formulated a comprehensive report titled 'Reforming the National Security System', which was presented to the Prime Minister on February 26, 2001. The main recommendations of the Report in so far as management of Defence is concerned, include creation of the Chief of Defence Staff (CDS), creation of a Defence Procurement Board, preparation of holistic and integrated Defence Perspective Plan for 15-20 years, establishment of a National Defence University and effective media

management. The Group of Ministers has also made recommendations for rejuvenation of State Police Forces, Central Para Military Forces, national service for the youth, expanding NCC and service in the Territorial Army, upgradation of the efficacy of the civil defence organization, setting up of village defence committees in rural areas, revamp of criminal justice system and strengthening, training and equipping of Border Guarding Forces.

- 2.15 It is for the first time, in independent India's history, that a comprehensive review of the national security system in its entirety has been undertaken. The implementation of the Group of Ministers' Report relating to 'Management of Defence' is expected to bring about improvements in the organisations, structures, processes etc. through integration of civil and military components and by ensuring 'Jointness' and 'Synergy' among the Armed Forces to the extent desirable. The measures are aimed at achieving progressive decentralization of decision-making powers at various levels, higher delegation of financial powers to the Service Headquarters and strengthening and upgrading the decision-making apparatus within the Services, wherever feasible. This process is expected to ensure greater speed, higher levels of efficiency and professionalism, cost effectiveness and accountability with much needed transparency in the system. The Government approved the

recommendations made in the report of the Group of Ministers on May 11, 2001 with the modification that a view on the recommendations relating to the institution of the Chief of Defence Staff (CDS) will be taken after consultations with various political parties.

SETTING UP OF DEFENCE ACQUISITION COUNCIL

- 2.16 Consequent upon the approval of the recommendations made by the Group of Ministers, the Government had set up a Defence Acquisition Council headed by the Raksha Mantri for taking decisions in regard to totality of new planning process, which inter-alia involves according in principle approval of capital acquisition in the long term prospective plan, according approval in principle to each capital acquisition, monitoring the progress on major projects etc. The decisions flowing from the Defence Acquisition Council are to be implemented by three Boards,



Raksha Mantri at Forward Areas, Rajasthan Border

namely, the Defence Procurement Board headed by Defence Secretary, Defence Production Board headed by Secretary (Defence Production & Supplies) and Defence Research and Development Board headed by Secretary (Defence Research & Development). These boards have been entrusted with specific functions.

- 2.17 Defence Acquisition Wing headed by Special Secretary (Acquisition) has also been created to assist the Defence Procurement Board in its functioning.
- 2.18 These measures would facilitate faster decision making in an integrated manner in regard to the acquisitions for the three Services and would also lead to higher degree of transparency and cost effectiveness in the process of acquisition of equipment, weapon and weapon systems.

CHIEF OF INTEGRATED DEFENCE STAFF (CIDS)

- 2.19 The Government has set up the Integrated Defence Staff, headed by Chief of Integrated Staff to Chairman, Chiefs of Staff Committee (CISC), to support the Chiefs of Staff Committee and its Chairman, in the optimal performance of their roles and functions. In specific, the CISC will supervise and control the Integrated Defence Staff, chair all multi-Service bodies, and the Defence Crisis Management Group (DCMG). In addition, he will also supervise the coordination of

long range plans, Five Year Plans and annual budgetary proposals for the three Services in consultation and coordination with Integrated Services Headquarters. He will render advice to the Government on prioritization for developing force levels and capabilities through restructuring acquisition programmes and budget proposals. He will also be responsible for finalizing net assessment comprising totality of national capability, formulating joint doctrine in consultation with Service Headquarters, formulating policy and programmes on joint employment, joint planning and military education for personnel of Defence Services, rendering periodical reports to Raksha Mantri on the need for structural or organisational changes, coordinate all aspects of Defence intelligence, coordinate Defence Services doctrine and responses to non-conventional and unconventional threats to national security in various areas, ensure the required jointness in the Armed Forces, enhance the efficiency and effectiveness of planning process through intra and inter Service prioritization.

PLANNING FOR DEFENCE

- 2.20 The defence policy accommodates continuing changes in the strategic setting whilst ensuring that the Armed Forces deployed are well-equipped, properly manned and supported to allow them to undertake operations effectively. It is equally necessary to ensure that they are capable of responding to future challenges.

The force structure is designed to provide a robust response in the existing strategic environment while remaining prepared and sufficiently responsive to further developments in the future.

- 2.21 Systematic planning for effective implementation of the Defence Strategy and the security policy is the essence of planning for defence. The strategic and technological environment assessment based on the harmonized perception of experts from all the concerned Ministries and Departments forms the basis for evolving the strategy. Planning for defence is a multi-disciplinary exercise involving, inter alia, an assessment and understanding of the trends in the international security environment, foreign policy, economic and international relations and the internal security environment.
- 2.22 The Directorate General of Defence Planning Staff (DPS), an Inter-Service

organisation, provides inputs to the Chiefs of Staff Committee (COSC) on matters pertaining to Defence Planning. The DG DPS is designed to be a multi-disciplinary group with representation from the three Services, Defence Finance, the Ministry of External Affairs and the Defence Research and Development Organisation (DRDO). The organisation deals with major issues pertaining to strategic defence planning such as threat assessments/analysis and possible responses to these threats, recommends balanced force structures to achieve military aims and conceptualizes and evolves Defence Plans.

- 2.23 To promote international and regional Defence Co-operation, the DG DPS is actively involved in forging Defence Bilateral Agreements in the vital areas of military to military co-operation and training with a number of countries. The DG DPS represents the Indian

Armed Forces at the ASEAN Regional Forum, a multi-lateral forum, to articulate India's security environment and defence policies. The Directorate also undertakes briefings of foreign defence and diplomatic delegations on matters connected with Indian security.

DEFENCE EXPENDITURE

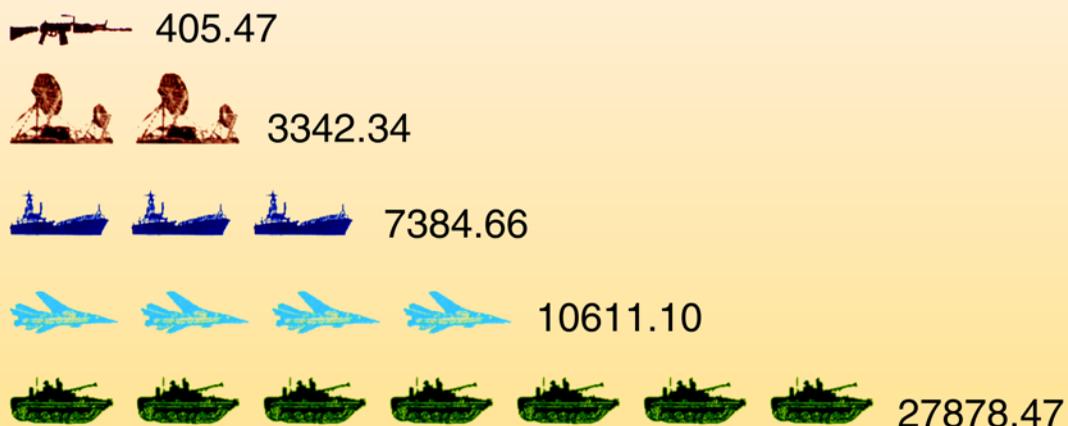
- 2.24 The outlay on Defence, assessed either as a percentage of the total Central Government expenditure or of the Gross Domestic Product, given India's size and security concerns, continues to be one of the lowest amongst neighbouring countries. The two charts in this chapter represent Service/Department-wise break-up of Defence expenditure for the years 1999-2000, 2000-2001, 2001-2002(RE) and 2002-2003(BE) and Service/Department-wise expenditure as a percentage of total Defence expenditure.

Service/Department-wise Break-up of Defence Expenditure

Rs. In Crores

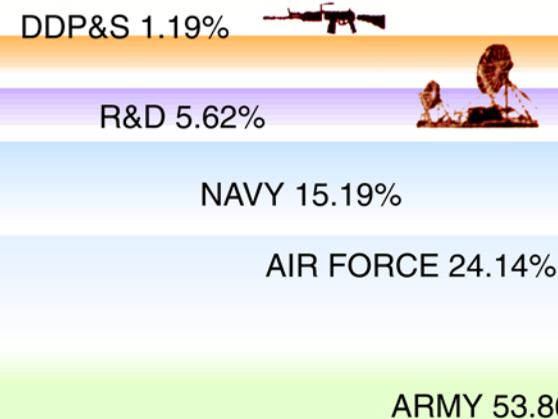


1999-2000 47070.63



2000-2001 49622.04

Service/Dep
Expenditure as
Total Defence





DDP&S



R&D



NAVY



AIR FORCE



ARMY



TOTAL

Department-wise
a percentage of
Expenditure



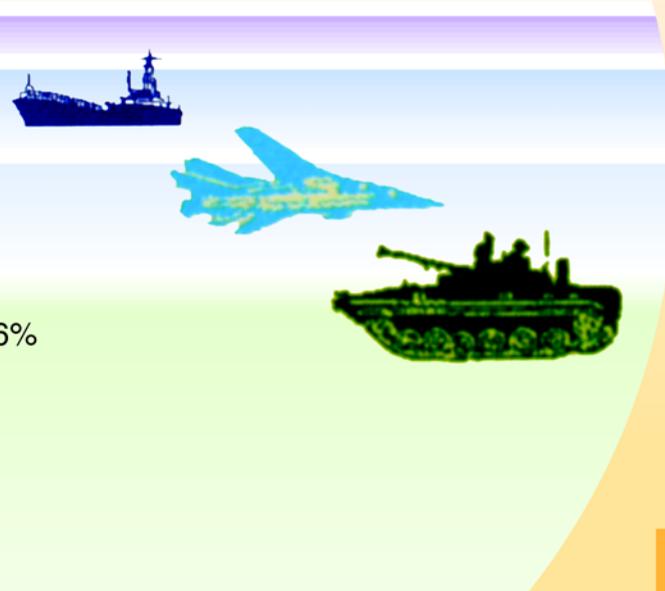
57000.00 (Revised Estimate)

2001-2002



65000.00 (Budget Estimate)

2002-2003



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INDIAN ARMY



Army version of Advanced Light Helicopter

3.1 The Armed Forces of India have the onerous responsibility of defending the country against external aggression and safeguarding its territorial integrity. The Indian Army has to be extremely vigilant at all times to meet various challenges arising from the country's long borders encompassing different geographical and climatic conditions. Its other important responsibilities include extending assistance to civil administration, which often has to call for the Army's high skills and organization to assist in relief operations during natural calamities, as well as to aid civil administration in the maintenance of law and order, as and when necessary. The deployment of Army in intense counter insurgency operations in Jammu & Kashmir and the North East parts of the country continues. To achieve these objectives, the Army has to be constantly modernised, suitably structured, equipped and trained.

MODERNISATION OF WEAPON SYSTEM AND EQUIPMENT FOR THE INDIAN ARMY

3.2 To enhance combat efficiency, following weapons and equipments have been introduced in recent times into the Indian Army:-

(a) **Armoured Corps :**

- (i) T-90 Tanks and Konkurs M Anti Tank guided Missile with tandem warhead.
- (ii) Procurement of Thermal Imaging Stand Alone Sights,

Thermal Imaging Fire Control System and Armour Fighting Vehicle Radio Set is being undertaken.

(b) **Artillery :**

- (i) Medium Range Battle Field Surveillance Radars.
- (ii) Long Range Recce and Observation System.
- (iii) Thermal Integrated Observation Equipment.
- (iv) Successful Trial Evaluation of 155 mm SP Guns of T-6 turret integrated with Arjun/G-6 chassis.

(c) **Infantry :**

- (i) Hand held Thermal Imagers.
- (ii) Battle Field Surveillance Radars (Short Range).
- (iii) Anti Material Rifles.
- (iv) Under Barrel Ground Launchers.
- (v) Unattended Ground Sensors.
- (vi) Mine Protected Vehicles.

(d) **Signals :**

- (i) Proliferation of Satellite based Communication.
- (ii) 400 AR-5000 Interception Receivers.
- (iii) 800 Signaling Converters have been procured for integrating Army Radio Engineering

Network and Army Static Communication Network.

- (iv) Proposed procurement of 1074 Radio Set HX and 6175 Very High Frequency Set.

(e) **Engineers :**

- (i) Acquisition of Counter Improvised Explosive Devices to enhance Counter Insurgency capability.
- (ii) Armoured Reconnaissance Vehicles and bridges of various types to improve ability to move through obstacle ridden terrain.

- (f) **Army Aviation :** Aerial attrition capability has been enhanced with acquisition of Cheetah armed helicopters (lancers).

(g) **Information Technology :**

- (i) KUBER 2001, a quality software designed to meet the accounting needs of all types of Army units, training establishments and formations has been launched.
- (ii) Installation of the State-of-the-Art High End Servers along with Mailing and Web System at Army Headquarter Computer Centre which has brought about revolutionary changes in the office automation of Army Headquarters and connectivity upto Corps Headquarters.

COUNTER INSURGENCY OPERATIONS JAMMU & KASHMIR

3.3 Non Initiation of Combat Operations (NICO), its subsequent termination and the Agra summit were significant events of the year having a direct bearing on the proxy war situation in Jammu & Kashmir. The salient aspects are as under:-

(a) Non Initiation of Combat Operations (NICO) in J&K with effect from November 28, 2000 was aimed at providing an opportunity to all sections of society to eschew the path of violence and to initiate a political process for the resolution of this long standing issue. However, the expectations of peace were short lived due to the intransigence of terrorists groups and local political organisations in the State, in participating in the dialogue process, resulting in NICO being called off on May 23, 2001. Notwithstanding the criticism, there were some very significant achievements of NICO. These were, reduction in tension along the Line of Control and international recognition of India's resolve to explore all possible means for restoring peace in Jammu & Kashmir.

(b) On termination of NICO, Security Forces recommenced operations against terrorist groups with notable success. Since May 23, 2001, 1799

terrorists have been eliminated by the Army alone (till March 14, 2002), which is the highest for any similar period, in the past few years, despite NICO when no proactive operations were undertaken.

(c) In view of the indiscriminate targeting of the civilian population by terrorist groups and also to enable the Army to operate without legal encumbrances, the Disturbed Areas Act was extended to the entire state of J&K in August 2001.



OVERALL TRENDS IN THE PROXY WAR

3.4 (a) Post Non Initiation of Combat Operations (NICO), the trans Line of Control exchange of fire (negligible during NICO) is comparable to the pre NICO period. In broad terms, this firing is assessed to be a fall out of the construction of border fencing by our troops on the IB

portion of J&K and Pak support to terrorist infiltration.

(b) In the hinterland, post NICO, the desired momentum in the counter proxy war operations has been achieved. There has been a significant increase in the attrition on terrorists. Overall trends in the important dimensions of proxy war situation in J&K in the current year are as follows:-

(i) **Terrorist Initiated Violent Incidents:** The number of violent incidents initiated by terrorists for the current year is approximately 113 per month which is a significant escalation, in comparison with the monthly average of 76 in the year 2000. However, most such incidents are due to terrorists resorting to violence against soft targets rather than confronting the Security Forces (SF), thus reflecting poorly on their morale and fighting capability.

(ii) **Attrition on Terrorists:** Renewed operations by the Security Forces, post NICO, were extremely effective, resulting in terrorist cadres suffering heavy attrition. The Army has killed a total of 2211 terrorists upto March 14, 2002 with 233 being eliminated in November alone (highest for a single month in recent years). The average monthly attrition on terrorists in the current year is 164

as compared to 119 for the year 2000. The results achieved have given further impetus to the counter proxy war operations, with the Security Forces retaining an upper hand. The current rate of attrition to terrorists is affecting their morale as is borne out by their radio intercepts, who (especially the HM) are now under pressure from their leadership to step up activities and offset the dominance established by the Security Forces.

(iii) **Infiltration:** The efficacy of the counter infiltration grid has been validated with 218 attempts being foiled this year, up to November 30, 2001. On an average, 18 attempts per month have been foiled this year, in comparison to 14 for the year 2000.

(iv) **Human Rights:** While on one hand, the Security Forces have been very particular of their Human Rights record, with troops being regularly sensitised to this aspect, terrorists (especially foreigner dominated groups) on the other hand, are increasingly resorting to killing of innocent civilians. Post Agra Summit, there have been some dastardly acts of minority killings by the terrorists, notably in the Doda District, which has drawn the opprobrium of all civilised people.

(v) **People Friendly Operations:** During the conduct of operations, the emphasis of SF is on 'people friendly operations', so as to minimise alienation of locals. Troops are fully conscious of their responsibility and are operating with a "human face".

3.5 Success in combating the Proxy War in Jammu & Kashmir hinges on the outcome of a politico-military strategy wherein the efforts of all components of the State are synergised towards the ultimate aim of restoring normalcy in J&K. Towards this end, the Army is leaving no stone unturned to ensure that the writ of the lawful Government runs and an environment of peace, conducive to development, returns to the State of J&K.



NORTH EAST

3.6 The nearly five decades old insurgency in the North East is at a low ebb now. The

visible peace in Nagaland as a result of the cease-fire with both factions of the National Socialist Council of Nagaland (NSCN), the oldest insurgent group in the North East, has opened up avenues for peace in rest of the region as well. This has been complemented by the 'Suspension of Operations' arrangement with the Bodo Liberation Tigers (BLT) in Assam, generating hope for the people of the region, who have suffered the scourge of insurgency for long. Relentless operations by the Security Forces against other insurgent groups in the region, have marginalised them and forced them to shift their bases to the neighbouring countries. Salient aspects of the prevalent security environment in the North East are covered in the succeeding paragraphs.

3.7 **Assam:** Sustained and successful military operations by the Security Forces under the Unified Headquarters, has resulted in the near marginalisation of both the United Liberation Front of Assam (ULFA) and National Democratic Front of Bodoland (NDFB), who have been forced to be holed up in camps in South Bhutan. This is aptly substantiated by the results achieved since January 01, 2001 wherein, 361 terrorists have been killed, 1468 apprehended, 228 have surrendered and 806 weapons have been recovered. The operations by the Security Forces also ensured a secure environment facilitating successful conduct of elections for the State Assembly in May 2001.

3.8 **Nagaland:** The cease-fire with National Socialist Council of Nagaland (Issac Muivah) (NSCN) (IM), in place since August 01, 1997, has been extended for another year, while the Government of India has also entered into a cease fire agreement with National Socialist Council of Nagaland (Khaplang) (NSCN (K)) for a year with effect from April 01, 2001. Despite some turmoil caused on account of the announcement of extension of cease fire beyond Nagaland and then its revocation by the Government of India, there is a distinct ground swell for peace in the State.

3.9 **Manipur:** Manipur was rocked by unprecedented protests and violence consequent upon announcement of extension of cease-fire with NSCN(IM) without territorial limits. The situation was kept under control by force accretions, adept handling of the situation and relentless operations by the Security Forces. With the review of the cease-fire and withdrawal of the clause “beyond territorial limits”, the situation in the valley districts has normalised. Since January 01, 2001, 139 terrorists have been killed, 1323 apprehended, 24 have surrendered and 210 weapons have been recovered.

3.10 **Tripura:** Situation in Tripura is that of a high grade law and order problem. The SF operations have been instrumental in keeping both the National Liberation Front of Tripura (NLFT) and All Tripura Tigers Force (ATTF) confined to their trans-border bases in Bangladesh and forcing a large

number of surrenders. Since January 01, 2001, 172 terrorists of both the factions have surrendered to the Security Forces. Also, 40 terrorists have been killed, 455 apprehended and 290 weapons recovered in the operations by the SF this year.

UN PEACEKEEPING MISSIONS

3.11 Peacekeeping Operations under the over all aegis of United Nations have grown in relevance and importance. Indian Army is one of the largest contributors of troops and materials for UN Peacekeeping Operations. Indian Army have been actively involved in Peacekeeping Operations in Lebanon, Ethiopia-Eritrea, Democratic Republic of Congo (DRC) and Kuwait. Details of Indian participation are as under :-

(a) **Lebanon:** One Indian Infantry Battalion Group, comprising 813 personnel, is participating in the UN mission in Lebanon (UNIFIL). The Force Commander of the Mission is an Indian Army Officer.

(b) **Ethiopia-Eritrea:** Indian Battalion (INDBATT), contingent of an Infantry Battalion, a mechanized company, an Engineer company and personnel from Corps of Signals, Army Medical Corps, Electrical and Mechanical Engineers and Army Education Corps has been deployed for the Peacekeeping Operations in Ethiopia and Eritrea since March 2001. Indian Army is one of the

largest troops contributor with 1363 personnel including 05 military observers and 17 staff personnel deployed in Central Sector of UN mission in Ethiopia-Eritrea (UNMEE). The Engineering Construction Company, has performed a commendable task by taking on variety of developmental work in entire area of responsibility of UNMEE.

(c) **Democratic Republic of Congo :** There are 29 military observers forming part of the UN mission in Democratic Republic of Congo (MONUC).

(d) **Kuwait:** There are 6 Indian Army Officers serving as Military observers in UN mission in Kuwait (UNIKOM).

RASHTRIYA RIFLES

3.12 Ever since its raising in 1990, Rashtriya Rifles, with its splendid all round performance, has emerged as the main specialised force to counter proxy war. Six new Rashtriya Rifles Battalions were raised during the year making a total of 48 battalions. Operational performance of Rashtriya Rifles has been exemplary. It has been possible due to high motivational level of troops, good intelligence network and an excellent rapport with local population and civil administration. However, success in 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 given objective.

- 3.13 Rashtriya Rifles troops have undertaken a number of good-will 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, providing medical aid and organising friendly matches between Army and locals. There has been overwhelming response from the population for such programmes which has generated tremendous good will towards Rashtriya Rifles troops.

TERRITORIAL ARMY

3.14 **Raisings :**

- (a) **Raising of Infantry Battalion (TA) Ecology for NCT of Delhi:** 132 Infantry Battalion (Eco) RAJPUT has been raised on August 08, 2001 as part of Ecological Task Force, under the aegis of National Capital Territory Delhi for afforestation and development of Bhatti Mines to be known as 'KARGIL MARTYR'S MEMORIAL FOREST'.
- (b) **Raising of Ecological Task Force for Punjab:** The State Government of Punjab has proposed to raise an Infantry Battalion (TA) Eco for conservation and management of Harike Wetland Project of Punjab.



Personnel of Territorial Army at Training

- 3.15 **Conversion of Five Defence Paid Railway Engineer Regiments (TA) and two Railway Bridge Construction Company (TA) into six Infantry Battalions (TA):** In light of the improved infrastructure of Railways and availability of civil hired transport for effecting mobilisation, existing Defence paid Railway Engineer Regiments (TA) and two Railway Bridge Construction Companies (TA) are being converted into six Infantry Battalions (TA).

CIVIC ACTION PROGRAMMES

- 3.16 While ensuring inviolability of borders of our country and assisting the civil authorities in maintaining the law and order and/or essential services as well as undertaking rescue and relief operations during natural calamities, the Army is executing numerous civic action programmes for uplifting of the people, particularly in underdeveloped areas. The details are outlined in the succeeding paragraphs.
- 3.17 **Operation Sadbhavna:** The aim of undertaking Operation Sadbhavna in Jammu & Kashmir by the Army is to assuage the feeling of alienation which may occur amongst the local inhabitants as a consequence of Army's counter proxy war operations which sometimes inadvertently lead to collateral damage to life and property involving civilians. This also helps in undertaking projects in remote and inaccessible areas where the civil administration is unable to operate because of the prevailing security/proxy war situation. Beside construction of 15 new schools and revival of 19 existing schools, numerous developments and community projects as per details given below have been under taken:-
- (a) **Indian Army Dedicated to Health Care of Kashmiri People:** The Armed Forces, with the assistance of the State Administration, have been regularly holding Medical Camps in the remote and inaccessible areas to



Vigilant troops at Siachen Border Area

bring healthcare to the doorstep of the Kashmiri people. In addition to free Medical, Gynecological, Surgical, Eye and Dental check ups and advice, medicines are being distributed in these camps. Immunization Camps for the children are also being conducted as part of the Nation wide campaign to eradicate various diseases. In addition, people are being educated on health care, hygiene and sanitation.

(b) **Education of the Kashmiri Children :**

(i) In the field of education, the Army has made immense contribution to prepare the Kashmiri children to meet the challenges and have a bright future. Presently quality education is being imparted to 5000 Kashmiri children in the Primary, Middle and Senior level schools being run/adopted by the Army. The schools are running at Srinagar, Khanabal, Balapur,

Aishmuqam, Awantipur, Ahagom, Uri, Charkut, Sharifabad and Kupwara. Computer education, science laboratories and well stocked libraries are available in all middle and senior level schools. These schools are also providing employment to 250 Kashmiri citizens as teachers.

(ii) **School Excursions:** To widen the horizon of the Kashmiri children, every year the Army is taking 200 selected boys and girls to various parts of the country. These excursions have provided the children an insight into the cultural diversity, religious tolerance, historical background and economic development of our country. The future generation of Kashmir has seen how peace and development go hand in hand. Till date more than one thousand children have benefited from these excursions.

(c) **Artificial Limbs to Militancy Victims and Handicapped Persons in the Valley:** As part of Operation SADBHAVNA, the Army, in coordination with Jyot Charitable Trust under the guidance of Dr DJS Vohra of NEVEDAC Prosthetic Centre, Chandigarh, is providing Artificial Limbs to handicapped persons with a view to enable them to lead a better and more meaningful life. These artificial limbs are state-

of-the-art, light weight and made of fibreglass. Till date, 198 persons from Kashmir have benefited from this scheme. A number of these people have also been given tricycles to move about freely. The affected people have been overwhelmed by this gesture, which has given them a new lease of life.

(d) **Community Development Centres (CDC):** A number of CDCs have been established with a view to create general awareness amongst the rural people of the Valley. Major emphasis is on creating a better living environment as well as to lay a solid foundation for healthy and clean living. These CDCs provide facilities like Vocational Training Centre, Recreation Room, TV, Library, Panchayat Office, Health Centre, Veterinary Centre and a Shopping Complex. Presently 17 CDCs are functional in various villages around the Valley. Four more are planned in the current year.

(e) **Employment – A Need of the Hour:** Today unemployment is the major problem affecting the Kashmiri people. Realising this, the Army has undertaken a number of recruitment rallies for the Army, Air Force and Navy. The Army has also started a number of Vocational Training Centres in rural areas for training the

young boys and girls in Computers, as Vehicle Repair Mechanic, TV Mechanic, in Tailoring and Embroidery. These centres are also providing opportunities to women affected by the militancy to attain skills and use them to earn a decent livelihood.

3.18 **Military Civic Action in the North East:** The Army has also undertaken Military Civic Action programme for upliftment of the people, in the insurgency affected States of the North East. Prominent among them are the establishment of six Static Computer Laboratories, construction of 10 Play Grounds, construction and repair of eight Community Buildings, construction of bridges, drinking water schemes, employment generation schemes like Piggery Farms and Broiler Farms, construction of toilet facilities in remote villages and renovation and repair to School Buildings. Also a large number of Medical Camps, Veterinary Camps and excursions for school children to places of national interest have been undertaken.

ENVIRONMENTAL IMPROVEMENT

3.19 Extensive plantation of trees has been done in cantonments, which are today the green lungs of the surrounding areas. Greening of field firing ranges at Deolali and Ahmednagar are examples. Families are being educated and encouraged in using renewable sources of energy.

ADVENTURE AND SPORTS

3.20 **Establishment of Army Sports Institute:** An all out effort is being made to improve the standard of sports in the Army. Few sports disciplines have been identified where Army has prospects of medals in the next Olympics. An Army Sports Institute has been established and inaugurated at Ghorpuri, Pune on July 02, 2001. Some of the existing Army Nodes for Excellence in sports have also been activated to improve our medal prospects in Olympics/ International Competitions.

3.21 **39th World Military Athletics Championship 2001:** The Indian Army Contingent participated in the 39th world Military Athletics Championship 2001, held on June 29, 2001 at Lebanon.

3.22 **Grand Prix Boxing Tournament:** Grand Prix 2001 International Boxing Tournament was held at Ustinad Labem (Czech Republic) from March 01-05, 2001. The positions obtained by our Army boxers are as under :-

(a) Nb Sub Ramanand I

(b) Hav Som Bahadur Pun III

3.23 **Asian Clay Shooting Championships 2001:** Maj RVS Rathore of Infantry School, Mhow stood IV in the 2001 Asian Clay Shooting Championship held at Bangkok from July 04-07, 2001 in which 10 countries participated.

3.24 **Junior World Rowing Championship:** Recruit Harish Chander Sahu of BEG &

Centre, Kirkee was selected to represent India in Junior Rowing Championship scheduled at Duisberg, Germany from July 23 to August 11, 2001.

3.25 **6th International Junior Boxing Championship:** The following Boxers of Sikh Regiment Centre represented India in 6th International Boxing Championship held in Germany on August 05, 2001 and won the medals mentioned against their names :-

- (a) Sep Gurmel Singh Silver Medal
- (b) Sep Hardeep Singh Bronze Medal

3.26 **Siang River Rafting Expedition:** Siang River Rafting Expedition was planned and executed by 5 Mountain Brigade under the aegis of 2 Mountain Division to promote adventure spirit, courage to undertake challenging tasks and discipline and ability to withstand protracted strain and stress. The expedition was conducted from Tuting to Pasighat in Siang river.

3.27 **Indian Army Everest Expedition:** The Indian Army Everest Expedition was flagged off on March 01, 2001 by the Chief of the Army Staff, Gen S. Padmanabhan, PVSM, AVSM, ADC from New Delhi. The team consisting of 12 climbing and 8 support members was led by Col Krishan Kumar. The team reached Base Camp on April 03, 2001.

After making their way through severe winds and subfreezing conditions, 7 members of first team reached the summit of Everest on May 23, 2001. The second team comprising of one NCO and four Sherpas reached the summit around 0545 hours on May 24, 2001. The successful team was flagged in by the Raksha Mantri, Shri Jaswant Singh on August 17, 2001.

EDUCATION AND WELFARE

3.28 **Welfare : Ex-servicemen of Nepal :**

- (a) India has always been proud to have Nepalese as soldiers in her Defence Forces and has made every effort to ensure that they are looked after and cared for in their twilight years. As of now, we have over 1,40,000 ex-servicemen residing in Nepal. To ensure their welfare the Government of India has established "Indian Ex-servicemen Welfare Organisation in Nepal (IEWON)" functioning within the Embassy of India, under the chairmanship of none other than HE Shri IP Singh, Ambassador of India to Nepal.
- (b) Welfare of ex-servicemen is being undertaken in the remotest areas of Nepal and to this effect 16 District Soldier Boards (DSBs) in various locations in Nepal, from Baitadi in the West to Ilam in the

East have been established. For purposes of pension, apart from Kathmandu, two pension paying offices are now functioning at Pokhara and Dharan. In addition, several welfare projects in form of extending medical facilities, educational scholarships, drinking water projects and vocational training schools have been undertaken.

3.29 **Rehabilitation & Welfare Measures:** As part of welfare measures initiated for the welfare of ex-servicemen by Ministry of Defence, next of kin of all battle casualties and war disabled soldiers who were boarded out since independence are being given Rs. One lakh from National Defence Fund and Army Central Welfare Fund upto April 30, 1999.

3.30 **Officer's Selection and Recruitment of Other Ranks:** During the year, intake of officers and recruits was as under:-

(a) **Officers Selection**

- (i) NDA - 628
- (ii) IMA - 400
- (iii) OTA - 339
- (iv) Technical Entries - 386
- (v) Women Officers - 98

(b) **Recruits** - 73731

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INDIAN NAVY



"INS KULISH"

Missile Corvette built by GRSE for The Indian Navy

4.1 The successful culmination of the International Fleet Review (IFR) early this year at Mumbai brought to fore that '*men of war*' besides as an instrument of diplomacy, also showcase the seamless boundary of the naval fraternity, thus exemplifying the 'Bridges of Friendship' in every sense. The sight of men in whites from 26 different countries during city parade and the warships anchored in the Mumbai harbour during the run up of the events to IFR epitomised the long cherished vision of '*Vasudhev Kuttumbakam*' which means that whole world is a family.

4.2 The event gave the desired impetus to the naval cooperation with the navies of the world over. The visit of Chinese Warships Harbin and Taicang in May and Canadian Naval ship Winnipeg in August 2001 to Mumbai merits special mention, as these were the first visit of ships from these countries after more than a decade. The year witnessed a steady upswing in naval cooperation with friendly countries in the field of training, exercise and operation. This is in consonance with the Navy's long-term vision to maintain its ability to influence events in our areas of interest. The image of India as a maritime nation has grown in the last few years and the professional competence and capabilities of Indian Navy are now recognised world over.

4.3 The commissioning of indigenously built IN Ships Mumbai (destroyer), Kirch and Kulish (missile corvettes), Darshak (survey vessel), Tillanchang and Tarasa (fast attack



Participating Naval Ships departing Bombay Harbour Post International Fleet Review

craft) this year, truly reflects the multifaceted expertise of the Defence Shipyards and the maturity of our Naval Designing and Building expertise. Indigenous shipbuilding has come of age now.

INTERNATIONAL FLEET REVIEW

4.4 International Fleet Review was held at Mumbai from February 13 to 17, 2001. 26 Warships from 19 countries participated along side Indian Naval and Coast Guard Ships, which culminated in the Fleet Review by the Hon'ble President of India

on February 17, 2001. This event also saw participation of delegations from 29 countries. The important events amongst others were:

- (a) Maritime Heritage Exhibition on February 09, 2001.
- (b) International Maritime Seminar on February 16, 2001.
- (c) Naval Band Concert on February 16, 2001.
- (d) Beating Retreat on February 17, 2001.
- (e) International City Parade on February 18, 2001 and

- (f) Release of Commemorative Stamp and First Day Cover by the Prime Minister of India on February 18, 2001.
- 4.5 Sixteen ships from eight countries also participated in a multilateral PASSEX on February 20, 2001 after the Fleet Review during which, basic manoeuvres, exercises and cross deck landings of helicopters between Indian and foreign warships were carried out.

MAJOR OPERATIONS AND EXERCISES

- 4.6 **Operation Swan** : After the Mumbai bomb blasts in 1993, the Indian Navy and Coast Guard were directed to mount a Joint Operation to prevent landing of explosives and other contraband on the Coast of Gujarat and Maharashtra. The code name of this operation is 'Operation Swan'. The coastal areas of Maharashtra and Gujarat are kept under continuous surveillance with setting up of nine Naval Detachments working in tandem with Coast Guard and local civil administration.
- 4.7 **Operation Tasha** : The Low Intensity Conflict(LIC) operation in the Palk Bay Code named 'Operation Tasha' entered the twelfth year. The operation has effectively minimised the smuggling of arms, narcotics and inflow of refugees along the Tamil Nadu Coast.
- 4.8 **Towing of Mauritian Coast Guard Ship (MCGS) Vigilant by INS Matanga** : INS Matanga a unit of the Flotilla and the

Navy's only Ocean Going Tug was tasked with the towing of MCGS Vigilant from Mauritius to Mumbai in June 2001. The mission was completed by the ship successfully and carved a niche as the longest towing operation that the Indian Navy has ever undertaken to date i.e., a distance of 2700 nautical miles. The mission was accomplished by the ship with 11 days at sea during onward passage and 18 days at sea during the return passage with MCGS Vigilant under tow.

- 4.9 **Exercises** : The Navy carried out its annual tactical exercise 'SUMMEREX' on the eastern seaboard in July 2001. The elements of Indian Air Force and Coast Guard participated in the exercise. An amphibious exercise was carried out on the shores of Andaman and Nicobar Islands in the month of November 2001 to test the amphibious preparedness of the Navy.

SEARCH AND RESCUE AT SEA

- 4.10 **Search And Rescue (SAR) Effort – Andman & Nicobar Islands** : On March 12, 2001 Fortress Commander Andaman and Nicobar Island (FORTAN) was intimated by Andman & Nicobar authorities at late hours about a boat which had gone missing. The twin-engine boat with five personnel, including two foreigners was on passage to Sir Hughes Island. Coordinated air and sea searches were carried out in the area approximately 100 nautical miles around Port Blair by Indian Navy and Coast Guard aircraft and ships on March 13, 2001. The boat was

sighted approximately 120 nautical miles due east of Port Blair on March 17, 2001 and the personnel were evacuated by Naval helicopters.

- 4.11 **Medical Assistance at Sea** : The Navy and Coast Guard in joint operation at Visakhapatnam on June 20, 2001, provided essential medical assistance to three persons who had suffered burn injuries on board a Chinese Merchant ship 'MV OSG Argosy' about 300 miles off Visakhapatnam.
- 4.12 **Casualty Evacuation off Mumbai** : On July 09, 2001, a Sea King 42C helicopter was deployed for evacuation of 16 persons stranded onboard a oil rig 'Noble Jimmy Puckett'.
- 4.13 **Casualty Evacuation off Kochi** : INS Mahe carried out casualty evacuation from a Singapore registered merchant ship 'MV Ocean King' engaged in cable laying and operating 53 nautical miles West of Kochi on July 16, 2001.

JOINT EXERCISES WITH FOREIGN NAVIES AND GOODWILL VISITS

- 4.14 **IN-RSN Exercise** : The third annual IN-RSN bilateral exercise was conducted at Kochi from March 19-28, 2001. Indian Naval Ships Gomati, Suvarna, Shalki and Sindhukirti and three RSN ships Vengeance, Courageous and Daring participated in the Anti Submarine Warfare and Air Defence exercise in Indian waters. Earlier, the ships visited Port Blair on March 14-15, 2001 for a

refuelling halt enroute to Kochi. The ships departed for Singapore on March 29, 2001.

VISITS BY INDIAN SHIPS TO FOREIGN PORTS

4.15 **Visit of INS Kora to Singapore :** INS Kora visited Singapore from May 04 - 11, 2001 to participate in the International Maritime Defence Exhibition 2001 (IMDEX 2001).

4.16 **Goodwill Visit by Mumbai and Jyoti:** INS Mumbai and INS Jyoti visited the countries in South East Asia and South West Pacific. Although, INS Mumbai was scheduled to take part in an Australian Centenary Naval Review (CNR) at Sydney, the same was cancelled due to the September 11, 2001 developments in America. As per the revised schedule, the ships visited Fremantle, Sydney, Wellington and Ho Chi Minh City before returning to

India.

4.17 **Participation by Kulish in LIMA 01 :** INS Kulish participated in the 'Langkawi International Maritime and Aerospace Defence Exhibition' (LIMA-01), held at Langkawi in Malaysia from October 08-15, 2001.

VISITS BY FOREIGN SHIPS.

4.18 The following foreign ships visited Indian ports during the year : -

Sl. No.	Country	Ships	Date	Port	Remarks
(a)	S Africa	SAS Drakensberg	Feb. 23-25	Kochi	—
(b)	Kenya	KNS Shujaa & Nyayao	Feb. 24-28	Kochi	—
(c)	Indonesia	Kri Tongol	Feb. 27- March 02	Chennai	—
(d)	France	Jeanne d'Arc Geroges Leygues	April 09-14	Kochi	—
(e)	UK	Gloucester	April 14- 17	Kochi	—
(f)	France	Var, Dupleix	April 23- 28	Chennai	PASSEX carried out with INS Rajput on April 28
(g)	Japan	KashimaYamagiri	May 14-17	Chennai	PASSEX carried out with INS Kuthar and Kirpan on May 17
(h)	France	La Fayette	May 15-21	Mumbai	—
(i)	China	Harbin Taicang	May 27-31	Mumbai	Friendship exercises carried out with INS Ganga on May 30
(j)	Indonesia	KRI Teluk Sabang	June 04-08	Port Blair	Repatriation of 91 fishermen
(k)	Canada	Winnipeg	Aug. 07-10	Mumbai	PASSEX carried out with Bramhaputra

COOPERATION WITH FOREIGN COUNTRIES

- 4.19 **Deployment of Magar :** The Government of India gifted two BMP IIs to the Maldivian Government as replacement for their aging Armoured Personal Carriers (APC). INS Magar transported the vehicles to Male on March 06, 2001. The vehicles were handed over to the Minister of Defence of Maldives.
- 4.20 **Deployment of Jamuna for Survey in Indonesia :** A new chapter was added to Indo-Indonesian Defence Cooperation when Indian Navy assisted the Indonesian Navy for hydrographic survey of the waters off Sabang (Indonesia) from April 30, 2001 to May 19, 2001. INS Jamuna, a survey ship assisted in carrying out the joint hydrographic survey.
- 4.21 **Indo-Bangladesh Combined Search and Salvage Exercise:** As a part of the Combined Seabed Search and Salvage Exercise with Bangladesh Navy, INS Sandhayak, a Survey ship was deployed on August 04, 2001 to undertake a survey operation 110 nautical miles (200 Kms) South West of Chittagong, to locate 250 boxes of arms and ammunition dumped into the sea by the Bangladeshi smugglers.
- 4.22 **INDO-US Discussions on Search And Rescue Cooperation:** A US delegation comprising the US Search and Rescue

core group visited New Delhi from August 08–10, 2001. The delegation carried out detailed discussions with representatives from the Ministry of Defence, Indian Navy, Coast Guard, Indian Air Force, Army and Directorate

General Shipping about the structure and capabilities of Search and Rescue organisation. The interaction highlighted the need of having regular Joint Search and Rescue exercises in Indian Ocean Region.

VISITS OF FOREIGN DIGNITARIES/ DELEGATIONS

- 4.23 The following foreign delegations visited various Naval ships/ establishments during the period under report:-

Delegation	Period of Visit
(a) Lt Gen Jiri Sidevy, Chief of General Staff – Czech Republic	January 19-21, 2001
(b) French High Military Studies delegation	February 20-21, 2001
(c) 18 Member of US War College delegation	February 20-21, 2001
(d) Three Member Indonesian delegation	March 16-20, 2001
(e) Ten Member Vietnamese delegation	March 22-27, 2001
(f) 21 Member French Naval Supply Academy delegation headed by Capt JL Fillon	March 19-31, 2001
(g) 07 Member Defence delegation from UAE	May 22, 2001
(h) 49 Member delegation from Chinese National Defence Academy headed by Lt Gen Zhang Zingye, Vice President NDU	May 22-23, 2001
(i) Defence Studies group from Japan	June 14-16, 2001
(j) His Royal Highness Dasho Jigme Khesar Namgyel Wangchuk, Crown Prince Bhutan	August 23-25, 2001
(k) 32 Member Indonesian delegation	August 23-25, 2001
(l) Major General AC Hurribunce, Chief of Joint Training from South Africa visited the Naval Academy at Goa	September 25-26, 2001
(m) An eight member delegation from Nigeria headed by Major General TL Asher, Commandant Nigerian Defence Academy visited INS Mandovi	October 03 - 04, 2001

COMMISSIONING / LAUNCHING OF SHIPS

- 4.24 The following ships were commissioned during the period under report:-
- (a) The third ship of Project 15A – INS Mumbai and second ship of Project 25A – INS Kirch were commissioned at Mumbai on January 22, 2001 by His Excellency Governor of Maharashtra Shri PC Alexander.
 - (b) INS Tillanchang, second of the Fast Attack Craft constructed by Garden Reach Ship Builders and Engineers Limited (GRSE) was commissioned at Visakhapatnam on March 17, 2001 by His Excellency Governor of Orissa Shri MM Rajendran. The ship is based at Port Blair.
 - (c) INS Darshak, a Survey ship constructed by Goa Shipyard Limited was commissioned on April 28, 2001 at Visakhapatnam by Smt Rajani Rai, Hon'ble Lt Governor of Pondicherry.
 - (d) INS Kulish, the third of P25 class missile corvette constructed by Garden Reach Ship Builders and Engineers Limited (GRSE) was commissioned on August 20, 2001 by His Excellency Governor of West Bengal Shri Viren Shah. The ship joined Eastern Naval Command and is based at Vishakapatnam.
 - (e) INS Tarasa, the third of Fast Attack Craft was commissioned on August

24, 2001 by His Excellency Governor of Assam Shri NN Jha.

- (f) The third ship of Project 1135.6, Tabar was launched on May 25, 2001 at St. Petersburg, Russia.

PROGRESS IN THE FIELD OF INFORMATION TECHNOLOGY

- 4.25 **Computerisation in Naval Dockyard, Mumbai:** Naval Dockyard has introduced a number of innovative IT system to harness the high potential of information technology towards human resource development, worker's welfare, improvement in time on task and productivity improvement. An online Over Time (OT) Management system for Over Time management and Workers Online Information System (WOLIS) is in use.
- 4.26 **IT Plan 2000-2005 :** A comprehensive IT plan for the year 2000-2005 has been formulated to promote IT and to set up basic infrastructure for IT and e-Governance within Navy. Naval Dockyard Mumbai has won the best prize for implementation of IT in Government departments in Maharashtra State.
- 4.27 **Addressing Scheme for Navy Enterprise Wide Network (NEWN) :** Navy has established an enterprise wide backbone network for computer communications and the IP addressing scheme for the Navy and Coast Guard units.
- 4.28 **Integrated Logistic Management Systems (ILMS) :** Navy has set up Logistic

Management Information Systems for Air Stores [ILMS (Air)], for total supply chain management of Naval inventory using computers and networks. The ILMS (Air) has been commissioned in May 2001.

- 4.29 **Computerisation of Naval Hospital Management:** Navy has computerised the management of the Naval Hospital, Asvini at Mumbai. It covers all the aspects of patient registration, stores, personnel and medical records management in Hospital via LAN having 200 nodes.

TRAINING

- 4.30 **Deputation of Officers for Courses Abroad :** Thirteen officers were deputed for courses abroad during the period under report. The new courses that have been availed this year are: -
- (a) **US Midshipmen Exchange Programme :** Two Sub Lts were deputed to USS Fort McHenry at Sasebo, Japan. The officers were exposed to the functioning of advanced navies in various fields of operations, including LCAC Swap, command assessment, etc and the inputs obtained from the officers have been extremely useful.
 - (b) **Attachment with French Navy :** One Sub Lt. was deputed to undergo training with the French Navy and embark their midshipmen training ship FNS Jeanne d'Arc for the next overseas deployment from October

01, 2001 to May 02, 2002. The officer also underwent French language course at France prior to the deployment.

- (c) **Regular Course at NIDS, Tokyo :** One officer was deputed to attend the Regular course at National Institute of Defence Studies, Tokyo.
- (d) **IDF International Liaison Course, Israel :** One officer was deputed for the course in Tel Aviv.
- (e) **National Defence University, China :** One officer was deputed to attend the Senior Commanding Officers' Course at National Defence University (NDA), China.

4.31 The other regular courses availed this year are as follows: -

- (a) Staff Course in Bangladesh.
- (b) Advanced Command and Staff Course, UK.
- (c) Naval Command Course, USA.
- (d) Summer School at IDSS, Singapore.
- (e) Executive Course at APCSS, Hawaii, USA.
- (f) Antarctic Navigation Course, Argentina.
- (g) International Explosive Ordnance Disposal Course, USA.

4.32 **IGNOU – Navy Educational Project (INEP) :** INEP has come into force with the signing of a Memorandum of Understanding (MOU) between Indira Gandhi National Open University (IGNOU) and the Indian Navy. The Project aims at enhancement of academic qualifications of Naval Personnel through a self oriented system developed and executed by IGNOU. Four Regional Centres and four Study Centres have been established at Delhi, Mumbai, Visakhapatnam and Kochi. The following courses will be undertaken through INEP:-

- (a) MBA
- (b) BCA, BSc, BCom & BA
- (c) Certificate in Computing
- (d) Bachelor in Library and Information Sciences
- (e) PG Diploma in Journalism and Mass Communications

4.33 **Training of Foreigners in India :** 18 countries have requested for availing courses with the Indian Navy. Currently 350 slots have been allotted under various schemes of Ministry of External Affairs to the 18 countries for the various courses with the Indian Navy.

4.34 **Training of Foreign Naval Personnel :** The number of Foreign Naval personnel presently undergoing training at Naval training establishments under various schemes is as follows:-

Sl.No.	Country	Officers	Sailors
(a)	Bangladesh	10	03
(b)	Nigeria	08	00
(c)	Maldives	05	08
(d)	Sri Lanka	64	28
(e)	Indonesia	04	00
(f)	Mauritius	04	03
(g)	Oman	00	02
(h)	Myanmar	02	00
(i)	Maldives	00	01
(j)	UAE	03	00
(k)	Seychelles	02	07
(l)	Malaysia	06	00
(m)	Namibia	01	02
(n)	Kenya	01	00

ADVENTURE AND SPORTS

4.35 **Adventure Activities:** The following activities were organised for Naval personnel during the current year :-

- (a) **Mountaineering :** Ten Naval personnel participated in Basic and Advance Mountaineering Courses at HMI, Darjeeling and NIM, Uttarkashi during April - October 2001.
- (b) **Treks :** Adventure trek to Mussoorie was organised during the month of May 2001 in which 35 Naval personnel participated. Two treks to Joshimath-Badrinath-Valley of Flowers were organised during June 2001. The

participation by naval personnel was overwhelming and about fifty Naval personnel undertook the trekking.

- (c) **Godavari Whaler Sailing Expedition** : Six Naval and six Army personnel participated in the expedition. The expedition was conducted in two stages. The first leg- 'River Leg' was from Talipuri to Kakinada (approximately 500 kms) and the second leg - 'Sea Leg' was from Kakinada to Visakhapatnam (approximately 80 nautical miles).

4.36 Achievement of Naval Sportsmen in International Arena : The achievements of Naval sportsmen in international events are as follows :-

- (a) Niraj Kumar, POME, 123607A represented the country in the 11th Meet of the 'Shooting Hopes' competition held at Plzen, Czech Republic from June 28 to July 01, 2001 and won a Bronze Medal.
- (b) Hardeep Singh, PO, 124818B represented the country in the 24th King's Cup Boxing Championship held at Bangkok, Thailand from July 01 - 07, 2001.

- (c) LB Yadav, MSCPO I, 110100B was awarded a sum of Rs. 30,000/- by Finance Minister Shri Yashwant Sinha on June 28, 2001 for his outstanding contribution as the National Wrestling Coach during Junior World Wrestling Championship held at Nevada (USA) in October 1998.

- (d) Bipin Pyngrope, POSTD, 154433 won a Silver Medal in the International Boxing Championship held in Vladivostok, Russia from September 20-23, 2001.
- (e) Mukesh Kumar, CPOIUW3 won one Gold and one Bronze Medal in Commonwealth Shooting Championship at Bisley, UK held from August 22 - 31, 2001.



'AU-REVOIR' - Steam Past Prior to Final Departure

5

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INDIAN AIR FORCE



A MiG-29 on Routine Mission

5.1 The Indian Air Force (IAF) is today, a modern, technology-intensive force, with a proven record of excellence and professionalism. At the dawn of the millennium, it is poised at the threshold of a new paradigm of modernization, keeping in 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 Bihar, Orissa, Uttaranchal, Uttar Pradesh, Andhra Pradesh and Maharastra during the year. The Siachen Glacier lifeline

continues to be maintained by the Indian Air Force, as well as the additional areas along the Line of Control (LoC), fully supporting the operations/exercises of the Indian Army in the world's highest battlefield.

FLEET IMPROVEMENTS/ INDUCTIONS

5.4 Actions initiated in the past to upgrade the fighter fleet and to replace the obsolete types continued to make progress. Development of the Su-30 MK-I variants continued, as also the upgrade of the MiG-21 Bis aircraft at Hindustan Aeronautics Limited (HAL). Other upgrades are on the anvil.

5.5 **Light Combat Aircraft (LCA) :** The Full Scale Engineering Development (FSED) of the LCA is progressing steadily. The first block of flights of Technical Demonstrator (TD-1) was completed in June 2001 and the TD-2 is expected to fly shortly as TD-1 continues to be checked out and upgraded for further test flights.

5.6 **MiG-21 Bis Upgrade :** The upgrade of the MiG-21 Bis aircraft picked up speed at HAL, Nasik Division. The first batch of upgraded aircraft is planned to be delivered by March 2002.

5.7 **Su-30 :** During the year, development of the Su-30 MK-I made considerable progress. All avionics have been integrated and flight trials are in progress. Delivery of upgraded Su-30 MK-I aircraft will commence in mid 2002. HAL, Nasik is to



Sukhoi-IAF Aircraft

manufacture 140 Su-30 MK-I aircraft from 2005 onwards under the Inter Government Agreement (IGA) and General Contract for license manufacture.

5.8 **Jaguar Upgrade :** The original IAF version of Jaguar Navigation and Weapon Aiming Sub System (NAVWASS) needs an avionics upgrade. Preliminary work on the upgrade prototype aircraft has commenced this year.

5.9 **MiG-27 Upgrade :** The MiG-27 ground attack aircraft had been inducted into the IAF in 1985. This aircraft too needs an avionics upgrade to improve its operational effectiveness by day and night. Development is underway at HAL, Nasik Division and the upgrade is likely to be completed by 2005.

HELICOPTERS

5.10 **Mi-17-1V Helicopters :** To meet the pressing needs of air logistics in the northern parts, a contract for supply of Mi-17-1V helicopters was signed with Russia. Delivery of the 40 helicopters has been completed in 2001 and these helicopters have been duly operationalised.

5.11 **Mi-35 Upgrade :** Upgrade of Mi-35 helicopters to enhance their operational capability is in progress. The upgrade comprises incorporation of 'Night Vision Goggles' (NVG) compatible lighting and advanced avionics. Flight demonstration trials have been completed and fleet modification is in progress.

5.12 **Advanced Light Helicopters (ALH) :** IAF intends to procure the ALH from HAL as a replacement to the Chetak utility helicopter. The ALH flight test programme is in an advanced phase, with over 1200 hours having been logged on the four ALH prototypes. HAL has been given clearance to produce Limited Series Production (LSP) versions for the three Services and the initial LSP ALHs are scheduled to be delivered to the IAF shortly.

PILOTLESS TARGET AIRCRAFT

5.13 **Lakshya :** Lakshya Pilotless Target Aircraft (PTA) developed by Aeronautics Defence Establishment (ADE) inducted in the IAF in November 2000, has been operationalised by the IAF.

FORCE MULTIPLIERS

5.14 **Unmanned Air Vehicles:** Keeping the enhanced need for surveillance and imagery in mind, it was decided to acquire Unmanned Air Vehicles (UAVs). The small size of the UAV along with its capacity to loiter for long makes it especially suitable for multiple tasks. The UAVs have been operationalised.

SURVEILLANCE AND EARLY WARNING

5.15 **Induction of AWACS and Surveillance Radars :** Considering the surveillance needs of a large airspace, technical negotiations for induction of Airborne Warning And Control Systems (AWACS) and other air defence radars

continued. Acquisition of aerostat based surveillance systems is also in the final stages. Induction of Indra II PC radars continued during the year and the fully automatic data handling system was operationalised. Integration of tactical air defence data was achieved through induction of TADIDS.



P-40 Radar deployed at Forward Area.

COMMUNICATION AND NAVIGATION AIDS

5.16 **Communication Projects :** Phase-I of the Tropo communications upgrade project was made operational and installation at the remaining sites is to commence soon. Suitable mobile communication systems have been inducted to provide instant communications at remote sites. Induction of additional radio relay equipment has also progressed during the year.

AIR MAINTENANCE

5.17 Air Maintenance carried out during the year 2001-2002 (as on December 2001) is as under: -

	Achieved (in Tons) (Upto 31 Dec 2001)	
	Fixed Wing	Rotary Wing
Northern Sector	13949	3834
Eastern Sector	669	3450

5.18 **Indian Remote Sensing Technology Experimental Satellite (IRS-TES):** IRS-TES was launched by ISRO on October 21, 2001. This will provide surveillance capability to the Indian Air Force.

5.19 **Selection of Best Combat Unit/ ATS Unit :** To encourage competition and to effect professional excellency, annual competitions for Best Combat Unit/ATS Unit have been held. The same were also held for the helicopters units and for BRDs and EDs. Similarly, trophies were awarded for the best medical establishment and best Air Force Schools during the year.

5.20 **Enhancement in Operational Preparedness of Units:** Numerous planned/ surprise inspections were undertaken to assess operational preparedness of units and to further enhance it.

FLIGHT SAFETY

5.21 **Accident Statistics :** There has been a reduction in the number of Cat-I fighter aircraft accidents during the year. As compared to 17 Cat-I Fighter aircraft accidents upto November in the year 2000-2001, there were 14 fighter aircraft Cat-I accidents upto November in the year 2001-

2002. The same reducing trend was also evident in the number of fatalities (33% reduction) as compared to last year.

5.22 **Anti Bird Measures :** The clearing of vegetation and implementation of anti-bird measures in the vicinity of airfields has resulted in approximately 18% reduction in the number of incidents due to bird hits during the year as compared to last year. The drive is being continued.

5.23 **Measures to Reduce Human Error (A) :** Operational Safety Management Workshops were conducted at all major air bases and Base Repair Depots (BRDs) to indoctrinate aircrew and officers of all branches to actively participate and involve in reducing the accidents resulting due to Human Error on the part of aircrew [HE(A)]. A special HE(A) study was carried out in the critical areas of operations to reduce HE(A) accidents and the recommendations have been implemented.

5.24 **Human Error (S) :** A study of the cases in the past decade was conducted to reduce accidents/incidents resulting from Human Error on the part of servicing personnel [HE(S)]. Workshops were also held for technicians to reduce accidents/incidents due to HE(S).

5.25 **Inter Ministerial Joint Sub Committee:** An Inter Ministerial Joint Sub Committee (IMJSC) had been formed in 1990 to reduce bird menace around ten Priority-I IAF airfields. The Government has approved

the environment cleaning project for Priority-I airfields and HUDCO has been tasked to undertake an environment study of the ten Priority-I airfields.

TRAINING

5.26 **Air Warrior Mindset as well as Leadership Training** are essential for a professional military organisation. Through a variety of means this is inculcated during the initial training and subsequent stages of service.

5.27 **Air Force Engineering College :** To ensure that the IAF is able to get professionally competent technical officers, the Government has approved the setting up of an Air Force Engineering College.

5.28 **Training of Foreign Students in IAF Training Establishments:** Many friendly countries have traditionally sought training for their officers and personnel at IAF training establishments. During 2001-2002 officers and airmen from Bangladesh, Botswana, Cambodia, Indonesia, Malaysia, Mauritius, Myanmar and Sri Lanka were provided training at various IAF training establishments in India. In addition, slots have been offered to Kenya, Nepal and Tanzania, also.

5.29 **Exercise 'POORNA VIJAY' :** An Army-Air Force Exercise named "Poorna Vijay" was conducted in Rajasthan sector during the second week of May 2001. The IAF carried out a paradrop of a Battalion of Paratroopers by night. In addition MiG-21, MiG-23, MiG-27 and Mirage-2000 aircrafts

also participated in counter surface force and Air Defence Missions.

- 5.30 **Amphex 2001** : A tri-service Amphibious exercise code named "MAITRI" was conducted at Andaman & Nicobar Islands from November 2-10, 2001. In this, IAF participated with several types of aircrafts including fighters, transport aircrafts and helicopters in strike, air defence, maritime strike, airborne assault and SHBO roles. The tactical phase was conducted from

November 4 - 8, 2001. IAF fighter aircrafts operated from Carnicobar after a gap of nine years.

- 5.31 **Joint Indian Air Force and Indian Army Exercise in Seychelles** : A joint exercise was held with the Seychelles Peoples Defence Forces (SPDF) in November - December 2001. Teams of the IAF and Indian Army participated in the exercise. IAF also participated in humanitarian relief with two AN-32 aircraft. The entire

exercise was completed in time and all objectives of the planned exercise were fully achieved.

RECRUITMENT

- 5.32 **Officers** : The educational qualifications for recruitment and selection of flying branch officers through Combined Defence Services Examination (CDSE), NCC, SSC (W), F(P) and Airmen have been made more broad-based to include any graduate with Mathematics and Physics at 10+2 stage. This is expected to increase the pool of volunteers for aircrew pilots and help in better quality intake.

- 5.33 **Airmen** : Recruitment of airmen continued as per requirements in the Air Force. This is done through the Central Airmen Selection Board.

- 5.34 **Career Website** : A dedicated AF career website has been launched to enhance career awareness for potential candidates. (<http://careerairforce.nic.in>, E-mail id.careeriaz@bol.net.in and ddiaf03@bol.net.in.)

DEFENCE CO-OPERATION

- 5.35 **Friendly Countries** : The IAF continued to enhance defence cooperation with other friendly countries. Besides training for friendly countries, programmes for interaction and cooperation with Russia, USA, France, UK, Indonesia, Myanmar,



Sukhoi-IAF Aircraft at Leh High Altitude Flying

Nepal, Bhutan, Sri Lanka etc. progressed well.

CEREMONIAL FUNCTIONS

- 5.36 **69th Anniversary of Air Force Day** : The 69th Anniversary of Air Force Day was celebrated on October 8, 2001. A ceremonial Investiture Parade was held at Air Force Station, Palam. The upgraded MiG 21 Bis aircraft was flown during the parade. The Hunter aircraft was flown for the last time and formally phased out after giving appropriate salutation for its life time achievements.

SPORTS AND ADVENTURE

- 5.37 **Aero Sports – NDA** : A skydiving demonstration was carried out by 'Air Devils', skydiving team of Air Force Adventure on May 30, 2001 during passing out parade of 100th NDA course. In this one cadet made history by being the first NDA cadet to carry out skydiving with the Air Devils team.
- 5.38 **Trekking** : A mountaineering expedition to Mount Rudugaira was conducted (by ASAI) in September 2001.
- 5.39 **Motor Cycle Expedition** : A motor cycle expedition was conducted by SWAC, from Air Force Station Naliya to Indo –

Myanmar border in April 2001 covering 5400 Kms.

- 5.40 **Films** : During the last year, the IAF has produced three films. A 20 minute film has been made on the work done by IAF after the Bhuj earthquake of January 26, 2001. Another 15 minutes film titled "Vayushakti-99" has been made on the Air Power display held at Pokhran in February 1999. The film depicts the solid punch of the Air Force. The latest film to be made is titled "Akash Yodha". This 50 minutes film encompasses the entire range of AF operations in the diverse terrain of India so as to spread the message of Air Power.

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COAST GUARD



'Sentinel of Mumbai Harbour'- Coastal Battery at Middle Ground

6.1 The Coast Guard was set up as an Armed Force of the Union in 1978 on recommendations of Rustamji Committee for preservation and protection of our Exclusive Economic Zone (EEZ). The Coast Guard is responsible for keeping India's EEZ measuring over 2.02 millions sq. kms. under regular surveillance, in order to prevent poaching/smuggling and other illegal activities. Besides, Coast Guard's charter of duties also includes Pollution Control at sea, Search and Rescue (SAR) and protection of Marine Environment.

COAST GUARD DEVELOPMENT PLANS

6.2 The initial Coast Guard Development Plan (Kamath Plan) was reviewed in 1987 and a 15-year Perspective Plan (1985–2000) for the growth of Coast Guard upto the turn of the century was made. However, the Coast Guard plans had to be recast again, to be co-terminus with the National Development Plan 1992-97 onwards.

6.3 In the Coast Guard Development Plan 1997–2002, an effort has been made to acquire capabilities hitherto not available in the Coast Guard like Pollution Control Vessel, Hovercraft, Indigenous Advance Light Helicopter (ALH) and Medium Range Surveillance Aircraft (MRSA) besides patrol vessels as per the details given below: –

#	Type	No.
(a)	Fast Patrol Vessel	02
(b)	Interceptor Boats	02
(c)	Pollution Control Vessel	03
(d)	Advanced Offshore Patrol Vessel	02
(e)	Hovercraft	06
(f)	MRSA	02
(g)	Twin Engine Helo	02
(h)	Dornier	07

ORGANISATION

6.4 The Command and Control of the Coast Guard is exercised by the Director General from the Coast Guard Headquarters at New Delhi. It has three Regional Commands with the Regional Headquarters situated at Mumbai, Chennai and Port Blair. The entire coastline of India and the maritime zones are divided into three Regions. The Regions are further divided into Coast Guard Districts, each representing a coastal State, under a District Commander. There are two Air Stations at Daman and Chennai and Air Enclaves at Goa, Mumbai, Kolkata and Port Blair.

FORCE LEVEL

6.5 From a small beginning in 1978, the Coast Guard has made a steady progress in developing its force levels with regular induction of ships and aircraft.

MAIN ACTIVITIES, IMPORTANT CONTRIBUTION AND ACHIEVEMENTS

6.6 **Operations :** In addition to the normal peacetime role of the Coast Guard comprising surveillance and patrol of EEZ, certain specific operations are also being undertaken to counter the threat of insurgency. These operations are detailed below: –

(a) **Operation Tasha :** Consequent to the withdrawal of IPKF from Sri Lanka, protection of Tamil Nadu Coast against infiltration of militants was entrusted to the Navy and Coast Guard. Since then one Coast Guard ship ex-Chennai and one Interceptor Boat/Craft from ex-Mandapam remain on continuous patrol in the Palk Strait. Also a Dornier aircraft ex-Chennai carries out air surveillance in Palk Strait and Gulf of Mannar. From April 2001 till date the Coast Guard Ships were deployed for a total of 566 days at sea, while the Coast Guard Aircraft had been on task for 305.35 hours.

(b) **Operation Swan :** In the year 1993, consequent to the Mumbai serial bomb blast, large scale smuggling of arms and explosives were reported through sea, adjoining Maharashtra and Gujarat coasts. To counter this, Operation 'Swan' was launched in co-ordination with Navy in April 1993 to patrol sensitive areas off the

West Coast. These operations appear to have contained the situation to a large extent. From April 2001 to December 2001, the Coast Guard Ships have been deployed for 272 days at sea while Coast Guard Aircraft had been on task for 372.35 hours.

- (c) **Operation Nakabandi :** With increased hostilities in Sri Lanka, influx of Tamil refugees has commenced again and local fishermen have started smuggling diesel and other explosive making material. To check the influx of refugees and to curb the clandestine activities in Palk Bay and Gulf of Mannar, Operation "Nakabandi" had been launched on August 13, 1996. During the current year about 344 refugees belonging to 47 families have reportedly come to India.
- (d) **Anti Smuggling Operations :** Based on intelligence inputs from Customs and Directorate of Revenue Intelligence, Coast Guard undertakes anti-smuggling operations. In addition, random anti-smuggling patrol are also conducted. This year Coast Guard ships have apprehended contraband worth Rs. 1.82 crores.
- (e) **Anti-Poaching Operations :** Anti poaching operations are conducted on a regular basis in the Indian Exclusive Economic Zone (EEZ).

During the year, Coast Guard ships have apprehended 07 fishing vessels along with 73 crew of different nationalities for illegal fishing in Indian Exclusive Economic Zone (EEZ).

- (f) **Search and Rescue Operations (SAR) :** Coast Guard ships and aircraft undertook 55 SAR missions and were instrumental in saving 214 lives at sea after receipt of distress messages from International Maritime Co-ordination Centre (INMCC), Bangalore. This has strengthened the SAR responses in the Indian Ocean under the new Global Maritime Distress System operation.
- (g) **Operation Sea Turt :** An operation code named 'Olive' was launched off Orissa Coast with a view to protect the endangered species of Olive Ridely turtles. Coast Guard ships and aircraft continue to be deployed from November to May next every year for protection of the turtles. During the operation, the Coast Guard ships completed 95 days at sea and the Coast Guard aircraft undertook 68 sorties and clocked 187.40 hrs. As a result of intensified patrolling by Coast Guard ships, fishing activity in the restricted area has reduced considerably. This year, large numbers of turtles have nested along the Orissa coast due to the

effective patrolling by the Coast Guard.

INTERNATIONAL COOPERATION

6.7 **Indo Japan Joint Exercise :** Coast Guard ships CGS Sangram visited Japan from May 24 –30, 2001 to participate in Japanese Peace Review and Joint Indo-Japan Coast Guard Exercises. This was the first time ever that a Coast Guard ship sailed out of the Indian Ocean. The ship also visited Philippines and Vietnam enroute for OTR. The mission objectives of the visit were as follows: -

- (i) To enhance international co-operation through joint exercise and interaction to effectively deal with Search and Rescue situation and trans-national crimes like piracy, smuggling, highjacking of ships at sea etc.
- (ii) To enhance diplomatic/political co-operation between India and Japan.
- (iii) To establish and practice joint work procedure for dealing with maritime search and rescue and anti piracy requirements.

INTERNATIONAL FLEET REVIEW, 2001

6.8 Indian Navy conducted an international fleet review from February 15-19, 2001 at Mumbai to enhance military exchange with Navies from friendly nations. Five Coast Guard ships, three Interceptor Boats, four

Dorniers and four Chetak helicopter participated in the event.

OTHER ACTIVITIES

- 6.9 (a) **Offshore Security to Oil Rigs :** Coast Guard ships and aircraft carry out regular patrol in the Offshore area to provide seaward security to oil rigs off Mumbai and off Tamil Nadu coast. The Director General of Coast Guard is the Chairman of the Offshore Security Co-ordination Committee, which discusses the security and disaster management of oil rigs once in a quarter.
- (b) **Seaward Security to Bhabha Atomic Research Centre (BARC), Trombay - Operation Tromscan :** Coast Guard is carrying out this operation to provide seaward security to BARC, Trombay. Coast Guard Interceptor boats and aircraft are deployed for this operation.
- (c) **National Data Buoy Programme of National Institute of Ocean Technology:** - Coast Guard Ships and aircraft are providing security for National Data Buoys positioned in Arabian sea and Bay of Bengal for collection and monitoring of Oceanographic data by Department of Ocean Development.

RELIEF OPERATIONS

- 6.10 (a) **Relief operations during Gujarat**

earthquake : After the earthquake on January 26, 2001 in Gujarat, Coast Guard Regional Headquarters at Mumbai made significant contribution towards relief operations. Coast Guard Dornier aircraft undertook six sorties from Mumbai to different parts of Gujarat with doctors and medicines on January 27, 2001. Coast Guard ship Veera sailed from Mumbai to Kandla on January 29, 2001 with relief material supplied by Maharashtra State Relief Cell. During the entire relief operation two Coast Guard Ships remained at Kandla for 24 days, Coast Guard Dorniers undertook 26 sorties from Mumbai to Bhuj/ Kandla, and 69 doctors along with 3350 kgs of provisions and medicines were airlifted to the affected area.

- (b) **Efforts during Cyclone in Arabian Sea :** During the cyclone in the Arabian sea from May 23-29 , 2001, Coast Guard helicopter CG 803 rescued two fishermen on May 24, 2001 from a damaged boat, 12 nautical miles off Madh Island, Mumbai. The fishermen were handed over to fishing community after being provided first aid. Coast Guard Dorniers ex- Daman carried out two sorties on May 24, 2001 off the Maharashtra coast to warn fishermen at sea and asked them to return to their respective ports.



Hovercraft 8000 TD Built for Coast Guard

- (c) **Orissa Flood Relief:** A devastating flood hit the Districts of Jagatsinghpur, Kendrapad, Puri, Cuttack, Jajpur and Khurda in Orissa on July 16, 2001. Coast Guard District Headquarters No. 7 at Paradip deployed a total of seven rescue teams at various locations for relief operations. During the entire relief and rescue operation, 138 lives were saved by Coast Guard rescue teams. Relief materials including life saving medicines and food were distributed to approximately 150 villages, including 20 inaccessible villages covering a population of 15,000 people. Coast Guard Geminies were also instrumental in helping State/local administrators including Ministers, Member of Parliament to reach inaccessible villages to provide relief operations. Medical teams of Coast Guard treated about 600 persons and distributed medicines in the affected areas.

USE OF HINDI

- 6.11 Coast Guard encourages the use of Hindi in the office-work. During the period under review, 50.5% correspondence was done in Hindi. Like previous years this year also, emphasis was given for noting to be written on files in Hindi. Coast Guard Bulletins and Coast Guard Orders are printed in Hindi. The incentive schemes introduced by the Govt. are also implemented and the personnel writing more than 20,000 words in Hindi were awarded cash prize. Directorate of Personnel was awarded the Official language trophy for doing maximum work in Hindi. The Hindi fortnight was organised from September 10-23, 2001 and various competitions of Hindi, like Essay Writing, Noting, Drafting, Translation, Dictation and Quiz etc. were also organised during the fortnight.

ENVIRONMENTAL PROTECTION

- 6.12 **Pollution Response :** Coast Guard is the central coordinating agency for combating oil spill at sea under the framework of National Oil Spill Disaster Contingency Plan. CG has undertaken about 40 oil spill operations till date. The latest being the clean up operation due to sinking of merchant ship MV LUCNAM off Sagar light, about 46 miles off Haldia Port. The

vessel had 30 crew onboard and all of them were rescued by CG ships and brought ashore safely. The vessel was carrying 11,000 tons of Ammonia Phosphate and 2,200 tons of Di-Ammonia Phosphate. The vessel was also carrying 662.29 MT of fuel oil and 58.44 MT diesel on board. Coast Guard aircraft sprayed 2200 litres of OSD to combat oil pollution. Since March 2001 till date Coast Guard has responded to two oil spill incidents.

- 6.13 **Preservation of Endangered Marine Species :** On January 16, 2001 Coast Guard Ship Tuticorin received information of a stranded Hump Back whale 25 kms North West of Cape Comorin. The whale was about 50 feet long and weighing over 30 tonnes. The CG team ex-CGS Tuticorin along with District Wild Life authorities and local fishermen using indigenous method set the whale free on January 17, 2001.

NATIONAL INTEGRATION

- 6.14 Coast Guard has been a true picture of a big family consisting of members from different religions and castes. Coast Guard personnel recruited from various parts of the country, far-flung areas and islands are posted onboard various ships/stations along the coast, carrying out the chartered duties of the service. Co-operation, sense

of belonging and brotherhood are the essence of this efficient and motivated service, where they portray the true picture of National Integration.

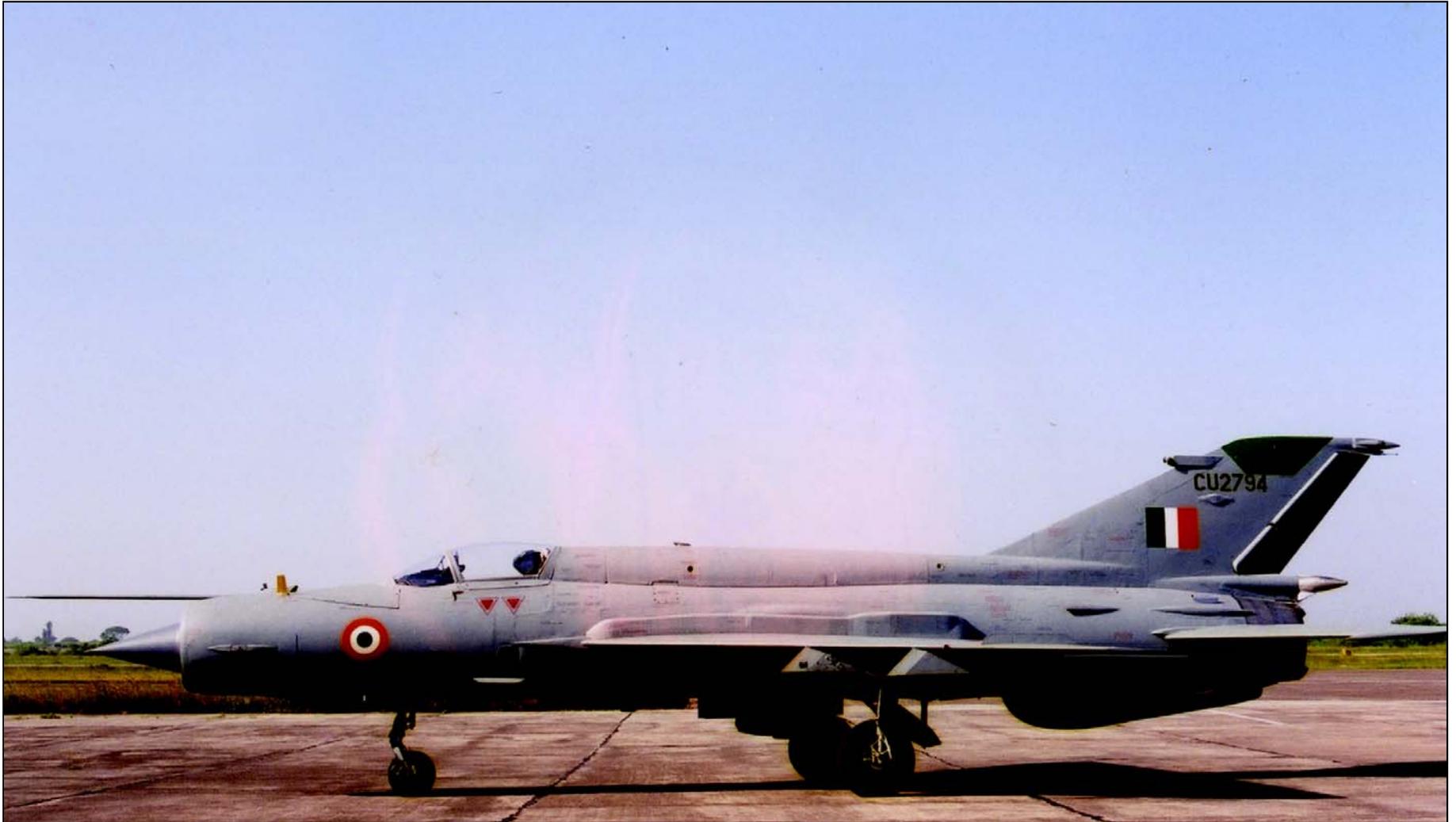
COMMUNITY INTERACTION

- 6.15 While the Coast Guard carries out its duties as per charter, there are certain unwritten requirements of all national organisations to fulfil certain national goals towards development and the greater common good. With this in mind, the Coast Guard has initiated a community interaction programme with the fishing and coastal community and the school children. Fishermen are given talks on safety at sea, action in distress, carrying of life jackets, radio frequencies on their transistors and rules of the road. In addition certain sports programmes, such as volleyball or tug of war and inter-village sports are also arranged. School children are given talks on the sea, shipping environment and maritime awareness. A Sea Cadet Corps Station is being started in Daman, which will be followed by units at smaller places such as Tuticorin, Mandapam, New Managalore and Paradip. Coast Guard Ships have adopted an island each in the Lakshadweep and when in the area, the CG doctors conduct an OPD for a few hours.

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DEFENCE PRODUCTION AND SUPPLIES



First MiG 21 Bis upgraded at HAL, Nasik

7.1 Department of Defence Production was set up in 1962, with an aim to create a self-reliant and self-sufficient indigenous Defence production base. Subsequently, in November 1965, Department of Defence Supplies was created to forge linkages between the civil industries and Defence production units. These two departments were merged in December 1984 into the Department of Defence Production and Supplies.

7.2 Since 1962, 16 new Ordnance Factories have been set up. Keeping in mind the emerging requirements of the Armed Forces, their capacities have been augmented and modernized. Presently, 39 Ordnance Factories and 8 Defence Public Sector Undertakings (DPSUs) are engaged in the task of manufacturing equipment and stores for Defence Services. One more Ordnance Factory is coming up in Nalanda, Bihar. In addition to the Ordnance Factories & DPSUs the capacity of the civil sector is also utilized for the purpose. The DPSUs are:-

- (i) Hindustan Aeronautics Limited (HAL)
- (ii) Bharat Electronics Limited (BEL)
- (iii) Bharat Earth Movers Limited (BEML)
- (iv) Mazagon Dock Limited (MDL)
- (v) Goa Shipyard Limited (GSL)
- (vi) Garden Reach Shipbuilders and Engineers Limited (GRSE)

- (vii) Bharat Dynamics Limited (BDL)
 - (viii) Mishra Dhatu Nigam Limited (MIDHANI)
- 7.3 The following organisations are also associated with the Department of Defence Production and Supplies for technical support:-
- (i) Directorate General of Quality Assurance (DGQA)
 - (ii) Directorate of Standardisation
 - (iii) Directorate General of Aeronautical Quality Assurance (DGAQA)
 - (iv) Directorate of Planning and Coordination

- (v) Defence Exhibition Organisation (DEO)

7.4 These Defence production units have become increasingly self-reliant. Additional capacities have been created and new items have been productionised. These include the main battle tank Arjun, the Advanced Light Helicopter (ALH) and a range of 155 mm ammunition.

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

(Rupees in Crore)			
Year	Ordnance Factories	DPSUs	Grand Total
	Total Sales	Total Sales	
1999-2000	5454.00	8975.79	14429.79
2000-2001	5536.00	7666.58	13202.58
2001-2002 (Targets)	6053.00	7523.43	13576.43
Achievements (upto October 2001)	2051.81	3193.83	5245.64

7.6 Defence Public Sector Undertakings and Ordnance Factories have exported items worth Rs. 66 crore up to October 31, 2001 as against the annual target of Rs. 177.5 crore for the year 2001-2002.

SUPPLIES WING

7.7 In the quest for self-reliance in the crucial sector of Defence, the Department has been

continuing its efforts to indigenise defence equipment wherever technologically feasible and economically viable. It has been a part of the 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

<p>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, they have now become 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 license to set up defence industry for manufacture of all types of defence equipment under license. Such companies could also have foreign direct investment, upto 26% of the equity.</p>	<ul style="list-style-type: none"> (iv) There would be a 3 year lock-in period for transfer of equity from one foreign investor to another foreign investor, and such transfer would be subject to prior approval of the FIPB and the Government. (v) No purchase guarantee for the products manufactured would be given by the Ministry of Defence. (vi) Adequate safety and security procedures will be put in place by the licensee, which will be subject to verification by authorized Government Agencies. (vii) The quality assurance agencies of the Ministry of Defence would inspect the finished products and conduct surveillance and audit of the Quality Assurance procedures of the Licensees. (viii) Self-certification would be permitted by the Ministry of Defence on case to case basis. (ix) Sale of arms & ammunition by the Private Manufacturers will be made to Ministry of Defence. Sale to other Government entities under Ministry of Home Affairs & State Governments would be permitted with the prior approval of the Ministry of Defence and (x) Export of manufactured items would be subject to policy and 	<p>guidelines as applicable to Ordnance Factories and Defence Public Sector Undertakings.</p> <p>7.9 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 indigenisation of defence equipment/stores, after conducting survey 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 the indigenisation activity and ensure timely supply of defence equipment/stores.</p> <p>7.10 In order to encourage civil industry for indigenous development of Defence stores, a scheme of National Award for Excellence in Indigenisation had been 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.</p> <p>7.11 To help the civil sector familiarize itself with the requirements of Armed Forces,</p>
<p>7.8 Detailed guidelines have been issued regarding the modalities for consideration of applications for grant of license. Some of the important features of these guidelines are given below:-</p> <ul style="list-style-type: none"> (i) All the applications will be considered by the Department of Industrial Policy & Promotion in consultation with Ministry of Defence. (ii) The applicant will be an Indian company/partnership Firm and Management will be in Indian hands. The Chief executive of the Company/partnership will be a resident Indian. (iii) There would be no minimum capitalization for the FDI. 		

permanent sample rooms are maintained in the four metropolitan cities. For ensuring enhanced and meaningful interaction, conferences/exhibitions are held from time to time with civil industry.

7.12 In so far as the task of ab-initio development of defence supplies is concerned, the value of developmental defence supply orders placed on the private sector has risen from approximately Rs.60 crores per annum during the early eighties to around Rs.200 crores per annum in the recent years. During the year 2000-2001, Supply orders of value of Rs.112.6 crores for ab-initio development, indigenising a total number of 1570 items along with 5 systems/sub-systems were placed. During 2001-2002 (upto 31.10.2001) 823 items along with 3 systems/sub-systems were taken up for development with a value of Rs.25.52 crores.



Advance Limpet Mine Maindeka

ORDNANCE FACTORIES

7.13 The Ordnance Factories Board is the oldest and the largest departmentally run production organisation in the country. The Factories are engaged primarily in the manufacture of Defence hardware under the Department of Defence Production and Supplies. The Ordnance Factories Organisation consists of 40 factories, (of which one is in the project stage) some of which are the oldest industrial establishments in the country. The first Ordnance Factory was established in 1801 at Cossipore, near Kolkata. By 1947, the number of Ordnance Factories had grown to 16. Their growth has been rapid particularly after independence. They play a vital role in equipping the armed forces as well as para-military forces with weapons, ammunitions, tanks, infantry combat vehicles, transport vehicles, clothing, general stores and other equipment. These factories are geographically spread over the country. There are ten Ordnance Factories in Maharashtra, eight in Uttar Pradesh, six each in Madhya Pradesh and Tamil Nadu, four in West Bengal, two in Uttranchal and one each in Andhra Pradesh, Orissa and the Union Territory of Chandigarh. One factory is being set up at Nalanda, Bihar. The 16 pre-Independence Ordnance Factories had to contend with an inadequate civil industrial infrastructure. Hence, they had to produce, besides finished stores, basic input and

intermediate materials as well. The 23 post-independence factories are linked to the developed industrial base for supply of raw material, component and semi finished inputs.

7.14 The Ordnance Factories have evolved into a strategic and dedicated production base for lethal and non-lethal defence stores. Investments on their infrastructure stem from national security and strategic needs.

7.15 **Organisation :** The Ordnance Factories Organisation is headed by the Director General Ordnance Factories (DGOF). In 1979, a Board was established at Kolkata as per the recommendations of the Rajyadhaksa Committee. The Director General Ordnance Factories is the Chairman of this Board. He is assisted by 9 other Members each of the rank of Additional DGOF. The Addl. DGOF/ Members are in charge of 5 operating divisions and 4 staff functions as indicated below:-

Operating Division

- (i) Ammunition and Explosives(A&E)
- (ii) Weapons Vehicles and Equipments (WV&E)
- (iii) Materials and Components(M&C)
- (iv) Armoured Vehicle(AV); and
- (v) Ordnance Equipment and Clothing (OEF)

Staff Functions

- (i) Finance
- (ii) Personnel
- (iii) Planning and Materials Management
- (iv) Projects and Technical Services

7.16 **Product Technology :** Capacities exist to produce a wide range of arms and ammunitions for the Infantry, Artillery

and Armoured Corps of the Army, Navy and the Air Force. The factories produce military transport vehicles, infantry combat vehicles, armoured vehicles, optical and opto-electronic instruments, summer and winter uniforms, parachutes, miscellaneous leather goods, general stores etc. Facilities also exist for design and manufacture of captive special purpose machine tools for production of arms and ammunition components.



Mine JPG : Light Mine Protected Vehicle

7.17 Besides supply of arms, ammunition and other items to the Armed Forces, the needs of the police and the para military organisations are also catered to. Items are also produced for the Railways, Public Sector Undertakings and other Government Departments and even for private bodies.

7.18 The Ordnance Factories have taken up continuous upgradation of products and manufacturing technologies to meet emerging requirements of the defence forces. The futuristic approach marks the establishment of new facilities.

7.19 **Growth :** Ordnance Factories sales have been steadily growing over the years with a record achievement of Rs. 5536 crore during 2000-2001 representing an increase of more than 1.5% over the sales of Rs. 5454 crore during 1999-2000. To keep pace with the development in arms, ammunition and other equipments, Ordnance Factories have been continuously updating / upgrading technology with the association of DRDO or through transfer of technology. In 2001-2002, the Ordnance Factories are set to achieve sales of Rs.6053 crore in accordance with the projected requirements of defence and other indentors. This will represent a growth of 9.3% over the level obtained in 2000-2001 of Rs. 5536 crore.

7.20 **Highlights :** Some of the significant achievements of Ordnance Factories in last few years have been as follows:

- (i) All thirty nine Ordnance Factories have been accredited with Quality Management Systems (ISO 9002:9004).
- (ii) Rifle Factory, Ishapore, has been awarded the "Certificate of Appreciation" by the Confederation of Indian Industry for commendable efforts made in the field of Safety Management during the year 2000-2001.
- (iii) Ordnance Equipment Factory, Kanpur has delivered 56 Nos. of Tent Extendable Frame Supported (TEFS) 4 M units to one NGO i.e. Save the Child Fund-India Programme, New Delhi for the relief of the Earth Quake effected people of Gujarat.
- (iv) Ordnance Factory, Ambajhari succeeded in developing the piston forgings meant for locomotive engines for Indian Railways.
- (v) Regional Training Institute (RTI), Ambajhari has been selected as Runners-up for Golden Peacock National Training Award-2001 by the Institute of Directors(IOD), New Delhi.
- 7.21 **Self-Certification in Ordnance Factories:** Quality being of crucial importance, all equipment and sub-systems undergo stringent quality checks. In line with practices prevailing in industry, both within and outside the country, Self-Certification by production units is being introduced in respect of some identified stores and will be progressively expanded.
- 7.22 The Quality enhancement drive launched by OFB has been extended to grass root level teams to analyze the defects and take remedial measures for their elimination in the manufacturing process itself.
- 7.23 **Research and Development Activities :** In-house Research and Development activities towards Product and Process improvements are attracting a great deal of attention in Ordnance Factories. Techniques of solid modeling and sensitivity analysis have been adopted in meeting the design of services stores. Some of the major achievements in these fields are as follows:-
- (i) Ordnance Factory Dehradun has developed through their in-house R&D a new Passive Night Sight Monocular required for Reece and Surveillance purpose by Para-Military Forces and various State Police Department.
- (ii) Production process of 76/62 mm Super Rapid Gun Mounting Ammunition (AA Flash Version) has been established at Ordnance Factory, Khamaria with the CKD/SKD supplied by M/s. NASCHEM, South Africa.
- 7.24 **Diversification :** Ordnance Factories produce wide varieties of chemicals for commercial use by different industries in the civil sector. They also manufacture wide range of textiles, leather goods and sporting arms and ammunition for the civil sector.
- MODERNISATION OF ORDNANCE FACTORIES**
- 7.25 Government has finalised modernisation plan for all the Ordnance Factories. The plan encompasses upgradation of technology, augmentation of capacities and replacement of old and obsolete plant and machinery that have outlived its life as well as installation of new plant and machinery of latest technology with a view to productionise Vehicle, Armament, Ammunition, Equipment and General Stores etc. The technologies and machines being planned for installation would have flexibility to take wide range of products. For renewal and replacement purpose, the investment of Rs.1456 crore is envisaged during the Xth Plan period and till 2000-2001, a sum of Rs.530.14 crore has been invested and a sum of Rs. 300 crore is planned for investment up to 2001-2002.
- ENERGY CONSERVATION**
- 7.26 Energy conservation in Ordnance Factories is a continuing process and conservation measure encompass all spheres of activities. Economy in energy consumption is achieved through improved efficiency and utilisation and technological upgradation. Improvement in utilisation is being pursued to achieve a

target restricting energy consumption to 4.2% of value of production in the current year.

POLLUTION CONTROL

7.27 The pollution control activities in the Ordnance Factories have been assigned due importance. The factories are obtaining statutory consent orders from respective State Pollution Control Boards for discharge of liquid effluents and gaseous emissions. They are having Effluent Treatment Plants which are operational. The progress/position in this regard is monitored strictly at OFB. The factories are also submitting annual Environmental Statement to the respective State Pollution Control Board as per their specified format within the stipulated time frame.

SAFETY

7.28 The corporate safety policy was reformed during 1996 to install stringent safety standards, safety consciousness and vigilance in the Ordnance Factories. Accident prone and hazardous areas have merited special concern. Safety manuals and standing instructions supplement safety policies. A disaster management plan is also prepared for contingent measures and Safety Committees (central and shop level) have been constituted. The use of personnel protective gear and appliances is emphasized.

7.29 Accidents are investigated thoroughly and the recommendations made by Boards of

Inquiry and audit teams are implemented meticulously. Periodic safety audit inspections at different levels(level-I, quarterly by factory's local team; level -II, half yearly by zonal team; and level-III, annually by OFB team) have been introduced. Besides, the Centre for Environmental and Explosives Safety(CEES) conducts audit inspections of ammunitions and explosives group of factories. Three regional Controllerates of Safety have been set up to enhance the efficacy of safety management. These are situated at Ambajhari (Region-I for 12 factories), Kanpur (Region-II for 11 factories) and at Avadi(Region-III for six factories). The remaining 10 factories in the ammunition and explosives group are the direct concern of the Ordnance Factory Board.

ENVIRONMENTAL POLLUTION

7.30 In line with the Government policy for protection of environmental purity, Ordnance Factory Organisation undertakes afforestation in all the Ordnance Factories as an ongoing process. Plan for planting new trees in 2001-2002 is 40,00,000 Nos. and so far 37,94,194 Nos. have been planted upto 31.10.2001.

COMPUTERISATION IN ORDNANCE FACTORIES

7.31 Information Technology (IT) is the major thrust area to provide Management Information for decision support systems at all levels, improve design capabilities,

improve accounting and analysis and reduce paper work.

7.32 In Ordnance Factory Board and the 39 Ordnance Factories Computerised Applications have been implemented in the areas of:

- On line Production Planning and Control (PPC)
- Pay-roll
- Personnel Information System (PIS)

7.33 Computerized Personal Information System for all employees of Ordnance Factories and Production Monitoring System (PROMOS) are maintained at O.F. Board, Kolkata. Local Area Network (LAN) have been established in 39 Ordnance Factories, 8 Regional Training Institutes, Ordnance Factory Staff College and Ordnance Factory Board. Satellite based Wide Area Network (WAN) has been established connecting the Ordnance Factories and OFB for Voice and Data Communication. Video conferencing facility is also available at 5 locations. A Project for LAN and WAN integration and Computerized MIS at board level is under progress. Updated information regarding Products, Services and other relevant areas are available at O.F. Board website www.ofbindia.com.

QUALITY MANAGEMENT

7.34 In Ordnance Factories, quality improvement is an ongoing process and

inbuilt in the production system. Implementation of Total Quality Management (TQM) concepts have been taken as a thrust and challenge area for all Ordnance Factories. The Quality Management Principles outlined in ISO 9000:2000 are being incorporated in all Ordnance Factories. Measurable Indices are being developed in line with ISO- (December 2000) Standards for incorporation in Quality Procedures towards ISO 9001:2000 Certification well before the deadline of December 2003. Seventeen Ordnance Factories have already got accreditation of their laboratories from National Accreditation Board for Laboratories (NABL). Sectoral meetings are held regularly to understand the needs of the users.

OTHER MEASURES

7.35 An Apex Productivity Council has been set up including representatives of the Board, recognised Federations, and recognised Associations of non-gazetted officers, supervisors and clerical employees. At the Unit level, Local Productivity Councils exist with similar constitution. The Apex Productivity Council meets twice in a year to address productivity related matters and review the functioning of the Local Productivity Councils. The Unit Level Productivity Councils meet monthly to examine measures for improving productivity and reducing costs.

RAJBHASHA

7.36 The progressive use of Hindi is given due importance. Special functions, competitions etc. were arranged in various units to commemorate the occasion and to propagate the use of Rajbhasha. The details of some of the main events at O.F. Board during 2001-2002 are as under:-

- (i) Setting up of Official Language Implementation Committee (Central).
- (ii) Adequate Manual / Electronic Typewriters are available at all Units. Efforts are being made to provide bilingual Software on most of the computers.
- (iii) Celebration of Hindi Day on September 14, 2001 marking the beginning of Golden Jubilee Year.
- (iv) Lectures by eminent speakers.
- (v) Rajbhasha competitions such as Hindi essay, typing, noting and drafting were held.
- (vi) Facilities of Hindi training and typewriting/stenography to the officers/employees were made available.
- (vii) Hindi Workshops were organised to provide an opportunity to the participants to understand the use of Hindi in day-to-day office work.

(viii) Most of the factories have brought out their own publication in Rajbhasha.

PUBLIC SECTOR UNDERTAKINGS

7.37 The value of production, sales, investment and profit of the 8 Defence Public Sector Undertakings are given in Appendices – I to III.

HINDUSTAN AERONAUTICS LIMITED (HAL)

7.38 The Hindustan Aeronautics Limited was established in October 1964 by merging Hindustan Aircraft Limited and Aeronautics India Limited. It is engaged in the design, development, manufacture, repair and overhaul of aircraft, helicopter, engines and their accessories. The Company has 12 divisions located in six states. Its registered office is at Bangalore.

7.39 The HAL's major supplies/services are to the IAF, Navy, Army, Coast Guard and the BSF. As a spin-off, Transport Aircraft and Helicopter have been supplied to Airlines as well as State Governments. The Company has achieved a foot-hold in export in more than 20 countries, having demonstrated its quality and price competitiveness. HAL supports fully the Space Vehicle Programme of ISRO. It has also diversified into Industrial and Marine Gas Turbine business and Software business. HAL's redefined mission is to become a globally competitive Aerospace Industry while working as an Instrument for achieving self-reliance in design, manufacture and maintenance of

Aerospace Defence Equipment and diversifying to related areas, managing the business on commercial lines in a climate of growing professional competence.

7.40 Significant achievements of HAL during the year are:

- (i) 3081 items were indigenised during the period April-October, 2001 against Memorandum of Understanding (MoU) annual target of 5400 items. Anticipated FE savings would be Rs. 16.18 crore per annum at current price level.
- (ii) The Company has initiated the project for developing a new Intermediate Jet Trainer Aircraft (HJT-36). The production is expected to commence from 2003.
- (iii) HAL has designed and developed a Test Bed for Pegasus Engines for Indian Navy. The Test Bed was successfully commissioned and handed over to the Navy.
- (iv) The flight trials have been conducted successfully by the Company on two Pilotless Target Aircraft Engine (PTAE-7).
- (v) The Company has undertaken the upgradation of Jaguar Navwass Aircraft for integration of latest avionics system for improving navigation and weapon aiming performance.
- (vi) The Company has undertaken the upgradation of MiG-21 BIS to

improve navigation and attack accuracy as well as to provide more pilot friendly cockpit. Two aircrafts have been flight tested and accepted by Aircraft System Testing Establishment (ASTE) pilots.

- (vii) The production of Jaguar two seater is under progress in HAL. Final assembly is expected to commence by March 2002.
- (viii) The Company has planned to take up Joint design, development and co-

production of a Multi-role Transport Aircraft of 15-20 ton capacity/100 seater to meet the requirement of Services and Civil Airlines.

- (ix) HAL has developed 24 Ancillary Units at different divisions which have been provided with necessary facilities in terms of Technical Consultancy and know-how, supply of Special Raw Material, Inspection Facilities, Familiarization Training to the staff, etc.



President giving Best Teacher National Award to Ms. S. Siroyee, Head Mistress, Aeronautics Girls High School, HAL, Koraput

**BHARAT ELECTRONICS LIMITED
(BEL)**

7.41 The Bharat Electronics Limited, established in 1954 with its corporate office at Bangalore, has nine units in the country. It is engaged in the design, development and manufacture of sophisticated state-of-the-art electronics equipment/components for the use of defence services, para-military organisations and other governmental users like All India Radio, Doordarshan, Department of Telecommunications, Airport Authority of India etc. The Research and Development Departments of BEL were established in mid 1960s, initially in Bangalore and gradually in all the Units. BEL also established two Central Research Laboratories (CRL) in Bangalore and Ghaziabad.

7.42 BEL manufactures and supplies the components on a commercial basis to meet the requirements of different manufacturers of electronic products in the country. Significant achievements of BEL are:-

- (i) The Company manufactured/ developed various products such as Decoy Radars, Upgraded Air Defence Weapon Control Radars, Coastal Surveillance System, Point to Multi Point Radio for Control Applications, Night Weapon Sight (6X), Very Low Power Transmitter, Band III (2x50w), 1 KW FM Transmitter (Bench Top), Mobile

VHF TV Transmitter, Band III and Telemedicine System both for defence and civil sectors.

- (ii) All the Divisions/Units of BEL have obtained the ISO 9000 accreditation. While majority of them have got the ISO 9002 certification, a few of the Divisions/Units have obtained the ISO 9001 certification.
- (iii) Over the years, BEL has set up 'state-of-the-art' manufacturing, testing and quality assurance facilities in all its Units and has been periodically updating/ modernising them.
- (iv) BEL has initiated action towards getting ISO 14000 – Environment Management System Certification for its manufacturing Units. With its strong dedication to maintain high environmental standards, achieving ISO 14000 certification is another positive step in its journey towards total quality.

**BHARAT EARTH MOVERS LIMITED
(BEML)**

7.43 Bharat Earth Movers Limited was established in May 1964 and commenced operations from January 1965. With the disinvestment of shares of BEML as of end March 2001, Government holds over 61% of equity shares in the company and is a major shareholder. It has three manufacturing units located at Bangalore, Kolar Gold Fields (KGF) and Mysore, all

in the State of Karnataka.

7.44 All the production units of BEML are fully equipped with necessary general purpose machines and special purpose machines like extra heavy duty machines, CNC boring machines. A wide range of mining and construction equipment like walking draglines, bulldozers, hydraulic excavators, dump trucks, etc., railway products like rail coaches, AC/DC EMUs, rail bus, etc., defence vehicles/aggregates and diesel engines are being produced in these manufacturing units.

7.45 Achievements :

- (i) The Company has given emphasis to Research and Development activities with the result it has successfully productionised BH-60 and BH-70 Dump Trucks, BD 45 W Wheel Dozer, BE 60 Excavator and various models of Diesel Generating Set.
- (ii) Higher capacity Wheel Loader has been developed by BEML and deployed at customer site for user trial.
- (iii) The development of Side Discharge Loader and 160 ton class Hydraulic Excavator has been undertaken by the Company.
- (iv) The Company has exported its products to UK, Middle East, Sri Lanka, Bangladesh and African countries.

- (v) The Company has manufactured and supplied wide range of earth moving equipment comprising of Dozers, Excavators, Dumpers, Loaders, Walking Draglines, Rope Shovels, Graders, etc. to civil sectors also such as coal, cement, power and others.
- (vi) All the manufacturing units of BEML continue to hold accreditation to ISO 9001/9002 certification.

MAZAGON DOCK LIMITED (MDL)

- 7.46 Mazagon Dock Limited was established in 1960. It is a leading shipyard in the country and builds a variety of ships for the defence and civil sectors. Its product range includes destroyers, frigates, missile boats, corvettes, submarines and patrol vessels for the defence sector and merchant vessels, dredgers etc. for the civil sector. MDL has also diversified its product range to cater to the needs of the oil exploration sector by producing and installing wellhead platforms for the ONGCL.
- 7.47 Significant achievements of the Company during the year are as under:-
- (i) A number of ships were repaired for the defence and civil sectors.
 - (ii) Many projects of ONGCL were completed.
 - (iii) Import substitution to a significant level was achieved in the

construction and repair of warships, merchant ships and offshore structures of ONGCL, and

- (iv) Voluntary Retirement Scheme was re-introduced during the year. 1009 employees including officers opted for voluntary retirement, thus reducing the surplus manpower in the identified categories to a considerable extent.

GARDEN REACH SHIPBUILDERS AND ENGINEERS LIMITED (GRSE)

- 7.48 Garden Reach Shipbuilders and Engineers Limited was acquired by the Government of India in 1960 as a Public Sector Undertaking under the Ministry of Defence. The company builds and repairs warships and auxiliary vessels for the Indian Navy and the Coast Guard. Its product range includes frigates, carrier and oil tankers, patrol vessels, attack craft, high technology ship borne equipment, portable bailey type steel bridges, turbine pumps for the agricultural sector, marine sewage treatment plants, diesel engines etc.
- 7.49 Significant achievements of the Company during the year are as under:-
- (i) One Hovercraft (H-182) was delivered to the Coast Guard in April, 2001.
 - (ii) One Hovercraft (H-183) was delivered to the Coast Guard in July, 2001.

- (iii) Two Hovercraft (H-184 and H-185) were delivered to the Coast Guard in October and November, 2001.

GOA SHIPYARD LIMITED (GSL)

- 7.50 Goa Shipyard Limited was taken over by the Government of India in 1967 as a Public Sector Undertaking under the Ministry of Defence. The Company builds a variety of medium size, special purpose ships for the Defence and Civil Sectors. Its product range includes survey vessels, missile boats, patrol vessels, offshore supply vessels, oil tankers, passenger ferries, tugs and barges etc.
- 7.51 Significant achievements of the Company during the year are as under:-
- (i) One Survey Vessel was delivered to the Indian Navy in April 2001.
 - (ii) One Fast Patrol Vessel was delivered to the Indian Coast Guard in June 2001.
 - (iii) Voluntary Retirement Scheme was introduced during the year to reduce the surplus manpower in the identified categories to a considerable extent.

BHARAT DYNAMICS LIMITED (BDL)

- 7.52 Bharat Dynamics Limited was established in 1970 for manufacture of Guided Missiles. It is among a few strategic industries and possesses the capability to produce advanced Guided Missile Systems. The Company has two units, one

<p>at Kanchanbagh, Hyderabad and the other at Bhanur, Medak District. Besides the indigenous Prithvi missile, it produces Milan and Konkurs missiles along with their launchers and other in-house developed products like Flame Launchers, Simulators etc. The Company is working hand in hand with DRDO for technology absorption of other missiles under Integrated Missile Development Programme. The Company has drawn up a Perspective Plan (1999-2008) which envisages plan for developing new technologies to meet the future requirements of the users.</p>	<p>(v) The Milan, Konkurs and Prithvi Divisions of the Company have ISO-9002 certification.</p>	<p>commercial scale manufacture of a range of sophisticated Bio-medical implants made of Titanium as a low cost import substitute.</p>
<p>7.53 The Company's achievements during the year are as follows:</p>	<p>MISHRA DHATU NIGAM LIMITED (MIDHANI)</p>	<p>(iv) MIDHANI successfully</p>
<p>(i) BDL is saving an amount of Rs.0.60 lakh per month due to implementation of energy conservation measures.</p> <p>(ii) BDL has launched efforts to enter into export market and so far has exported goods worth Rs. 0.29 crore in the current year.</p> <p>(iii) The Company paid a dividend of Rs. 23 crore for the year 2000-2001 and also received the Best Tax Payer Award for the year 2000-2001 from the Government of Andhra Pradesh.</p> <p>(iv) For better and effective utilization of manpower, the Company has introduced multi-skill training for workers and deployed them on the production floor.</p>	<p>7.54 Mishra Dhatu Nigam Limited (MIDHANI) was incorporated as a Public Sector Undertaking in 1973 at Hyderabad for manufacture of super-alloys titanium alloys and special purpose steel required for strategic sectors like Aeronautics, Space, Armaments, Atomic Energy and Navy with a view to attain self-reliance in this sophisticated field. MIDHANI went into commercial production in July 1983. Today, MIDHANI manufactures some of the very complex alloys, which only a few advanced countries in the world produce.</p> <p>7.55 The achievements during the year are as under:-</p> <p>(i) The year 2000-2001 has been the 14th consecutive profit-earning year for MIDHANI.</p> <p>(ii) Flawless performance of aeronautical alloys developed and manufactured for the Light Combat Aircraft, which has been flight tested during the year, has once again vindicated MIDHANI's technological competence.</p> <p>(iii) Substantial increase, to the extent of 140% was registered in the sale of Armour material. Strong foundations were laid for</p>	<p>productionised investment casting of valve seat inserts for heavy-duty diesel engines and components for land based gas turbine engines manufactured by BHEL.</p> <p>(v) Strenuous efforts made with active interaction with OFB and DMRL resulted in finding a solution to the problem of large number of T 72 gun barrels .</p> <p>(vi) As a part of indigenisation efforts several spares and components were developed in house thereby saving precious foreign exchange.</p> <p>(vii) Special Stainless Steel similar to 18-10L(Nitric Acid grade) were developed. Austenitic Stainless Steel with extra low carbon, sulphur, phosphorous is an excellent intergranular-corrosion-resistant material, used in the processing of spent fuel in Atomic Reactors for plutonium extraction.</p> <p>(viii) Grade 12X18H10T has been chosen for development of Hexagonal bars to meet requirements of HAL and Air Force Units. Hexagons of sizes 12 mm, 14 mm and 17 mm across the flat (A/F) have been drawn successfully.</p>

(ix) MIDHANI developed and supplied High Duty Valve Seat inserts for High Duty Diesel Engines. The components experience service temperature of more than 1200K.

OTHER ORGANISATIONS IN DEPARTMENT OF DEFENCE PRODUCTION AND SUPPLIES

DIRECTORATE GENERAL OF QUALITY ASSURANCE (DGQA)

7.56 The effectiveness of the Armed Forces depends on reliable and consistent performance of their weapons and equipment. The DGQA is responsible for ensuring high precision and quality in respect of stores for the Army, the Navy (excluding Naval armaments) and all command users items for the Air Force. The Organisation is structured into seven Technical Directorates looking after eight Technical Committees, each of which is responsible for a distinct range of equipment. These Technical Directorates function in a three-tier vertical control structure comprising their respective Controllerates, Field Quality Assurances Establishments and Proof Establishments (for Armament discipline only). The tasks performed by these three tiers are complimentary and compatible to each other and are integrated to achieve maximum efficiency.

7.57 Main functions of DGQA are:

- (i) Formulation/control of specifications, drawings, technical literature and documents for Defence equipment and stores.
- (ii) Undertaking quality assurance by testing and technical evaluation for Services use.
- (iii) Providing all technical data and other basic inputs for standardisation, codification and cataloguing to Directorate of Standardisation.
- (iv) Establishment of sources for procurement.
- (v) Product improvement based on feed back from the end user.
- (vi) To keep close liaison and maintain interaction with the Civil Sector Industry from the initial stage of development and productionisation of components and products.

7.58 **Inspection Of Stores** : The value of stores inspected and accepted by DGQA during 1999-2000, 2000-2001 and 2001-2002 are as under:

Year	Value (Rs. in crore)	
	Inspected	Accepted
1999-2000	11816.40	10804.22
2000-2001	11837.20	10646.72
2001-2002 (upto Sep. 2001)	5445.83	4663.16

7.59 DGQA has streamlined its procedures to ensure quality while suitably modifying quality assurance procedures. DGQA Teams have visited forward areas to provide repair and maintenance.

DIRECTORATE GENERAL OF AERONAUTICAL QUALITY ASSURANCE (DGAQA)

7.60 DGAQA has its Headquarters at New Delhi with Resident Inspection Establishments at various production centers in the country. Its main functions inter-alia include quality assurance during design/development, production, overhaul and repair of military aircraft and accessories, technical association with DRDO, establishment of indigenous spares for production of aeronautical stores etc.

7.61 During the year 2001-2002, (up to October, 2001), DGAQA has inspected Aeronautical Stores of the value of Rs. 91.14 crore. DGAQA also actively participated in IGMDP Projects like Prithvi/ Akash/ Trishul Missiles, both as the overall Nodal Agency and Quality Assurance Agency for most major systems.

DIRECTORATE OF STANDARDISATION

7.62 Directorate of Standardisation was constituted in 1962 with the objective to control item proliferation within Defence Services. Nine Standardisation Cells have been located at nodal stations to provide a booster to the Standardisation activity. The basic objective of Directorate of

Standardisation is to establish commonality in equipment and components among the three Services so that overall inventory of the Defence Services is reduced to 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 Rationalised Lists, Joint Services Guides, Joint Services Policy Statements and Joint Services Qualitative Requirements.
- (ii) Codification and Cataloguing of Defence Inventory and
- (iii) Entry Control

7.63 Achievements :

- (i) 13 important documents covering main equipment/assemblies, sub-assemblies have been published during the year.
- (ii) 209 standard documents which have completed 5 years, have been revised.
- (iii) 297 items were considered for variety reduction under 12 Joint Services Rationalized Lists. This quantity was reduced by 111 items, thus bringing 37.34% variety reduction.

7.64 Codification and Cataloguing : In continuation of the process of accelerating the pace of codification,

21,43,800 items were codified till October 2001 and 2269 catalogues regarding Main Equipment/Sub-Assemblies have been published.

7.65 Harmonisation of Standards : Out of 176 standardisation documents taken up with BIS for harmonization, 5 standard documents have been finalized/accepted. 82 standardisation documents are under consideration for feasibility of their adoption as National Standards.

7.66 Networking and Website : The website of the Directorate of Standardisation has since been uploaded with large volumes of various Standards for the Organisations responsible for design, development, manufacture and bench marking of Defence inventory. The connectivity of the website has also been upgraded from 64 KBPS Internet Lease Line to 2 MBPS Lease Line. Since April 2001, the site is available round the clock. For controlling access to the Local Area Network (LAN) by outside users, Firewall has been provided as a security measure. Various Indian and Foreign standards are available on the website.

**DIRECTORATE OF PLANNING
AND CO-ORDINATION**

7.67 The Directorate of Planning and Coordination was set up in 1964 as a deemed Attached Office of Department of Defence Production and Supplies with the primary objective of preparing

the overall plans for production of Defence equipment in the country. It acts as a catalyst in the Defence production efforts by providing a dynamic link between the production organisations, the users, the Research and Development Agencies and the Quality Assurance Organisations facilitating Transfer of Technology (ToT) and modernisation plan of Ordnance Factory Board. In furtherance of its role, the Directorate represents the Department of Defence Production and Supplies in the General Staff Equipment Policy Committee, the Research and Development Panels and Standardisation Committees. The Directorate also represents the Department of Defence Production and Supplies in the Licensing Committee meetings of Ministry of Industry to ensure that there is no overlap in the capacities created elsewhere and under the Ministry of Defence. The Directorate is also responsible for processing the cases for setting up of Ordnance Factories in the country at the green field sites as well as progressing electronics related projects for the Defence Forces. The Directorate is also the nodal point in the Department for International Co-Operation on Defence Production and Defence Exports.

7.68 This Directorate is actively pursuing international cooperation in the field of co-development and other joint ventures

to facilitate induction of new technologies in the field of Defence production. This would facilitate the availability of advance equipments to the Forces as well as to enhance the export to other countries.

DEFENCE EXHIBITION ORGANISATION

7.69 The Defence Exhibition Organization (DEO) established in 1981, is primarily responsible for organising and coordinating Defence Exhibitions in India and abroad. It maintains permanent Defence Exhibition Pavilions at Pragati Maidan, New Delhi. The Ordnance Factory Board, Defence Public Sector Undertakings (DPSUs); Defence Research and Development Organisation (DRDO), Directorate General of Quality Assurance (DGQA), three Services, the Coast Guard and the National Cadet Corps(NCC) are represented in the exhibition. Products manufactured by Ordnance Factories and the Defence Public Sector Undertakings are

displayed in the pavilion. The pavilion provides an overview of the wide range of Defence infrastructure in the country and regularly participates in the India International Trade Fair, held in November every year.

7.70 DEO also assists the Department of Defence Production and Supplies in vendor awareness and development programmes of the production units.

7.71 As a part of export promotion effort, DEO coordinates the participation of Defence Public Sector Undertakings and Ordnance Factory Board in one selected international exhibition every year. During the current financial year Defence Public Sector Undertakings, Ordnance Factory Board and Defence Exhibition Organisation have already participated in the Langkawi International Maritime and Aerospace Exhibition (LIMA-01) at Langkawi, Malaysia during October 9-14, 2001 and had put up composite India

Pavilions at both the Aerospace and Maritime Divisions.

INTERNATIONAL LAND AND NAVAL SYSTEMS

EXHIBITION – DEFEXPO INDIA – 2002

7.72 After the success of Defexpo India '99 which gained acceptance as a world class forum for exhibition of Land and Naval Systems, it was decided to organize the second International Land and Naval Systems Exhibition "DEFEXPO INDIA-2002" at Pragati Maidan, New Delhi during February 19-23, 2002. The exhibition was organized by the Confederation of Indian Industry (CII) in association with the Department of Defence Production and Supplies, Ministry of Defence, Government of India. Seminars on subjects concerning Land and Naval Systems were organised during this occasion.

Appendix - I

VALUE OF PRODUCTION AND SALES						
VOP = Value of Production (Rs in Crore)						
Name of the PSUs	1999-2000		2000-2001		2001-2002 (April-Oct. 2001) (Provisional)	
	VOP	Value of Sales	VOP	Value of Sales	VOP	Value of Sales
HAL	2454.43	2400.88	2603.26	2446.55	1259.87	1203.29
BEL	1543.29	1494.14	1787.57	1715.33	619.13	534.50
BEML	1293.85	1317.00	1343.17	1347.40	672.18	500.92
MDL	1146.47	2262.83	711.59	1517.59	215.71	332.23
GRSE	427.30	880.44	491.06	229.17	223.60	355.24
GSL	109.28	178.16	190.00	133.67	87.09	18.03
BDL	314.14	324.01	218.61	164.26	93.38	134.37
MIDHANI	111.90	110.48	113.87	112.61	43.33	44.12
TOTAL	7400.66	8967.94	7459.13	7666.58	3214.29	3122.7

Appendix - II

INVESTMENT (Rs in Crore)						
Name of the PSUs	1999-2000		2000-2001		2001-2002 (Estimated)	
	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	3.68	123.84	-	123.84	-
GSL	19.40	0.20	19.40	-	19.40	-
BDL	115.00	-	115.00	-	115.00	-
MIDHANI	137.34	-	137.34	-	137.34	-
TOTAL	832.15	3.88	832.15	-	832.15	-

Appendix-III

PROFIT AFTER TAX		
	(Rs. in crore)	
Name of the PSUs	1999-2000	2000-2001
HAL	368.26	243.65
BEL	107.93	155.21
BEML	14.60	6.00
MDL	13.07	[-]18.36*
GRSE	21.22	31.42
GSL	2.35	4.93
BDL	80.76	48.99
MIDHANI	2.14	0.24
TOTAL	610.33	472.08

* Loss

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DEFENCE RESEARCH & DEVELOPMENT



Naval Version of Prithvi Missile - 'Dhanush'

8.1 The Defence Research and Development Organisation (DRDO) was formed in 1958 by amalgamating the then existing Defence Science Organisation (DSO) and the Technical Development Establishments (TDEs). A separate Department of Defence Research and Development was formed in 1980 to improve administrative efficiency in the sanction and management of complex high technology projects for design, development and production of state-of-the-art weapon systems, equipment, platforms and sensors. In addition to DRDO, the Department also administers and funds a society, Aeronautical Development Agency (ADA), which is engaged in the development of Light Combat Aircraft (LCA).

MISSION

8.2 The mission of the Department of Defence Research and Development is to progressively enhance self-reliance in defence systems and state-of-the-art defence technologies. The Department has a mission-mode structure, to facilitate accomplishment of this mission. The Department is headed by the Scientific Adviser to Raksha Mantri, who also functions as Secretary, Department of Defence Research & Development and Director General, Research and Development.

8.3 The department has a network of R&D laboratories/establishments of Defence Research & Development Organisation (DRDO) including the Centre for Military

Airworthiness & Certification (CEMILAC), spread all over the country. The Department also administers and funds the Aeronautical Development Agency (ADA), engaged in the development of the Light Combat Aircraft (LCA).

PROGRAMMES AND PROJECTS

8.4 The defence R&D laboratories/ establishments execute programmes/ projects in a wide range of disciplines such as, aeronautics, armaments, missiles, combat vehicles and engineering, advanced computing, electronics, life sciences, advanced materials and composites and Naval R&D. The programmes/ projects are undertaken either to meet the specific requirements of the three Services (Staff projects) or to develop competence in emerging technologies of relevance to futuristic systems (technology demonstration and technology development projects). The Department also supports extramural research in academic institutions and other national R&D laboratories, on defence related problems, through Grants-in-Aid projects, which are approved and monitored by various R&D Boards.

PROGRAMME MANAGEMENT

8.5 The programmes/ projects are executed in close partnership with User Services, Defence Public Sector Undertakings (DPSUs), academic institutions, national research laboratories and private enterprises, to harness optimally the best

available national resources and expertise. To reduce the time lag between design, development and production the 'concurrent engineering' approach is being followed, in case of high technology projects. There is adequate delegation of financial and administrative powers to the programme/ project leaders to facilitate the project execution.

REVIEW MECHANISM

8.6 The programmes/ projects are reviewed through institutionalised programme/ project monitoring and review mechanisms in the Department. There is an in-house apex level body called 'DRDO Council', chaired by Scientific Adviser to Raksha Mantri, to review progress of major projects of all the laboratories, once a year. In addition, Corporate Reviews covering techno-managerial aspects are also carried out at the laboratories, by a high level committee. The staff projects for the Army are reviewed by the Vice Chief of Army Staff (VCOAS), twice a year. For all major programmes/ projects, there are multi-tier 'Programme Management Boards(PMBs)', having representation from the Services, defence R&D laboratories/ establishments, production agencies, quality assurance agencies and in some cases from academic institutions and other national research laboratories, which periodically monitor and review the programmes and give mid-course directions.

DRDO DEVELOPED ITEMS LED TO PRODUCTION

8.7 The limited series production (LSP) of

Pilotless Target Aircraft (PTA) - Lakshya, a reusable remote operated aerial target system, for providing training to gun and missile crew and air defence pilots, is already in progress for all the three Services. With the delivery of five Lakshya, the LSP order of the Air Force has been completed. The first batch of Lakshya has been delivered to the Navy and inducted. The balance quantity is expected to be delivered during the year.

8.8 The modified fuze FBT-3I was integrated with 250 kg and 450 kg

Bomb with Ballistic Tail Unit (BTU) and its production was established at the Ordnance Factory. Production clearance was given for fuzes FBRN-4I and FBN-2I. Several types of life saving power cartridges were produced and supplied to the Air Force.

8.9 The Armoured Engineer Reconnaissance Vehicle (AERV) on BMP-II tank has been recommended for introduction into the Service. The Limited Series Production order for eight vehicles has been placed by the Army.



Armoured Engineer Reconnaissance Vehicle (AERV)

8.10 The production of Carrier Mortar Tracked (CMT) vehicles is under progress at Ordnance Factory, Medak. The CMT 1 and CMT 2, already manufactured, have been dispatched to the User, after inspection and clearance by DRDO and DGQA.

8.11 Production order for 5 sets of 'Sarvatra' – a wheeled-based mechanically launched multi-span mobile bridging system for the assault role, has been placed by the Army.

8.12 The series production of Mat Ground Surfacing (MGS C1-70), a trackway expedient which can be laid mechanically in the field conditions to negotiate marshy, desert and difficult terrains, has been completed.

8.13 The production order for 124 Nos of Main Battle Tank – 'Arjun' has already been placed. The transfer of technology and incremental improvements, which would be incorporated in the production tanks at appropriate stage, are in progress.

8.14 Production orders were placed by the Army for Remotely Controlled Improvised Explosive Device Jamming System – 'Safari', which is used to neutralize the Improvised Explosive Devices (IEDs) and thus protecting the passing Army and Civil convoys. The bulk secrecy equipment – 'Sansar' and the Avalanche Victim Detector were produced as per the requirements of the Services.

8.15 The small and large size NBC respirators have entered mass production phase. In addition, Life Jacket, an effective life saving

appliance, with 20 kg buoyancy and carrying harness for Milan weapon system have been accepted for introduction into the Service.

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

- 8.16 The first Technology Demonstrator (TD1) Light Combat Aircraft (LCA) completed the first block of test flights on June 02, 2001. The first block of flight tests covered gentle manoeuvres upto 2.5 g, left and right rolls, Handling Quality (HQ) tests, climb upto 8 km, formation flights, tower-fly-by test, parametric identification manoeuvres, neutral point estimation, air data calibration, landings with/without the use of Brake Parachute and a host of system related tests. The completion of first block of flight tests in less than five months is comparable to the achievements elsewhere in the world. The analyses of the test flight results have indicated a reasonably good match between the recorded flight data and performance estimates. The LCA TD1 is being prepared for the second block of flight tests.
- 8.17 The second LCA Technology Demonstrator TD2, is ready to the post-flight build standard of LCA TD1. Equipping of the third aircraft, 'reduced weight standard LCA Prototype' Vehicle (PV1), is in progress. The design improvement activity is in progress for the fourth aircraft LCA PV2. Design activities for PV5 (LCA Trainer), ensuring

commonality with LCA (Navy), have been initiated.

- 8.18 Under the Kaveri programme for development of engine for the LCA, two Kabini prototypes (C1, C2) and five Kaveri engine prototypes (K1, K2, K3, K4 and K5) have been built for engine testing. In addition, various modules and components have been manufactured for testing in the rigs to assess aerodynamic and structural integrity performance. The design of compressor blade and disc has been modified after the problems faced in flight standard K4 engine. The modified design is being incorporated in K5 engine prototype which would then undergo 50 hours of ground testing prior to dispatching it to Central Institute of Aviation Motors (CIAM), Moscow, for Exploratory Altitude Testing in mid-2002. After completion of detailed design of various sub-systems, the fabrication and manufacturing are in progress for the marinised Kaveri engine.
- 8.19 The Remotely Piloted Vehicle (RPV) – 'Nishant', for battlefield surveillance, reconnaissance, real time engagement of targets by artillery fire and damage assessment, has undergone 64 development flight trials. Through these flights, the air vehicle, flying and handling characteristics, flight control and navigation systems have been validated. The Army has decided to go in for induction of 'Nishant' through Limited Series Production (LSP). The system is

planned to undergo trials for Army evaluation before the LSP.

- 8.20 Two guided flight trials of short range surface-to-air missile - 'Trishul' (Naval version) were conducted in May 2001, against approaching electronics simulated target in sea-skimming mode and surface-to-air mode from INS Dronacharya.
- 8.21 Four flight trials of medium range surface-to-air missile - 'Akash', were conducted in March and September 2001 against simulated target and PTA (Pilotless Target Aircraft) tow body. During these flights, ram rocket propulsion system and guidance for duration have been proved. The Phased Array Radar- 'Rajendra', Battery Control Center (BCC) and Akash Self Propelled Launcher (ASPL) have been used in an integrated mode, during the trials.
- 8.22 Two tube launched, programmed controlled flight trials of third generation anti-tank missile – 'Nag', were conducted in April and September 2001. During the trials in September 2001, the indigenous sub-systems viz. control sensor package, electro-mechanical actuator and smokeless Extruded Double Base (EDB) sustainer propellant have been qualified. First set of captive flight trials with Imaging Infra-Red (IIR) day and night version seeker has been conducted in December 2001.
- 8.23 One flight trial of Naval version of 'Prithvi' surface-to-surface missile - 'Dhanush', was conducted in September 2001 from

INS Subhadra, using stabilized launcher. The flight trial met all mission requirements. One flight trial of 'Prithvi' – Air Force version was conducted on March 31, 2001. The missile was tracked up to full range of 250 km. One more flight trial took place on December 12, 2001. Development of 500 kg pre-fragmented warhead for 'Prithvi' – Air Force version, has been completed and the production document has been handed over to the production agency. Development trials of incendiary and bomblet warheads have been completed.

8.24 Under Electronic Warfare (EW) programme for the Army – 'Samyukta', the Core System Evaluation (CSE) of Communication (Com) segment has been completed successfully. The entities like Stand-alone Jammer (SAJ) and Low Power Jammer (LPJ) for Com segment and Electronic Counter Measure (ECM) for non-com segment in low and mid bands have been realized and are under evaluation. Out of five EW systems envisaged under 'Sangraha' programme for the Navy, one system has already been fully flight tested on airborne platforms. Flight trials on three systems have been conducted on Naval platforms. Production orders have been placed in all, for four systems. The development of fifth system is in progress.

8..25 An Electro-Optic Fire Control System (EOFCS) for Naval ships is under development. The Electro-Optic Director (Turret) has been fitted with all the three electro-optic sensors viz. thermal imagers, laser range finders and day time CCD camera and is under final integration with TV tracker and system control computer. The evaluation of the system by the User is planned during mid-2002.

8.26 A man portable short range battle field surveillance radar for the Army, to detect, track and classify moving surface targets like crawling and walking men, light and heavy vehicles and low flying helicopters, has been developed using a state-of-the-art microstrip patch array



Missile Agni-2

- antenna. The system is undergoing evaluation. Supervision Radar (SV-2000) has been developed for use with Naval Advanced Light Helicopter (ALH) for detection of sea surface and airborne targets. The system is getting ready for User evaluation.
- 8.27 A test and validation facility has been established, under the programme for Command Information Decision Support System – ‘Samvahak’. The programme envisages a distributed battlefield information system covering the entire tactical zones from Corps HQs down to battalion level. The development of application software is in progress.
- 8.28 Under the technology demonstrator programme, development of Futuristic Infantry Combat Vehicle (ICV) –‘Abhay’, for replacement of BMP-II vehicles, is in progress. Major assemblies have been realized and integration with hull is in progress. Mild Steel (MS) turret with armament is being integrated with Gun Control Equipment. The MS prototype is expected by mid-2002.
- 8.29 A Cavitation Tunnel facility has been commissioned for checking hydrodynamics performance of ships, submerged bodies and underwater weapons’ models.
- 8.30 A Military Geo-Spatial Information System (MGSIS), covering the databases for spatial information of terrain and vehicle mobility parameters has been developed. The system has been tested with actual terrain data and is ready for the installation at the User’s site.
- 8.31 The 81 mm anti-thermal, anti-laser smoke grenade has been developed and demonstrated to the Army and found to be highly effective. This bursting type smoke grenade is capable of forming the smoke screen instantaneously, to defeat the night vision aids and laser beams, for more than 20 seconds.
- 8.32 A Multipurpose Dry Chemical Powder Fire Fighting Mobile Unit has been developed, which is capable of combating medium size fires involving oils, petroleum products, gaseous substances and electrical equipment/machinery in field areas. The extinguishing medium used is one of the Halon alternatives and has a working temperature range of –50^o C to 50^o C. The system has been offered for User trials.
- TECHNOLOGY DEVELOPMENT/
INNOVATION**
- 8.33 The technology of Plastic Bonded Explosive (PBX) has been developed. The PBX possess low shock and impact sensitivity, high energy output and long storage life. Two types of PBX compositions, pressable and castable, based on RDX, HMX and other ingredients, have been formulated and evaluated successfully.
- 8.34 A state-of-the-art process technology has been developed for the manufacture of Amorphous Boron Powder (ABP) on pilot scale of 2 kg/batch of purity 85-88%. In addition, a process for enrichment of ABP from 85-88% to more than 94% has been established on 300 gm batch size. The ABP, used in solid rocket propellant, offers much higher heat of combustion and its use in igniter compositions, makes ignition easier and smoother. This technology development will lead to import substitution and savings in foreign exchange.
- 8.35 A major technological breakthrough has been achieved in establishing the feasibility of synthesis of a novel, insensitive, thermally stable compound, CL-20, having high density, nitrogen energetic and high burn rate. The compound CL-20, is used in combination with energetic binders to give better performance and burn rate for advanced solid rocket propellants.
- 8.36 The Gallium Arsenide Enabling Technology Centre (GAETEC) has developed digital attenuator MMIC (monolithic microwave integrated circuit) based on switch technology. The GAETEC also developed amplifier modules for space applications, which were used in a recently launched satellite.
- 8.37 A foundry for realising 1 micron Application Specific Integrated Circuits (ASICs) development is fully operational and qualified for devices as per Mil-STD-883B specifications. Eight types of devices have already been fabricated.

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- 8.38 The technology to produce Cadmium Zinc Telluride (CZT) substrates has been developed and is under transfer to a PSU. A W-band Single-Pole Single-Throw (SPST) switch has been developed as per the specifications. A thermal imager based on indigenous 60 element linear array with compact electronics, display unit, power supply and light weight tripod stand has been developed.
- 8.39 A slotted wave guide array antenna developed has been exported to Poland. As per the Polish test report, its performance is better than that of an advanced country. An X-band Coupled Cavity Travelling Wave Tube (CCTWT) has been developed for the multimode radar for the LCA.
- 8.40 A solid state cooling garment has been developed for the tank crew, based on a thermo-electric unit, which on integration with a liquid cooled unit provides over 300 watt of cooling around the body surface of the user. The system is effective in providing adequate microclimate cooling to the tank crew while operating in hot environment with air temperature around 50 °C or slightly higher. The efficacy of the system has been established in the heat chamber in the laboratory and in the tank in desert conditions.
- 8.41 A new treatment modality for treating High Altitude Pulmonary Edema (HAPE) patients, using a mixture of Nitric Oxide (NO) 15 ppm and 50 % oxygen, has been approved by Directorate General Armed Forces Medical Services (DGAFMS). The new treatment has shown greater benefit in moderately severe and severe cases of HAPE, as compared to conventional oxygen administration.
- 8.42 The technology of minimally processed vegetable was developed and demonstrated through satisfactory results of User trials, at Base Victualling Yard, Vishakhapatnam and Southern Naval Command, Kochi. The technology is under transfer to the Navy.
- 8.43 Technology for development of Electroluminescent Lamp (EL) devices, for the formation light applications of the LCA, has been developed. The EL devices are presently not available in the country and are being imported. The EL devices form an important component of modern military equipment like tank, aircraft, ship or submarine. These are flat panel light emitting devices that convert electric energy to light energy and have advantages of low power consumption, long life and light emission without infrared (IR) signature.
- 8.44 A mobile radiation monitoring laboratory has been developed for on the spot assessment of radioactive contaminants present at any location. It is fitted with alpha, beta and gamma counting systems for monitoring of radioactivity in air, water, milk and food products. A detector for identification of radio nuclides and a solid state anemometer for recording meteorological data have also been provided.
- 8.45 A techno-economic module with advance polarity reversal electro dialysis desalination technologies, has been developed for conversion of brackish water (5000 ppm TDS) into potable water. The module is capable of removing the salt deposition on the membrane, for long time consistence performance. By using this module, large capacity plants can be designed and fabricated.
- 8.46 Thin Film Composite (TFC) Reverse Osmosis (RO) membranes, presently being imported, have been developed. Using these membranes, a Reverse Osmosis (RO) Desalination Plant of capacity 50 litre/hour has been developed which is capable of removing 90-93% salt from brackish water containing salinity 6000-10000 ppm.
- 8.47 A structural adhesive SA-8, equivalent to imported Hysol-934 (USA) and a conductive sealant equivalent to imported Chobond-2165 (USA) have been developed for the LCA. The structural adhesive has a working temperature range from -55 °C to 150 °C and offers excellent resistance to most common chemicals. The conductive sealant developed has excellent electrical and physical properties and bonds a wide range of metallic and non-metallic components.
- 8.48 Technology for production of PEEK (an engineering thermoplastic) insulator tubes of four different diameters 20 mm, 32 mm, 40 mm and 50 mm has been developed. The finished tubes have been approved for
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fitting in the fuel system of the LCA. These tubes are used to permanently connect aerospace fuel or air pipelines and prevent the flow of lighting current along the pipe by acting as an insulator.

- 8.49 During the year, 43 patent applications were filed including three in foreign countries covering products/processes developed by the DRDO laboratories/establishments, in the fields of bio-medical sciences, electronics, high energy materials and magnetic materials. Twelve patents and four designs including two designs in foreign countries were granted and eight patent applications were accepted for grant.

BASIC RESEARCH

- 8.50 The DRDO interaction with academic community has been two-fold. The imagination driven projects in science and technology are supported through Extramural Research Scheme. The projects, outcome of which could be of direct relevance to the on-going activities of DRDO laboratories/establishments, are transactionally supported through a new scheme of Contracts for Acquisition of Research Services (CARS). Under the Extramural Research Scheme, 40 new projects with a total value of Rs 11 Crore are being researched upon in 26 different academic/research institutions in the country.

- 8.51 DRDO has already constituted four Research Boards viz. the Aeronautics

Research & Development Board (AR&DB), Armament Research Board (ARMREB), Naval Research Board (NRB) and Life Sciences Research Board (LSRB) to provide thrust to basic research. These boards promote research in collaborative mode with academic institutions and other national R&D Laboratories through funding of Grants-in-Aid projects. The AR&DB is currently funding 165 projects at about 25 institutes. The ARMREB has sanctioned 27 projects costing Rs 3.33 Crore in the fields of high energy materials, sensors, ballistics and other armament related fields. Under the NRB, presently 30 projects are being pursued by the academic institutions in five technology areas. Under LSRB, 27 projects are being pursued covering areas in biological and bio-medical sciences, psychology, physiology, bio-engineering, specialized high altitude agriculture, food science and technology etc.

SUPPORT TO SERVICES

- 8.52 DRDO has developed a variety of softwares for simulator training of Army personnel on Air Defence Combat and reporting of enemy aircraft and missile. A wargaming software package at division level is operational at WARDEC and is being used by the Army for exercise purpose.
- 8.53 DRDO developed plastic bullets were supplied to para-military forces and various Police departments for control of unruly mobs and anti-terrorist activities.

- 8.54 DRDO provided assistance in the R&D efforts of Ordnance Factory Board for indigenisation of armament stores. The performance evaluation of various stores like 155 mm shell using new technology, 100/120 kg aerial bomb, 81 mm ER mortar bomb, 120 mm light mortar bomb, was successfully conducted.

- 8.55 Various types of vehicles were tested for the Army/Air Force which included Prefabricated (long chassis) Bus ex-TELCO, Prefabricated (long chassis) Bus ex- Ashok Leyland, Double Stretcher Ambulance on 4x4 mm 950 XD ex-Mahindra & Mahindra, 5 kilolitre Water Browser on 5/7.5 t 4x4 Stallion ex-VFJ and Type Testing of Perkins 1004.4 THR engine for the Air Force.

- 8.56 Avalanche forecast warnings were issued with good accuracy for use by the Army and the civil population for J&K including Siachen, Kargil, Mushkoh valley, Shamshabari range, Pir Panjal range and for Himachal Pradesh (HP) covering Manali-Rohtang area. The 18 Automatic Weather Stations (AWS), installed earlier in J&K, Siachen, HP and Uttaranchal, continued to function with good reliability, thus establishing the technology of acquiring meteorological data of remote places through satellites.

- 8.57 Snow precipitation and meteorological forecast on 50 x 50 km scale, with very high accuracy and three days in advance, has been issued regularly to the Army for the formations in Northern Command, helping

- them in planning various operations. Two Upper Air Stations, one at Jammu and the other at Manali, have been established for radio-sonde observations and integrated with the national network of the Indian Meteorological Department under an integrated project 'Parwat' involving the Army and the Department of Science & Technology.
- 8.58 Avalanche control and wind drift structures, installed on a frequently occurring avalanche site, on Jammu-Srinagar highway, have been functioning efficiently leading to no avalanche occurrence. More number of such structures have been installed during the year and the related technology has been demonstrated to the Army and the Border Roads Organisation (BRO).
- 8.59 A light weight, multilayered composite armour 'Kali' designed and developed by DRDO, has been accepted for HAL's Lancer helicopter. Three sets of the armour have been supplied and fitted on the helicopters under delivery to the Army.
- 8.60 Biodigesters, based on DRDO developed technology for night soil degradation at low temperatures, are in use by the Army.

- Forty two metal biodigesters and eight temperature controlled biodigesters were supplied to the Army for use in Siachen and Leh regions and two at Arunachal Pradesh. All the biodigesters installed have been functional during the winter season.
- 8.61 About 10,000 copies of a brochure (one in Hindi and the other in English), outlining methods to facilitate acclimatization at high altitudes, have been distributed to the troops posted in Western Himalayas.
- 8.62 The malaria containment programme pursued by DRDO in the North East led to reduced incidence of malaria in Lama Camp Cantonment and surrounding villages.
- 8.63 Training courses were organised for several Army units, by the agricultural laboratories of DRDO, to impart training in DRDO developed agro-animal technologies. These activities are likely to increase the availability of fresh foods in the region, for the troops as well as locals.

SOCIETAL MISSIONS AND SERVICES

- 8.64 A water testing kit developed by DRDO is under use by Public Health Engineering

Department, Government of Assam and Geological Survey of India, Guwahati. A dengue detection kit has been developed, based on the principle of immunochromatography, with more than 90% specificity and sensitivity for detection of IgM and IgG antibodies, in patients suffering from dengue infection.

HUMAN RESOURCE DEVELOPMENT

- 8.65 Under Research & Training Scheme, a total of 180 personnel, including officers from the three Services, were sponsored to undergo M.E./M.Tech courses in various disciplines at IITs and other institutions of repute. This is in addition to the candidates sponsored by Directors of the laboratories under the delegated powers. Under the Continuing Education Programme (CEP), 80 courses have already been organised and 56 more are to be conducted by March 2002. In addition, a number of specialised courses were conducted both by the Institute of Armament Technology (IAT) and the Institute of Technology Management (ITM). A DRDO laboratory has started conducting training courses to deal with the problem of bio-terrorism.

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INTER-SERVICE ORGANISATIONS



Construction of Bailey Bridge across Nerab River in Ethiopia

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) Directorate General Defence Planning Staff
- (viii) Services Sports Control Board
- (ix) Armed Forces Films & Photo Division
- (x) School of Foreign Languages
- (xi) History Division
- (xii) National Defence College
- (xiii) College of Defence Management
- (xiv) Defence Services Staff College
- (xv) Ministry of Defence Library

**MILITARY ENGINEER SERVICES
(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 arm of the Ministry of Defence, which provides works services to the three Defence Services and other related departments, such as Defence Research and Development Organisation, Directorate General of Quality Assurance, Ordnance Factories, Coast Guard, Kendriya Vidyalaya Sangathan, Central and State Government Undertakings. Today it handles an annual workloads exceeding 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 three Services on construction engineering. It is structured to design works, which are executed through contracts under the supervision of Officers and staff consisting of both civilians as well as combatants from the Corps of Engineers. 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. While the officers' cadre has an All India Service liability, the subordinates are restricted to area-based requirements.

9.4 MES is specialized in 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 **Projects completed/in progress by the MES during the year** : Naval Officers Mess has been completed in New Delhi. The complex has an integrated sports facility, in addition to single officers accommodation. The Phase-I of the modernization of in INHS Ashvini, Mumbai has also been completed and Phase-II of the project is likely to be completed by October 2002. Provision of Transducer Complex at NPOL Kochi and Provision of Civil Works (Phase II) of ELSEC, DLRL at RCI Hyderabad is under progress. Provision of Works services for missile seeker simulation facility at RCI Hyderabad is expected to be completed by September, 2002. Provision of 280 married quarters for Officers/ Air men NCS(E) and Civilian at Hasimara, Central heating system in 153 GN at Leh and provision of married accommodation for JCOs/Havs/ Other Ranks of Ladakh Scouts at Leh are in progress.

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

(i) **Revision of Defence Works Procedure 1986**: The revision of Defence Works Procedure is presently being carried out by a team of officers. Representatives of Army, Navy and Air Force are also being co-opted during presentation.



Wheel-based Mechanically Launched Mobile Bridging System– ‘Sarvatra’

- (ii) **Works Directorate Website :** The website for Works Directorate consisting of data Charter, Organisation, Prestigious Works, Important Policy letters and ISO Certification Road Map has been hosted in July 2001.
- (iii) **IS Codes on CD ROM:** Various IS Codes on CD ROM have since been procured and the software installed on computers in Design Directorate. This has commenced the process of

converting the important database on electronic media.

Apart from these the earlier thrust areas like quality management, user interaction and satisfaction and automation of MES were also given adequate consideration.

ARMED FORCES MEDICAL SERVICES (AFMS)

- 9.7 **Brief Activities of Armed Forces Medical Services:** 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 66 lakhs. In addition, ex-Servicemen and their families are also entitled to free treatment from Services sources and so are the para military organizations like Assam Rifles, Rashtriya Rifles, Coast Guard as well as DRDO, and Border Road Organisation personnel, while posted in the field. Armed Forces Medical Services is also activated in aid to civil authorities during epidemics, natural calamities and internal security duties, especially in inaccessible and difficult areas. In addition to this, life saving emergent care is also provided to all civilians by establishments of AFMS.

- 9.8 **Infrastructure of AFMS:** The AFMS is the largest and amongst the best organised health care delivery systems in the country. There is a network of Regimental Aid Posts manned by doctors. These are supported by 89 Field Ambulances, which are mobile 45 bedded hospitals. Besides the facilities made available in combat zones, 127 hospitals of varying sizes and facilities, spread over the length and breadth of the country are also functioning. While the peripheral hospitals have basic specialist facilities, the eight Command/Army Hospitals have super specialist centres with state-of-the-art equipment and facilities.

- 9.9 **Creation of one post of Lt Gen in Army Dental Corps** : One post of Lt Gen in the appointment of Director General Dental Services has been created in Army Dental Corps and the post has since been filled up.
- 9.10 **Aid to UN Mission** : Following officers of Army Dental Corps took part in various UN Missions abroad :-
 (a) Maj PK Singh - UNIFIL Lebanon
 (b) Maj BS Talwar-UNMEE Ethiopia
 Capt Manjula of CH (CC) Lucknow had been selected and sent on deputation to UN Mission as a member of the Medical team.
- 9.11 **Raising of 12, 14 and 21 Corps Dental Units** : Three Corps Dental Units (4 Chair each) are being raised for affiliation to 12, 14 and 21 Corps respectively.
- 9.12 **International Conference** : Maj Gen JL Sharma, VSM, PHDS, Addl DGDS attended "Section Defence Forces Dental Services Conference – 89th World Dental Congress Kuala Lumpur 2001" from September 27 to October 1, 2001 and gave a presentation on "Dental Services in Indian Armed Forces."
- 9.13 **CME Update & Workshop** : CME update and workshop on "Dental Implants in Inter Disciplinary Practice" was organized by Department of Dental Surgery AFMC Pune from October 06 to October 07, 2001 and 23 officers from Army, 03 officers from Navy and 03 officers from Air Force attended the workshop.
- 9.14 **Modernisation of Dental Treatment Facilities** : To enhance the scope of maxillo-facial surgical treatment facilities in Armed Forces, procurement of 7 sets of Titanium Bone plates and accessories for various Zonal specialized dental treatment centers has been finalized. The implants will be useful to render effective and modern treatment to gun shot and other trauma cases. This treatment modality is a departure from the conventional methods and is particularly helpful in reducing the hospitalization time of the patients, thus saving precious man hours.
- 9.15 **Commissioning** : 30 Nursing cadets were commissioned after their successful completion of 4 years BSc Nursing course in the college of Nursing at AFMC, Pune.
- MAJOR ACHIEVEMENTS**
- 9.16 **Modernisation of INHS Asvini**: The INHS Asvini modernisation project is one of the premier projects being undertaken by the Indian Navy. The hospital is being constructed in a phased manner with the Dental block having been completed in December 1998. The Phase-I of the modernization project has been completed and was inaugurated on September 15, 2001. Phase-II of the project is likely to be completed by October 2002.
- 9.17 **Upgradation/creation of Artificial Limb Sub Centers**: Two ALC Sub-centers at Lucknow and Delhi have been upgraded.
- Further, five ALC Sub-centers at Lucknow, Delhi Cantt., Bangalore, Chandimandir and 151 Base Hospital, Guwahati, are being established.
- 9.18 **ALC Pune** :
 (a) **Modernisation Programme**: Plastic materials like high density polypropylene, polyester and epoxy resin are being used for making artificial limbs. Reinforcing materials like glass fibre polyamide (nylon) and carbon fibre are also being used as a routine for socket. As such, all available indigenous technology in the country is being used at the Centre.
 (b) **Modernisation of Medical Units in Northern Command**: Medical units in Northern Command have been modernised with electromedical equipment, thereby enhancing the diagnostic treatment and surgical capabilities of all the hospitals in Northern Command.
 (c) **Progress of Battle Casualties**: All the battle casualties of Operation Vijay were provided with state-of-the-art technology limbs imported from Otto Bock, Germany.
- 9.19 **Construction of Hospital at Partapur**: The existing hospital at Hunder is planned to be improved/upgraded as a 75 bedded hospital at Partapur.

9.20 **Command Military Dental Centre Eastern Command, Calcutta:** An aesthetically sound new building with need-based architectural sensitivity and most hygienic working environment has been raised for CMDC(EC), Calcutta.

9.21 **Recent Health Initiatives - Indian Navy :** A health education booklet, titled "Indian Navy's Commonsense Rules for Well Being", has been distributed to various Ships and Establishments. It covers day to day health problems, their prevention and initial management. A bilingual booklet on AIDS has also been published. Computerised ICD Book has been developed in-house and forwarded to all Naval hospitals, Command headquarters and sister service headquarters.

ENVIRONMENTAL PROTECTION

9.22 **Hospital Waste Management:** After notification of Biomedical Waste (Management and Handling) Rules on 20 July 1998, WHO had allocated a few pilot projects on Hospital Waste Management to 11 leading Medical Colleges of the country. One such project was given to the Armed Forces Medical Services, and it was a proud moment for IAF when Command Hospital AF, Bangalore, was chosen by WHO to be the venue for conduct of the project. The DGMS(Air) was Principal Investigator of the project. This project at CHAIB is the only one to have been accomplished successfully and has been a trend-setter not only for the Armed Forces but also for the country. The module of

Hospital Waste Management, developed at CHAIB, is proposed to be replicated in other hospitals of the Armed Forces and Health Care Institutions of the country as well.

9.23 **Environmental Hygiene and Sanitation:** Environmental hygiene and sanitation of the bases is monitored on a regular basis to prevent untoward health hazards in the stations. Suitable recommendations are made to improve the standards of water supply, waste disposal and control of pest nuisance.

DIRECTORATE GENERAL DEFENCE ESTATES (DGDE)

9.24 The Directorate General of Defence Estates is the apex body of the Defence Estates Organisation, having its offices in various parts of the country. Municipal administration of Cantonment towns, management of defence lands both inside and outside cantonments, acquisition/hiring of immovable properties for defence purposes and administration of Urban Land (Ceiling and Regulation) Act 1976, where applicable, are the main functions of the organization. The organization also deals with all the litigations arising out of these functions.

9.25 The Directorate General Defence Estates is the nodal executive agency of the Ministry of Defence for procurement of immovable property for defence purposes by way of acquisition, transfer, requisitioning and hiring. There are large number of

acquisition/transfer of land projects in different States. During the current year an anticipated expenditure of Rs.26.91 crores was allocated on account of land acquisition and 2618 buildings were hired by the organization for residential and office accommodation of the Defence Forces with an outlay of Rs.5.00 crores. The area of land held on hiring and requisitioning for defence use is 53075 acres and 20367 acres respectively with an approximate annual outlay of Rs. 9.50 crores as expenditure on rental/recurring compensation.

9.26 The Director General Defence Estates functions as an advisor to the Ministry of Defence on land and Cantonment Board matters. It is an Inter services Organisation responsible for executive functions relating to hiring, requisition or acquisition of land and buildings to meet the defence requirements. The defence land considered temporarily/permanently surplus is also disposed of by the Service by way of licence, lease or transfer to other Central Government Department/State Government/PSUs or reputed schools/institutions or ex-servicemen.

9.27 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, its management of land, custody of land records and procurement of

<p>immovable property is carried out through Defence Estates officers. Out of 17.31 lakh acres of defence land holding, 0.68 lakhs acres of land is under management of DGDE.</p>	<p>2001-2002 Rs 23,96,80,000 had been allocated on this account.</p>	<p>manpower and infrastructural support to the Services Headquarters and the Headquarter offices of Inter-Services Organisations (ISOs) under Ministry of Defence. Joint Secretary (Training) also discharges the functions of the Chief Administrative Officer (CAO) and Director (Security). In relation to security, he oversees the work of the Chief Security Officer.</p>
<p>9.28 There are 62 Cantonments in India, located in 18 States and the National Capital Territory of Delhi. The Cantonment Boards are autonomous bodies functioning under the overall control of the Cantonments Act, 1924. Cantonment Boards comprise elected representatives besides ex-officio and nominated members. Parity 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 Commanding-in-Chief of the commands at the intermediate level and by the Central Government through DGDE/Ministry of Defence at the apex level.</p>	<p>9.30 Most of the Cantonment Boards maintain hospitals or dispensaries. These cater to the civil population of the cantonment as well as the adjoining areas.</p>	<p>9.34 The functioning of CAO's Office is discharged by the following six Divisions: -</p>
<p>9.29 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. The Boards, however, receive payment of service charges in respect of Central Government properties in lieu of taxation. The nature of the cantonment is such that neither industries can come up nor trade and business can achieve any significant growth. The Central Government provides financial assistance by way of grant-in-aid to the Cantonment Boards to a certain extent, to balance their budget. During</p>	<p>9.31 Maintenance of primary schools is also undertaken by the Cantonment Boards according to the local requirements. A number of Cantonment Boards are also maintaining Higher Secondary Schools and Intermediate/Junior Colleges.</p>	<p>(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</p>
<p>9.29 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. The Boards, however, receive payment of service charges in respect of Central Government properties in lieu of taxation. The nature of the cantonment is such that neither industries can come up nor trade and business can achieve any significant growth. The Central Government provides financial assistance by way of grant-in-aid to the Cantonment Boards to a certain extent, to balance their budget. During</p>	<p>9.32 In order to improve the quality of services provided by the Cantonment Boards and to improve the financial resources of the Boards, several seminars were held by Directorate General Defence Estates. In accordance with the above, the following new initiatives were taken in some of the Cantonments :-</p>	<p>9.35 The Administration Division provides administrative cover to about 10,000 civilian employees employed in Army Headquarters and 26 Inter-Services Organisations. A Grievances Cell is also functioning within the Administration Division to examine the grievances of serving/retired Armed Forces Headquarters Civilian employees and to ensure their speedy settlement.</p>
<p>9.29 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. The Boards, however, receive payment of service charges in respect of Central Government properties in lieu of taxation. The nature of the cantonment is such that neither industries can come up nor trade and business can achieve any significant growth. The Central Government provides financial assistance by way of grant-in-aid to the Cantonment Boards to a certain extent, to balance their budget. During</p>	<p>(a) Projects of rain water harvesting and non conventional energy resources in a few cantonments were taken up, specially where ground water level is depleting fast. Jabalpur Cantonment has now a success story in the regard.</p> <p>(b) Many Cantonments took successful steps in enhancing their incomes in order to initiate plan urban renewal action in cantonments.</p>	<p>9.36 The Defence Headquarters Training Institute, functioning under the Training,</p>
<p>9.29 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. The Boards, however, receive payment of service charges in respect of Central Government properties in lieu of taxation. The nature of the cantonment is such that neither industries can come up nor trade and business can achieve any significant growth. The Central Government provides financial assistance by way of grant-in-aid to the Cantonment Boards to a certain extent, to balance their budget. During</p>	<p style="text-align: center;">OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER</p>	<p>9.36 The Defence Headquarters Training Institute, functioning under the Training,</p>
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- Coordination and Welfare Division of CAO's Office, caters to the training needs of the civilian personnel posted in Service Headquarters and Inter-Services Organisations.
- 9.37 Estates & Works Division performs the Estate functions in respect of residential accommodation of Service Officers posted at Armed Forces Headquarters. It now manages 3045 Defence Pool Accommodation which includes both regular, hostel and hired accommodation. It also performs hiring/rent reimbursement functions and payment of monthly licence fee to the house owners.
- 9.38 The welfare of civilian employees in Service Headquarters and Ministry of Defence is being looked after by this Office. Armed Forces Headquarters/Inter-Services Organisations Welfare Fund and Defence Civilians Medical Aid Fund (DCMAF) provide financial help to the employees during the hours of acute distress. DCMAF, having all India coverage, provides financial assistance in the cases of TB, cancer, leprosy, burn injuries etc. to its members. Its scope has now been enlarged to include ex-gratia payment of Rs. 50,000 in case of accidental death of a full service member.
- 9.39 Sports and cultural activities are also given a place of importance. Civilian employees are encouraged to join different sports activities. Every year, the sports persons of the Organisation participate in various

competitions at different levels and win prizes for the Organisation.

- 9.40 The Chief Security Officer and the personnel under his command ensure the physical security of 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 physical security in the zone. Efforts are also made through briefings to sensitise officers and personnel on maintaining security of information.

DIRECTORATE OF PUBLIC RELATIONS (DPR)

- 9.41 The Directorate of Public Relations is the nodal agency for providing media support and publicising the activities of the Ministry of Defence, the three Services and Inter-Services Organisations. With its Headquarters in New Delhi, the Directorate has 24 offices across the country. The Directorate is manned by Indian Information Service Officers, Service Officers and Armed Forces Headquarters Service Officers.
- 9.42 The Photo Section is an important publicity unit of the Directorate. The Section supplied over 8,000 photographs to the print, focussing different defence related events. Its photos, issued during Republic Day celebrations and other events, were widely used in the media. Photographs were also supplied to authors, research scholars, students and members of public on request.

- 9.43 The Broadcasting Section of the Directorate maintained close liaison with All India Radio and broadcast various entertaining and informative programmes for the Armed Forces. The programme **Sainikon ke liye** prepared by the Directorate was broadcast daily for the benefit of the Armed Forces personnel. This section projected major achievements of the various segments of the three forces by airing special features and messages of Heads of Services/Corps.
- 9.44 The Directorate brings out a fortnightly journal **Sainik Samachar** for the Armed Forces in 13 languages, viz., Assamese, Bengali, English, Gorkhali, Hindi, Kannada, Malayalam, Marathi, Oriya, Punjabi, Tamil, Telugu and Urdu.
- 9.45 At the Headquarters, more than 900 press releases were issued and over 120 press conferences were organized for the Defence Minister as well as other senior officers to project the Ministry's point of view. Besides, a series of special briefings were also arranged. A number of media visits were conducted to various locations and defence establishments to focus on important issues.
- 9.46 The Defence Minister's visits to key defence locations and units in various parts of the country, especially Jammu & Kashmir, were highlighted in the media. Suitable publicity was also arranged for visiting dignitaries who called on the Defence Minister and the three Service Chiefs. Army's counter-insurgency

- operations and operation Sadbhavna in Jammu and Kashmir were also highlighted.
- 9.47 Necessary media coverage was arranged for the launch and commissioning of various ships and frigates of the Indian Navy; joint maritime exercise with navies of other countries and goodwill visits of Indian Navy ships abroad.
- 9.48 The successful test flights of various missiles conducted by DRDO such as Brahmos, Dhanush, Agni and Akash were given wide publicity. Publicity was also provided to the various activities of Inter Services Organizations such as National Cadet Corps, Coast Guard, Armed Forces Medical Services, Directorate General Defence Estates, History Division, Services Sports Control Board and National Defence College.
- 9.49 Wide media coverage was provided to Defence Minister's visits to Russia and USA. Suitable publicity was arranged during the period under review for the Republic Day, the Independence Day, Combined Commanders Conference, Defence Investiture Ceremonies, Army Day, Navy Day, Air Force Day, Kargil Vijay Diwas, NCC Day and Raising Days of different formations of the three Services and Inter Service Organisations.
- 9.50 Achievements of the Defence Public Sector undertakings viz. Bharat Electronics Ltd., Mazagaon Dock Ltd., Garden Reach Ship Builders & Engineers Ltd., Hindustan Aeronautics Ltd., Bharat Earth Movers Ltd.,

Goa Shipyard Ltd., Bharat Dynamics Ltd., Mishra Dhatu Nigam Ltd. and Ordnance Factory Board were suitably publicized. Other major events such as Def-expo 2002, signing of Defence agreements with USA, Russia and other countries were given wide publicity.

ARMY PURCHASE ORGANISATION

- 9.51 Army Purchase Organisation (APO) in the Ministry of Defence is entrusted with the responsibility of the procurement and timely supply of dry ration items for the consumption of the Defence Forces. APO procures rice and wheat through the Food Corporation of India; sugar from the Directorate of Sugar; pulses, animal rations, edible oils, vanaspati, tea and milk products from the Central and State Public Sector Undertakings, through the National Cooperative Federations and through various National/State Level Cooperative Consumer Federations/Cooperatives. Tinned items like vegetables, fruits, jelly and jams, tinned milk, meat and fish products, coffee, egg powder etc. are procured from all the Registered Suppliers including Private parties/dealers through open tender. The indented quantities as per the Army Specifications are procured keeping in view the flush season of the items so as to ensure the cost effective procurement.
- 9.52 During the year 2001-2002, a budget provision of Rs. 640 crores has been provided to the Army Headquarters for procurement of the above items by this Organisation. As

against this, supply orders/contracts worth Rs. 633 crores have been placed by APO upto October 31, 2001.

- 9.53 The quality control of the contracted items is ensured by the Composite Food Laboratories under the charge of the Army Headquarters, who after inspection and acceptance of the tendered commodities, also supervise dispatches of the goods to different Supply Depots as per the Despatch Instructions issued by AHQ. Payments for the supplies are made by the Principal Controller of Defence Accounts (HQrs), after due authentication by the Officer Commanding, Composite Food Laboratories.

DIRECTORATE GENERAL OF DEFENCE PLANNING STAFF

- 9.54 The Directorate General of Defence Planning Staff (DPS), an Inter-Service Organisation, is a multi-disciplinary group with representation from the three Services, Defence Finance, Ministry of External Affairs and Defence Research and Development Organisation (DRDO) and provides inputs to the Chiefs of Staff Committee (COSC) on matters pertaining to Defence Planning. The Organisation deals with major issues relating to strategic defence planning such as threat assessment/analysis and possible responses to these threats and recommends balanced force structures to achieve military aims, and conceptualises and evolves Defence Plans.

9.55 To promote international and regional Defence co-operation, the DG DPS is actively involved in forging Defence Bilateral Agreements in the vital areas of military to military co-operation and training with a number of countries including USA, UK, France, Russia and South Africa. The DG DPS represents the Indian Armed Forces at the ASEAN Regional Forum to articulate India's security environment and defence policies. The Directorate also undertakes briefings of foreign defence and diplomatic delegations on matters connected with Indian security.

SERVICES SPORTS CONTROL BOARD (SSCB)

9.56 **Services Championships** : The Services Sports Control Board conducts and coordinates 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.

9.57 **National Championships** : SSCB is affiliated to 26 National Sports Federations and participated in 36 National Championships including 10 junior sections. The overall performance was quite good as our team won overall championship in 7 events and were runner-up in 7 events. Four events were not conducted at National level.

9.58 **CISM Competition** : SSCB (India) is an affiliated member of International Military Sports Council (CISM). Every year CISM conducts various competitions and invites sportsmen of Armed Forces of each member countries. Accordingly, four athletes took

part in 39th World Military Athletic Championship held at Lebanon from June 29 to July 6, 2001. Hav Kulwinder Singh won a silver Medal in Decathlon event in this prestigious International championship.

9.59 Every year CISM convenes General Assembly Meetings. This year the 54th General Assembly was held from May 11-21, 2001 at Algeria. President SSCB and Secretary SSCB attended the said meeting.

9.60 **International Competitions** : During this period there was 152 international representation including sportsmen, coaches and officials. The results in brief are as follows:-

a) Singapore International Marathon from February 2-6, 2001 at Singapore

Hav HA Chinappa - 12th position (MRC)

b) International Marathon Championship on February 3, 2001 at China

i) Hav TG Nanish - 20th position (MRC)

ii) Hav Sugar Singh - 19th position (JRC)

c) Trg-cum-competition(Boxing) from February 19, March 5, 2001 at Czech Republic

i) STD IP Bipin - No position (Hamla)

ii) Hav Ramanand - Gold Medal (1 STC)

iii) Hav Satish (Gdrs) - No position

iv) Sep SB Pun - Bronze Medal (58 GTC)

d) 2nd Asian Machine Rowing Championship from February 17-18, 2001 at Hongkong

i) Nb/Sub Inderpal Singh (CME) - Silver Medal

ii) Nb/Sub Kasam Khan (CME) -02 Silver medals

iii) Nb/Sub Tarlochan Singh (CME) -Bronze Medal

iv) Hav RK Pillai (CME) - Silver Medal

v) Nk Balwant Singh (CME) - Bronze Medal

e) South Asian U-19 Boxing Championship from March 6-10, 2001 at Kathmandu

Rect KN Belwal (KRC) - Gold Medal

f) 4th Asian Kabaddi Championship from April 2-6, 2001 at Bangkok

WD Ram Mehar Singh, (HQ WAC) - Gold Medal

g) World Boxing Championship from June 1-11, 2001 at Belfast

Hav Ramanand (1 STC) - Reached pre QF Stage

h) 3rd South Asian Body Building Championship from June 20-25, 2001 at Maldives

JWO Prasad Kumar (ATI Belgaum) - Gold Medal

I) Trg-cum-competition programme (Jr Boxing) from August 1-5, 2001 at Germany

- i) Sep Gurmain Singh -Silver medal (SRC)
- ii) Sep Hardeep Singh - Bronze medal (SRC)
- iii) Sep Taranjit Singh - No position (SRC)

j) International Athletic Championship from June 28, 2001 at Hungry

- i) Hav Jaiveer Singh (Gdrs) -Bronze medals
- ii) Hav Satvir Singh - Silver medal

k) 7th International Boxing championship from August 6-11, 2001 at Ukraine

- i) Hav Ramanand (1 STC) - Bronze medal
- ii) Nb/Sub Narender Rana (58 GTC) -Gold medal

l) Ist Asian Age group Swimming championship from August 24-26, 2001

Rect Kunj Kishore Singh (ASC)

m) International Boxing tournament from September 18-25, 2001 at Russia

- i) PO Bipin Pyngrope - Silver Medal (Hamla)
- ii) Lt Col PKM Raja (SSCB) - Adjudged as the Best Referee & judge of the tournament

9.61 VI National Games 2001:

These games were held from November 19 to December 1, 2001 in various cities of Punjab. Services fielded its teams in 19 sports events.

ARMED FORCES FILMS AND PHOTO DIVISION (AFFPD)

9.62 The Armed Forces Films and Photo Division has been entrusted with the task of meeting the requirements of Service Headquarters and other defence organisations with regard to production, procurement and distribution of training films, production of photographs and art work etc.

9.63 The Central Defence Film Library of this Division maintains a rare collection of films and photographs depicting Indian Forces in action in various theaters of World War-II. Nearly 350 units/formations/training establishments draw these films for training purposes, presentations and seminars.

9.64 During this year there are 22 films under various stage of production. So far 10 films havexx been completed and 9 films are at various stages of production in AFFPD and are likely to be completed by March end. A highly specialized film for Army Aviation has been made under the extremely challenging conditions, shot at various high altitude locations including Leh and Siachen Glaciar. During the year upto February 27, 2002, 1122 training films/video cassettes have been

distributed to various users and 13432 colour/black & white prints have been made. The Art Section has worked on 4996 pieces of Art work.

9.65 The mobile cinema unit of AFFPD procured documentary films and news magazines containing information on family welfare and cultural values from Films Division, Ministry of Information and Broadcasting and distributed to troops in the forward areas.

SCHOOL OF FOREIGN LANGUAGES (SFL)

9.66 The School of Foreign Languages under the aegis of the Ministry of Defence, is a unique institute in our country. It is unique in the sense that it has been the pioneer in foreign language teaching in India, having been established way back in 1948. At present, the School is engaged in imparting training in 10 foreign languages. It also caters to the needs of the other Ministries, such as the Ministry of External Affairs, the Cabinet Secretariat etc.

9.67 The language taught at the SFL are : Arabic, Bhasa Indonesia, Burmese, Chinese, French, German, Persian, Pushto, Russian, Spanish, Sinhala and Tibetan. For certain administrative reasons Japanese has been temporarily discontinued.

9.68 The courses offered by the SFL are as follows:-

- a) Interpretership Course
- b) Certificate of Proficiency Course

- c) Advanced Diploma Course
d) Short-term Course.
- 9.69 The Interpretership Course is a full time one. The students are sponsored by the Ministry of Defence, the Cabinet Secretariat and other Government departments. This course trains the students to become experts in the highly skilled work of interpretation and translation. Furthermore, they are trained in writing and speaking the target language with utmost fluency. The Interpretership Course is need-oriented. It has been designed and formulated solely to meet the specific needs of the Armed Forces. It is a highly specialized course which has no parallel anywhere else in India. It is only at the SFL that languages of strategic importance such as Sinhala, Bhasa Indonesia, Burmese, Pushto and Tibetan are taught at such a high level. In fact, in the whole country the SFL is the only institute where courses in Bhasa Indonesia, Sinhala and Burmese are offered.
- 9.70 The duration of the interpretership course is as follows:-
- a) Bhasa Indonesia : 16-1/2 months
b) Burmese : 16-1/2 months
c) French : 16-1/2 months
d) German : 16-1/2 months
e) Persian : 16-1/2 months
f) Pushto : 16-1/2 months
g) Sinhala : 16-1/2 months
h) Spanish : 16-1/2 months
- i) Tibetan : 16-1/2 months
j) Russian : 20 months
k) Arabic : 20 months
l) Chinese : 23-1/2 months
m) Japanese : 23-1/2 month
- 9.71 The certificate of Proficiency Course is followed by the Advanced Diploma Intensive Course. Both are part-time courses and each of 1 year duration. Classes are held daily from 0800-0855 hours. Together, this 2 year course is equivalent to the 3 year Diploma Course of the universities.
- 9.72 Short-term courses are purely need-based programmes. They are conducted as and when necessary, especially for MI Designates and officers being sent to UN Missions.
- 9.73 The SFL frames the Standard and Syllabus for the Ministry of External Affairs, National Defence Academy, Pune, Army Education Centre and Training College, Pachmari, Cabinet Secretariat and the Home Ministry. It conducts their examinations and issues diplomas to the successful candidates. For the IFS probationers, it is obligatory to pass Advanced Diploma (IFSS) examination conducted by this Institute.
- 9.74 During the academic year 4 periodical tests are held in all the courses in order to assess and monitor the progress of each individual student. Teaching aids such as videos and audio cassettes are regularly used to enhance the oral skills of the students.
- 9.75 The SFL has consistently tried to keep abreast with the latest teaching technology. Amongst the latest is teaching languages through computers. Keeping this in mind the SFL has acquired the latest state-of-art in the form of sophisticated computer with a complete multi-media kit. The software consists of teaching programmes in Russian, French, Spanish and Chinese.

HISTORY DIVISION

- 9.76 Historical Section was created after the end of the Second World War to write a detailed official history of the war with particular reference to the operations conducted by the Armed Forces of the undivided India. After Independence, it served as Combined Inter Service Historical Section (India & Pakistan). It was wound up in 1963.
- 9.77 In the meanwhile, Historical Section was established in 1953 to write and publish the official history of the post independence military operations of the Armed Forces of the Indian Union. The history of operations in Jammu & Kashmir (1947-48) was its first assignment. Till now, it has brought out 18 volumes. The Historical Section was redesignated as History Division w.e.f. April 01, 1992.
- 9.78 The History Division functions as military archives and reference

organization of the Ministry of Defence and the Indian Armed Forces. It also provides expert advice and guidance to the Ministry of Defence and Services Headquarters on the matters concerning heraldry and ceremonials. During the year, 4500 operational records/documents were received from Units and Formations and Services Headquarters for permanent retention and safe custody in the History Division. Over 400 Service Officers and Scholars visited the Record Room and Library to consult records/documents and books in connection with research projects and assignments pertaining to military history. In addition, this office also provided information on over 250 requests regarding military history to various Units and Formations and scholars from India and overseas.

9.79 The Herdaldic Cell of the History Division has been assisting the Ministry of Defence and the three Services by suggesting names for new establishments, designing of crests and badges and coining suitable mottoes for Units/formations.

NATIONAL DEFENCE COLLEGE (NDC)

9.80 The National Defence College was inaugurated by our first Prime Minister, Pandit Jawahar Lal Nehru, on April 27, 1960. This is the only institution in the country that imparts knowledge on all aspects of national

security and strategy. During the last 41 years, the NDC has grown from strength to strength and established a name for itself as a centre of excellence in National Security and Strategic Studies. The college has provided education and training in a highly specialised and sensitive discipline to a large number of senior defence and civilian officers. Many of the former students of the college have reached the very top of their professions in India and abroad, and some have even become head of their countries.

9.81 The NDC conducts the National Security and Strategic Studies Course of 47 weeks duration. The aim of this Course is to equip future policy makers with the background necessary to give them a broad understanding of the multifarious economic, political, military, scientific and organisational aspects involved in the planning of National Strategy. Defence Forces Officers of the rank of Brigadier and equivalent and Civilian Central Government Officers of the status of Director and above are nominated for training at the College.

9.82 The 41st NDC Course commenced with effect from January 08, 2001 and 83 officers attended the course as per details given below:-

- (a) Army - 34 officers
- (b) Navy - 05 officers

- (c) Air Force - 10 officers
- (d) Civil Service - 13 officers
- (e) Foreign Officers - 21 officers



Use of Computers in Training

9.83 Officers from Myanmar, Oman, Bangladesh, Indonesia, Ghana, Nigeria, USA, Nepal, Republic of Korea, Sri Lanka, Malaysia, Russia, Vietnam, UAE, UK, Brunei, Tanzania and Germany participated in 41st NDC Course.

9.84 The Course curriculum consists of the following:-

- (a) Study Capsules
- (b) Lectures and Panel Discussions
- (c) Field Tours
- (d) Research Activities-Thesis Writing
- (e) Seminars

9.85 The Course consists of seven study capsules. In the 41st NDC Course, these were conducted as per the details given below:-

Sl. No.	Study Capsules	Duration
(a)	Socio-Political Study of India	January 10 to February 16, 2001
(b)	Economy, Science and Technology	February 19 to April 4, 2001
(c)	International Security Environment	April 9 to May 16, 2001
(d)	Study on Global Issues	June 18 to July 18, 2001
(e)	India's Strategic Neighbourhood	July 30 to August 27, 2001
(f)	India's Immediate Neighbourhood	August 28 to September 14, 2001
(g)	Strategies and Structures for National Security	October 3 to November 23, 2001

9.86 Eminent persons with great expertise in their respective fields are invited to speak at the College to build foundations of the course. Guest speakers include a mix of academicians, professors, diplomats, journalists, politicians, civil service officers and industrialists.

9.87 On some of the important issues, where there are sharply differing perceptions, or where views from multi-disciplinary sources are required, panel discussions are arranged. A number of foreign dignitaries and senior officers visiting India also come to the College and give talks and Lectures. About 197 experts were invited to speak to the course members of 41st NDC course. They

provided valuable and diverse inputs for the studies.

9.88 The Field Tours form an extremely important part of the curriculum. These tours help in validating the knowledge gained in the classroom by relating it to the ground situation. Such tours also provide an excellent opportunity to interact with top leadership, government agencies, management of various establishments and industrial complexes of various states in India as well as foreign countries. The tours broaden the horizon of the studies on National Security and help in imbibing invaluable knowledge and expertise on such a vast subject. The 41st Course members undertook the following tours:-

(a) Domestic Tours :-

Tour	Duration
(i) Socio-Political Tour	January 29 to February 2, 2001
(ii) EST Tour	March 12 to 16, 2001
(iii) Frontier Tour	April 16 to 20, 2001
(iv) Foreign Students Tour of Defence Industries and Training Establishments	July 19 to 27, 2001
(v) Naval Tour	September 30 to October 2, 2001
(vi) Air Force Tour	November 7 to 09, 2001

(b) Foreign Countries Tour : Visit to major military installations and industrial agencies and personal contact with senior international leaders abroad contribute to the rich core of the curriculum at the NDC as these are essential tools to successfully continue the leadership into the 21st Century. The Course members undertook a Foreign Countries Tour from May 21 to June 1, 2001 in six groups as follows:-

- (i) Yugoslavia - USA
- (ii) Oman - Spain
- (iii) Japan - Myanmar

- (iv) Israel - Poland
- (v) Bulgaria - Germany
- (vi) Saudi Arabia- Turkey

(c) **SAARC Tour** : The Course Member visited the SAARC countries in five separate groups from September 17 to 20, 2001. Each group visited one SAARC country. They could discern the views of important personalities and the desire to strengthen regional cooperation and trends towards greater regional cohesion in areas of mutual benefit involving economic, social and functional co-operation.

9.89 **Research Activity-Thesis Writing** : During the NDC Course, each course member is required to undertake thesis writing work. The aim of the individual thesis is to enable course members to make an original contribution to the prevailing knowledge on a subject of a national or international interest that has a bearing on national security. The theses are evaluated and the best five theses are selected for the award of Pyare Lal Gold Medal and Book Prizes.

**COLLEGE OF DEFENCE
MANAGEMENT (CDM)**

9.90 Over the last three decades, the College of Defence Management has emerged as a unique institution in the country, and one of the few of its kind in the world imparting training in defence management to officers of the rank of Major to Major General and equivalent in the three Services. CDM

motto is “Naipunyat Vijayo Dhruvam”, which on translation means “Victory Through Excellence”. The College has trained over 5000 officers of the three Services, Ministry of Defence and friendly foreign countries in modern management techniques optimized for the defence services. In view of its achievements in the field of defence management, the College has been recognized by the All India Management Association (AIMA) as a centre of excellence, and granted the ‘Cooperative Member’ status along with other selected Institutes of Management in India.

9.91 **Vision:** College of Defence Management is dedicated to being the Nation’s leading centre of excellence in developing management thought to optimize the effectiveness of the Defence Services.

9.92 **Mission:** 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.

9.93 **Objectives :**

- (a) To promote application of modern management concepts and techniques in the services through excellence in conduct of pragmatic training programmes.
- (b) To develop expertise in matters related to human and material

resources, jointmanship and management of Inter-Service Organizations.

- (c) To establish excellence in academic and advisory reputation in the field of defence management and
- (d) To provide defence management related research and consultancy support.

9.94 **The New Home:** The College shifted to its new location in May 2001. This 54 acre sprawling campus is equipped with the most modern and state-of-the-art training aids. A well laid out IT Centre with over 100 computers and an equal number of printers; three storied library with over 27000 books on management and 25 computer based work stations; two octagonal halls with a seating capacity of 100 each; and an auditorium with a capacity of 300 fitted with the latest Crestron projection control system are only a few of the training support equipment installed. Phase-2 construction work for remaining administrative infrastructure has commenced in December 2001.

**DEFENCE SERVICES STAFF COLLEGE
(DSSC)**

9.95 The Defence Services Staff College established in the year 1948, 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 officers from the Indian Civil Services.

9.96 With a modest beginning of training 50 officers in 1948 the College has on its rolls

432 student officers including 34 officers from 24 friendly countries and six officers from the civil services.

9.97 The aim of the College is to train selected officers of the three Services in command and staff functions in peace and war, in their own service, inter service and joint services environment, as also to provide related general education to enable them to perform effectively in command and staff appointments tenable by Majors or Colonels in the Army, Lieutenant Commanders to Captains in the Navy and Squadron Leaders to Group Captains in the Air Force.

9.98 The training philosophy of the college is based on the principles of self-learning and self-advancement. During their stay for a period of 45 weeks the student officers are guided towards self-development by the Directing Staff. Another outstanding facet of the training philosophy at the College is the importance given to development of 'jointmanship' within the services. Nearly 60 percent of the training curriculum is devoted towards joint training which facilitates understanding of the functioning of the other services by the student officers.

9.99 In order to broaden the horizon of the students in the fields of academics and



Cadets in Jubilant mood on successful completion of training

general awareness, the DSSC invites a large number of eminent personalities to talk to the officers on a wide range of subjects which include strategy, leadership, geopolitics science and technology, international relation etc.

9.100 The DSSC is affiliated to the University of Madras, which awards students the Master of Science degree in Defence and Strategic Studies on successful completion of the course.

9.101 The College possesses a wide range of modern training facilities such as Internet, Local Area Network, a well-equipped modern Library and many state-of-the-art training equipment to enhance the quality of training.

9.102 The dictum of healthy mind in a healthy body has been followed unscrupulously at the College. The College boasts of availability of finest facilities for sports and pastime activities. The range of activities include angling, hiking, para sailing, skeet shooting, hunt, golf. All racquet games, dramatics and sailing to name just a few. Officers and lady wives are encouraged to pursue their hobbies, hone skills and acquire new pursuits.

MINISTRY OF DEFENCE LIBRARY

9.103 The Ministry of Defence Library provides literature on relevant subjects to officials responsible for planning and policy formulation in the Ministry of Defence, three Services Headquarters, Inter-Service Organisations and other allied Defence Establishments located in Delhi. During the year, the library added 1188 books, subscribed to 123 Journals and 27 Newspapers. It specializes in Defence and related subjects, besides catering to the needs of general reading clientele. Photocopies of 120 Articles were circulated to the Senior Officers as part of the Special Dissemination of Information service. The Library also issues three Bulletins periodically on new additions of books, Selected articles from Journals/ Newspapers. The reading material for the library is selected by a Book Selection Sub-Committee.

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RECRUITMENT AND TRAINING



Military Training Centre at Leh (J&K)

10.1 The Armed Forces epitomise 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 into the Armed Forces provided he meets the laid down physical, medical and educational criteria.

RECRUITMENT OF OFFICERS

10.2 Recruitment of Commissioned Officers in the Armed Forces is mainly done through the Union Public Service Commission (UPSC). For technical branches, women special entry scheme, NCC special entry scheme and service entries recruitment is made directly through the respective Recruiting Directorates for the Army, the Navy and the Air Force.

RECRUITMENT THROUGH THE UPSC

10.3 The UPSC holds an all-India competitive examination, known as the Combined Defence Services Examination (CDSE), twice a year. University graduates are eligible to appear in the examination. Successful candidates join the respective training academies, viz., the Indian Military Academy (IMA) for the Army, the Naval Academy for the Navy and the Air Force Academy for the Air Force.

10.4 The UPSC also holds, twice a year, an examination for entry into the National

Defence Academy (NDA). Candidates on completion of the 10+2 Examination or while in the 12th standard, are eligible to compete. Successful candidates join the NDA. On completion of the NDA course, they are sent to the respective Service academies for their pre-commission training.

RECRUITMENT THROUGH SELECTION BOARDS

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

ARMY : All Arms of Services.

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

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

UNIVERSITY ENTRY SCHEME

10.6 Final/pre-final year students in Engineering disciplines are eligible for induction into the technical Branches/Services of the Army, as Commissioned Officers under the University Entry Scheme.

SHORT SERVICE COMMISSION (TECHNICAL) ENTRY SCHEME

10.7 The Short Service Commission (Technical) Entry Scheme envisages recruitment of qualified technical graduates through the SSBs, to attend the Officers Training Academy (OTA), Madras, after medical tests, for a 10 month course. On completion of training at the OTA, successful candidates are inducted as Short Service Commissioned Officers in the Technical Branches of the Army.

RECRUITMENT OF MEDICAL OFFICERS

10.8 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, the Director General of the Armed Forces Medical Services conducts an all India competitive examination.

RECRUITMENT OF WOMEN OFFICERS

10.9 Eligible women are recruited as officers on Short Service Commission basis in the following Branches of the Armed Forces.

ARMY : EME, Signals, Engineers, Army Education Corps,

Army Ordnance Corps,
Army Service Corps,
Intelligence and Judge
Advocate General's
Branch.

NAVY : All Branches of the Indian
Navy

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

RECRUITMENT THROUGH NCC

10.10 University graduates possessing NCC 'C' Certificate with minimum 'B' grading and 50% marks in graduation are inducted in the Navy and Air Force as Regular Commissioned Officers and as Short Service Commissioned Officers in the Army. These graduates are exempted from appearing in the CDSE conducted by the UPSC and are selected through the SSBs.

INDUCTION UNDER SPECIAL COMMISSIONED OFFICERS SCHEME

10.11 Government had approved the creation of a 6,000 strong Support Cadre of Special Commissioned Officers. These posts are filled up by eligible JCOs and ORs. Under this entry, serving JCOs/NCOs/ORs in the age group of 30-35 years, with an Army Senior School

Certificate Pass (Class XI 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 six months duration. 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 Cadres/QM job/ERE appointments etc. 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 + 2 TECHNICAL ENTRY SCHEME

10.12 Under this scheme, candidates with 10+2 qualification, after selection through SSB, are sent for military and engineering training at IMA and the College of Military Engineering, Pune. Initial six months military training is followed by Degree Engineering Training of 4 years. The objective of this scheme is to help in bringing down the deficiency of officers in Technical Arms/ Services.

RECRUITMENT OF OTHER RANKS

10.13 Recruitment of Airmen to the Air Force is done through the Central Airmen Selection Board, located at the Air Force Station,

New Delhi. There are 13 selection centres under this Board.

RECRUITMENT OF JAWANS THROUGH OPEN RECRUITMENT RALLIES

10.14 A new system of recruitment has been introduced with effect from April 1, 1998. Under the revised system, recruitment of jawans in the Army is carried out through open recruitment rallies only. Recruitment rallies are planned well in advance, keeping in view the geographical, demographical and topographical considerations. At least one such rally is held in each month, combining districts, areas and regions, depending upon the response anticipated, thereby giving every aspirant, irrespective of his place of residence, minimum one opportunity in a year to get himself enrolled in the Army. In the old system of Branch Recruiting Office-oriented recruitment, aspirants had to travel long distances to reach the nearest BRO for enrolment, whereas in the revised system, recruitment has been brought closer to their area of domicile. Advance publicity regarding an ensuing rally in a particular area/district is given by putting up hoardings, advertisement in local newspapers, radio etc.

PUBLICITY FOR RECRUITMENT

10.15 Measures have been taken to make the youth of our country more aware of the opportunities in the Army, both for officers including women officers and Other Rank

categories. 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 – National Defence Academy, Combined Defence Services Examination, Technical Graduate Course, Short Service Commission (Technical and Non-Technical), University Entry Scheme, Law Graduates, Induction in Medical Services for both men and women, Special Entry Scheme (Officers), Havildar Instructors, Junior Commissioned Officers (Catering and Religious Teachers) etc. A composite advertisement on various entries in the Army is also brought out periodically both in English and Hindi. Concerned Zonal Recruitment Offices/Branch Recruitment Offices (BROs) also publish advertisements on recruitment of Other Ranks in local regional newspapers.
- b) **Advertisements in Journals/Magazines:** These are normally brought out in the journals of educational institutions.
- c) **Hoardings :** Hoardings are erected at ZRO/BRO premises as well as adjacent to Engineering Colleges all over the country to attract technical

talents into the Army. DAVP approves the sites and, thereafter, the hoardings giving detailed information are installed and maintained by them.

- d) **Printed Publicity:** Information folders, leaflets, brochures, data cards, posters and blow-ups, prepared through DAVP and private professional agencies are widely distributed.
- e) **Exhibition and Fairs:** Each 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.

IMAGE PROJECTION CAMPAIGN

- 10.16 To meet out the shortage of officers and bring out awareness of the opportunities that are available on commissioning in the Army amongst the target group (youths) an advertising campaign was launched in September 1997 with the assistance of a professional advertising agency to project positive aspects of a wholesome career available to Service officer. The aim of the campaign was to reach out to every corner of the country through the print, audio, visual and audio-visual media. An evaluation check of the impact of the campaign through independent market

research agency MODE revealed that the campaign worked in the desired direction. On this basis the campaign is continuing.

TRAINING

- 10.17 Several features distinguish Human Resource Management in the Defence Sector. The training aims to equip the soldier with necessary inputs to make him not only an efficient fighting man, but also a man well informed on national and international developments. The specialised and rigorous recruitment procedures, the environment in which the defence officers have to interact, demand a holistic approach in 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 tandem to achieve these objectives.



Training of Jawans

SAINIK SCHOOLS

- 10.18 Sainik Schools were established as joint ventures between the Central and State Governments and under the overall governance of Sainik Schools Society. All the 18 Sainik Schools aim at preparing the students academically, physically and mentally to enter the Armed Forces through National Defence Academy (NDA).
- 10.19 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 removing regional imbalance in the officers cadre in the Armed Forces. Sainik Schools have been fulfilling these objectives for which adequate and varied infrastructure/ equipment have been provided.
- 10.20 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 July 1 of the year concerned. Admissions are made strictly in the order of merit, on the basis of an Entrance Examination held in February each year.
- 10.21 The scheme of entrance examination envisages a written examination and an interview. The candidates who qualify in the written examination are called for interview, keeping in view the number of vacancies available. Admission is further subject to the candidates being found medically fit,

- according to medical standards prescribed for entry to National Defence Academy.
- 10.22 Sainik Schools are wholly residential schools run on public schools' lines. All the Sainik Schools are also member of the All India Public Schools Conference. They offer a common curriculum and are affiliated to the Central Board of Secondary Education, New Delhi and follow the 10+2 pattern of education. These institutions also aim at developing sound character, team spirit, dedication to duty, patriotic outlook and desire to serve the country with efficiency, in the students.
- 10.23 The schools impart instruction in English medium, although knowledge of English is not a pre-requisite for admission. The schools offer only Science stream at the plus-two level as cadets are obliged to take the NDA entrance examination.
- 10.24 Sports and games, co-curricular activities, educational tours, excursions, adventure courses and socially useful productive works aimed at developing the dignity of labour, form an integral part of the training imparted in Sainik Schools. By the time a student leaves the school, it is aimed that he can play at least one major game well and has some knowledge of another, has picked up a hobby of his

liking and has taken part in some of the sports and co-curricular activities.

- 10.25 During the year 2001, a total of 108 students from Sainik Schools joined the NDA. Besides a number of students have joined Naval Academies, AFMC and IMA etc. As on date more than 6000 officers of the Defence Services are alumni of Sainik Schools.

MILITARY SCHOOLS

- 10.26 There are five Military Schools in the country at Chail, Dholpur, Belgaum, Bangalore and Ajmer. They admit boys in Class VI, based on an All India Entrance Examination. In Military Schools 67% vacancies are reserved for the wards of the Other Ranks, 20% for the wards of service officers and 13% for the wards of civilians.
- 10.27 The aim of these schools is to impart quality education to enable the students to take the All India Secondary School Examination and Senior Secondary Certificate Examination conducted by the CBSE and also to facilitate their entry into the NDA.

RASHTRIYA INDIAN MILITARY COLLEGE, DEHRADUN

- 10.28 The Rashtriya Indian Military College (RIMC) was founded on March 13, 1922 with the object of providing the necessary preliminary training for boys

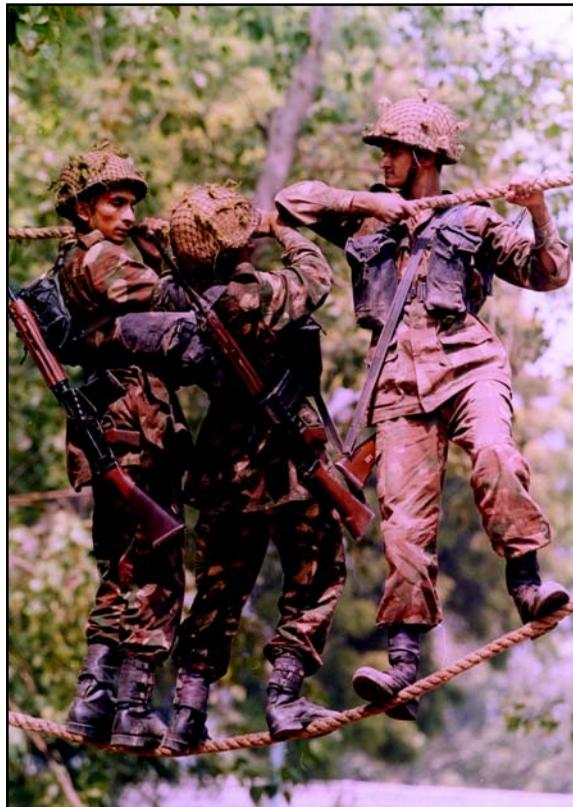
- of Indian birth or domicile, wishing to become officers in the Armed Forces of India. It was then named as the Prince of Wales Royal Indian Military College and the students (known as cadets), on completing the course of instruction for five years at the RIMC, used to enter pre-commission training establishments in the UK viz., the Royal Military College, Sandhurst, the Royal Military Academy, Woolwich and the Royal Air Force College, Cranwell. The name was changed to "Sainik School" for a brief period and eventually to the present name.
- 10.29 With the establishment of the Indian Military Academy at Dehradun in 1932, this college discontinued sending its cadets to UK for the King's Commission and the cadets from the RIMC were admitted into the Indian Military Academy with effect from that year for the Indian Commission. The institution now serves as a feeder institution to the National Defence Academy, Khadakwasla(Pune), where cadets of the Army, Navy and Air Force receive their initial training.
- 10.30 **Aim and Scope :** The object of the Government in maintaining this College is to train suitable candidates for admission to the NDA. Cadets from RIMC are not admitted directly into NDA. They are required to qualify at the UPSC competition examination and the Services Selection Board.
- 10.31 The College provides education on the lines of Residential Public Schools for boys who desire to join NDA subsequently, with a view to obtaining a commission in the Armed Forces. However, the course of study is such that, should a cadet fail to qualify for NDA, he will be in a position to join a College/professional institution/university on graduating from RIMC.
- 10.32 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 August, 25 cadets per term with maximum strength of RIMC being 250.
- 10.33 **Training :** The intake of boys is at class VIII, in the age group 11-1/2 to 13. The college runs classes from 8th to 12th on 10+2 CBSE pattern. The academic instruction imparted is designed to prepare the students for:-
- Secondary School Examination at the end of class X conducted by Army Headquarters and recognized by Central Board of Secondary Education.
 - Senior School Certificate Examination at the end of class XII conducted by Army Headquarters and recognized by Central Board of Secondary Education.
- UPSC examination for admission into NDA, for which minimum educational qualification is class XII.
- 10.34 In addition to the academic training, the RIMC provides ample scope for the enrichment of the social and cultural life. To provide free play to their natural interest and make education interesting and effective, various activities are organized at different levels at the College to include various clubs and adventure activities.
- NATIONAL DEFENCE ACADEMY
(NDA), KHADAKWASLA**
- 10.35 NDA is a premier Joint Services Institution of the Nation for training of young cadets as future officers of the Defence Services. It has a four-fold aim:-
- Attain requisite educational standard and acquire mental, moral and physical qualities essential to their progressive and continued development as officers of the fighting services.
 - Obtain such basic service training as will assist in developing their character, initiative, self-confidence and above all qualities of leadership.
 - Develop ability to appreciate inter-service aspect of the Armed Forces.
 - Develop an interest in extra curricular activities of the out-door type.

10.36 The motto of the Academy is “SEVA PARMO DHARMA” (Service before self).

10.37 Entry into NDA is based on a competitive examination conducted by the UPSC. Cadets of the 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 wherein 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.

10.38 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 B.A. or B.Sc. degree at the time of passing out from the Academy.

10.39 **Training :** The training curriculum at NDA is structured to impart Service and Academic training to the cadets with a great amount of emphasis being laid on extra curricular and out-door activities to develop the “whole man” concept and the finer aesthetic qualities which are pre-requisites of the Officer cadre in the Defence Services.



Jawans undergoing training

10.40 A number of cadets from friendly countries like Bhutan, Nepal, Sychelles, Singapore, Afghanistan, Tanzania, Ghana, Maldives and Palestine etc. have undergone training at NDA. Presently cadets from Nepal, Bhutan, Maldives and Palestine are undergoing training at NDA.

10.41 **Strength Under Training :** The present strength of NDA is 1787 including 77 foreign cadets. This includes 60 cadets from Bhutan, 9 cadets from Palestine and 8 cadets from Maldives.

INDIAN MILITARY ACADEMY, DEHRADUN

10.42 The Indian Military Academy (IMA) established in 1932, boasts of a glorious and colourful history. The Academy is located in between Shivalik and the Himalayan foothills, in the salubrious climate of Dehradun. With the forest environment and rugged mountains, close to the mythological ashram of Dronacharya, it forms the idealistic training ground for commission in the profession of arms.

10.43 **Aim :** The aim of the IMA is to train Gentlemen Cadets (GCs) for commission into the Army. It also has a Wing for training service cadets selected for commission in the Army.

10.44 It aims at the fullest development of intellectual, moral and physical qualities with basic military training and broad academic education. It develops the qualities of dynamism, initiative and understanding, which forms the very basis of leadership in war, as well as in peace. The Academy motto sums it all – “VEERTA AUR VIVEK” meaning “Valour and Wisdom”.

10.45 **Modes of Entry** – 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 Graduates.
- e) University Entry Scheme for engineering college students in Final/Pre-Final year of studies.

10.46 **Training :** IMA also imparts training to Gentlemen Cadets from friendly countries like Maldives, Mauritius, Seychelles, Sri Lanka, Nepal, South Africa and Bhutan.

10.47 In addition to basic service training and broad academic education, IMA has a number of extra curricular activities to develop a fully rounded personality inculcating finer aesthetic qualities.

10.48 **Strength of IMA:** The present strength of IMA is 1607 Gentlemen Cadets. The 109th Regular and 92 Technical Graduates Course have commenced from December 8, 2001.

ARMY CADET COLLEGE

10.49 This is a wing of IMA which caters for training of service cadets selected for commission. The academic format is similar to NDA on the lines of 10+2+3 and the syllabus is common. On completion of the course these cadets also qualify for a B.A. or B.Sc. degree, recognized by the Jawaharlal Nehru University.

OFFICERS TRAINING ACADEMY, CHENNAI

10.50 The Officers Training Academy was established in 1963 as an Officers Training School to meet the increased demand of officers in the Army. It was re-designated as Officers Training Academy from January 1, 1988 on completion of 25 years of its existence. To begin with, its main task was to train Gentlemen Cadets for grant of Emergency Commission. From 1965 onwards, the Academy started training cadets for Short Service Commission, after which the former commission was dispensed with.

10.51 Since September 21, 1992, the Indian Army has opened up its portals for entry of women as Commissioned Officers. Initially 50 lady cadets were commissioned every year, with the entries presently limited to Army Service Corps, Army Ordnance Corps, Army Education Corps, Judge Advocate General's Department. Corps of Engineers, Signals and Electrical and Mechanical Engineers. Strength of lady cadets from March 1997 course has been enhanced by 50 per course i.e. 100 per year.

10.52 **Aim :** The aim of OTA is to train Gentlemen/Lady cadets so as to make them fit for a Short Service Commission in the Army.

10.53 The training is designed to:

- a) Impart basic military knowledge.

- b) Provide broad based general education to stimulate interest in professional studies and generate general awareness.

- c) To develop highest qualities of leadership, moral and physical courage and physical fitness.

- d) To instill high sense of patriotism, devotion to duty, discipline, integrity, loyalty and honour.

10.54 The OTA imparts pre-commission training for the following courses:

<u>Sl. No.</u>	<u>Course</u>	<u>Educational Qualification</u>
a)	Short Service Commission (Non-Technical)	Graduation
b)	Short Service Commission in (Technical)	University Graduation Engineering.
c)	Women's Special Entry Scheme	Graduate/ PostGraduate.

10.55 **Strength of OTA :** Against the designated capacity of 500, OTA is presently training 522 GCs including 85 Lady Cadets.

10.56 In addition OTA conducts orientation training for selected service personnel for grant of Permanent Commission (Special List) as Technical and Records Officers.

COLLEGE OF COMBAT, MHOW

10.57 The College of Combat is the premier institution of the Indian Army. It imparts



Recruits Under Training

training in the leadership, strategy and tactics to its officers ranging from Captains to Generals. Its creation in April 1971 fulfilled a long felt need to impart integrated all-arms-training to officers, to promote inter-service jointmanship and to encourage doctrinal research on matters of military. The College trains over 1200 officers from armed forces and para military forces every year. About 100 officers from friendly countries are also trained every year.

10.58 Training Vision :

- (i) To harmonise and synchronise the training in the three wings of the college so that they act as stepping-stones to the next level of leadership.
- (ii) Contemporary teaching based on realities of existing operational environment and proposed modernization of the Army.
- (iii) Validate new operational and

logistic concepts through war games & discussions.

- (iv) Keep updated on Pakistan and China.
- (v) Provide enemy syndicate for Army Headquarters wargames and
- (vi) Conceptual studies and seminars.

10.59 Pillars of Strength :

- (i) **HC Wing:** The Higher Command Course is pitched at the directional and conceptual level. Selected officers are trained in higher command with particular emphasis on a division and are prepared to hold senior staff and command appointments.
- (ii) **SC Wing:** The Senior Command Course is pitched at the functional level. Selected Majors and Lieutenant Colonels of all arms and services are trained in the tactical environment of a battalion or a combat group as part of a brigade group or combat command in co-operation with other arms and services and air.
- (iii) **JC Wing:** The Junior Command Course is pitched at the active and functional level. Officers of all arms and services, with not less than six years of service, are trained in the tactical environment of a rifle company or combat team as part of

a battalion or combat group, in co-operation with other arms and services and air.

10.60 **Faculty of Studies:** The Faculty of Studies with a task of study and research has acquired for itself the sobriquet of the Commandant's think-tank. It keeps abreast with all tactical, logistical and technical developments in India and abroad in all aspects connected with training at this College. It acts as a bridge between tutorial precepts and ground realities in vetting various exercises. It revises and updates all training material and conducts lectures and demonstrations for the courses.

10.61 **Beyond the Charter:** Apart from running HC, SC and JC Courses, the College has also been conducting other major training programme like the 'Combined Operational Research and Evaluation Programme' for officers of the rank of Major Generals and their equivalents in the three Services. A 'Formation Commanders Orientation



Use of Infantry Weapons : Effect Simulator System Equipment

Programme' for Brigadiers awaiting command of divisions has also been introduced.

10.62 The College has been affiliated to DA University, Indore. HC Course students are eligible for award of M.Phil degree in Defence and Management. The students of SC and JC courses appear for Diploma in Senior/Junior Level Defence Management respectively. Chairs-of-Excellence have been instituted at the College for award of Ph.D degree.

10.63 The College is also planning to become a member of IMO (Indore Management Organisation). This will provide the College Faculty an opportunity for interaction with leaders of industry, management professionals and various delegations visiting Indore to provide a wider management and socio-industrial perspective.

JUNIOR LEADERS ACADEMY (JLA)

10.64 The Junior Leaders Academy(JLA) is a Category 'A' Institution raised to develop leadership qualities in the Junior Leaders of the Indian Army. The motto of the Academy – "NETRITVA SE JEET" , written in Hindi translates to – "VICTORY THROUGH LEADERSHIP". The JLA was set up in the training year 1998-99. JLA shifted from its interim location at Madgaon to Bareilly in July 1999 and the COAS inaugurated the commencement of the courses by the Academy on August 20, 1999.

10.65 **Training :** Lal Bahadur Shastri Institute of Management and Technology (LBSIMT), Bareilly is recognized by the All India Council for Technical Education. The LBSIMT confers a diploma on alumni of JLA. The JLA conducts two courses for JCOs and NCOs of Indian Army.

10.66 **Junior Leader Course (JLC):** The aim of JLC is to develop leadership qualities enabling the participants to become self-reliant individuals capable of performing the functions of junior officers in their units, with greater confidence and minimum supervision.

10.67 **Potential Subedar Major (PSM) Course:** The aim of the course is to develop potential Subedar Majors into leaders with an enlarged vision, enhanced leadership qualities, high motivation levels and capable of functioning as model Subedar Majors.

10.68 **The JLA Experience:** Life on the campus is very much like any other educational institution where students live, study and play. The JLA provides many facilities for the multi-faceted development of leaders.

10.69 **The IT Revolution:** In keeping with the IT revolution the functioning of JLA has been automated in a big way. Apart from computers and its peripherals, equipment held by JLA includes state-of-the-art photocopier machine, digital camera, Web camera, VPS, animation software, scanners and video camera.

10.70 The quality of instruction is a key to the successful implementation of the JLA's vision and mission.

DEFENCE SERVICES STAFF COLLEGE

10.71 The Defence Service Staff College (DSSC) is one of the oldest military institutions, which was established in 1905 in Deolali and has been functioning at Wellington since 1950. The Defence Service Staff College imparts training to middle level officers of the three Services, besides a few civilian officers and officers from friendly neighbouring countries. The College conducts a 45 weeks training programme from June to April every year.

10.72 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 appointment as Maj/Lt Col and equivalent ranks in other Services.

HIGH ALTITUDE WARFARE SCHOOL(HAWS) GULMARG

10.73 High Altitude Warfare School (HAWS) is located at Gulmarg, approximately 65 kms North West of Srinagar. The winter warfare series of courses are conducted at Gulmarg. During the summers, the School moves temporarily to Sonamarg to conduct mountain warfare series of courses.

10.74 **Training** : Following courses are conducted at HAWS:-

a) **Winter Warfare Basic Course**: The aim of Winter Warfare Course is to :-

- i) train students in planning and execution of military recce and special mission operations in snow bound areas and
- ii) impart advance training in the technical aspects of High Altitude Winter Warfare (including snow craft and military skiing to train potential students for employment as instructors at HAWS.

b) **Winter Warfare Advance (WWA) Course** : The aim of WWA course is to:-

- i) train students in planning and execution of military recce and special mission operations in snow bound areas and
- ii) impart advancement training in the technical aspects of High Altitude Winter Warfare (including snow craft and military skiing) to train potential students for employment as instructors at HAWS.

c) **Mountain warfare(MW) Course** : The aim of MW course is to:

- i) impart tactical, administrative and technology training on all aspects

of High Altitude Mountain Warfare (including rock and ice craft) to officers upto company level and JCOs/NCOs upto platoon level of arms and services and

- ii) train unit instructors of infantry battalions detailed for induction in High Altitude Area.

d) **Mountain Warfare Advance(MWA) Course** : The aim of MWA course is to:-

- (i) train students in the planning and conduct of military recce, Special Mission Operations and Mountain Expedition in High Altitude Area and
- (ii) impart advance training on technical aspect of High Altitude Mountain Warfare (including rock and ice craft) and select potential instructors for employment as instructors at HAWS.

COUNTER INSURGENCY AND JUNGLE WARFARE SCHOOL(CIJW)

10.75 'Jungle Training School' was established in September 1968, under the Command of Lieutenant Colonel Mathew Thomas (Retired as Lieutenant General). The Counter Insurgency and Jungle Warfare School (CIJW) in its present form was established on May 01, 1970 as a Category 'A' Establishment at Veirangte (Mizoram). Brigadier Mathew Thomas was the

founder Commandant of the Institution. The School motto 'FIGHT THE GUERILLA LIKE A GUERILLA' is equally apt. The CIJW School is located at Veirangte – the gateway to Mizoram, astride NH-54 and lies approximately 50 Kms from Silchar.

10.76 **Training** : The role of CIJW School is to function as Army's Nodal Instructional Agency for training in counter insurgency and related aspects of Jungle Warfare. The training curriculum as part of charter of duties encompasses the following:-

a) **Pre Induction Training(PIT)**: The aim of PIT is to reorientate troops from conventional operations to insurgency environment keeping in view the peculiar conditions prevailing in the area. It is carried out for five weeks under the aegis of the Battalion Training Wing(BTW) for units earmarked for counter insurgency operations in the Eastern theatre. Training of other Services (Navy/Air Force), PMFs CPOs, State Police, units earmarked for UN missions and troops from foreign friendly countries is also undertaken on specific request.

b) **Courses of Instructions**: The Courses Wing is responsible for the conduct of courses. It conducts courses of instructions for junior leaders. The aim of these courses is to prepare junior leaders in the planning and conduct of counter insurgency operations at unit and

sub-unit levels. Personnel from friendly countries, OMFs and CPOs also attend the CIJW courses.

c) **Language Familiarisation:** It conducts Language Familiarisation courses in Nagamese, Manipuri, Tangkhul, Assamese and Bodo.

d) **Specific Instructional Programme:** It also conducts short Low Intensity Warfare capsules in the formations and other Categories 'A' training establishments.

e) **Study and Research**

(i) Develop techniques, drills and tactics to effectively deal with insurgency in the country.

(ii) Provide inputs to Headquarters ARTRAC for development of operational concepts and doctrines in Low Intensity Combat Operations(LICO).

(iii) Revision and updating of General Staff publications and other training material.

(iv) Assist in production of training films and other audio visual aids on Low intensity Conflict.

INFANTRY SCHOOL

10.77 The Infantry School is responsible for the following activities:-

a) Conduct courses as per the

schedules issued by the Military Training Directorate.

b) Develop new tactical doctrines, battle techniques and battle drills pertaining to infantry and introduce them after approval of the Army Headquarters.

c) Continuously study and keep abreast of tactical and technical developments in India and abroad on all matters pertaining to functions of the school.

d) Study and evaluate latest trends in the development of weapons, ammunition and equipment and offer comments to the Army Headquarters in this regard, as well as disseminate these through the courses of instructions.

e) Prepare pamphlets, ATMs and SATMs pertaining to Infantry tactics, battle techniques and battle drills.

f) Carry out trials of weapons, equipment and ammunition pertaining to Infantry as ordered by the Army Headquarters.

g) Assist Army Headquarters in formulating General Staff Qualitative Requirement and General Staff Personnel Services pertaining to weapons and equipment.

h) Assist Director General in holding Conference and Science and Technology Seminar.

i) Train Army Shooting Team and the National Shooting Team in precision shooting

j) Organise Army Rifle Association Meets.

k) Maintain close liaison with other Category 'A' establishments as regards conduct of courses.

l) Liaise with Research and Development and Defence Production agencies with regard to development of weapons, equipment and ammunition.

m) Prepare training pamphlets for all arms pertaining to weapons and field craft.

10.78 **Training :** Training is conducted in a systematic and sequential manner as central lecture and classes at the squad post. The lessons at the squad post are conducted by basic method of instruction. Students are assessed throughout the course.

a) **Courses:** The scope of courses encompasses the following:-

(i) Acquire proficiency in weapon handling.

(ii) Planning, conduct and supervision of weapon training.

iii) Ability to ensure correct documents, care and maintenance of the weapons at unit level.

iv) Qualities of good coach and instructor abilities.

b) Army Marksmanship Unit :

i) The Army Shooting Team was initially raised at 1 EME Centre, Secunderabad but was later shifted to Infantry School, in 1980 for providing better training and administration backup.

ii) The aim of raising Army Marksmanship Unit is to achieve excellence at world level precision shooting competitions, thereby bringing laurels to the Nation in general and Army in particular and also to meet the operation requirement of snipers and enhancing the marksmanship in the Army in general.

c) Weapons And Trials Wing : The school conducts courses for officers, JCOs and NCOs of Infantry, Other Arms and Services, PMF, CPO and friendly countries in technical and tactical handling of Infantry Weapons and trains Unit Instructors for the School and other training establishments. A total of 33 courses are conducted in a training year. The aim of the course conducted by Weapons and Trials Wing is to teach technical and tactical handling of Infantry Weapons and train unit instructors.

**COLLEGE OF DEFENCE
MANAGEMENT**

10.79 The Institute of Defence Management, Secunderabad was established in June 1970. It

was renamed as the College of Defence Management (CDM) in 1980. The College imparts training in defence management to the officers of the rank of Major to Major General and equivalent in the three Services. 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 training programmes conducted by the 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. It has been recognized by All India Management Association (AIMA) as a centre of excellence and granted the 'Cooperative Member' status along with other selected institutes of management in India.

MILITARY MUSIC

10.80 Training is imparted regularly to military bands at the Military Music Wing of the Army Educational Corps (AEC) Training College at Pachmarhi. A number of courses, ranging from one year to three



Martial Music

years, are being conducted at the Military Music Wing. Vacancies are also allotted to personnel of the Para Military Forces and to the students from friendly countries. The Military Music Wing of AEC Training College at Pachmarhi is the only institute of its kind in Asia.

ARMY ADVENTURE WING

10.81 The Army Adventure Wing conducts and supports various forms of adventure activities, keeping in view the following:-

- (a) Expose Army personnel to high risk training activities so that they take correct decision under pressure;
- (b) Develop spirit of camaraderie amongst volunteers;
- (c) Develop administrative skills while handling difficult situations;
- (d) Enhance self-confidence of team members; and
- (e) Inculcate leadership qualities in Army personnel.

NATIONAL DEFENCE COLLEGE

10.82 The National Defence College (NDC), inaugurated by our first Prime Minister, Pandit Jawahar Lal Nehru on April 27, 1960, is the only institution in the country that imparts knowledge on all aspects of national security and strategy. During the last 41 years, the NDC has grown from strength to strength and established a name for itself as a centre of excellence in National Security

and Strategic Studies. The College has provided education and training in a highly specialised and sensitive discipline to a large number of senior defence and civilian officers from India and abroad.

10.83 The NDC conducts National Security and Strategic Studies Course of 47 weeks duration. The aim of this Course is to equip future policy makers with the background necessary to give them a broad understanding of the multifarious economic, political, military, scientific and organizational aspects involved in the planning of National Strategy. Defence Forces officers of the rank of Brigadier and equivalent and Civilian Central Government Officers of the status of Director and above are nominated for training at the College.

10.84 The 41st NDC Course commenced with effect from January 08, 2001 and 83 officers from the Army, the Navy, the Air Force and friendly countries participated in it. About 197 experts were invited to speak to the course members. They provided valuable and diverse inputs for the studies. The course curriculum consists of Study Capsules, Lectures and Panel Discussions, Field Tours, Research Activities – Thesis Writing and Seminars.

10.85 **Foreign Countries Tour** : Visits to major military installations and industrial agencies and personal contacts with senior leaders and international leaders abroad contribute to the rich core of the curriculum at the NDC, as these are essential tools to successfully continue the leadership into the 21st Century.

The course members undertook a Foreign Countries Tour from May 21 to June 01, 2001 in six groups as follows:-

- (i) Yugoslavia - USA
- (ii) Oman - Spain
- (iii) Japan - Myanmar
- (iv) Israel - Poland
- (v) Bulgaria - Germany
- (vi) Saudi Arabia - Turkey

10.86 **SAARC Tour** : The Course members visited the SAARC countries in five separate groups from September 17 to 20, 2001. Each group visited one SAARC country. They could discern the views of important personalities and the desire to strengthen regional cooperation and trends towards greater regional cohesion in areas of mutual benefit involving economic, social and functional cooperation.

10.87 During the NDC Course, each course member is required to undertake thesis writing work. The aim of the individual thesis is to enable course members to make an original contribution to the prevailing knowledge on a subject of national or international interest that has a bearing on national security. Their theses were evaluated and the best five were selected for the award of Pyare Lal Gold Medal and Book Prizes.

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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 young age. Majority of service personnel, at the time of retirement, are at an age where they have numerous unfinished responsibilities, which necessitate their taking up of a second occupation. As per statistics maintained, a total of 16,75,211 ex-Servicemen (ESM) and 3,39,493 widows have been registered and reported to be surviving as on September 30, 2001. The ex-Servicemen population is mainly concentrated in the States of Uttar Pradesh (1,87,105), Punjab (2,11,413), Haryana (1,78,956), Maharashtra (1,57,068), Kerala(1,32,908), Tamil Nadu (1,07,997), Rajasthan (1,09,677), Uttaranchal (98,111) and Himachal Pradesh (81,651). A 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 the 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 organisations of RSBs, 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 ESM and their dependants.

RESETTLEMENT

11.2 Efforts continue to be 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 organisations; and
- (c) Schemes for self-employment.

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 (DGR). The emphasis of the programmes run by the DGR has been to organise employment/self employment-oriented training programmes, so as to open new resettlement avenues for Officers as well as for Other Ranks (ORs). A number of new courses and job-oriented training programmes have been included in the training schedule. The training includes inputs on managerial science as well as technology and know-how required in the

civil field. Constant endeavour is made to improve the quality of training to enhance the post employment opportunities of defence personnel and to equip them with necessary qualifications and expertise, commensurate with the skill and aptitude of each individual in the desired field of settlement in civil life.

OFFICERS TRAINING

11.4 The Resettlement Training Programmes range from vocational courses of 3 months duration to degree/diploma courses in Business Administration, Personnel Management, Hotel Management and Tourism, Human Resource Training and Development etc. of one to three years' duration. During 2001-02 (upto October), 334 officers have been trained in various disciplines.

JCOs/ORs AND EQUIVALENT TRAINING

11.5 Training Programmes were also undertaken for the retiring as well as retired JCOs/ORs and their equivalents from the three Services. These programmes included vocational courses like Security Management, Export/Import Management, Marketing/Sales Management and Travel Agency Management. In an endeavour to further increase their employment potential, courses like Computer Hardware Maintenance, Diploma in Medical Laboratory and X-Ray/ECG Technology, Ceramic Handicraft, Electroplating,

Machinist and Lens Making, Computer Science and Application, Office Automation, Computer Aided Designing (CAD), Printing Technology and Desk Top Publishing (DTP), Bee-Keeping, Poultry Farming, Crop Production, Dairy and Animal Husbandry, Assistant Security Officer, Industrial Security and Fire Fighting Courses etc. are being conducted. The Directorate General Resettlement (DGR) has been conducting more than 400 courses for vocational training. Besides, courses at more than 200 ITIs for pre and post release training, and On-the-Job Training (OJT) courses at 85 PSUs /Departmental Undertakings along ex-Servicemen Resettlement Training Schemes are being run.

11.6 The details of the personnel imparted training in various fields during the last five years, till October 2001 are as follow:

SCHEME	1997-98	1998-99	1999-2000	2000-01	2001-02 (upto Oct. 2001)
Officers					
Training	1150	606	431	249	334
PBOR					
Training	5114	5824	4563	3869	4989
On the Job					
Training	1228	1419	1393	840	1500
ITI					
Training	1324	1292	1847	4000	2675

RE-EMPLOYMENT

11.7 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, priority employment to disabled ex-Servicemen and dependants of deceased service personnel on compassionate grounds.

RESERVATION FOR EX-SERVICEMEN IN GOVERNMENT JOBS

11.8 The Central Government has reserved 10% of Group 'C' posts and 20% of Group 'D' posts for ex-Servicemen. Central Public Sector Undertakings and Nationalised Banks provide 14.5% reservation in Group 'C' and 24.5% in Group 'D' posts to them. 10% posts of Assistant Commandants in Para Military Forces are also reserved for ex-Servicemen. In addition, most of the State Governments, except for the States of UP, Bihar, Jammu & Kashmir, Kerala and Meghalaya, are providing reservations to ex-Servicemen in the State Government jobs. It has, however, not been possible to have statutory backing to the reservations inter alia due to the overall ceiling of 50% imposed by the Supreme Court and 49.5% reservation already having been provided in the Government jobs for SC/ST/OBC. Therefore, the reservation for the ex-Servicemen is not of vertical nature as in the case of reservation for SC/ST/OBC. It is of horizontal nature, which implies that

ex-Servicemen selected against the vacancies reserved for them are subsequently adjusted against the relevant category i.e., SC, ST, OBC or General to which they belong. There is also no carry forward of unfilled reserved vacancies under horizontal vacancies.

RELAXATION IN AGE

11.9 Ex-Servicemen have been provided age relaxation to the extent of military service plus three years against reserved/unreserved vacancies in Groups 'C' and 'D' posts and also in Groups 'A' and 'B' posts which are filled otherwise than by way of competitive examinations. The age relaxation is restricted to five years in Groups 'A' and 'B' posts which are filled by competitive examination.

RELAXATION IN EDUCATIONAL QUALIFICATIONS

11.10 Ex-Servicemen have been granted relaxation in prescribed educational qualifications. Army Class I, II and III certificates have been equated to 8th class, 6th class and 4th class respectively in the civil field. For reserved vacancies for which the minimum educational qualification is matriculation, an ex-Serviceman, who has put in at least 15 years of service and has passed Army Class I or equivalent, is considered eligible. For the reserved jobs, for which the minimum educational qualification is graduation, an ex-Servicemen who has put in at least 15 years of service in the Army and has passed Matriculation or equivalent examination is considered eligible.

SECURITY AGENCIES

11.11 The Directorate General of Resettlement (DGR) registers/sponsors Security Agencies for providing Security Guards to various Public Sector Undertakings and industries in private sector. The Scheme offers self-employment opportunities to retired Defence Officers and employment opportunities to ex-PBOR. The Department of Public Enterprises (DPE) had issued instructions to the PSUs to get security personnel through DGR sponsored Security Agencies. The Scheme has shown good results. The Director General Resettlement has also requested the Chief Secretaries of all States urging them to issue suitable instructions to all concerned under their jurisdiction to obtain security cover through DGR empanelled agencies, to enhance opportunities for the resettlement of the ex-Servicemen.

PLACEMENT OF JCOs/ORs

11.12 The number of ex-Servicemen, who were provided employment through DGR and Zila Sainik Welfare Offices in the States during the last five years is as follows:

PLACEMENT OF JCOs/ORs					
	1997	1998	1999	2000	2001*
Central Govt	4023	5188	3992	4035	2101
State Govt	4815	2825	2540	2219	1090
Private Sector	5424	3306	3068	2766	1494
Security Agencies	8873	7140	13810	8717	5882

*Figures for 2001 are provisional.

OFFICER'S EMPLOYMENT

11.13 During the year 2001 (upto October 2001), 408 officers were registered with the DGR for employment assistance, out of which the names of 106 officers were sponsored for employment.

SCHEMES FOR SELF-EMPLOYMENT

11.14 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. Important self employment schemes are SEMFEX-I, SEMFEX-II, National Equity Fund Scheme and SEMFEX-III. Application for sanction of loans are submitted by ex-servicemen direct to the concerned Zila Sainik Boards in the States. The applications are scrutinised and those who satisfy eligibility criteria and other terms and conditions are recommended for sanction of loan through State Financial Corporations, aided by Small Industries Development Bank of India (SIDBI), Scheduled Commercial Banks, District 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).

EX-SERVICEMEN COAL TRANSPORT COMPANIES

11.15 Special provision exists for sponsoring ex-Servicemen coal transport companies for the execution of work in coal subsidiaries of the Coal India Limited. The unemployed retired officers and JCOs registered with DGR are selected to form ex-Servicemen coal transport companies and are sponsored to respective coal subsidiaries for five years, extendable by another two years. 102 companies of ex-Servicemen employing over 6000 personnel are operating in six different coal sub-subsidiaries of Coal India Limited.

ALLOTMENT OF OIL PRODUCT AGENCIES TO THE EX-SERVICEMEN/ WIDOWS/ DEPENDENTS UNDER DEFENCE QUOTA

11.16 Ministry of Petroleum and Natural Gas have reserved 8% of Oil Product Agencies, i.e. LPG, petrol pumps, kerosene depots etc. for disabled soldiers with disability of 50 per cent or more and attributable to military service, widows and dependants of those who died in war/peace due to causes attributable to military service. DGR sponsors eligible candidates for selection by the Oil Selection Board constituted by the Ministry of Petroleum & Natural Gas. Final allotment is made by the concerned oil company. Approximately 70-80 'eligibility certificates' are issued every year. In

YEAR-WISE BREAKUP OF NUMBER OF CASES CLEARED FOR SETTING UP PRODUCTION UNITS IN VARIOUS SCHEMES, LOAN AMOUNT SANCTIONED AND ACTUAL DISBURSAL OF LOAN					
Amt in Rs. Lakh					
SCHEME	1996-97	1997-98	1998-1999	1999-2000	2000-01
SEMFEX-I					
No. of cases	10	12	12	9	Nil
Amt Sanctioned	13.75	5.50	15.49	5.63	Nil
Disbursed	10.41	5.50	14.97	5.61	Nil
SEMFEX-II					
No. of cases	415	359	468	297	4679
Amt Sanctioned	289.16	179.76	379.17	274.51	2828.16
Disbursed	192.87	171.04	266.94	265.98	2574.37
SEMFEX-III					
No. of Cases	39	45	13	83	703
Amt Sanctioned	119.39	57.13	27.24	135.54	581.22
Disbursed	105.47	48.84	25.19	100.79	380.36
NATIONAL EQUITY FUND SCHEME					
No. of cases	—	—	—	—	13
Amt sanctioned	—	—	—	—	41.1
Disbursed	—	—	—	—	41.1

addition to the 8% reservation, Ministry of Petroleum & Natural Gas has announced a Special Scheme for direct allotment of Retail Outlet/LPG distributorship to widows/next of kins (NOK) of Service personnel killed in action in Kargil.

ALLOTMENT OF ARMY SURPLUS CLASS V-B VEHICLES

11.17 Ex-Servicemen and serving personnel due to retire within six months, can apply for Army Surplus V-B vehicles. The allotment is made by the Army Headquarters through nine vehicle depots. On an average, 800 applications are registered every year under this scheme.

RESERVATION OF CSD AND LOW TECHNOLOGY ITEMS MANUFACTURED BY THE EX-SERVICEMEN ENTREPRENEURS

11.18 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 the ex-Servicemen Entrepreneurs under the Defence Purchase Programme for which ex-Servicemen manufacturing units alone are eligible.

GRANT OF PRICE SUBSIDY TO THE EX-SERVICEMEN'S SMALL SCALE INDUSTRIAL UNITS

11.19 The ex-Servicemen's manufacturing units, supplying stores to Defence Establishments under Defence Purchase Programme, are eligible for 10% price subsidy of the total

value of stores supplied or Rs 50,000, whichever is less in a financial year for five consecutive years. 39 ex-Servicemen units have been granted over Rs 60 lakhs under the scheme so far.

ALLOTMENT OF PARKING SITES IN NEW DELHI

11.20 The New Delhi Municipal Committee currently has 105 parking slots in the area under their jurisdiction. 50% of these parking slots are allotted to ex-Servicemen on the basis of open limited tenders.

ALLOTMENT OF TYPEWRITERS/ DUPLICATORS

11.21 Ex-Servicemen are eligible to apply a maximum of five repairable typewriters and one duplicator through the DGR. These typewriters and duplicators are allotted by Directorate of Military Records and Forms through Regional Stationery Depots on nominal payment. On an average, 60 applicants including Officers and JCOs are allotted these machines every year. As per feedback, these machines are used for setting up typewriting institutions in rural areas.

ALLOTMENT OF MOTHER DAIRY/ DMS MILK BOOTHS AND FRUIT & VEGETABLE OUTLETS

11.22 This scheme was launched in consultation with the National Dairy Development Board (NDDB) to provide ready-made booths with deep freezers, electronic weighing machines and other accessories

costing approximately Rs 8 lakh borne by NDDB. Ex-Servicemen upto the rank of JCO or its equivalent, below the age of 55 years, are eligible for allotment of Mother Dairy Milk Booths and Fruit & Vegetable outlets till such time they attain the age of 60 years. More than 4500 ex-Servicemen have benefited under the scheme since 1987 on a rotational basis. Based on the success of this scheme, other States have also been approached to provide similar facilities to ex-Servicemen. Tamil Nadu and Karnataka have already responded with 50% and 100% reservation for allotment of automatic milk vending booths in their States.

WELFARE

11.23 The Kendriya Sainik Board (KSB) under the Chairmanship of Defence Minister has been established for laying down the general policies on the welfare of ex-Servicemen (ESM) and their dependents; for the administration of welfare funds and also for coordinating the work of Rajya Sainik Boards (RSBs) and Zila Sainik Boards (ZSBs). The expenditure on the resettlement work in the States is shared by the Central and the State Governments in the ratio of 50:50. The KSB also administers Armed Forces Flag Day Fund collected on Flag Day through sale of car flags and token flags. Various welfare activities are financed from interest earnings of the Fund. The Fund has a corpus of Rs 93.62 crores as on date. 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 ESM and their dependents. Financial assistance is also provided to individual ESM and their families who are in a state of penury to meet their specific needs.

FINANCIAL ASSISTANCE FROM RAKSHA MANTRI'S DISCRETIONARY FUND

11.24 A portion of the earnings of Armed Forces Flag Day Fund is set apart as Raksha Mantri's Discretionary Fund to provide financial assistance to poor and needy ex-Servicemen for various purposes viz. medical treatment, marriage of daughters, repair of houses, education of children. Monthly financial assistance upto a period of two years is also provided to old and infirm ex-Servicemen/widow of ex-Servicemen living in penury.

CONCESSIONS AND FACILITIES

11.25 Under-mentioned concessions and facilities are available to eligible personnel:-

- (a) Free educational facilities to children of defence personnel killed or disabled in action.
- (b) 28 seats in the MBBS, one seat in BDS and two seats in engineering stream

are available through KSB to dependants/wards of certain categories of defence personnel.

- (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 of Rs 600 and Rs. 300 p.m. per student are provided to wards of war bereaved, disabled attributable and non-attributable peace time casualties, respectively, housed in 35 War Memorial Hostels to enable them to pursue their studies.
- (f) **Medical facilities:**
 - (i) Ex-Servicemen, their families and families of deceased service personnel, drawing pension of any kind, are entitled to free out-patient treatment at Military Hospitals. These personnel can also be provided in-patient treatment in Military hospitals subject to certain conditions. In addition to the existing military hospitals, 24 MI Rooms and 12 dental centres have specially been created from the funds provided by the Services and KSB for provisioning medical

facilities to ex-Servicemen pensioners and their dependants.

(ii) Ex-Servicemen suffering from serious diseases are given financial assistance upto 90% (in case of PBOR) and 75% (in case of officers) of the total expenditure for treatment in civil hospitals, in case they cannot raise funds from other sources. These are by-pass surgery, open heart surgery/valve replacement, pacemaker implant, angiography/angioplasty, kidney/renal transplantation, dialysis, cancer, joint replacement, stroke, prostate surgery and spastic paraplegics. Assistance for dialysis and cancer is restricted to Rs. 75,000 per year.

(iii) The leading hospitals throughout the country have been empanelled from where the ex-Servicemen can get treatment for serious diseases on payment of 25% / 10% of the total expenditure. In case of officers and PBORs respectively, the remaining 75% / 90% is paid directly to the hospitals by the KSB. For the purpose, the ex-Serviceman is required to submit to the hospital a letter issued by KSB in this behalf.

(iv) Ex-Servicemen, not availing medical facilities from military hospitals, due to non-availability of Military Hospitals in the immediate vicinity, can draw a fixed medical allowance of Rs 100 every month.

(g) **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:-

(i) **Rail Travel Concession:** 75% concessions in rail fare for travel in II Class is available to war widows, including those of IPKF casualties. Besides, recipients and widows of posthumous recipients of Chakra series of gallantry awards are entitled to free rail pass for traveling in Class I/II AC Sleeper.

(ii) **Air Travel Concession:** Certain categories of personnel are eligible to 50% concession in fare for air travel in domestic flights of the Indian Airlines. These are:-

(a) Recipients of Gallantry Awards of Class I and II viz. PVC, MVC, Ashok Chakra and Kirti Chakra.

(b) Permanently war disabled officers who have been invalided out of service and the dependent members of their families.

(c) War widows of post Independence era.

(h) **Reservation of House Sites/Houses:** Majority of States have made reservations for serving/retired Armed Forces personnel in allotment of house sites/houses.

(i) **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.

- (j) **Sainik Rest House Facilities:** Over 252 Sainik Rest Houses have been created in the country, which provide transit facilities to ex-Servicemen and their dependents at nominal rates.
- (k) **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

11.26 The service conditions of Armed Forces Personnel differ greatly from civilians owing to exigencies of service and the need to work in different geo-climatic conditions such as deserts in the west, glaciers in the north, rain-forces in the east and the high seas in south are inbuilt, which obviously, would involves periodic separation from the family. In the event of hostilities, they are also expected to make the supreme sacrifice of life to maintain the territorial integrity of the country. The Armed Forces are required to maintain a youthful profile

at all times for the upkeep of the highest degree of combat efficiency. Hence, they are retired/released at a younger age as compared to civilian employees and are granted pensionary benefits at somewhat liberal scale as compared to their civilian counterparts. The nature of retirement/release from service determines the admissibility of the type of pension in the case of Armed Forces Personnel. The eligibility conditions, rates etc of the different types of pensions are enumerated in the succeeding paragraphs

RETIRING/SERVICE PENSION

11.27 Retiring/Service pension, admissible to the Armed Forces Personnel is calculated at 50% of the average reckonable emoluments drawn during the last ten months in the case of officers. In the case of personnel below officers rank, it is calculated with reference to the maximum of the rank, held for 10 months preceding retirement. In the case of retirement/death gratuity, DA admissible on the date of retirement/death is also treated as emoluments. Retiring pension is subject to a minimum of Rs.1275 per month and maximum of upto 50% of the highest pay, applicable to Armed Forces Personnel. As per formula evolved under the modified parity, in the case of past pensioners, with effect from January 1, 1996, pension would not be less than 50% of the minimum pay in the revised scale of the

pay introduced w.e.f. January 1996 for the rank, rank and group (in the case of PBORs) held by the pensioner. While in the case of commissioned officers of the Army, Navy and Air Force, the minimum period of qualifying service (without weightage) actually rendered and required for earning retiring pension is 20 years (15 years in the case of late entrants), in the case of Personnel Below Officers Rank(PBOR) it is 15 years (20 years in the case of Non-Combatants Enrolled). However, keeping in view their early retirement, Armed Forces personnel are given the benefit of weightage in the form of added years of service ranging from 9 years for Captains and below to 3 years for Generals. Personnel below officers rank are given the benefit of 5 added years of service for determining their qualifying service. For calculating gratuity, a uniform weightage of 5 years added service is given to all ranks. Armed Forces Personnel are also permitted higher commutation of their pension at 43% for officers and 45% for PBORs as compared to 40% for civilians.

11.28 Army Reservists who did not opt for grant of pension and have not availed the benefits of Rehabilitation Assistance granted by the Government and are not in receipt of any other pension, are sanctioned an ex-gratia payment of Rs. 600 p.m. plus dearness relief w.e.f November 1997, provided they had rendered minimum qualifying service to earn pension.

CATEGORISATION OF CASES FOR DETERMINING PENSIONARY BENEFITS

11.29 On the basis of recommendations of the 5th Central Pay Commission for determining the pensionary benefits for death or disability under different circumstances due to attributable/aggravated causes, the cases have been broadly divided into 5 categories as indicated below :-

CATEGORY A: Death or disability due to natural causes.

CATEGORY B : Death or disability due to causes attributable or aggravated by military service.

CATEGORY C : Death or disability due to accidents while performing duties.

CATEGORY D : Death or disability due to acts of violence/attacks by terrorists whether or not on duty.

CATEGORY E : Death or disability due to war or war-like situation.

DISABILITY PENSION

11.30 A person, who is released/retired from service, on account of a disease/injury/wound attributable to or aggravated by military service (Categories B and C), is entitled to disability pension, provided the disability assessed by the Medical Board is 20% or more. Disability Pension consists

of Service element and disability element. The Service element is related to the length of service, rendered by the individual and the disability element is paid in the form of compensation for the disablement and depends on the degree of disablement. The amount of service element is equal to the normal retiring/ service pension. With effect from January 1, 1996 the service element subject to a minimum of Rs. 1275 p.m. is also payable when the length of service rendered is less than the minimum pensionable service. Personnel with 100% disability are also paid a Constant Attendance Allowance at the rate of Rs.600 p.m. on the recommendations of a Medical Board. In all other cases, where the personnel are invalided out of service with a disability, neither attributable to nor aggravated by the military service, invalid pension is granted, if the service, actually rendered is 10 years or more. If the service is less than 10 years, such Service personnel are paid invalid gratuity depending upon the length of service. Pursuant to the implementation of the 5th Central Pay Commission, relating to disability pension/liberalised pension/war injury pension etc. the rates of disability pension have been revised with effect from January 1, 1996 as under:

(a) **On Invalidment:** Where an individual is invalided out of service on account of causes attributable to or aggravated by military service, he/she is entitled to disability pension as under :-

(i) **Service element** - equal to normal retiring/service pension for the length of service actually rendered plus weightage as admissible. With effect from January 1, 1996 the service element subject to a minimum of Rs.1275 p.m. is admissible. There is no condition of minimum qualifying service for earning this element.

(ii) **Disability element** - The rates of disability element for 100 % disability for various ranks admissible w.e.f. January 1, 1996 are as under :-

Commissioned Officers	Rs.2600 per month
JCOs & equivalents	Rs.1900 per month
Other Ranks	Rs.1550 per month

(iii) **Broad banding of disability-** In case of invalidment on or after January 1, 1996, the extent of disability or functional incapacity is determined as under for the purpose of computing disability element :-

Disability less than 50%	50%
Between 50 and 75%	75%
Between 76 and 100%	100%

Where permanent disability is not less than 60%, the disability pension (service element plus disability element) is payable at not less than 60% of the reckonable emoluments last drawn by the individual.

- (b) **In case of Retention of Personnel Despite Disability :** Where an individual is retained in service despite disability and retires/is discharged on attaining the age of retirement or on completion of tenure, w.e.f. January 1, 1996 he/she is entitled to disability element at the following rates (for 100 % disability) :-

Commissioned Officers	Rs.2600 per month
JCOs & equivalents	Rs.1900 per month
Other Ranks	Rs.1550 per month

- For disabilities less than 100% but not less than 20%, the above rates are proportionately reduced. No disability element for less than 20% disability is admissible.
- Retiring/service pension or retiring/service gratuity as admissible is also payable in addition to the disability element from the date of retirement/ discharge.

On the basis of the recommendations of the 5th Central Pay Commission, the procedure regarding acceptance of attributability pertaining to disability and special family pension and assessment of degree of disability has undergone change. As per the revised instructions the procedure of periodical reviews by Re-Survey Medical Board for re-assessment and continuance of disability pension has also been dispensed with. In injury cases, the percentage of disability as recommended by invaliding/ release medical board and as approved by the next higher medical authority is treated as final, unless the individual himself requests for a review. Likewise in cases of diseases of permanent nature, the assessment of degree of disability as recommended by IMB/ RMB and as adjudicated by MA(P) in case of PBOR and Service Headquarters in respect of officers is treated as final unless the individual himself requests for a review.

- (c) **Lump sum compensation in lieu of disability element :** If an individual is found to have a disability which is assessed at 20% or more for life but is retained in service despite such disability, he/she is paid a compensation in lump sum (in lieu of disability element) equal to the capitalised value of disability element on the basis of disability actually assessed. In cases of casualties occurring on or after January 1, 1996,

the rates for disability element effective from January 1, 1996 are applicable for calculating the capitalised value. Once a compensation has been paid in lieu of the disability element, there is no further entitlement to the disability element for the same disability.

WAR INJURY PENSION

- 11.31 War Injury Pension is sanctioned to an individual, who sustains injury/disability in war or war like operations(Category E)). Pursuant to the implementation of the recommendations of the 5th Central Pay Commission relating to disability pension/ liberalised pension/ war injury pension etc. the rates of disability element in respect of war injury are taken as double as mentioned above at para 11.30(a)(ii). The extent of disability or functional incapacity for the purpose of computing war injury element in the cases of invalidment is determined as in para 11.30(a)(iii). With effect from January 1, 1996, Armed Forces Personnel sustaining disability due to acts of violence/attack by terrorists, anti social elements, bomb blasts in public places or transport, indiscriminate shooting incidents etc. (Category D) are entitled to the same pensionary benefits (i.e. service element and retirement gratuity) as admissible to war injury cases on invalidment/ retirement/ discharge including lump sum compensation in lieu of disability, as mentioned above, except that on invalidment they would be entitled to disability element instead of war injury element.

FAMILY PENSION

- 11.32 **ORDINARY FAMILY PENSION:** 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 the reckonable emoluments. The amount of minimum family pension, which, earlier was Rs.375 per month, has been raised to Rs.1275 per month, with effect from January 1, 1996 on the basis of the recommendations of the 5th Central Pay Commission. As per orders issued with regard to modified parity, past family pensioners are entitled to get at least 30 % of the minimum of revised pay scale which came into force w.e.f. January 1, 1996 for the rank and group, last held by the pensioners/deceased individuals. If the deceased personnel had rendered 7 years or more service, the family is given family pension at double the rate of the first 7 years or upto the time, the deceased would have reached the age of 67 years, whichever is earlier. The amount of enhanced family pension will, however, not be more than 50% of the emoluments, or the retiring pension if the death takes place after retirement but before 67 years of age.
- 11.33 With effect from January 1, 1996 Ordinary Family Pension is admissible also to (i) the parents who were wholly dependent on the Armed Forces Personnel, when he/she was alive, provided the deceased had left behind neither a widow nor a child, and (ii) widowed/divorced daughter till she attains the age of 25 years or upto the date of her remarriage whichever is earlier. The
- income criteria, in respect of parents and widowed/ divorced daughter is that their earning is not more than Rs. 2550 per month. Pensionary benefits to the eligible Next of Kin (NOKs), as defined above, were made applicable from January 1, 1998 and as such, all past cases are also to be considered on merits for grant of family pension from January 1, 1998.
- 11.34 With effect from July 27, 2001, family pension admissible under the Employees Pension Scheme, 1995 and the family pension Scheme, 1971 has been allowed in addition to the family pension admissible to the Armed Forces Personnel under the relevant Pension Regulation.
- 11.35 **SPECIAL FAMILY PENSION :** If the death of a service personnel has occurred on account of causes attributable to or aggravated by Service (Categories B and C), the family is paid Special Family Pension. There is no condition of minimum service on the date of death for grant of Special Family Pension. In the case of Commissioned Officers, Special Family Pension is payable to the widow. The families of Short Service Commissioned Officers and Emergency Commissioned Officers are also entitled to Special Family Pension. In the case of PBORs, the rules provide for nominating anyone from the eligible members of the family (except dependant brothers/sisters) for the first life award and for transfer of the same in full to the widow regardless of her financial position in the event of death of parents
- where they were nominated as original awardees.
- 11.36 With effect from January 1, 1996, Special Family Pension is calculated at the uniform rate of 60% of reckonable emoluments drawn by the deceased, subject to a minimum of Rs.2,550 p.m. irrespective of whether widow has children or not. There is no maximum ceiling on Special Family Pension. In case the children become beneficiary, the Special Family Pension is payable at the same rate to the senior most eligible child till he/she attains the age of 25 years or upto the date of his/her marriage whichever is earlier. Thereafter, Special Family Pension passes on to the next eligible child. Widowed/divorced daughters upto the age of 25 years or marriage whichever is earlier are also eligible for the purpose of Special Family Pension. In case the eligible child is physically or mentally handicapped and unable to earn a livelihood, Special Family Pension is admissible for life. In the absence of wife and children, dependent pension at the prescribed rates is admissible to the parents of the deceased. The widow who got remarried on or after January 1, 1996 are also eligible for Special Family Pension subject to certain conditions.
- 11.37 **LIBERALISED FAMILY PENSION (LFP) :** In the event of death of Armed Forces Personnel (including SSCOs & ECOs) in war or war like operations, counter insurgency operations or in an encounter with or in incident involving armed
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hostilities, terrorists/extremists, anti-social elements etc.(Categories D and E), their families are granted Liberalised Family Pension (LFP) equal to the reckonable emoluments last drawn by the deceased personnel at the time of his death. Pension at this rate is payable to the widow in the case of officers and to the nominated heir in the case of PBOR until death or disqualification. If the personnel is not survived by widow but is survived by child/children only, all children together are eligible to Liberalised Family Pension (LFP) at the rate equal to 60% reckonable emoluments last drawn by the deceased. Liberalised Family Pension (LFP) is payable to the senior most eligible child till he/she attains the age of 25 years or upto the date of his/her marriage whichever is earlier and thereafter the Liberalised Family Pension (LFP) passes on to the next eligible child. Widowed/divorced daughters upto the age of 25 years or marriage whichever is earlier are also eligible for the purpose of Liberalised Family Pension (LFP). In case the eligible child is physically or mentally handicapped and unable to earn a livelihood Liberalised Family Pension (LFP) is admissible for life. No children allowance is payable in addition to Liberalised Pension.

11.38 On re-marriage of widow, both in the case of Commissioned Officers as also in the case of PBOR in whose case Liberalised Family Pension (LFP) is sanctioned as first life award to widow, full Liberalised Family Pension (LFP) would continue to

the widow if she continues to support children after re-marriage or has no children. If however the widow does not support the children after re-marriage, Special Family Pension at the rate of 60% will pass on to the children and Ordinary Family Pension @ 30% to widow. In the absence of wife and children, dependent pension (Liberalised) at the prescribed rates is admissible to the parents of the deceased without reference to their pecuniary circumstances.

(a)	Death occurring due to accidents in the course of performance of duties	Rs. 5.00 Lakhs
(b)	Death occurring in the course of performance of duties attributable to acts of violence by terrorists, anti-social elements etc.	Rs. 5.00 Lakhs
(c)	Death occurring during (i) border skirmishes and (ii) action against militants, terrorists, extremists etc.	Rs. 7.50 Lakhs
(d)	Death occurring during enemy action in international war of such like engagements which are specifically notified by the Ministry of Defence	Rs. 7.50 Lakhs w.e.f. August 1, 1997 & Rs. 10.00 Lakhs w.e.f. May 1, 1999

11.40 **REVISION OF DISABILITY PENSION / SPECIAL FAMILY PENSION/ LIBERALISED FAMILY PENSION/WAR INJURY PENSION ETC. IN RESPECT OF PRE 1996 ARMED FORCES PENSIONERS** : The necessary orders for regulation/consolidation w.e.f. January 1, 1996 of pension/family pension of all pre January 1, 1996 pensioners/family pensioners were issued by the Ministry of

EX-GRATIA AWARD IN THE EVENT OF DEATH WHILE PERFORMING MILITARY DUTY

11.39 On the basis of the recommendations of the 5th Central Pay Commission, orders have been issued on September 22, 1998 for grant, in addition to Special Family Pension/Liberalised Family Pension, Ex-gratia payment to the family of a deceased service personnel in the event of death occurring on or after August 1, 1997 as under:-

Defence in 1997. Further, in pursuance of the 5th Central Pay Commission's recommendations relating to modified parity in pension, on the basis of orders issued in respect of civilians by the nodal department i.e., Department of Pension and Pensioners Welfare, necessary orders have been issued by Ministry of Defence for revision of Disability Pension/Special Family Pension/Liberalized Family

Pension/War Injury Pension etc. in respect of pre – January 1, 1996 Armed Forces Pensioners in 2001. In accordance with the provisions contained in the letter dated May 16, 2001, while for the widows, who were in receipt of Liberalised Family Pension (LFP), irrespective of the date of award, the consolidated pension shall be not less than the reckonable emoluments calculated on the minimum pay in the revised scale of pay introduced w.e.f. January 1, 1996 of the rank, rank and group (in the case of PBORs) held by the deceased personnel at the time of death, for the Special Family Pensioners, the consolidated pension, shall not be less than 60% of the minimum pay in the revised scale of pay introduced w.e.f. January 1,

1996 of the rank, rank and group (in the case of PBORs) held by the deceased personnel at the time of death, subject to a minimum of Rs. 2550 p.m. The rates of Disability Pension, War Injury Pension (except invalidment cases), Constant Attendant Allowance as applicable to post January 1, 1996 pensioners have also been extended to pre January 1, 1996 pensioners in receipt of Disability Pension, War Injury Pension, Constant Attendant Allowance etc. w.e.f. January 1, 1996.

11.41 The number of Defence Pensioners is estimated to be about Rs. 19.27 lakh. Approximately, 55,000 service personnel retire every year. Pension to Defence Pensioners is disbursed through 30,000

branches of public sector banks, 543 Treasuries, 62 Defence Pension Disbursing Offices and 5 PAOs, scattered all over India. The annual expenditure on Defence pensions, during last five years, has been as follows:-

Year	Pension Disbursed (Rs. Crore)
1997-1998	4947.42
1998-1999	7270.28
1999-2000	11024.65
2000-2001	10538.93
2001-2002(BE)	10769.60

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COOPERATION BETWEEN THE ARMED FORCES AND CIVIL AUTHORITIES



AN-32 in Aid to Civil Authorities at Bhuj

ARMY

12.1 The Armed Forces render assistance to Civil Authorities for maintenance of law and order, essential services and for organizing relief and rescue operations during natural calamities in unforeseen situations, when the resources available with the civil administration are inadequate to handle the situation and the Armed Forces are called upon to do so. The assistance provided by the Armed Forces during the year is outlined in the succeeding paragraphs.

AID TO CIVIL AUTHORITIES IN NATURAL CALAMITIES

12.2. Army was called upon by Civil Administration of various States on a number of occasions during the year for rescue and relief operations.

OPERATION SAHAYATA – GUJARAT

12.3 The constructive role of Army in the earthquake in Gujarat on January 26, 2001 was commendable. Army Engineers and Medical Corps were the first to provide immediate organised relief and assistance in the devastated areas of Bhuj and its surroundings. The details are as under:-

- (a) Army Engineers carried out a detailed survey of the affected 64 villages to assess the damage and to identify the type of aid required. This enabled the Government agencies and the NGOs to plan and provide aid to various villages.

- (b) Power supply system was repaired and power was restored on February 5, 2001 in Adhoi village.
- (c) Free STD booths were installed for the benefit of local and relief workers to communicate their well being to their kith and kin.
- (d) Cash and financial equipment of banks; weapons and ammunition of State Police Armoury and valuables of public were recovered and handed over.
- (e) Mobile relief teams distributed relief material comprising of ration, kerosene oil and purified potable water to the far-flung villages.
- (f) Clearance of roads, lanes and by-lanes was undertaken.
- (g) Demolition of structurally unsafe buildings was carried out.
- (h) In the wake of damaged civil hospital at Bhuj and crumbled civil health services, Army doctors attended to more than 11,000 casualties. Life and limb saving emergency procedures were performed during the first three days itself. All medical units worked relentlessly day and night for the victims of the earthquake to provide immediate succour to the dying and the wounded, and saved many lives. Sporadic cases of chicken pox and gastroenteritis were

attended to, and further outbreak of the diseases was effectively contained. 264 patients were evacuated to Command Hospital (SC) Pune, Military Hospital Ahmedabad, Base Hospital Delhi Cantt and civil hospitals of Pune. A total of 29,589 patients/casualties were treated, 2192 major operations and 7552 minor operations were performed and 2748 plaster of Paris were applied.

FLOOD RELIEF OPERATIONS IN ORISSA

12.4 There had been serious flood situation in Orissa due to incessant rains and discharge from Hirakund Dam on July 16, 2001. Jajpur, Kendrapara, Cuttack, Jagatsinghpura, Puri, Bhubaneswar, Balasore, Bhadrak and Khurda were badly affected by flood. A total of two infantry columns and six engineer columns with Boat Assault Universal Types (BAUTs) were deployed from July 16 to 28, 2001 to carry out rescue and relief operations. 17,236 marooned civilians were evacuated. 4,48,088 kilograms of rations, 27,010 packets of cooked food, 1300 polythene sheets, 8,180 litres of water, 21,000 kilograms of cattle feed and 4,200 litres of kerosene oil were distributed. In addition to this, 57,104 persons were provided medical aid.

FLOOD RELIEF IN BIHAR

12.5 Floods in different parts of Bihar caused havoc. Army provided prompt assistance in Gopalganj and Samastipur Districts.



Flood Relief Operations

Three engineer columns were deployed in rescue and relief operations from August 3 to September 20, 2001. 1265 marooned civilians were evacuated and 2,23,600 kilograms of rations were distributed whereas 11,345 persons were provided medical aid.

LANDSLIDE IN RUDRA PRAYAG (UTTRANCHAL)

12.6 Severe landslides occurred near Okhimath in Rudra Prayag (Uttranchal) on July 16, 2001. Three Army columns were deployed during the period from July 17 to 20, 2001 to carry out rescue and relief operations in the area.

CONSTRUCTION OF BRIDGE AT LUNNI KHUD ON ROAD BAIJNATH- DEOL-FATAR

12.7 Due to flash floods on July 29, 2001, the bridge on Baijnath – Deol – Fatar Road in Kangra District was badly damaged. On request of Himachal Pradesh Government, one Bailey Bridge Double Single (DS) was provided on loan and the road communications was restored.

1ST KUMBH MELA OF THE MILLENNIUM AT ALLAHABAD

12.8 The 1st Kumbh Mela of the millennium was held from January 09 to February 21, 2001.

It was the biggest religious congregation of human beings in the world. Kumbh Mela 2001 is also significant since such auspicious alignment of stars and planets was to take place after 144 years. This event, therefore, drew the largest participation by pilgrims. Most of the Mela activities including the Holy dip at Sangam were performed around two major defence installations at OD Fort and 508 Army Base Workshop. This created serious safety and security problems for the Army as any untoward incident could have caused a chain reaction in the entire Mela Complex. Special attention was therefore, paid to this important aspect. Army assistance also consisted of the following:-

- (a) Deployment of one company of Territorial Army with intelligence personnel.
- (b) Deployment of Army Engineers with 100 Boats.
- (c) Deployment of Bomb Disposal and Mine Sweeping Teams.
- (d) Deployment of Medical Resources to provide timely first aid.

NAVY OPERATION SAHAYATA

12.9 Operation Sahayata was launched by the Navy on January 26, 2001 to provide humanitarian relief in the earthquake hit areas of Gujarat. Over 250 tons of relief material comprising of foodgrains, pre-cooked food, tents, blankets, petrol, etc. were

provided by the IN ships. Six Naval Surgical Teams were deployed in the remote villages while two IN ships were converted into hospital ships and were based at Kandla to provide medical aid. About 600 patients were treated on site and 41 serious ones transported to Mumbai by other ships.

ADOPTION OF MODHA VILLAGE

12.10 The Indian Navy contributed in a big way in reconstruction and rehabilitation of the victims of the devastating earthquake which hit the Kutch region on January 26, 2001. The Indian Navy, besides undertaking relief work and other welfare schemes, adopted a village Modha, 32 kms from Jamnagar, which had faced the brunt of the earthquake with 80% damage. Construction of 120 houses and other community places was undertaken on 12 hectares of land under the project named 'Nai Roshani'. The project commenced on April 16, 2001 and was completed on August 29, 2001 at a cost of Rs 1.3 crores.

FLOOD RELIEF OPERATIONS IN ORISSA.

12.11 Consequent to the flash floods in Orissa in the month of July 2001, Indian Navy launched large-scale relief operations to assist the State Government in handling the rescue and relief work. The following were mobilised towards this effort: -

- (a) Nine rescue teams comprising seven officers and 74 sailors.
- (b) Three Medical teams.

- (c) A liaison cell was established at Bhubaneshwar for co-coordinating relief effort in consultation with the Relief Commissioner.
- (d) A Quick Reaction Group (QRG) communication vehicle was positioned at NLC Bhubaneshwar.
- (e) Two Chetak helicopters were positioned at Chilka for dropping relief supplies.
- (f) A total of 100 quintals of relief material was airdropped by the IN helicopters in various districts of Orissa.

DIVING ASSISTANCE

12.12 **Diving Assistance at Dhanbad.** Bharat Coaking Coal India Ltd. sought assistance of Indian Navy for rescuing survivors from a flooded mine on February 03, 2001. Indian Naval diving team ex-New Delhi was dispatched to Dhanbad, which was subsequently augmented by a diving team ex-Vizag.

12.13 **Diving Assistance at Uttaranchal.** Diving assistance was provided to the Government of Uttaranchal to recover bodies of passengers from a bus which had fallen into the Alaknanda river in Chamoli



Aid to Kashmiri citizens

township on May 01, 2001.

12.14 **Rescue Operations off Kozhikode.** A diving team comprising 2 officers and 23 sailors was dispatched for rescue and rendering necessary assistance to the stranded passengers of the ill-fated Chennai bound Mangalore - Chennai Mail, which had derailed and fallen into the Kadalundi river, 20 kms South of Kozhikode on June 22, 2001. In addition, INS Jamuna was also positioned off Bepore coast to provide necessary logistic support for the operation.

12.15 **Diving Assistance at Muvattupuzha.** A request was received from the District Collector, Kottayam on July 09, 2001, seeking diving assistance for evacuation of people stranded in the water logged areas of Muvattupuzha. IN diving team rescued 23 people.

DISASTER MANAGEMENT

12.16 **Fire at Tata Chemical Factory, Mithapur.** A team of Naval Fire Fighters was the first to reach Tata Chemicals Factory at Mithapur, approximately 8 kms South of Okha on March 02, 2001, when fire broke out in the power plant. The fire was

brought under control with assistance from other Fire Fighting Units.

AIR FORCE RECONSTRUCTION : AIR FORCE STATION, BHUJ

12.17 On January 26, 2001 an earthquake with an estimated intensity of 6.9 – 7.9 on the Richter Scale ravaged Air Force Station Bhuj and other parts of Kutch. Due to the earthquake, 92 Air Force personnel and family members at the Air Force Station lost their lives. Notwithstanding the tragedy and destruction, personnel at Air Force Station Bhuj rose to the occasion and continued all types of operations at Bhuj airfield. The airfield became the only communications hub center for massive relief operations for the entire quake-hit area.

12.18 41 IAF transport aircraft including 6 heavy lift IL-76s, 14 AN-32s, 5 HS 748 and 16 helicopters were pressed into relief operations immediately. The IAF flew about 50 sorties within the first 24 hours. Relief equipment and workers were airlifted from Army, Air Force and Para Military bases from the rest of the country by the IAF.

12.19 Upto the end of the relief operations, IAF aircraft carried out 222 sorties, airlifting 240 tons of relief materials and evacuating 792 casualties.

12.20 The reconstruction work of Air Force Station Bhuj has been taken up in a phased manner. Work on married accommodation is in progress. In addition, pre-fabricated shelters for officers and airmen have been provided. Special repairs on buildings, which can be recovered, are being carried out. Permanent accommodation for all messes (Officers, SNCOs and Airmen), ATC and Ops complexes and other technical buildings are being reconstructed.

12.21 Peculiar geo-climatic conditions of our country make it prone to natural disasters. On every occasion, IAF has been called upon to provide relief and succor to our countrymen; a task which the Air Force has accomplished successfully. During the year 2001-2002, IAF undertook flood relief operations in the States of Bihar, Orissa, Uttaranchal, Uttar Pradesh, Andhra Pradesh and Maharastra.

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NATIONAL CADET CORPS (NCC)



Prime Minister's Rally

13.1 The National Cadet Corps, the most distinguished youth organization of the country has completed fifty-three years of its existence on November 25, 2001. The NCC's presence can be felt in almost all parts of the country. It comprises of 16 Directorates, 94 Group Headquarters and 763 Units. The NCC has achieved many milestones since its inception by an Act of Parliament in 1948. The organization strives to provide opportunities to the youth for all round development with a sense of commitment, dedication, self-discipline, leadership, adventure and moral values under one umbrella. The youth from all states across the country, are provided with large number of opportunities to attend multifarious NCC activities. The most important aspect of the NCC is to provide opportunities to young people across the country from all strata of society to attend various training, social and cultural activities.



Hon'ble Raksha Mantri with NCC Cadets during NCC Day-2001 Celebrations.

13.2 The authorized cadet strength of NCC has grown substantially from its small beginning. Recently, it has been decided to raise the authorized NCC Cadet Strength from 12 lakhs to a total of 12,26,560 cadets. The NCC today is functioning in 7,109 schools and 5,018 colleges which includes 138 Navodaya Vidyalayas.

TRAINING OF CADETS

13.3 **Camp Training** : Various training camps conducted during the training year 2001-2002 were:

(a) **Annual Training Camps(ATC)** : 678 Annual Training Camps were organised and 3,29,475 cadets attended the camps during the first half of the training year 2001-2002.

(b) **National Integration Camps(NIC)** : These are attended by cadets from all over the country. This year, 69 camps had been planned at different places in which approximately 50,000 cadets were likely to participate. NICs at Kohima, Leh, Chitrakoot and Delhi were conducted with specific importance for areas such as North Eastern Region, high altitude areas and rural locations. NIC at Port Blair was scheduled from February 16-27, 2002 wherein 80 cadets from main land and 50 cadets from the islands participated.

(c) **Vayu Sainik Camps (VSC)**: A combined annual training camp known as VSC was held for a period of 12 days from October 11-22, 2001 at Air Force station, Jalahali (Bangalore). 562 Senior Division cadets and 317 Senior Wing cadets attended the camp.

(d) **Nau Sainik Camp**: This is also organised once a year for 12 days. 400 Senior Division cadets and 160 Senior Wing cadets attended the camp at Vishakhapatnam from October 31 to November 11, 2001.

(e) **Centrally Organised Camps** : 6,982 cadets attended the Centrally Organised Camps at various places during the training year.

13.4 **Attachment Training**: The NCC cadets derive first hand experience of immense value by attachment to the Armed Forces units. During the year, attachments were as under:-

(a) A total of 20,345 (20,000 Army, 115 Navy and 230 Air Force) cadets were attached to the Army, Navy and Air Force units for 14-28 days during this training year.

(b) 128 cadets were attached to the Indian Military Academy, Dehradun and 32 girl cadets with Officers Training Academy, Chennai in August 2001.

(c) 25 Air Wing cadets were attached to Air Force Academy, Dundigal from October 16-27, 2001.

- (d) 1000 girl cadets were attached with various Military Hospitals for Nursing and First Aid training.

13.5 **Gliding and Flying :** The gliding facilities are provided at 34 Air Squadrons. The NCC Air Squadrons carried out 4,639 launches during the first half of the year. The Subsidized Power flying has been stopped from April 1, 2001 due to accident of Microlights. 37 Zen Ait and 6 'X' Air Microlight aircraft have been inducted into NCC to enhance the overall aviation awareness of the Air Wing Cadets.

13.6 **Sea Training :** NCC cadets of the Naval Wing, during their sea training and attachment to the Naval Units, are imparted intensive training in Naval subjects like Navigation Communication, Gunnery, Seamanship, Damage Control and Ship Safety, First Aid and Ship Husbandry. 65 cadets were attached with ships of Eastern Naval Command and 80 cadets with ships of Western Naval Command.



Sea Training

13.7 **Adventure Training :**

- (a) **Mountaineering Courses :** Basic and Advance Mountaineering Courses are conducted at regular intervals at Himalayan Mountaineering Institute (HMI) Darjeeling, National Institute of Mountaineering (NIM) Uttarkashi and Mountaineering Adventure School (MAS) Manali. 185 vacancies on the above courses were allotted for cadets.
- (b) **Adventure Courses :** This year the NCC sponsored 72 boys and 33 girls cadets of Junior Division/Wing for the adventure courses at HMI Darjeeling, and NIM Uttarkashi.
- (c) **Mountaineering Expedition :** Since 1970, NCC has conducted 48 mountaineering expeditions, of which 26 were for boys and 22 for girls. This year, the boys expedition team successfully climbed Manali Peak (5669 m) in July 2001. The girls mountaineering expedition, which was flagged off by Sadhvi Uma Bharati, Minister for Youth Affairs & Sports, successfully climbed Ladakhi Peak (5342 m) in September 2001.
- (d) **Cycle and Motor Cycle Expeditions :** These were organised both at the national and state levels.
- (e) **Para Sailing :** 546 Parasails have been sanctioned by the Government to be issued at the scale of one parasail per Group Headquarter per

year for 6 years. Regular launches are organised by the Directorates.

- (f) **Para Jump :** Every year 20 boy cadets and 20 girl cadets of NCC are trained at Para Training School, Agra. This year, Military Training Directorate has approved 40 vacancies for the course commencing from November 2001.
- (g) **Slithering :** Every year 10 Senior Division and 10 Senior Wings cadets are trained in slithering operations with Helicopters, to participate in the demonstration during the PM's Rally.
- (h) **Trekking Expedition :** A total of 10 All India treks i.e. 3 for girls and 7 for boys are conducted every year, in which 1,000 cadets take part.

YOUTH EXCHANGE PROGRAMME

13.8 The following Youth Exchange Programmes were planned and successfully executed during the period under review:-

- (a) One officer and 4 NCC cadets (2 girls and 2 boys) of Air Wing attended the NCC Air Wing Programme in Singapore from June 2-16, 2001.
- (b) One officer and 4 NCC cadets (2 boys and 2 girls) participated in Naval Programme of Singapore from May 29 to June 15, 2001.

- (c) A team of 12 NCC cadets (6 boys and 6 girls) visited United Kingdom from July 18 to August 5, 2001 to attend the Army and Air Training Camp.
- (d) Two NCC cadets (one boy and one girl) visited Sri Lanka from October 14 to 22, 2001 to attend Sri Lanka NCC annual training camp.
- (e) 2 Officers and 20 NCC cadets visited Vietnam to attend the Youth Exchange Programme with Youth Federation of Vietnam from September 9 to 28, 2001.
- (f) 2 Officers and 12 cadets (6 boys and 6 girls) went to Bhutan to participate in the Youth Exchange Programme with Bhutan during November 2001.
- (g) 2 Officers and 8 cadets visited Singapore to attend Camp PINNACLE as part of Youth Exchange Programme from December 7-15, 2001.
- (h) One Officer and 12 cadets (6 boys and 6 girls) went to Bangladesh in December 2001 to participate in Victory Day Celebration.
- (i) One Officer and 10 NCC cadets (5 boys and 5 girls) went to Nepal in February 2002 to participate in Army Day Camp of Royal Nepalese Army.

ACTIVITIES AT NATIONAL LEVEL

13.9 The NCC cadets also participated in the following activities conducted at the national level:-

- (a) **All India GV Mavlankar Shooting Competition** : The XIth All India GV Mavlankar Shooting Championship was conducted at Asansol in West Bengal from November 18 to 27, 2001. 32 cadets, i.e., one boy and one girl cadet from each of the 16 NCC Directorates, participated in the event.
- (b) **Refresher Course for Associate NCC Officers (ANOs)** : A total of 13 courses were conducted at Officers Training School (OTS) Kamptee during the training year 2001-2002. 935 officers underwent training at these courses.
- (c) **Refresher Course for Permanent Instructions (PI) Staff** : During the year, 2490 Permanent Instructions (PI) Staff (both JCOs and NCOs) underwent refresher training in 20 courses.
- (d) **Pre-Commission Courses** : These courses are run for newly commissioned Associated NCC Officers (ANOs). A total of 475 ANOs underwent training spread over 5 courses.
- (e) **NCC Regatta** : All India NCC Best sailors yatching regatta was

conducted at Chilka, Orissa from January 28 to February 04, 2002. A total of 96 Cadets i.e. 3 Senior Division and 3 Senior Wing from each Directorate, participated in the event.

- (f) **Yatching Association of India (YAI) National Team Sailing Championship 2002** : NCC team comprising six main and three reserve cadets participated in the Championship, held at Chilka.
- (g) **NCC Special Entry Scheme, OTA Chennai** : The Xth course of the NCC Special Entry Scheme at OTA Chennai, for a short service commission in the Indian Army commenced in October 2001. 96 cadets were selected out of which 93 joined the course.



NCC Cadets assisting in relief activities for Orissa Cyclone Victims.

13.10 **Civil Defence Course** : Civil Defence Course No. 234, held from January 7-22, 2002 at National Civil Defence College, Nagpur was attended by 10 (Associated NCC Officers) ANOs.

AWARDS/INCENTIVES DURING THE YEAR

13.11 **Awards:** In the current year, the following NCC awards were presented to NCC personnel:-

- | | | |
|---|---|----|
| (a) Raksha Mantri Padak | - | 01 |
| (b) Raksha Mantri's Commendation Card | - | 01 |
| (c) Defence Secretary's Commendation Card | - | 05 |
| (d) Director General's Commendation Card | - | 35 |

ASSOCIATED NCC OFFICERS (ANOS)

13.12 Associated NCC Officers (ANOs) form the back bone of NCC organization and serve as a link between the cadets and NCC organization. The present authorized strength of the ANOs is as under :-

- | | | |
|--------------------|---|---------------|
| (a) Army Wing | - | 9718 |
| (b) Naval Wing | - | 828 |
| (c) Air Wing | - | 687 |
| (d) Girls Division | - | 1720 |
| Total | - | 12,953 |

13.13 During the first six months of the current training year 316 ANOs have been

inducted in the NCC after grant of NCC Commission. Another 400 ANOs were granted commission during the remaining part of the year.

13.14 **Grant of Honorary Rank to ANOs** : Meritorious ANOs are granted Honorary Ranks, after relinquishment of NCC Commission, in recognition of the service rendered by them in NCC. During the year 12 ex-ANOs of Senior Division/Senior Wing have been granted Honorary Rank of Major (or equivalent) and 2 ex-ANOs of Junior Division/Junior Wing have been

granted Honorary Rank of Second Lieutenant.

13.15 **Honorary Colonel Commandant** : The Vice Chancellors of various Indian Universities are appointed as Honorary Colonel Commandants of NCC for the duration of their tenure as Vice Chancellors. These Honorary Colonel Commandants serve as motivating force for the smooth conduct of NCC activities. In this year, 23 Vice Chancellors have been appointed as Honorary Colonel Commandant of NCC.



NCC Cadets at Republic Day Parade

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GENERAL



TC RADAR REPORTER

14.1 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

14.2 The important activities of these institutions during the period under review are enumerated in the succeeding paragraphs.

INSTITUTE FOR DEFENCE STUDIES AND ANALYSES (IDSA)

14.3 The Institute for Defence Studies and Analyses was established in November 1965 to undertake 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 enlarged its research activities to encompass national and international security in all its ramifications. It is the oldest strategic and security studies think tank in India. IDSA is a registered society and is governed by an Executive Council whose members are distinguished persons from different walks of life. The Institute is funded by the Ministries of Defence and External Affairs,

but independent analysis is enabled because of its autonomous character. It is accessible to the political leaders, research scholars, government officers and the public who may be interested in the national security issues. The Parliamentary Standing Committee on Defence frequently utilizes the literature, information and the expertise of the Institute. Further, the IDSA also interacts with the academia, the diplomatic corps, military delegations and the Press.

The Research Faculty

14.4 The Institute has a well qualified and a multi-disciplinary research faculty of over 50 scholars. They are drawn from the academia, the defence forces, the para military organizations, and the civil services. Presently, there are 15 researchers under the 2000-2002 fellowship programme who are engaged in the research projects. Their collective efforts ensure an all encompassing and, by and large, 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 the scholarly research work, IDSA has bilateral ties with a number of institutes across the globe engaged in similar pursuits. It also has ties with the Council for Security Co-operation in the Asia Pacific (CSCAP).

14.5 The research output of the faculty is mainly published in the Institute's journal,

Strategic Analysis, or as monographs and books. IDSA also publishes *Delhi Papers* and *Occasional Papers* on specific topics. 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 issues, military doctrines, arms transfer and technology developments. It has been found useful by many institutions and the defence departments of the numerous universities in India.

14.6 Important books published by the IDSA during the period under review are titled "*Oil and Gas in India's Security*" and "*State Sovereignty in the 21st Century*". Similarly, the two monographs meriting a mention are "*ASEAN Regional Forum and Security of the Asia-Pacific*" and "*Joint Visions for the Indian Armed Forces*".

A Resume of Important Activities

14.7 The Institute organized a major international conference during the year on "*State Sovereignty in the 21st Century: Concepts, Relevance and Limits*" which was jointly organized by the Indian Council of World Affairs and IDSA on July 23-24, 2001. The proceedings of the Conference were published as a book that has been well received. Further, following the terrorists attacks in the US on September 11, 2001, a national seminar on "*Terrorism: Then and*

- Now" was organized in Delhi in the first week on October 2002. Besides, Fellow Seminars related to the ongoing research projects were held every week.
- 14.8 During the year, as part of the bilateral dialogue, IDSA hosted a delegation from the Institute of Political and International Studies, Iran. Apart from the visiting delegates, the interaction was also attended by a number of special invitees. The Institute also organized numerous Round Table Discussions for the visiting scholars, diplomats and the military teams.
- 14.9 Besides the research projects, the Institute is also engaged in training programmes and imparts training to the Government officers drawn from the Indian Administrative Service, Indian Foreign Service, the Armed Forces and the Para-Military Forces. During the year as many as eight training capsules were conducted by the IDSA. The faculty members were often invited as guest speakers at various training establishments and universities around the country.
- 14.10 The second half of the year under review has been marked by a series of new initiatives and directions to improve the quality of research work in the IDSA. All the researchers, on the basis of inter-relationship of their project themes, were grouped into 'Clusters' to ensure a more wholistic and a focused analysis of the issues under scrutiny. It has enhanced the academic rigor. The modernization of information services has been set in

motion. This includes upgradation of the existing generation of computers, better internet connectivity, local area network, enhanced data base et al. Further a number of facilities have been created for the efficient functioning of the IDSA staff as also for their welfare.

MOUNTAINEERING INSTITUTES

- 14.11 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 and Winter Sports (JIM), Aru with temporary headquarter at Batote (J&K). These Institutes are run as private Registered Societies. The Defence Minister is the President of these Institutes. 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.
- 14.12 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, Utrakashi, 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 and order, the training courses conducted by the Institute were temporarily suspended from April 1996. The Institute is now conducting some courses on ad-hoc basis.

- 14.13 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.
- 14.14 The Institutes conduct Basic and Advanced Mountaineering Courses, Method of Instruction Course (MOI), Search and 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 mountaineering expeditions.

14.15 Trainees for these courses come from all parts of the country and include Army, Air Force, Navy, ITBP, BSF Personnel, NCC Cadets and private students. Foreigners are also permitted to join these courses.

14.16 The Institutes conducted the following courses during the year upto December 2001:-

Institute	Basic	Advanced	Adventure	MOI	S&R
HMI	6	3	6	1	-
NIM	6	3	4	1	-
JIM	1	1	4	-	-

14.17 The number of students trained in these courses are as under:-

Institute	Basic	Advanced	Adventure	MOI
(HMI/ NIM/ JIM)				
Men	524	141	2048	31
Women	95	30	101	2

14.18 The Institutes at Darjeeling and Utrakashi have separate stores of mountaineering equipment for loan to the Mountaineering Expeditions on nominal hire charges.

14.19 NIM created history by successfully putting 7 members of the Instructional staff of the Institute on the top of Mount Trishuli West (7035 meters) on July 17, 2001. This is the most technical mountain, remotely

located in Garhwal Himalayas and was unclimbed. 15 expeditions, including foreign ones, had failed to climb this peak in the last few years. This was last unclimbed seven thousander peak of Garhwal, Kumaon Himalayas, which was known to be invincible.

14.20 The construction of the Museum Project at HMI, Darjeeling is at an advance stage and is expected to be completed by mid 2002. An Artificial Rock Climbing System has been set up at HMI Campus for training in rock climbing. The Indian Mountaineering Foundation organized the 7th National Sports Climbing Competition at this wall in the HMI campus from November 27 to 30, 2001.

CEREMONIALS, HONOURS AND AWARDS

14.21 Every year Ministry of Defence organises national functions like the Republic Day Parade, the Beating Retreat Ceremony, the Martyrs' Day Function and Independence Day Celebration. Defence Investiture Ceremonies for presentation of Gallantry and Distinguished Service Awards at the Rashtrapati Bhawan are also organized by the Ministry of Defence in association with the President's Secretariat. The organisation of these ceremonies requires co-ordination of a large number of activities amongst various Ministries/Departments and numerous other agencies. The Ceremonial

functions organized during 2001-2002 are detailed in the following paragraphs.

KARGIL VIJAY DIWAS

14.22 Kargil Vijay Diwas was celebrated on July 26, 2001. On the occasion, the Vice President, Prime Minister, Raksha Mantri, Raksha Rajya Mantri and the three Service Chiefs paid homage at Amar Jawan Jyoti at India Gate. Candle lighting ceremony was also organized. The Prime Minister, Raksha Mantri, Raksha Rajya Mantri, Defence Secretary and the three Service Chiefs lighted the candles at Amar Jawan Jyoti. The Prime Minister also addressed the next of kins of the martyrs and the winners of gallantry awards for 'Operation Vijay' (Kargil).



Surface to Surface Missile Dhanush

**INDEPENDENCE DAY - 15 AUGUST
2001**

14.23 On August 15, 2001, the Prime Minister, after inspection of Guard of Honour presented by the three Services and the Delhi Police, unfurled the National Flag on the ramparts of the Red Fort. A 21 gun salute was also presented on this occasion. This was followed by the Prime Minister's Address to the Nation. The function began with the choir singing of patriotic songs by school children in different Indian languages and concluded with the singing of the National Anthem and release of balloons.

14.24 The following gallantry awards were announced on the Independence Day 2001:-

Kirti Chakra	- 02
Vir Chakra	- 02
Shaurya Chakra	- 46 (14 Posthumous)
Ati Vishisht Seva Medal	- 01
Yudh Seva Medal	- 01
Vishisht Seva Medal	- 01
Bar to Sena Medal (G)	- 06
Sena Medal (G)	- 113 (7 Posthumous)
Nao Sena Medal (G)	- 01
Vayu Sena Medal (G)	- 09
Sena Medal (DD)	- 06
Mention-in-Despatches	- 07 (1 Posthumous)

**DEFENCE INVESTITURE
CEREMONIES, 2001**

14.25 The Defence Investiture Ceremony-2001 was held at Rashtrapati Bhawan on October 12 and October 19, 2001, when the following awards announced on the Independence Day, 2000 and Republic Day, 2001 were presented by the President to the recipients:

GALLANTRY AWARDS

Mahavir Chakra	01 (1 Posthumous)
Kirti Chakra	07 (5 Posthumous)
Vir Chakra	03 (2 Posthumous)
Shaurya Chakra	44 (17 Posthumous)
Total :	55

DISTINGUISHED SERVICE AWARDS

Param Vishisht Seva Medal	25
Bar to Ati Vishisht Seva Medal	01
Ati Vishisht Seva Medal	38
Total :	64

14.26 Yudh Seva Medals, Bar to Vishist Seva Medals, Vishisht Seva Medals, Bar to Sena Medal, Sena Medals, Nao Sena Medals and Vayu Sena Medals were presented by the respective Chiefs of Staff and Senior Commanders at separate Investiture Ceremonies.

AMAR JAWAN CEREMONY, 2002

14.27 The Prime Minister placed a wreath at the Amar Jawan Memorial, under the arch of the India Gate on January 26, 2002 to pay homage to the memory of those who sacrificed their lives in safeguarding the freedom of the nation.

REPUBLIC DAY PARADE-2002

14.28 In a brief investiture ceremony at Rajpath, the President presented 4 Ashok Chakras posthumously to the next of kins of the martyrs. After the investiture ceremony, the President took salute at the Republic Day Parade on January 26, 2002. His Excellency, Mr Cassam Uteem, President of Mauritius was the Chief Guest. Army's mounted column of 61 cavalry, contingents of Para Military Forces, Delhi Police, Home Guards, NCC and NSS participated in the parade. In addition, Defence Research and Development Organisation displayed Nishant, Sarvatra and Agni-II. Twenty-eight tableaux, and ten cultural items presented by the school children from Delhi and two Zonal Cultural Centers, reflected the cultural diversity of the nation and displayed a glimpse of the progress and achievements of the country in different fields. Out of the 25 (4 posthumous) children awarded with National Bravery Award, 21 participated in the parade on elephants. The Motor Cycle display by BSF and 'Flypast' by the Indian Air Force

were the grand finale to the parade. A large number of balloons were also released in the end of the parade.



Republic Day Parade

MARSHAL OF THE INDIAN AIR FORCE

14.29 On the eve of the Republic Day 2002, the President conferred the rank of Marshal of the Indian Air Force on Air Chief Marshal Arjan Singh, DFC (Retd) in recognition of his most outstanding services to the Indian Air Force, the Armed Forces and the Nation. He is the first Marshal of Indian Air Force. In 1938, he was selected for flying training at Cranwell, UK and was commissioned as a pilot in the Royal Air Force in December 1939. For his outstanding leadership during World War II, he was awarded the 'Distinguished Flying Cross'. In July, 1964, he was appointed the Chief of the Air Staff at the young age of 45. During the 1965 Indo-Pak conflict, he under his able command, steered the Indian Air Force to inflict heavy damages on Pakistan. In recognition of his

services of an exemplary high order and for his exemplary leadership during the conflict, he was awarded Padma Vibhushan, the nation's second highest civilian award. He retired from Air Force in July, 1969.

HONOURS AND AWARDS

14.30 The following gallantry and distinguished service awards were announced on the Republic Day, 2002:-

Ashok Chakra	4 (4 Posthumous)
Kirti Chakra	9 (8 Posthumous)
Vir Chakra	1
Bar to Shaurya Chakra	1
Shaurya Chakra	30 (8 Posthumous)
Param Vishisht Seva Medal	21
Bar to Ati Vishisht Seva Medal	2
Ati Vishisht Seva Medal	44
Yudh Seva Medal	1
Bar to Vishisht Seva Medal	10
Vishisht Seva Medal	121
Bar to Sena Medal (G)	3
Sena Medal/Nao Sena/ Medal/ Vayu Sena Medal(G)	118 (14 Posthumous)
Sena Medal/Nao Sena Medal/Vayu Sena Medal (D)	57

BEATING RETREAT CEREMONY-2002

14.31 The Beating Retreat Ceremony organized at Vijay Chowk on January 29, 2002 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 illumination of the Rashtrapati Bhawan, North Block, South Block and Parliament House.

MARTYRS' DAY CEREMONY-2002

14.32 On January 30, 2002, the President placed a wreath at Mahatma Gandhi's Samadhi at Rajghat. Floral tributes were also paid by the Vice President, the Prime Minister and some of his cabinet colleagues. 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

14.33 The Official Language Division of the Ministry of Defence is the nodal agency for effective implementation of the Official Language Policy in the Ministry as also for overlooking this work in various defence establishments including Defence Undertakings. The Division is accomplishing this job with the help of one Director (OL), one Deputy Director (OL), four Assistant Directors (OL) and other requisite staff for implementation and secretarial work. As per directions of Department of Official Language, Ministry of Home Affairs; work relating to official language implementation is carried out through various channels, such

as quarterly and half-yearly progress reports, annual assessment reports, quarterly meetings of the Official Language Implementation Committees, Hindi Salahakar Samities and inspections of the various offices located all over the country. The other main functions of the Official Language Division are:-

- (i) to translate the material received from various offices, divisions and sections of the Ministry;
- (ii) to nominate the staff for undergoing in-service training in Hindi, Hindi stenography and Hindi typing through the Hindi Teaching Scheme of the Government;
- (iii) to organize Hindi workshops for promoting the use of Hindi in official work and implementation of various incentive schemes for this purpose;
- (iv) to select and to give away prizes to the best in-house magazines published by various subordinate offices of the Ministry under the Cash Award Scheme;
- (v) to organize quarterly meetings of Official Language Implementation Committees/ Hindi Salahakar Samities;
- (vi) to select and to give away cash prizes to the best books written originally in Hindi/translated in Hindi on defence subjects and
- (vii) to formulate an Annual Action Plan for the Ministry of Defence as a whole

with a view to achieving various targets set in the Annual Plan issued by the Department of Official Language and implement the same.

14.34 **Translation Work :** Various types of material is received in the Division for translation from different sections and divisions of the Ministry, which inter-alia, includes general orders, notifications, resolutions, Parliament questions, cabinet notes, administrative and other reports, Audit Paras, material relating to Consultative Committees, Public Accounts Committee, Standing Committees on defence matters etc. The translation and typing of the material pertaining to Republic Day, Independence Day, Annual Administrative Reports, Budget Performance, VIP references etc. is also performed by the division.

14.35 **Hindi Training :** Officers and staff were nominated for training in Hindi, Hindi Stenography and Hindi typing during the sessions starting from July/August 2001 and January/February 2002.

14.36 **Hindi Workshops :** Hindi workshops were conducted regularly for the officers/ staff of the Ministry having proficiency/ working knowledge in Hindi with a view to providing them an opportunity to practise noting and drafting in Hindi. Such workshops also facilitated them to acquire deeper knowledge of the provisions of Official Language Act/Rules and the orders/instruction issued thereunder.

14.37 **Monitoring :** The Division monitored progressive use of Hindi in the three Services

Hqrs., Inter-Services Organizations and Defence Undertakings through regular meetings of the two Official Language Implementation Committees functioning in the Ministry. In these meetings, quarterly progress reports of these organizations are reviewed and remedial measures suggested.

14.38 During the year under report, the Committee of Parliament on Official Language conducted inspections of various Defence organizations located at Ranchi, Kolkata, Goa, Allahabad, Lucknow, Vishakhapatnam, Pune, Darjeeling, Guwahati, Thiruvananthapuram, Cochin, Lakshadweep, Bangalore, Mumbai, etc. The representatives of the Ministry participated in these inspection-meetings and ensured proper implementation of the orders/instructions issued by the committee in this connection.

DEFENCE COOPERATION WITH FOREIGN COUNTRIES

14.39 The strengthening of defence cooperation with foreign countries continued to be an important objective and component of our overall defence policy. Consequent upon significant events taking place in the field of security and eradication of terrorism from global environment, our security concerns were better understood by other countries. Apart from our traditional defence ties with old friends, defence related cooperation with larger number of countries was initiated and progressed during the year.

- 14.40 Indo-Japanese relations have shown substantial improvement during the last year. Japan appreciated India's security concerns, particularly in the light of events that have unfolded in Afghanistan and our neighbouring countries.
- 14.41 The Gulf countries, West Asian and North African regions represent part of India's extended neighbourhood. India enjoys multi-faceted relations with the countries of the region. This region continues to host a substantial Indian community that contributes to the economic well being of the region. India has also maintained an interest in the progress of the peace process in the Middle East that has a bearing on regional security. Therefore, India has a strategic interest in peace and stability in the region along with the need to keep shipping lanes open and secure.
- 14.42 Iran is witnessing change while adhering to the basic tenets of the Islamic Resolution. Its foreign policy is showing greater dexterity. It is opening up to Europe and is simultaneously not neglecting links with the Arab and Islamic fraternity. The upward trend in oil prices augurs well for Iran. The process of gradual and measured change is likely to continue. During the visit of Raksha Mantri to Iran in April 2001, issues of mutual concern were discussed with the Defence Minister of Iran and a Memorandum of Understanding on Defence Cooperation was signed between the two countries. During the visit of Defence delegation led by Brig. Gen. Dr. Hussein Dehghan, Deputy Minister of Defence of Iran in July 2001, the first meeting of India-Iran Joint Working Group on Defence Cooperation was held. The meeting covered a wide range of bilateral, regional and international issues. India's relations with Iran are substantially moving forward substantially.
- 14.43 Central Asia is a part of India's extended neighbourhood and developments in the region have direct bearing on our security interests. Apart from deep-rooted historical and cultural ties, our societies are also based on the foundation of secularism. There is a common interest in combating the spread of terrorism, religious fundamentalism and drug trafficking emanating from neighbouring Afghanistan. There is intense competition to harness and develop the energy resources of Central Asia. Countries which are in a position to provide transit routes for energy pipelines and trade have the possibility to increase their profile in the region, including in the shaping and evolution of regional associations and groupings, most of which have security dimensions. India has had historic cultural ties with the Central Asian Republics, and it is our endeavour to develop them further. During Tajik Defence Minister's visit in December 2001, issues of mutual interest in the field of Defence Cooperation between the two countries were discussed.
- 14.44 India's relations with the Russian Federation are characterized by continuity, trust and mutual understanding. These were further strengthened during the visit of Raksha Mantri to Russia in June 2001. During his visit, Raksha Mantri held discussions with Minister of Foreign Affairs, Mr. I.S.Ivanov and Minister of Defence, Mr. S.B.Ivanov. The Raksha Mantri also met President Putin. During this visit, the first meeting of the Inter-Governmental Commission on Military Technical Cooperation was also held between the two countries in which various issues were discussed.
- 14.45 Mr. I.I.Klebanov, Deputy Prime Minister of the Russian Federation visited India during February and October 2001 to discuss issues of bilateral Defence Cooperation.
- 14.46 The Prime Minister visited Russia during November 2001. He held discussions with President Putin amongst others, on the bilateral Cooperation between the two countries in various fields. Discussions were also held on issues of mutual security concerns.
- 14.47 The Fourth Meeting of the Indo-French High Committee on Defence Cooperation, which was co-chaired by the Defence Secretary from the Indian side and Mr. J.B.Ouvriev, Special Representative of the French Minister of Defence from the French side, was held in New Delhi during June 27-28, 2001. During the official talks, the two sides discussed a wide range of bilateral, regional and international issues of mutual concern. The two sides noted with satisfaction, the significant progress that had been achieved in the field of bilateral defence cooperation ever since the establishment of the High Committee. Both sides acknowledged the positive impact of close political relationship between the two countries.
- 14.48 Rt. Hon. Geoffrey Hoon, M.P. Secretary of State for Defence of UK visited to India during November 13, 2001.

15

ACTIVITIES AND ACHIEVEMENTS OF VIGILANCE UNITS

15.1 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 Department of Defence Research and Development is being looked after by one Chief Vigilance Officer and in respect of the Department of Defence Production and Supplies by another Chief Vigilance Officer. The Vigilance Division looks after all vigilance matters and provides 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 initiating other measures for combating corruption. The complaints received through the Prime Minister's Office and Raksha Mantri's Complaint Box are also being dealt by the Vigilance Division.

REDRESSAL OF PUBLIC GRIEVANCES

15.2 The public grievances pertaining to the Ministry of Defence as a whole are received by the Vigilance Wing 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 regularly.

OBSERVANCE OF VIGILANCE AWARENESS WEEK

15.3 In accordance with the directives issued by the CVC, Vigilance Awareness Week commencing from October 31, 2001 to November 6, 2001 was observed in the Ministry, Defence PSUs, attached and subordinate offices as per the following programmes:

- (a) **Pledge**
All employees including officers took a pledge administered by the Defence Secretary in the South Block. Messages received from CVC and Vigilance Commissioner were read out soon after the pledge.
- (b) **Banner and Posters**
In order to sensitize the officials and the public to vigilance, banners and posters were displayed at prime locations.
- (c) **Programmes on Vigilance Awareness**
Programmes were conducted in all offices under the control of the Ministry of Defence and prominent personalities

addressed the gathering at various locations.

- (d) **Involvement of Non-Government Organisations-Vendors.**

During the week, vendors' meets were organized at various locations. Representatives of Ancillary Units and various contractors attended in large number. The suggestions made by various representatives on purchase and sub contract procedures have been taken note of and circulated to all concerned for comments. Necessary changes will be made in the procedure after examination of the suggestions and comments.

- (e) **Essay/Slogan Writing on Anti-corruption**

Competitions were organized during the week through essays and slogans on vigilance and anti-corruption. Similar competitions were organized in some of the schools and colleges run by the Defence PSUs and Defence departments.

- (f) **Prizes**

The Vigilance Awareness Programme concluded with the distribution of prizes to the winners.

Appendix-I

MATTERS DEALT WITH BY THE DEPARTMENTS OF THE MINISTRY OF DEFENCE

A. DEPARTMENT OF DEFENCE

1. Department of Defence of India and every part thereof including preparation for defence and all such acts as may be conducive in times of war to its prosecution and, after its termination, to effective demobilisation.
2. The Armed Forces of the Union, namely, the Army, the Navy, the Air Force.
3. The Reserves of the Army, Navy and Air Force.
4. Territorial Army.
5. The National Cadet Corps.
6. Works relating to Army, Navy, Air Force and Ordnance Factories.
7. Remounts, Veterinary and Farms Organisation
8. Canteen Stores Department (India).
9. Civilian Services paid from Defence Estimates.
10. Hydrographic Surveys and preparation of navigational charts.
11. Formation of Cantonments, delimitation/excision of Cantonment areas, local self government in such areas, the constitution and powers within such areas of Cantonment Boards Authorities and the regulation of house accommodation (including the control of rents) in such areas.
12. Acquisition, requisitioning, custody and relinquishment of land and property for defence purposes. Eviction of unauthorised

13. occupants from defence land and property. Matters relating to ex-Servicemen including Pensioners.
14. Defence Accounts Department.
15. Purchase of foodstuffs for military requirements and their disposal excluding those entrusted to Ministry of Food and Civil Supplies (Department of Food).
16. Coast Guard Organisation.
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) Directorate General of Defence Planning Staff.
 - (viii) Services 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) Defence Services Staff College.
 - (xv) Ministry of Defence Library.

B. Department of Defence Production & Supplies

19. Ordnance Factory Board and Ordnance Factories.
 20. Hindustan Aeronautics Limited (HAL).
 21. Bharat Electronics Limited (BEL)
 22. Mazagon Docks Limited MDL.
 23. Garden Reach Shipbuilders & Engineers Limited (GRSE).
 24. Goa Shipyard Limited (GSL)
 25. Bharat Dynamics Limited (BDL)
 26. Mishra Dhatu Nigam Limited (MIDHANI)
 27. Directorate General of Quality Assurance (DGQA) including Directorate of Technical Development & Production (Air).
 28. Standardisation of defence equipments and stores including Directorate of Standardisation.
 29. Bharat Earth Movers Limited (BEML)
 30. Development of aeronautics industry and Co-ordination among users other than those concerned with the department of Civil Aviation and the Department of Space.
 31. Indigenisation, development and production of items required for defence purposes.
 32. Procurement exclusive to the defence services.
- ### C. Department of Defence Research & Development
33. Apprising, assessing and advising Raksha Mantri on the influence on National

- Security of Emerging developments in Sciences and Technology.
34. Rendering advice to Raksha Mantri and to the three services and inter-Services Organisations on all scientific aspects of weapons; weapon platforms; military operations; surveillance; support and logistics, in all likely theatres of conflict.
35. To function, with the concurrence of the Ministry of External Affairs, as the nodal co-ordinating agency of the Ministry of Defence on all matters relating to instruments of Accord with foreign Governments relating to the acquisition of technologies whose export to India is the subject of national security related controls of foreign Governments.
36. Formulation and execution of programmes of scientific research and design, development, test and evaluation, in fields of relevance to national security.
37. Direction and administration agencies, laboratories, establishments, ranges, facilities; programmes and projects of the department.
38. Aeronautical Development Agency.
39. All matters relating to certification of the design, air worthiness of military aircraft, their equipment and stores.
40. All matters relating to the protection and transfer of technology generated by the activities of the Department.
41. Scientific analysis, support and participation in acquisition and evaluation proceedings of all weapon systems and related technologies proposed to be acquired by the Ministry of Defence.
42. 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.
43. To deal with reference made under section 35 of the Patents Act, 1970(39 of 1970).
44. Financial & other material assistance to individuals, institutions and bodies corporate, for study & for training of manpower on aspects of science & technology that bear on national security.
45. In consultation with the Ministry of External Affairs, on international relations in matters connected with the role of Science and Technology in national security including:
- i) Matters relating to relations with Research Organisations 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 corporate abroad to provide for foreign scholarships and the training of Indian scientists and technologists under the administrative control of the Department.
46. Execution of works and purchase of lands debitable to the budget of the Department.
47. All matters relating to personnel under the Control of the Department.
48. Acquisition of all types of stores, equipment and services debitable to the budget of the Department.
49. Any other activity assigned to, accepted by, the Department through understanding or arrangements with any other Ministry, Departments Agency of the Government of India whose activities have a bearing on the scientific and technological aspect of national security.
- D. 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 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 short falls in expenditure nor unforeseen excesses.
 8. To advice 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.

Appendix-III

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MINISTERS, CHIEFS OF STAFF AND SECRETARIES WHO WERE IN POSITION FROM APRIL 1, 2001 ONWARDS

RAKSHA MANTRI

Shri Jaswant Singh
Shri George Fernandes

From March 18, 2001 to October 14 , 2001
From October 15, 2001 onwards

RAKSHA RAJYA MANTRI

Shri UV Krishnam Raju

From July 23, 2001 onwards

RAKSHA UTPADAN RAJYA MANTRI

Shri Harin Pathak

From October 15, 2001 onwards

Defence Secretary

Shri Yogendra Narain
From October 20, 2000 onwards

Chief of Army Staff

General S. Padmanabhan
PVSM, AVSM, VSM, ADC
From September 30, 2000 onwards

Secretary Defence Production and Supplies

Shri Subir Dutta
From December 1, 2000 onwards

Chief of Naval Staff

Admiral Sushil Kumar
PVSM, UYSM, AVSM, NM, ADC
From December 30, 1998 to December 29, 2001

Secretary DR&D and SA to Raksha Mantri

Dr. V.K. Aatre
From December 29, 1999 onwards

Chief of Air Staff

Admiral Madhvendra Singh
PVSM, AVSM, ADC
From December 29, 2001 onwards

Secretary (Defence Finance)

Shri P.R. Sivasubramanian
From March 16, 2001 to February 28, 2002

Chief of Air Staff

Air Chief Marshal A.Y. Tipnis,
PVSM, AVSM, VM, ADC
From January 1, 1999 to December 30, 2001

Shri M. Kumaraswami

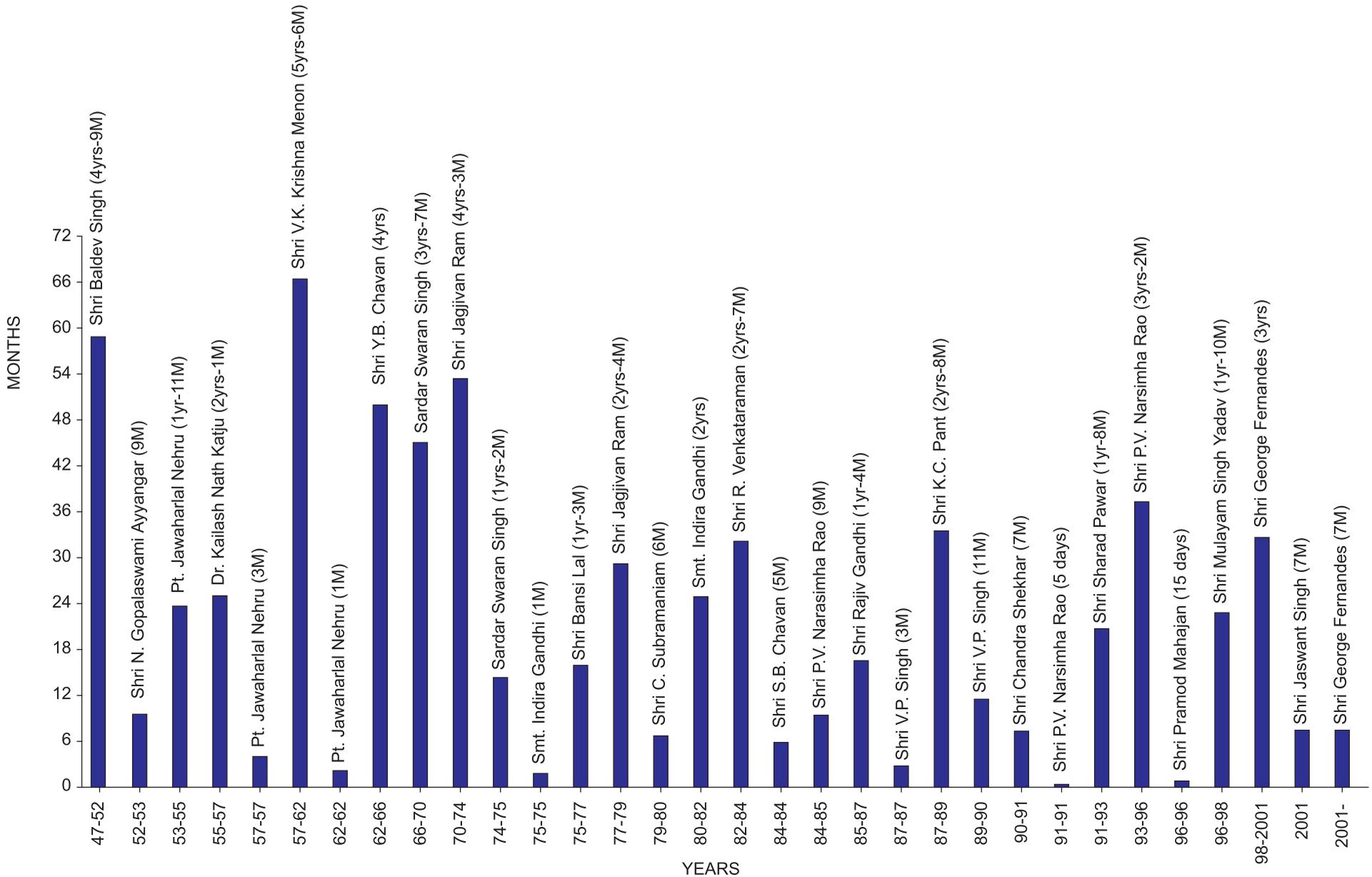
From March 1, 2002 onwards

Air Chief Marshal S. Krishnaswamy

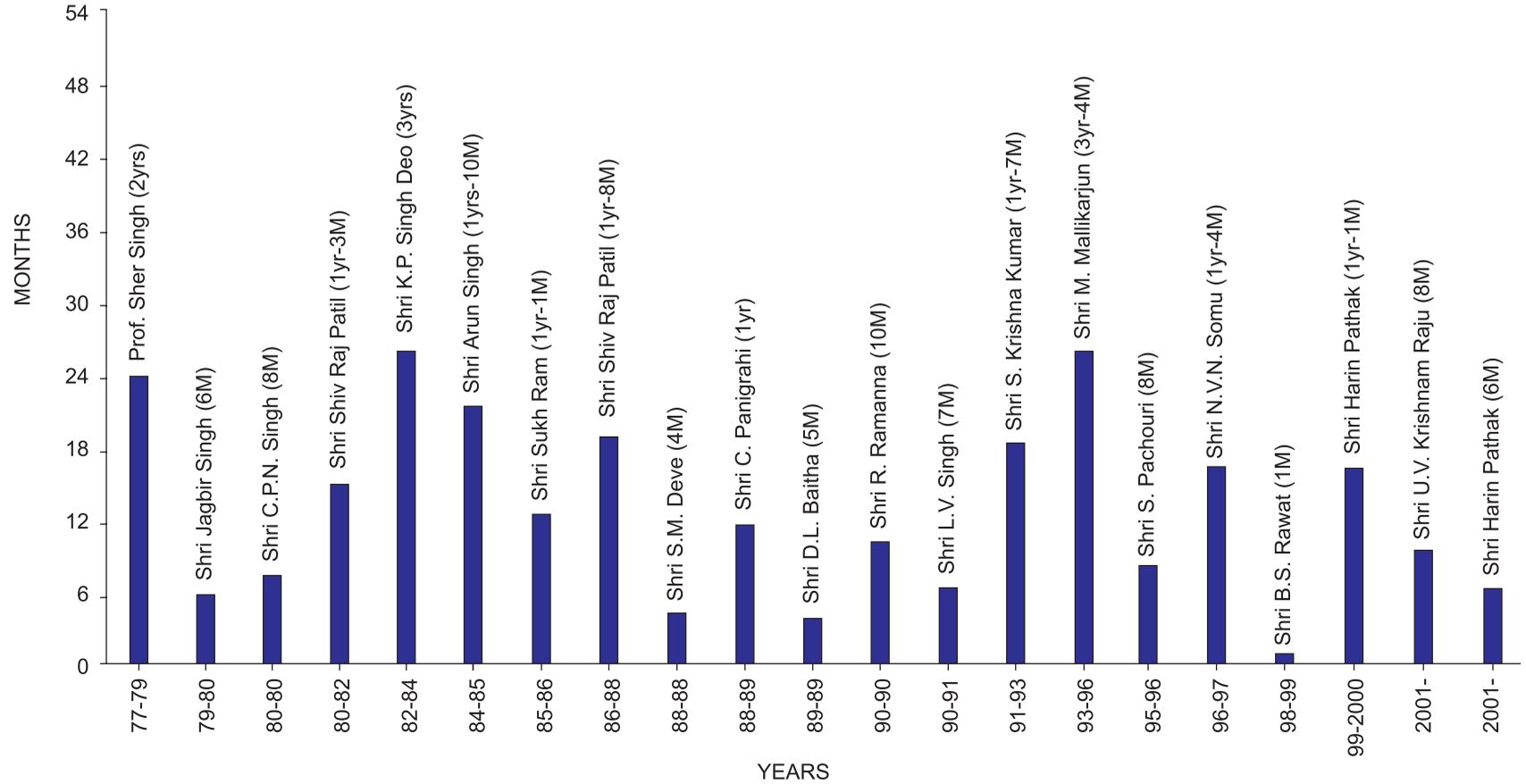
PVSM, AVSM, VM and Bar, ADC
From January 1, 2002 onwards

APPENDIX-III

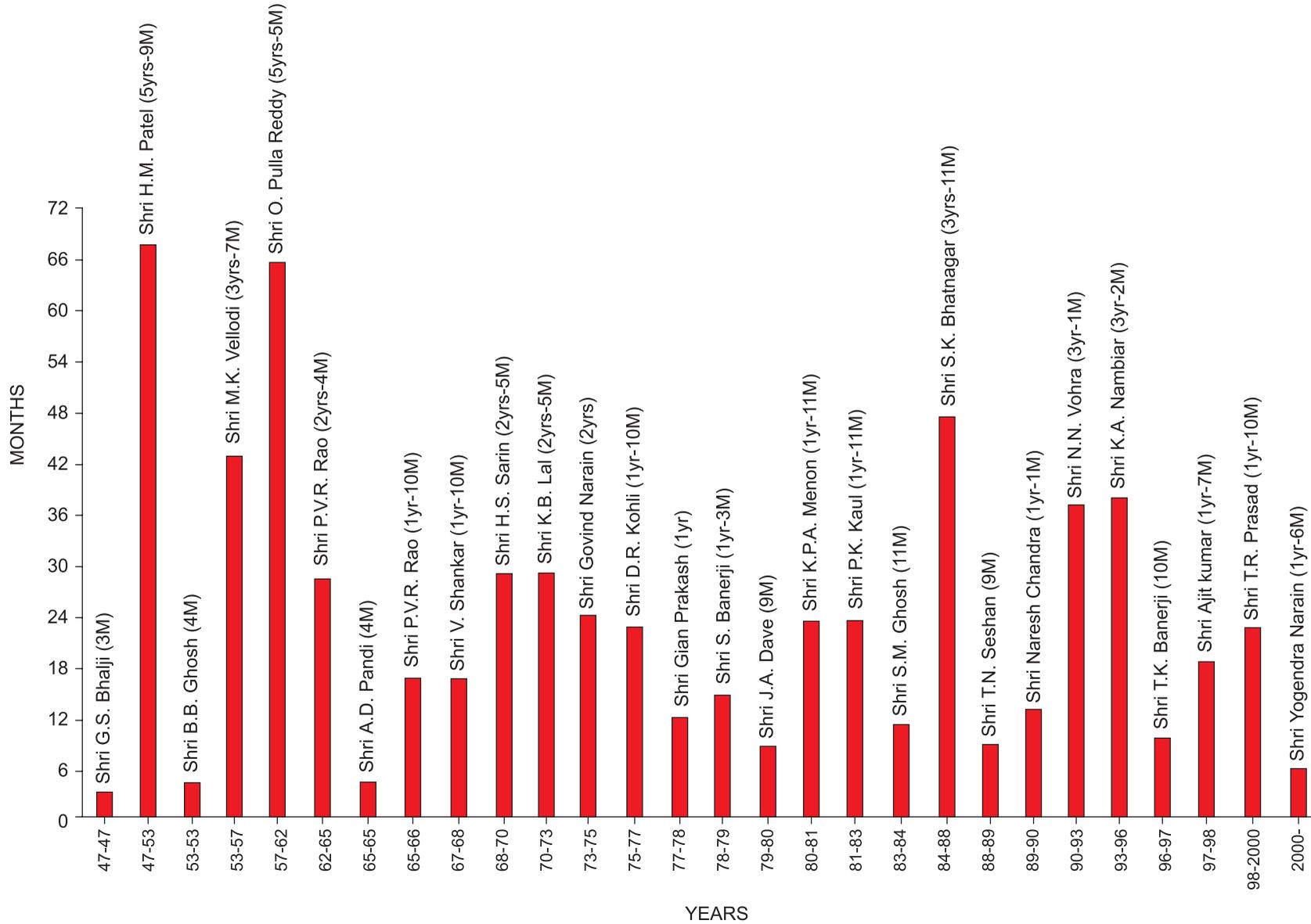
MINISTERS, CHIEFS OF STAFF AND SECRETARIES WHO WERE IN POSITION FROM AUGUST 15, 1947 ONWARDS RAKSHA MANTRIES



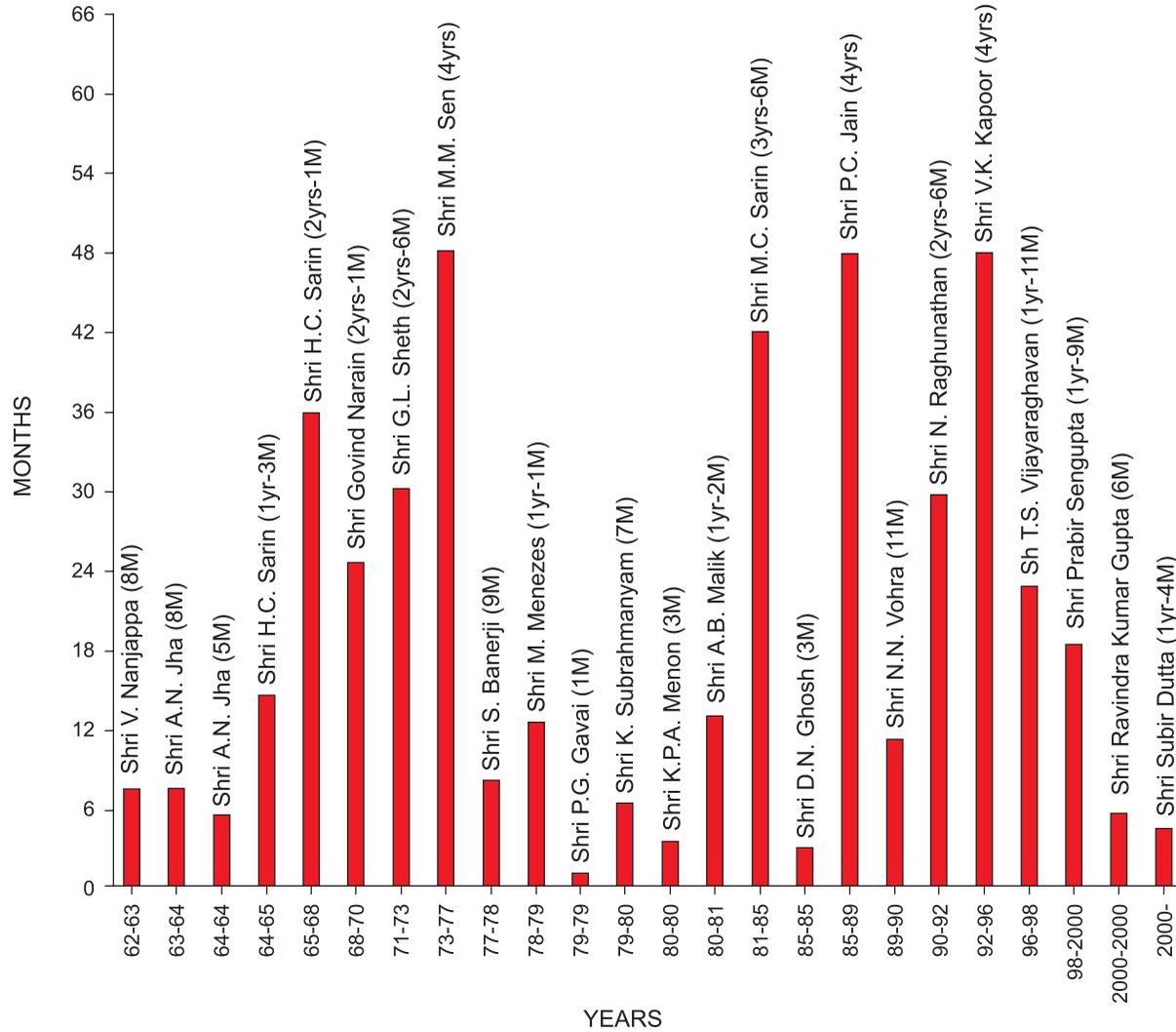
RAKSHA RAJYA MANTRIES



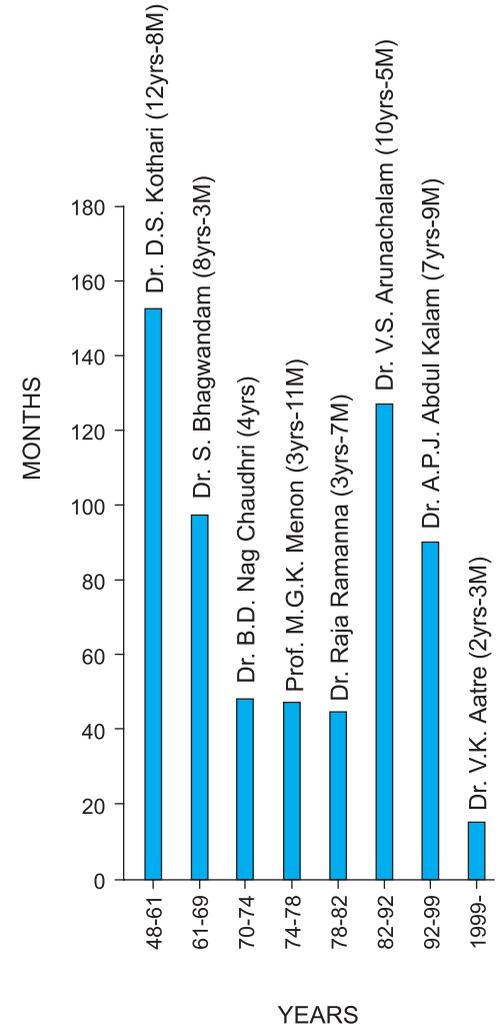
DEFENCE SECRETARIES



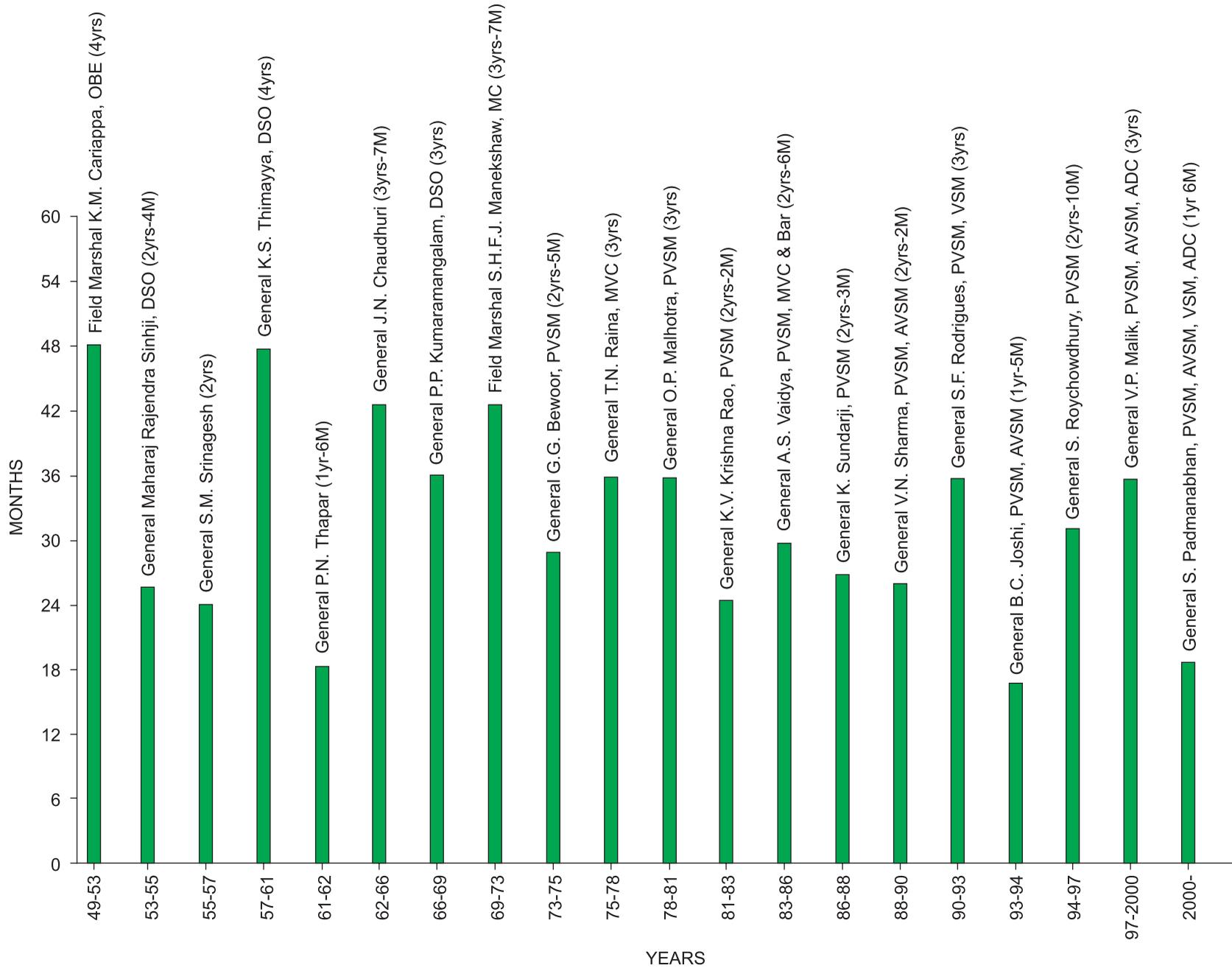
DEFENCE PRODUCTION SECRETARIES



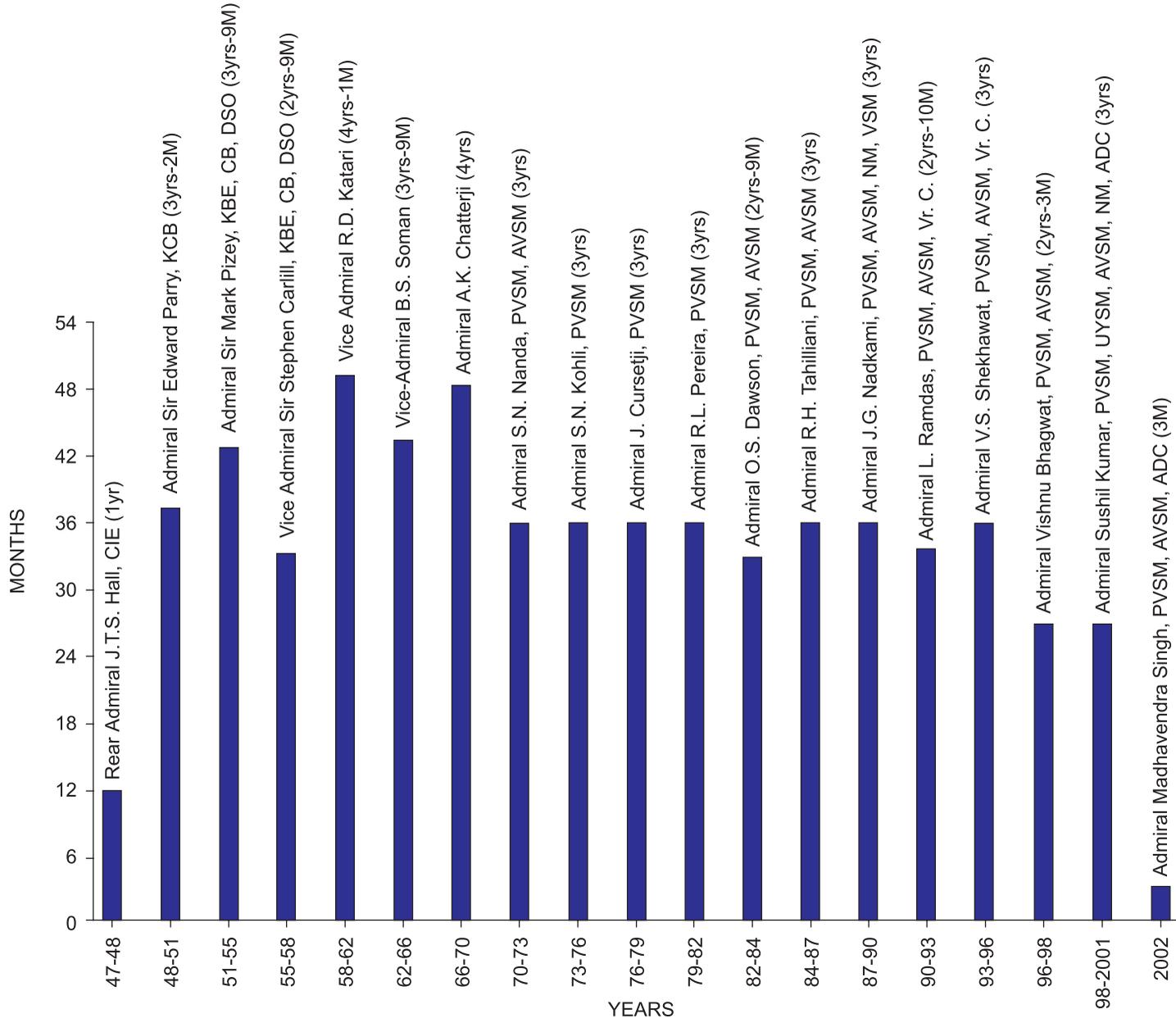
DEFENCE RESEARCH & DEVELOPMENT SECRETARIES



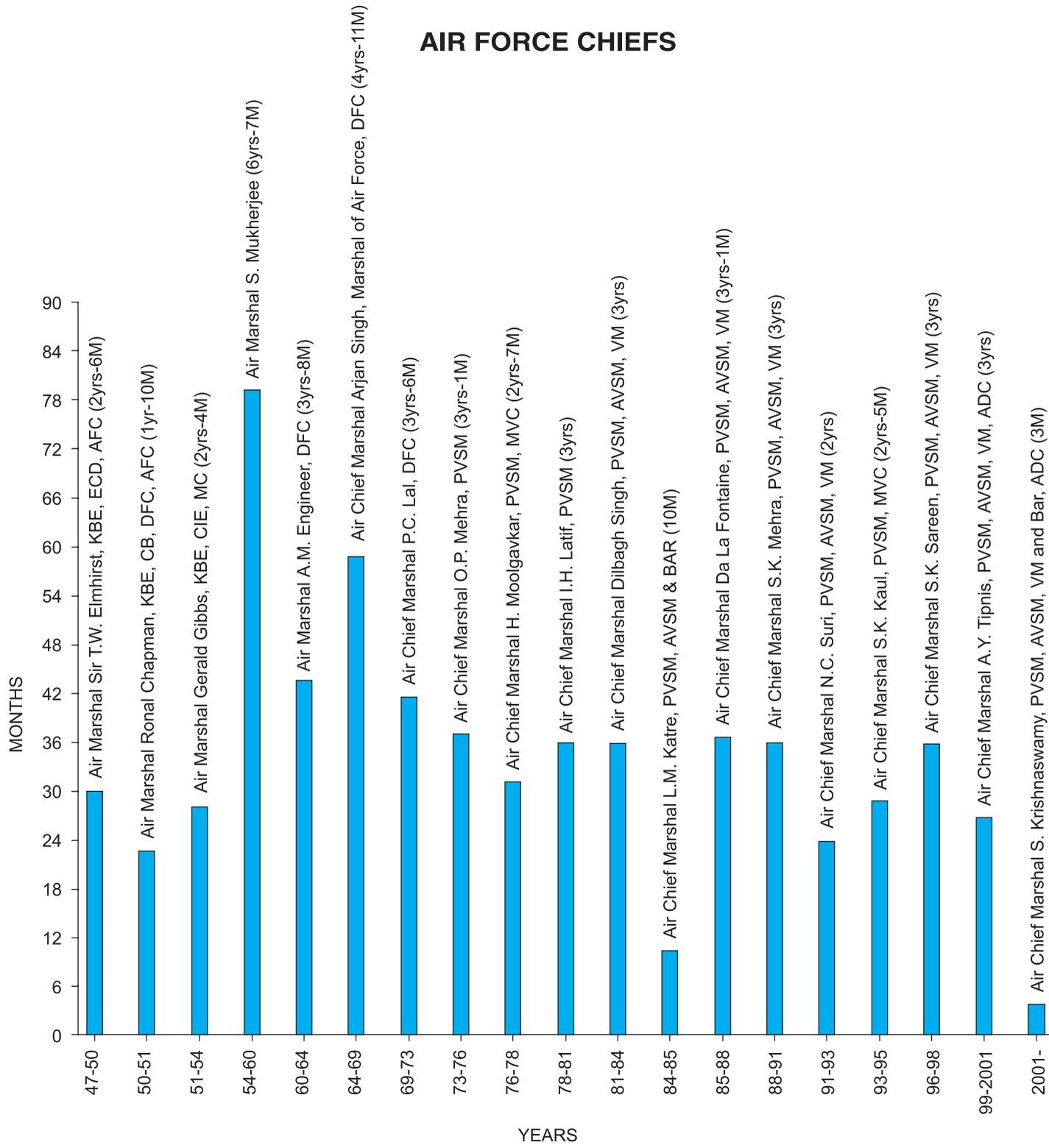
ARMY CHIEFS



NAVAL CHIEFS



AIR FORCE CHIEFS





Bofors Gun in Action