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NATIONAL SECURITY ENVIRONMENT



Indian Troops hosting National Flag a-top "Gun Hill" after recapturing from pakistani Intruders during Kargil War

1.1 The Pakistani intrusion across the Line of Control (LoC) in Kargil dominated India's security scenario during the year 1999-2000. Taking advantage of unheld gaps in the mountainous and glaciated terrain in the Kargil sector of the LoC, Pakistan committed armed aggression against India which led to the occupation of strategic territory on the Indian side of the LoC. The successful eviction of Pakistan's Armed Forces by the concerted action of the Indian Armed Forces clearly demonstrated that while India remains a votary of peace, it has the will and the capability to fight and win a war, if thrust upon it even at a time, place and terrain chosen by the adversary. Viewed against the background of the historic initiative taken by the Prime Minister to visit Lahore in February 1999 and the signing of the Lahore Declaration, which clearly reflected India's willingness and determination to resolve its differences with Pakistan through a process of dialogue and confidence building, the Pakistani intrusion in Kargil was a betrayal of trust. Even while accepting India's extended hand of friendship in Lahore, Pakistan was planning its clandestine, unprovoked full-scale intrusion across the LoC in Kargil. The regional security environment, already vitiated by Pakistan's continued low intensity conflict in both Jammu & Kashmir and the North Eastern States has deteriorated further after the military *coup d'etat* in Pakistan.



Troops of Rajputana Rifles re-joining after re-capturing "Tololing" Peak near Drass Sector during Kargil War

posture along the LOC and synergised anti-militant operations in the hinterland. In the aftermath of OP Vijay, Pakistan has attempted to escalate the proxy war against India. The militants, specially mercenaries, have in the last few months launched a number of desperate attacks against isolated Army posts. Our security forces have remained vigilant in countering these efforts. Despite threats to carry out spectacular acts of terrorism to avenge the Kargil debacle, the militancy has been effectively checked by the increased tempo of operations by the Armed Forces. It may be mentioned that the key characteristic of the present day militancy is the overwhelmingly dependence on alien mercenaries, who now form well over 70% of those engaged in militancy in Jammu & Kashmir.

1.2 Consequent to OP Vijay, the Army has been focussing on a strong counter infiltration

1.3 A number of shortcomings in the form of weapons, equipment, ammunition, clothing

and logistics which had built up over a number of years came to light during the Kargil conflict. The concerned agencies have been sensitised and all cases of procurement projected by the Services are being processed on a fast track basis in order that our Armed Forces are equipped to face any situation. Certain voids such as in surveillance capability, weapon locating radars, integral helicopter lift capability, communications and fire power for fighting in mountainous terrain, high altitude UAVs, communication interception equipment, satellite imagery capability of world standards besides development of skills in encryption and decryption were identified during the Kargil conflict. Action is well underway to fill these voids.

1.4 China has continued the process of modernisation of its Armed Forces. The defence co-operation between China and Pakistan also continues. However, the brief hiatus in the dialogue with China post-May 1998 is now over. India and China have begun a dialogue on security issues, following the June 1999 visit of External Affairs Minister to Beijing, which would supplement the existing framework for dialogue on the boundary issue. The Agreement on the Maintenance of Peace and Tranquillity along the Line of Actual Control in the India-China Border Areas signed on September 7, 1993 and the Agreements between the Government of the Republic of India and the Government of the People's Republic of China on

Confidence- Building Measures in the Military Field Along the Line of Actual Control in the India-China Border Areas signed on November 29, 1996 provide a reliable framework for the maintenance of peace and tranquillity in the border areas. Existing institutions like the Joint Working Group have met regularly. India is of the view that these agreements and the ongoing mutual dialogue will enhance understanding and mutual trust and contribute to the resolution of outstanding issues.

1.5 Further, developments in various parts of the Globe have also not contributed to the establishment of a world free from weapons of mass destruction. The developed nations have exhibited no inclination to eliminate or even reduce their arsenals of these weapons. On the other hand, the frequency of use of military force for the resolution of political issues in the international arena has increased. Related events the world over and, in particular, in India, Russia and the Central Asian region reflect the global trend towards greater militarisation of fundamentalist forces.

1.6 While India would continue to pursue a policy that ensures peaceful co-existence of all nations and respects their sovereignty and integrity, various developments in the international and regional security environment warrant that we remain fully prepared to protect our legitimate security interests. In furtherance of India's national

security objectives, we would not hesitate to take steps to deter threats to Indian interests and defeat any aggression.

NATIONAL SECURITY OBJECTIVES

1.7 India's national security objectives are served by:

- Defending the country's borders as defined by law and enshrined in the Constitution; and protecting the lives and property of its citizens against terrorism and insurgencies.
- Maintaining a secure, effective and 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; it cannot be otherwise.
- 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 dialogues 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 national security environment.

SALIENT FEATURES OF NATIONAL SECURITY ENVIRONMENT

1.8 Geographically, India shares land borders with seven countries and maritime boundaries with seven. The length of the 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. Further, owing to its peninsular nature, India has two coastlines that are over 7600 km long with island territories on both sides. India's Exclusive Economic

Zone extends to over two million square kilometres. The island territories in the East are 1300 km away from our mainland and are virtually adjacent to our ASEAN neighbours. Thus, India's geographical location endows us with vast maritime, economic and energy resources in terms of EEZ, sea-borne trade, living and non-living seabed resources and equally enormous deposits of oil and gas. However, at the same time, these geographical features also entail major security implications.

1.9 The exploration and exploitation of resources in our EEZ, our maritime assets, our considerable maritime infrastructure, the long coastline in the North Indian Ocean region, our far-flung island territories and significant imports from the Gulf through this region all have complex security implications. The North Arabian Sea has always been strategically and economically very critical to India and the world, primarily due to the sizeable cargoes of oil transported from the Persian Gulf and the Red Sea to both the developed and developing nations. The importance of the North Arabian Sea is further accentuated by the concentration of oil energy assets along the Saurashtra Coast and the Gulf of Kutch.

1.10 The region accounts for four declared nuclear weapon states, a fifth undeclared but widely perceived as one, and the presence of nuclear fleets of non-Asian countries in Asian waters. Most of these states produce and export missiles, with

reach sufficient to cover much of India, or in the case of China, all of it.

1.11 Militancy in different regions of India by groups actively supported from across the borders has vitiated the security environment in the country. India's major law and order concerns centre around Pakistan sponsored insurgency in Jammu and Kashmir, inter-linked and externally supported subversive activities of militant groups in North-East and the violence perpetrated by Left-wing extremist groups elsewhere.

1.12 Pakistani agencies operating from Nepal continue to launch operations against India and this included the hijacking of Indian Airlines flight IC-814 from Kathmandu by Pakistani militants in December 1999. Another dimension to the security climate in the North-East is the number of camps of ULFA and Bodo insurgents that have been set up on the borders of certain countries neighbouring India. Countries bordering this area have a common stake in uprooting terrorism and violence from the region to enable overall development and prosperity of the people.

1.13 The ISI activities in these countries which are directed against India have been taken up at various levels with the State governments concerned. They have been sensitized to the dangers of terrorist activities on their territory. We have stressed the need for prompt remedial action given the mutual inter-dependence of the

countries in our region.

1.14 The increase in smuggling activities, especially of narcotics and technologically advanced small arms, accompanied by a spurt in the terrorist related activities is another area of concern. India is located in the middle of two of the world's major narcotics producing and exporting regions – North West Pakistan and Afghanistan on the one side and Myanmar on the other. The involvement of insurgent and criminal groups in the global drug trade is a major cause of concern. Instances of currency counterfeiting that have come to the fore also pose serious challenge to security.

1.15 Sino-Pakistan and Pakistan-North Korea defence co-operation, which encompass transfer of nuclear technology, assistance in the missile development programme and the transfer of conventional military equipment to Pakistan is yet another area of concern and potential instability.

OUR NEIGHBOURS

1.16 Within the sub-continent, India's national security interests are closely linked to her immediate neighbours namely Myanmar, Bangladesh, Bhutan, Nepal, Sri Lanka, Maldives and Pakistan. Her relations with Nepal, Bhutan, Bangladesh, Sri Lanka and Maldives are basically stable. However, there is potential for further reinforcing the relationship both in the SAARC framework and at bi-lateral levels. India continues to progress its co-operation with Myanmar in areas such as Border Management, Control

of illegal traffickings of Narcotics, and Border Trade. A security dialogue with Myanmar has been maintained. The relationship is widening into a number of developmental areas, including Agriculture, Power Generation, Transport and Science and Technology. The ISI has been trying to exploit some areas of Nepal and Bangladesh for engineering subversive activities in different parts of India, particularly the North East and J&K. This is a cause of serious concern.

PAKISTAN

- 1.17 Pakistan has actively encouraged terrorism against India. There is enough evidence that destabilizing India through sponsored terrorism is a matter of state policy for Pakistan. Pakistan is consciously and noticeably emerging as an epicentre of Islamic fundamentalism inducting Islamic Mujahideen into Afghanistan in the North and into Kashmir in the East. This has drawn us into a protracted Low-Intensity Conflict in Kashmir. Kashmir, however, is not the root cause for Indo-Pak tensions, but a manifestation of a deeper insecurity in that country. Embroiled as it is with internal turmoil and economic instability, these insecurities translate into a strong anti-India bias in Pakistan's perceptions.
- 1.18 Our policy of restraint and resolve during the Kargil crisis was appreciated by the international community. The blatant misadventure of the Pakistani military establishment in Kargil failed miserably on

the politico-diplomatic and military fronts. Further, the military coup in Pakistan, which is largely a manifestation of the power struggle between the elected civilian government and the Army, with the Kargil episode as a background, is likely to have far reaching implications to the security environment in the region. Its impact is already visible in the number of suicide squads of militants operating in J&K.

- 1.19 Today, Pakistan's nuclear arsenal is in military hands, unfettered by even the presence of the façade of civilian-political control in a polity that has always been dominated by the military. Notwithstanding the severe economic crisis that Pakistan is currently facing, it continues to modernise its Armed Forces well beyond its legitimate requirements.

CHINA

- 1.20 At the regional level, China is India's largest neighbour. China is a declared nuclear power with a wide range of military capabilities. There have been positive trends in the Sino-Indian relationship and the border areas have remained largely peaceful. The two sides have reiterated their commitment to adhere to the provisions of the Joint Agreements. They wish to seek a reasonable and mutually acceptable resolution of the boundary question through peaceful dialogue by convening the meetings of Joint Working Group and Expert Group, though the core issue of boundary dispute remains unresolved.

- 1.21 China has further improved her ICBM capability by test-firing DF-31 and laboratory testing DF-41 missiles. The presence of Chinese SSBNs in the Indian Ocean may soon be a reality. She is also improving her strategic air and sea-lift capabilities. The PLA is being restructured with a view to enhancing its trans-border



Chief of Army Staff, Chief of Air Staff, Senior Army & Air Force Commanders and troops waving "victory" sign at "MOGULPURA" following recapturing the entire Drass Kargil Area from Pakistani intruders during Kargil war

military capability by improving mobility, firepower and ensuring better co-ordination in joint service operations.

AFGHANISTAN

- 1.22 As a neighbour, India remains committed to the unity, sovereignty, territorial integrity and independence of Afghanistan. The insoluble and violent conditions in Afghanistan have continued the sufferings of the Afghan people; they have also complicated the regional

security environment. India believes that a solution can only be found through negotiations which would lead to the establishment of a broad based Government with the participation of all ethnic groups. Indian concerns vis-à-vis the Taliban originate from their close links with Pakistan, their fundamentalist disposition and the known involvement of Afghan mercenaries in J&K militancy. Militant training camps in Taliban-controlled areas in Afghanistan are a major source of international terrorist activities.

INDIAN OCEAN REGION

- 1.23 The Indian Ocean Region is of strategic importance to India's security. A substantial part of India's external trade and energy supplies pass through this region. The security of India's Island territories, in particular, the Andaman and Nicobar islands remains an important priority. Drug trafficking, sea-piracy, and other clandestine activities such as gun running are emerging as new challenges to security management in the Indian Ocean Region.
- 1.24 The location of the Republic of Maldives astride the major sea-lanes in the Indian Ocean is of strategic relevance to India. The presence and interest of extra-regional powers including the United States, which has a major air and naval base for its Central Command at Diego Garcia, 550 km south of Maldives also has security implications for the region.

JAPAN

- 1.25 Japan is gradually redefining its political, economic and security role in the Asia Pacific region, whilst retaining its well established commitment to the US-Japan alliance. The Indo-Japanese relationship has undergone substantial improvement during the last one year and Tokyo appreciates our security concerns better than ever before. Further, different issues of mutual interest were discussed during the visit of the Indian Defence Minister to Japan in January 2000. This has helped to forge a better understanding of each other's views on a number of bi-lateral, regional and international issues.

WEST ASIA

- 1.26 The West Asian and North African regions represent part of India's extended neighbourhood. India enjoys multifaceted relations with the countries of the region. This region will remain the primary source of India's energy needs for the foreseeable future. It would also continue to host a substantial Indian community that contributes to the economic well being of the region. India also remains interested in the progress of the peace process in the Middle East. The growing links between these regions and other parts of the world in the area of ballistic missiles proliferation as well as the infusion of high technology weapon systems, have a bearing on regional security. Strategically, the Iraq-US/UN stand off has the potential to erupt into intra-regional tensions and re-induction

of hi-tech weapons into the region.

CENTRAL ASIA

- 1.27 India has historical and cultural links with Central Asia. It has always recognised the unique identity of the countries and peoples of the region and was among the first to recognise their independence. For geo-political and geo-economic reasons, Central Asia attracts a large measure of external attention. Big power rivalries over their rich economic resources, especially hydrocarbons; the perennial flash point of Afghanistan, the volatility of the Tajik situation; religious fundamentalism, cross-border terrorism and arms and drugs trafficking underline the complexities of the security situation in Central Asia. Central Asian countries and India have a common stake in countering religious extremism and terrorism. India's traditional links with the region are being strengthened through enhanced dialogue and interaction as well as India's positive and constructive participation in regional security initiatives such as the Conference on Interaction and Confidence Building in Asia (CICA). A large number of visits, including at the highest level, have been exchanged. India has been making its contribution to the development of the region by promoting trade and investments, including through bilateral credits, and offering training facilities. In 1997 India, Iran and Turkmenistan signed a trilateral transit agreement to facilitate trade with Central Asia. India and the countries of the Central Asia have a

common stake in peace and stability in the region. The bilateral contacts of India with these countries at the highest level have underscored the fact that the security of the two regions is interlinked. Negative influences such as religious extremism, terrorism, drug trafficking, ethnic conflicts and the crisis in Afghanistan have a detrimental effect on the security of the region as a whole. Accordingly, co-operation between India and the Central Asian countries is a high priority on the agenda for closer relations with these countries.

SOUTH EAST ASIAN REGION

1.28 South-East Asia is an important region for India's strategic interests. India shares a long land border with Myanmar and sea frontiers with Myanmar, Indonesia, Thailand and Malaysia. South-East Asia, which has some medium -size powers, has evolved a common approach to security. Our excellent relations with ASEAN countries provide us with opportunities to address the emerging strategic challenges in this region. The South East Asian economic crisis has altered the inter-se military balance amongst the countries of the region. Most of the countries of the region have had to reduce their defence expenditure affecting military preparedness. The defence budget of some of these countries has been enhanced with signs of economic revival, but this has not resulted in an appreciable improvement of operational effectiveness, as the Armed Forces are being

increasingly tasked with duties such as internal security and anti-immigration patrols.

1.29 The economic crises have also created additional opportunities for extra regional powers to gain increased security leverages in the region. Economic assistance in times of crises has enabled countries outside the region to progress their own defence agenda and increase their influence in the region. At a strategic level, the military balance between China and the other countries of South East Asia is altering further in China's favour. This will accord China greater influence and leverages in the region. Due to the economic stakes for the US in China and the thawing of relations between the two, the US would become progressively less inclined to intervene on behalf of others against China.

1.30 China is also building strategic relationships with some of our Bay of Bengal littoral neighbours by offering military aid and weapons at "friendship" prices. These developments alongwith China's strategic partnership with Pakistan have security implications for the region. Though Sri Lanka has remained politically non-aligned; the need for greater defence preparedness to counter the LTTE has brought Colombo closer to China. Most of Sri Lanka's military hardware have been supplied by China at comparatively lower costs compared to Western sources. Against the

background of developments in the Asian region, which may negatively impact on the security not only in Asia but the entire world, the fostering of mutually beneficial defence related linkages between India and the countries of South East Asia play an important role in making the Asian region, an area of peace and stability. These linkages could include an increased number of exchange of visits by naval vessels, training of military personnel, joint military exercises, provision of repair facilities for military equipment, supply of spares, joint development of equipment and technologies required by the Armed Forces and engagement in regular political-military dialogues and closer interaction between institutes dealing with defence and strategic issues.

ASIA-PACIFIC REGION

1.31 Since 1996, India has been an active participant in the ASEAN Regional Forum (ARF), the only security dialogue forum in the Asia-Pacific region. The ARF has been focussing on building confidence and trust and has before it a basket of proposals on CBMs for future consideration. India sees the ARF as a desirable initiative for fashioning a new pluralistic and cooperative security order in tune with the diversity of Asia-Pacific region and in consonance with the transition away from a world characterized by blocs built around military alliances. Our participation in the ARF demonstrates India's increasing engagement in the Asia Pacific region, both in politico-security and economic spheres

and our commitment to the objective of sustaining regional peace and stability.

1.32 Over the past few years, there has been considerable progress in India's relations with the countries of the European Union, including growth in bilateral economic ties. This has come through as a result of intensive interaction both at the political and official levels and the frequency of high level exchanges between India and the countries of Western Europe. The increased co-operation is indicative of the mutual recognition of the advantages of and the need for deeper interaction and co-operation.

1.33 Emerging cooperative governance in Europe is beginning to stress an enhanced unitary European identity. However, a united Europe, as a centre of economic and military power is yet to evolve. NATO's eastward expansion and its taking on a proactive and intrusive security role in non-NATO areas under the assumed legitimacy bestowed upon these operations by the UN are matters that merit our serious attention.

RUSSIA

1.34 With the maturing of Russian democracy, the Russian economy has started showing some signs of improvement. A resurgent Russia will gradually endeavour to assert itself in its erstwhile traditional areas of influence in keeping with its vast geographic spread, its great pool of human talent and its enormous resource base. Its

recent rapprochement with China has global security dimensions.

1.35 India and the Russian Federation have longstanding mutually beneficial relations in the field of defence within the overall framework of their time-tested ties which are characterized by continuity, trust and mutual understanding. Long Term Indo-Russian Programme of Military-Technical Cooperation up to 2010 signed in December 1998 was yet another important step in this direction. India and Russia are determined to raise the level of their multifaceted cooperation to a strategic partnership. Both countries seek a multi-polar world and share an identity of views on a wide range of issues, including on the growing scourge of international terrorism. Both appreciate the need for both bilateral and multilateral endeavours to eradicate this scourge.

1.36 Our defence ties with Russia encompass defence supplies, broad-based cooperation in defence production and R&D, Service-to-Service exchanges, training and naval ship visits.

USA

1.37 Based on mutual respect, mutual benefit, equality and understanding, Indo-US co-operation has improved in the recent past. High level contacts between military officials of the two countries are now increasing and the sanctions imposed by USA after May 1998 have also been lifted to an extent. The US has

also resumed its IMET programme. In keeping with the improving relations between the two countries, the institutional framework including the Defence Policy Group, the Joint Technical Group and Service-to-Service level Steering Groups for co-operation evolved over the years, need to be revived and strengthened.

1.38 The forthright and positive stand taken by the USA regarding Pakistan's intrusion in Kargil highlights the changing contours of Indo-US co-operation. The two countries are also engaged in discussions to assess the threat of international terrorism and measures to counter it.

INDIA'S NUCLEAR POLICY, DISARMAMENT AND INTERNATIONAL SECURITY

1.39 India has been consistent in its commitment to the elimination of weapons of mass destruction and to global nuclear disarmament on a universal and non-discriminatory basis. At the same time, India's legitimate national security requirements cannot be overlooked, especially in view of the developments in this region. In this context, as a non-aligned country, India has always maintained that it would not be a party to any discriminatory non-proliferation system. The principal plank of our nuclear policy has not changed and we continue to believe that a nuclear weapon free world would enhance India's security along with the security of all other nations. Moreover, our nuclear policy has also been marked by

restraint and openness. As a nuclear weapon state, we are even more conscious of our responsibility in this regard. In the past, we have undertaken a number of initiatives in pursuance of global nuclear disarmament. India would continue to take such initiatives both individually and collectively. We are committed to co-operating with like-minded States to ensure that the emerging world order will rest on the principles of universality, democracy and non-discrimination.

1.40 The circumstances under which India was obliged to stand aside on the Comprehensive Nuclear Test Ban Treaty in 1996 are well known. With the steps taken to address its security requirements, in May 1998, India has voluntarily announced a moratorium on further underground nuclear testing.

1.41 India has maintained that lasting non-proliferation can only be achieved through disarmament and discriminatory treaties are unstable instruments. As a responsible State committed to non-proliferation, India has declared that it shall not transfer nuclear weapons or related know-how to other countries. India maintains an effective system of export controls and shall make it more stringent where necessary to render it more effective in the context of a nuclear India.

1.42 India's nuclear policy can be summarized as:

- India's security interests require the

maintenance of an effective and credible minimum deterrent. This flows from the principle of minimum sufficiency, which precludes an arms race with anyone.

- India has made a formal commitment to no first use of nuclear weapons. India maintains a unilateral moratorium on explosive nuclear tests. It is now engaged in discussions with key interlocutors on a range of issues, including the CTBT.
- India is engaged in negotiations at the Conference on Disarmament on a treaty banning production of fissile material for nuclear weapons or other nuclear explosive devices.
- India has an effective export control mechanism in place that is continuously refined and updated to prevent the unauthorised transfer of sensitive equipment, material and technologies.
- India's nuclear deterrent is based on the principle of strict political and civilian control. Such control would be exercised through appropriate scientific, technological and military management of the nuclear assets of the country to prevent unauthorised or accidental use.

1.43 India's policy on disarmament and international security issues is predicated

on certain fundamental principles that are based on a broad national consensus. These are:

- The primary factor in India's security calculus is the supreme national interest of safeguarding the sovereignty, independence and territorial integrity of the country.
- Global nuclear disarmament and elimination of nuclear weapons is an indispensable requirement for regional and global security and for genuine and durable non-proliferation.
- Disarmament and non-proliferation can only be addressed in a comprehensive, and not a piecemeal manner in artificially defined regional compartments. The all-pervading threat arising from the possession of weapons of mass destruction can only be removed with a holistic and global approach to the problem.
- International disarmament and non-proliferation treaties should be universal and non-discriminatory and must provide equal security for all.
- The clandestine and illegal transfer or receipt of sensitive materials, equipment and technology by some countries should not be overlooked

or condoned for the sake of political expediency.

- There is a need for the international community to develop effective safeguards against the danger of sensitive materials and weapons of mass destruction falling into the hands of extremist and terrorist organisations by accident or by the acts of governments that support such organisations.

1.44 By ratifying the Chemical Weapons Convention (CWC) in 1993, India has demonstrated its commitment to international disarmament treaties, which are non-discriminatory in character. The implementation of all obligations assumed by India as an original state party to the Convention and related activities has proceeded satisfactorily.

1.45 India is a party to the 1972 Biological and Toxic Weapons Convention (BTWC). India actively participated in the work of the Ad Hoc Group of State Parties to the Convention in Geneva during 1999 to negotiate a Protocol to the Convention on the basis of the agreed mandate. India envisions the Fissile Material Cut-off Treaty within the overall context of its security imperatives and the broader goal of universal nuclear disarmament. A limited moratorium covering individual countries is completely unacceptable.

1.46 The proliferation of small arms to non-

state actors, the qualitative improvement in the lethality of small arms, in terms of the impact of high technology and their easy availability, has drawn the attention of the international community to the problem of small arms proliferation. Apart from a deliberate transfer of small arms to parties involved in low intensity conflicts there is also a widespread clandestine movement of such arms in the international market. The weapons recovered by Indian Forces from terrorists and insurgents in Jammu and Kashmir alone, which are enough to equip regular Army divisions, are indicative of the magnitude of the problem and the need to prevent the deliberate proliferation of such arms. The problem of curbing the indiscriminate use of anti-personnel landmines became an emotive issue with numerous countries and NGOs, calling for their total ban. India believes that while the concerns expressed are justified on humanitarian grounds, a phased approach is desirable till such time as alternative technologies are developed. Countries plagued by landmines do not have the necessary manufacturing capability and are usually importers of such devices. The focus should thus be on restricting access coupled with increased demining activity. The use of mines should be permitted for the long-term defence of borders, perimeters and peripheries of states.

ENERGY SECURITY

1.47 Energy security is particularly crucial to

India for two main reasons: the country's dependence on the imports of fossil fuels and the physical proximity of the two energy rich areas of the Gulf and Central Asia, where competitive access rivalries contain inherent tendencies towards conflict involving outside powers. In spite of improvements in indigenous production, dependence on imports of energy sources, such as crude and petroleum products, will continue. India's energy security would need to take into account some or all of the following factors:

- Mutually beneficial arrangements with India's eastern neighbours as well as Nepal for long term energy exploitation and sharing.
- Protection of the energy infrastructure within the country from disruption by terrorists and militants.
- Energy co-operation and sharing arrangements only with countries whose actions do not undermine India's security and which have demonstrated a willingness to co-operate meaningfully with India.
- International transit of energy destined for India only through stable, secure and friendly countries where there is no danger of disruption of supplies by state and non-state actors for political ends.

- Taking carefully calibrated actions to insulate India from disruption of supplies from outside by greater domestic production and recourse to nuclear and non-conventional energy sources.
- Co-operating with other interested parties in protecting the sea-lanes of communication.
- Diversification of supply routes within India.
- Focussed investments in maritime and naval assets to ensure adequate reach and endurance.
- Greater involvement in exploration projects overseas pertaining to oil and gas resources.

IMPACT OF TECHNOLOGY

- 1.48 The future battlefield scenario would be vastly different from its traditional version. Technological superiority, weapon effectiveness and force mix, capabilities for rapid response and precision strike will be more important than conventional numerical superiority. There is already a transformation in warfare towards the utilisation of high technology weapons and systems, advanced command and control networks, electronic and information warfare, as well as enhanced administrative efficiency and logistics support.
- 1.49 The technology control regimes and

denials have reinforced the emphasis on the indigenous development of defence related technology. Technological self-reliance in defence systems is an urgent need of the hour to possess weapons of high performance. Realising the importance of technological superiority and the thrust for self-reliance, the Defence Research and Development Organisation (DRDO) has endeavoured to achieve technological self-reliance in critical technologies. DRDO has launched a number of major programmes for the development of critical technologies and systems, through consortia of institutions and industry, technological empowerment of laboratories and collaborative teams. As a result of these efforts several major systems have been indigenously developed and led to production. Some of these include, surface- to-surface missile PRITHVI, Pilotless Target Aircraft, EW Systems, 105mm Field Gun, Composite Sonar PANCHENDRIYA, MBT ARJUN, Surveillance Radar INDIRA and several types of armament and ammunition and software for military operations. Critical foundries have also been established for the production of silicon and gallium arsenide based chips, 32 bit micro processor ANUPAMA and Super Computer PACE Plus have been designed and developed for defence applications. Several high frequency critical components have been realised through Indian industry.

- 1.50 With the successful completion of these initiatives, our programmes for indigenous

development and production of state-of-the-art systems in the defence and other critical high-tech sectors will no longer be affected by the denial regimes thus making the country technologically self reliant. These indigenous efforts have transformed the “technology denied” into the “technology gained”.

- 1.51 A new information warfare is emerging with sophisticated technologies related to computer virus attacks, precision attacks on command and control nodes, soft and hard kill capabilities to significantly degrade/paralyze the information structure of the adversary. Our Armed Forces recognised the impact of this technological wave and has geared itself to meet the challenges and exploit the advantages afforded by the technology. There is a growing realisation that over the next few years, cyberspace and cyber wars will increasingly occupy the centre stage at all levels of warfare. Our Forces have prepared plans, which aid and enhance equipment and personnel capabilities, to fully harness the technology and remain abreast in the sector afforded by the convergence of telecommunication and multi-electronic based system. For example, the Army has already planned to field a robust network backbone alongwith establishment of Army Intranet in the near future. The intranet includes MIS network, Army logistics network, Military intelligence network, Army training network and operational information systems. DRDO will

address issues involved in large scale networking which may include scalable systems and software, operation information system and decision support system, GIS application, virtual reality applications, Digital Libraries etc. Research in modelling and simulation techniques can provide an excellent training tool to compensate for the cost-prohibitive sophisticated modern day battlefield systems.

1.52 The technology pertaining to computers

and computer-based systems has rapidly progressed and provided extensive facilities for routine administrative and logistic functions at various levels in the Armed Forces. The latest Geographical Information System (GIS) enables the use of computers for important functions of operations and digitisation of maps etc., both on land and at sea. Besides enhancing administrative efficiency, operational capability of Armed Forces, and the utilisation of weapons and equipment in hand can be rapidly optimised with

progressive computerisation.

1.53 The information intensive battlefields of the future require greater levels of integration between the various Services towards the concept of integrated warfare. The ultimate impact of technology will be a unified battlefield with platforms, weapons, systems and human beings fighting war in a digital battlefield, in a synergistic manner, to attain the maximum force multiplication. The Armed Forces are being geared up for this future scenario.

2

ORGANISATION AND FUNCTIONS OF THE DEFENCE MINISTRY



AGNI-II on display at Rajpath during Republic Day Parade, 2000

HISTORICAL BACKGROUND

- 2.1 In the year 1776, a Military Department was created in the Supreme Government of the East India Company at Calcutta. Its main function was to sift and record orders (passed in other Departments) relating to the Army. It also maintained a list of Army personnel. It continued to function for many years as a branch of the Public Department, although headed by a separate Secretary to the Government from 1776 onwards.
- 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. In 1864, the Military Accounts Departments of Bengal, Bombay and Madras Presidencies were merged with the Military Department. The Army, however, continued to function as the Presidency Armies till April 1895, when they were unified into a single Indian Army. It was divided into four Commands viz., Punjab (including the North West Frontier), Bengal, Madras (including Burma) and Bombay (including Sind, Quetta and Aden) for administrative convenience.
- 2.3 The supreme authority over the Indian Army was vested in the Governor General-in-Council, subject to the Control of the Crown, which was exercised by the Secretary of State for India. In the Council, there were two members responsible for military affairs, one of whom was the Military

Member, who supervised all administrative and financial matters while the other was the Commander-in-Chief who was responsible for all operational matters. After 1909, the Military Department was renamed as the Army Department and was redesignated as the Defence Department in 1938. In 1947, the Defence Department became the Ministry of Defence under a Cabinet Minister.

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 respectively. In November 1962, a Department of Defence Production was set up to deal with research, development and production of defence equipment. The Department of Defence Supplies was created in November 1965 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. A Department of Defence Research and Development was created in 1980.



Three service-chiefs in the COSC meeting

- 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 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 the Departments are as follows:
- 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).



The Prime Minister Shri A.V. Vajpayee escorted by Def. Min. Shri George Fernandez, is received by three services chiefs & Def. Secretary, during Republic Day Parade, 2000

- (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 a Financial Adviser. He is tasked with exercising financial control over proposals involving expenditure from the Defence Budget, and with the responsibility 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, the Financial Adviser, Principal Secretary to 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, the Financial Adviser 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 set up.

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 and 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-1.

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 Financial Advisers who held positions from April 01, 1999 is given in Appendix II.

PLANNING FOR DEFENCE

2.13 The defence policy accommodates continu-

ing 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 whilst remaining prepared for sufficiently responsive to further developments in the future.

- 2.14 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 harmonised perception of experts from all the concerned Ministries and Department 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.
- 2.15 The Directorate General of Defence Planning Staff (DPS), an Inter-Service organi-

sation, 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 conceptualises and evolves Defence Plans.

- 2.16 In the recent past, some important facets of defence planning addressed by the DG DPS include evolution of the “National Defence Policy” and an “Approach Paper to the 10th Defence Plan”.
- 2.17 The Directorate is currently carrying out a comprehensive “Strategic and Technological Environment Assessment” to meet the changing geo-political situation and the rapid technological developments that will impinge on the national security in the first two decades of the 21st Century.

- 2.18 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, 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

- 2.19 Given India’s size and security concerns, the outlay on Defence, assessed either as a percentage of the total Central Government expenditure or of the Gross Domestic Product, 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 1997-98, 1998-99, 1999-2000(RE) and 2000-2001(BE) and Service/Department-wise expenditure as a percentage of total Defence expenditure.

The Service/Department-wise break-up of Defence expenditure

(Rs. in Crores)

Departments/Services	1997-98	1998-99	1999-2000	2000-2001
DDP&S	1067.29	405.93	(-) 41.17	432.59
R&D	1951.38	2292.45	2740.00	3094.75
Navy	4764.56	6015.54	6997.39	8228.05
Air Force	9126.83	9046.16	10395.73	14495.61
Army	35277.99	39897.58	48504.00	58587.00

3

ARMY



A T-72 Tank of "Blue land" advancing to capture a strategic position of "Red land" during the Exercise "Vijay Chakra" in the deserts of Western Sector

3.1 The Army's basic responsibility is to safeguard the territorial integrity of the nation against the external aggression. 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 such as desert terrain on the west, snow covered mountains in the north and thick mountainous rainforests in the east. The responsibilities of the Army have increased manifold due to counter insurgency operations in the Kargil and Dras sector, Jammu & Kashmir and the North Eastern parts of the country. In addition, the Army is often required to assist the civil administration during internal disturbances to maintain law and order as well as to organise relief operations during natural calamities such as floods, earthquakes, cyclones and to maintain essential services like supply of food and medical aid. The Indian Army played an important role in the relief operations in the Orissa cyclone.

**MODERNISATION OF VARIOUS ARMS/
SERVICES OF THE INDIAN ARMY
MECHANISED FORCES**

3.2 To enhance the combat efficiency, Mechanised Forces are in the process of acquiring T-90 S tank and Konkurs Medium Anti-Tank Guided Missile with tandem warheads.

ARTILLERY

3.3 For meeting urgent operational requirements, Artillery have contracted for Medium Range Surveillance Radars and Thermal Integrated Observation Equipment. Artillery is also in the process of

acquiring weapon-locating radar, which will enhance effectiveness.



Bofors Gun in action during OP Vijay

AIR DEFENCE ARTILLERY

3.4 Air Defence Artillery has acquired improved Tactical Control Radars. The case for Schilka upgrade is under consideration.

ARMY AVIATION

3.5 Cheetah night vision goggles have been contracted during the year. Negotiations for Cheetah arming and trials of a helicopter mounted surveillance system are in progress. Advance Light Helicopter prototypes have already completed stringent hot weather trials. The prototypes are under advanced stages of certification.

ENGINEERS

3.6 To combat the Improvised Explosive Devices (IED) planted by militants, Corps of Engineers has acquired counter IED equipment. In addition, trials are in progress to evaluate vehicle mounted mine detection system.

ARMY CAPITAL WORKS

3.7 Army capital works can be categorised

into two broad categories, viz. Married Accommodation and Other than Married Accommodation (OTM). The Other than Married Accommodation category generally includes technical and administrative accommodation, training establishments, military hospitals, laboratories, storage facilities, ammunition depots and external services.

3.8 The management of Army Capital Works has been streamlined over the years. Close monitoring and careful cost control has resulted in most of the high value projects being completed on schedule and within the estimated cost. Completion of on going works continued to get priority to achieve an optimum use of the available resources and minimise cost overruns. Modern construction techniques and materials are being instituted gradually.

3.9. The allocation of funds for Capital Works for the Army during the Financial Year 1999-2000 was Rs. 450 crores, which includes Rs. 28 crores for special married accommodation under Quick Shelter Project initiated to achieve enhanced satisfaction levels of married accommodation. The emphasis continues on the construction of married accommodation expeditiously in a time bound manner. Towards achieving this end, all married accommodation projects are being treated as Fast Track Projects and works amounting to Rs. 38.75 crores have been sanctioned during 1999-2000. During 1998-99, married accommodation comprising 417 units for officers, 394

units for JCOs and 1978 units for OR have been completed.

REVENUE WORKS

- 3.10 These works comprise major and minor works (which do not result in creation of capital assets), normal and special repairs of buildings, roads, furniture, electrical and water supply installations, tools, plants and machinery.
- 3.11 The allocation of funds for Revenue Works and Maintenance Services is Rs. 1367.57 crore during 1999-2000 as against Rs. 1239.38 Crores allotted during the year 1998-99. . To optimise the use of the available funds and to achieve higher users' satisfaction, innovative schemes like door-to-door maintenance, "Welcome maintenance" and the single window system for attending to maintenance problems introduced earlier have been given a major thrust.

SIGNALS

- 3.12 During the year, the Corps of Signals have contracted the state-of-the-art Radio Set HX for use by Special Forces. In addition, they have acquired Hand Held Direction Finders and Radio Receivers and they are in the process of updating communications in high altitude areas.

ASCON

- 3.13 ASCON is a fully secured digital network providing voice, telex and data services and serving as the backbone communication network of the Army. ASCON was planned in the early eighties and Phase 1

and 2 of ASCON have been implemented. Phase 3 of ASCON has been envisaged to cover voids in the existing network.

- 3.14 **WAN Connectivity for Army Intranet :** Army Intranet was inaugurated by COAS on January 15, 1999.
- 3.15 **AREN Equipment :** Tactical Communication Network 'AREN' (Army Radio Engineered Network) provides survivable, secure and reliable voice, data and telex communication to the field formations. Conceived in the early 70's, AREN was implemented in two distinct but concurrent phases. Phase I involved the modernisation of the entire range of existing communication equipment from infantry platoon to Corps Head Quarters level. Phase II was the design development and production of automated switching and mobile communication systems for fielding an integrated, digital secure communication network in the tactical area. It is a matter of great pride for the country that the design, development and production of the AREN family of equipment has been done indigenously in association with the Defence Research Development Organisation and Public Sector Undertakings. The availability of Radio Trunk System (RTS) for providing grid access to mobile subscribers as well as Radio Local System (RLS) for providing local connectivity on radio has further improved the versatility of the AREN.

INFANTRY

- 3.16 In order to provide mobility and protection

to our troops against improvised explosive devices, the Army have acquired Protected Vehicles and deployed them in the Northern as well as the Eastern Commands. To enhance logistics capability in east of Zojila, Infantry have contracted snowmobiles and All Terrain Vehicles. Infantry have also contracted for Anti Material Rifles, Sniper Rifles, AK 47 Rifles with Under Barrel Grenade Launcher, Multiple Grenade Launcher, Disposable Flame Thrower and Rocket Launcher to enhance our combat potential. Short Range Battle Field Survival Radars and Special Equipment were inducted for a few infantry units in Jammu & Kashmir.



The Chief of Army Staff and Chief of Air Staff examining a Captured Grenade Launcher from Pakistanis' intruders on during Kargil War at Kargil

ARMY SERVICE CORPS

- 3.17 The basic role of the Army Service Corps

encompasses provisioning and supply of rations and all grades of petroleum products to all the three services and a few para military forces in peace as well as in war. This includes procurement, inspections, quality control, storage and distribution. The Corps delivers all the items including ammunition to the most forward locations, be it by surface, air or animal transport. At altitudes of 15,000 to 17,000 feet in the higher reaches of the northern sector, cooking of food in very low temperatures and inhospitable terrain is a major problem. This was overcome during OP VIJAY by resorting to Composite Pack Rations, Survival Rations and Meals Ready to Eat. In such treacherous conditions and dangerous looping roads, the stalwart drivers of Army Service Corps drove their trucks fully loaded with troops, food and other essentials without a thought to their personnel protection and safety. The mules and mule drivers were pressed into service where roads did not exist to support the Indian Army in line with ASC credo 'SEVA ASMAKAM DHARMA'.

ELECTRICAL AND MECHANICAL ENGINEERS

3.18 **Development of Simulators :** The Corps of EME has actively associated itself in the design, development and manufacture of an array of sophisticated and state-of-the-art simulators such as B Vehicle Driving Simulators, Hand Grenade Simulators and Small Arms Training Simulators, etc. for use by the field Army in imparting realistic and cost-effective training to its personnel.

3.19 **Indigenisation of Equipment :** The Corps has also successfully developed the Eagle Mine Detector for combat application by the field Army.

TERRITORIAL ARMY (TA)

3.20 The Territorial Army (TA) is an organisation of units formed by ordinary citizens from all walks of life who generally, while continuing to pursue their normal vocations also volunteer for military service. These citizens, on joining the Territorial Army, undergo a short period of rigorous training to make them competent soldiers. The Territorial Army has an authorised strength of 41,000 men of all ranks comprising 25 Infantry Battalions (TA) and 29 departmental units. The Territorial Army Infantry units successfully met the heavy commitments during 'Operation Vijay' and 'Operation Rakshak' in J&K and Counter-Insurgency Operations in the Eastern Sector apart from Guard and Escort duties round the year. The 131 Infantry Battalion (TA), Waste Land Development Force, which was raised at the behest of ministry of Rural Areas and Employment, at Morena (Gwalior), completed its assigned task of soil conservation and plantations.

3.21 The Territorial Army recently held its Golden Jubilee Celebrations. As part of celebrations, it successfully conducted various adventure activities during September/October 1999. A Motorcycle expedition from Pune to Kargit to Delhi was organised covering a distance of 4,600 Kms in 38 days to pay homage to the Kargit Martyrs. Three cycle expeditions were conducted - one

from Chandigarh covering 1,048 Kms from September 12 to October 6, 1999 and the second from September 29 to October 6, 1999 from Saugar (MP) to Delhi covering a distance of 630 Kms. The third cycle expedition on Kumaun Hill was flagged off from Tawaghat on Indo Tibetan border on September 17, 1999 which reached Delhi on October 6, 1999, successfully covering a distance of approximately 682 Kms over difficult mountainous terrain.

3.22 The Territory Army celebrated its Golden Jubilee on October 9, 1999 and a first day cover was also released by Hon'ble Defence Minister on that day. The high standard of drill of the Territorial Army contingents in the Parade was well-praised by the viewers.

3.23 The Territorial Army rendered assistance to civil authorities during Super Cycle in Orissa in October-November 1999 by mobilizing six Infantry Battalions for loading/unloading, guarding, escorting relief material to various distentions in the cycle affected areas of Orissa during the period from October 29 to December 15, 1999. In addition, one Infantry Battalion was also mobilized in Thiruchirapalli during November 22-25, 1999 for flood relief and rescue operations. The Territorial Army also rendered assistance during Port & Dock workers strike during January 14-18, 2000 by mobilizing five of its Railway Engineers Regiments at various ports for running trains within Dockyard complexes and for maintenance of track, locomotives and wagons employed for the assigned tasks. The Territorial Army also rendered assistance

during strike called by Officers Association of Oil Sector PSUs during January 9-12, 2000 by mobilizing three of its Oil Units for running the Thermal power stations, crude Oil distillation plant and to maintain supply of Aviation fuel to Aircraft operation out of Delhi. This strike was withdrawn subsequently.

THE REMOUNT & VETERINARY CORPS

- 3.24 The Remount & Veterinary Corps (RVC) has been entrusted with the task of breeding, rearing & training of horses, mules and Army dogs. The Corps is also carrying out the specialised task of deployment of Army dogs. Army dogs have proved to be a force multiplier in Counter Insurgency Operations and the Corps is engaged in meeting this challenging job efficiently.

MILITARY FARMS

- 3.25 Military Farms, the pioneers in organised commercial dairy farming in the country, supply hygienic and pasteurized milk to troops at 49 military stations. These farms produce as well as procure fodder for their animals and meet the requirement of Army animals. In order to strengthen military farms in forward areas, poultry, goat/sheep and vegetable farming has been taken up at Dimapur, Guwahati, Tenga, Karu (Leh), Shillong and Panitola. Military farms have also embarked on collaborative projects with the Ministry of Agriculture for dairy development in remote regions of the country. The Frieswal Project, one of the biggest cattle breeding project for evolving a breed for the tropics, is being run in collaboration with the Indian

Council of Agricultural Research (Ministry of Agriculture).

TRENDS IN TRAINING

3.26 National Defence Academy (NDA):

The academic training of the National Defence Academy is in tune with the national educational format of 10+2+3. The syllabus of the Academy meets these requirements and has been approved by the Jawaharlal Nehru University for grant of B.A. or B.Sc. degrees at the time of passing out from the Academy after three years of training. The Academy is a unique institution wherein Inter Service aspects are developed in the formative stages of an officer, thus developing a bond of friendship and respect for each other's Service.

3.27 Entry of Women as Commissioned Officers:

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. The strength of lady cadets from March 1997 has been enhanced to 50 per course i.e. 100 per year.

3.28 Junior Leaders Academy (JLA) :

Officers and Non Commissioned Officers in warfare tactics and weapon craft. However, there was no course specially structured to impart training in leadership and management. With the aim of filling this void, a Cat-

egory 'A' Training Institution named Junior Leaders Academy (JLA) has been established. The Academy conducts specifically structured courses in leadership and management to help them to shoulder responsibilities presently being borne by junior officers. The establishment of another Junior Leaders Academy is in progress.

HUMAN RIGHTS ASPECTS IN THE ARMY

- 3.29 The achievement of human rights values is the restoration of the right balance between the needs of the society and individual liberty and dignity. While it is not always easy to maintain this balance, the Army, with its concern and commitment for human rights, has managed to achieve the best track record in the world in observance of human rights despite being heavily committed in Counter Insurgency in Jammu & Kashmir as well as in the North Eastern States where it is operating against individuals trained and equipped with state-of-the-art weapon system and who do not subscribe to the Geneva Conventions or any law. The troops have carried out all operations with utmost restraint and with full respect for the human rights of the populace, sometimes even at the cost of their own lives.

REHABILITATION AND WELFARE MEASURES

- 3.30 The Indian Army has been engaged in a number of military operations since independence. During these operations a large number of soldiers have been killed or disabled permanently. Besides, the Army



Naval aviators fly over mountains too! Lt. Cdr. UtaPl Dutta was the sole naval officer to have participated in Kargil Ops.

has been involved in fighting insurgency in Jammu & Kashmir, Punjab and North Eastern States over a protracted period of time. Counter Insurgency operations are still continuing in Jammu & Kashmir and the North East. There are approximately 14,000 living war widows and 7000 disabled soldiers who need to be taken care of by the Government and the Army. This figure is increasing every year. The Army has established a permanent Rehabilitation and Welfare (R&W) Section under the Adjutant General's Branch/Ceremonial and Welfare Directorate to execute the onerous task of implementing welfare schemes for the war widows/dependents and disabled soldiers. This section will interact and process all cases with various Government and Non-Government departments, co-ordinate training and subsequent rehabilitation of affected personnel and also maintain a centralised database on all war widows, dependents and disabled soldiers. It will act as the nodal agency for dealing with all issues related to the welfare of war widows and disabled battle casualties of the Army.

ARMY'S ROLE IN ANTARCTICA EXPEDITION

3.31 The Army logistic support contingent comprising two officers, two JCOs and nine other ranks has been provided to the Department of Ocean Development, Government of India for the 18th and 19th Antarctica Expeditions. While the 18th Antarctica Expedition is presently stationed at Antarctica, the 19th Expedition has moved from South Africa in December, 1999. The Army has been inti-

mately involved in this venture with effect from the 2nd Antarctica Expedition that was launched in 1982. Tasks undertaken by the contingent are construction, repair and maintenance of permanent stations; running of life support systems and overland transportation of men and material on the Continent. The Army team has also been undertaking other humanitarian tasks, over and above their laid down charter.

UNITED NATIONS PEACE KEEPING OPERATIONS

3.32 Peacekeeping operations, under the aegis of United Nations, have grown in relevance and importance, especially in the post Cold War period. This instrument is used by the UN for conflict resolution and the establishment of democracies worldwide. The professionalism and dedication of the Indian soldiers, the quality of performance of the Indian units deployed on such missions and execution of task by our staff officers in various UN Headquarters have established benchmark of quality in the field of Peacekeeping Operations. The respect for human rights displayed by Indian soldiers, often at the risk to their own lives, has been recognised and respected by all nations. Indian contributions, in numbers, rank first in the world today and is spread over three continents.

3.33 **Contributions by India :** During the year 1999-2000, the Indian Army was actively involved in the Peacekeeping Operations in Angola, Sierra Leone, Lebanon, Kuwait and the Democratic Republic of Congo.



COAS meeting the peace keepers

- (a) **MONUA (Angola) :** Indian troops as part of UN Military Mission Observer (MONUA) in Angola were not only involved in maintenance of peace but were also engaged in construction of quartering areas, reconstruction of bridges, reopening of roads, demining of roads as well as extending medical and humanitarian aid to the local populace. The Mission has since been closed down and all our troops have returned in April 1999.
- (b) **UN Iraq/Kuwait Observer Mission (UNIKOM) :** Seven military observers have been deployed from India for this part of the mission. Their main task is to monitor the sensitive demilitarised zone between Iraq and Kuwait. With their dedication, professionalism and ardent hard work, they have achieved accolades from the international community.
- (c) **UNIFIL (Lebanon) :** UNIFIL is a long established mission in one of the most strategically important and sensitive regions of the world. The countries of the region have also been important strategic partners of India

in the international order. The Indian contingent of 617 personnel, comprising all ranks of 2 MADRAS Battalion Group has recently replaced 2/4 GR Battalion Group which has been repatriated on successful completion of one year in the mission. The task involves domination of the area of operation, prevention of infiltration/operations by local militias, protection of local population against attacks and provision of humanitarian aid. The induction of the Indian contingent has been welcomed by all other participants in UNIFIL as well as by the host country.

- (d) **MONUC (Congo)** : Five officers have been deployed in this new UN mission as military liaison officers. Their main task is to ensure constant liaison between the UN

and the Government of Congo and of other neighbouring countries so as to speed up the peace process underway in war-torn Congo.

- (e) **UN Mission in Sierra Leone** : India had the unique privilege of deploying a 15 member medical team and five military observers including the Chief Military Observer to head the Observer Mission in mid 1998. Unfortunately, the Mission did not last long due to renewed fighting and most of our personnel were repatriated in early 1999. The Mission is now under expansion and transition from an observer to a formed troops mission. India is contributing one Infantry Battalion (Composite), Field Engineer Company, Quick Reaction Company, Army Aviation Unit, Transport

Unit and a large number of personnel for the Force Headquarters. Maj Gen VK Jetley, UYSM has been deployed as the Force Commander of the new Mission. The Indian Air Force is also participating with one Helicopter Unit in the Mission. In all, India is contributing 208 Officers, 190 JCOs and 1932 OR to this mission.

- 3.34 In the increasingly competitive environment and the changing political, social and economic equations, the relevance and benefits of Indian participants have been clearly established. There is a need within India to develop a strategic thought process in support of such operations and continuous training and doctrinal development to meet the emerging complex challenges in this field.

4

NAVY



A corvette Braving the High Seas

- 4.1 India, being a maritime nation, has extensive and critical interests in the seas around us. Recent developments in South Asia have demonstrated that naval forces remain well suited for the graduated response required for conflict management in present times. The country's economic well being is very closely linked to our ability to keep our sea-lanes free and open at all times. Additionally, India has other maritime interests as well. Our Island territories situated on our Western and Eastern seaboard are at considerable distances from the mainland. With the end of the Cold War, international relations have undergone radical changes affecting the world order. Various international maritime cooperation initiatives by the Indian Navy over the last few years helped in building bridges with foreign navies which would go a long way in establishing a strategic relationship, based on mutual trust and confidence.
- 4.2 In the wake of the Kargil crisis in May 1999, the Navy had put its forces on alert and altered the operational deployment of ships and submarines from both the Western and Eastern seaboard. This sent a clear signal across the border that any misadventure at sea will be firmly dealt with. It is now clear that the Navy's posture had a definitive impact on the outcome of the crisis.
- 4.3 The commissioning of the second indigenously built destroyer reinforced the Navy's march from a buyer's Navy to a builders Navy. Confidence in indigenous ship building has been further demonstrated by the Government's sanctioning of the build-

ing of an Air Defence Ship and a long term submarine building plan.

OPERATIONS AND EXERCISES

- 4.4 **Operation Vijay:** In pursuance of Kargil crisis - Op Vijay, Veer class ships were deployed off the North Saurashtra Coast from end May 1999 onwards. The presence of these ships off North Saurashtra Coast greatly contributed to the maritime as well as national security and prevented the adversary from attempting any misadventure in the North Arabian Sea. The rest of the Western fleet alongwith the Indian Navy Ships Rana, Ranjit, Kirpan, Khukri and Gharial from the Eastern fleet were deployed elsewhere on the West Coast. The ships maintained a very high state of operational and material readiness throughout the operations and remained at sea for a prolonged duration. Inclement weather, heavy monsoon and rough seas did not come in the way of ships from maintaining the highest state of alertness and readiness to respond to any contingency which may have been detrimental to the maritime interests of the country.
- 4.5 **Surveillance Operations:** Naval ships and aircraft continued their vigil in the Palk Bay and off the coast of Gujarat, Maharashtra and Saurashtra for the prevention of the smuggling of arms, drugs and the illegal movement of undesirable personnel. Naval ships and aircraft have also been deployed in extensive surveillance and anti poaching operation in the Andaman Sea and in the areas adjoining our island territories of Andaman and Nicobar.



Ships of Sukanya Family

- 4.6 **Search and Rescue Operations:** During April 1999, two merchant ships (MV Hyundai and MT Manpool) collided in the Dondra Head/Malacca Strait Sea Line of Communication that resulted in the sinking of Manpool, with a total crew of 39 onboard. The Eastern Naval Command reacted to the SOS and dispatched INS Khukri to render assistance. The operation was the effective projection of the ability of the Navy to render speedy assistance at considerable distances from our shores. Again in April 1999, INS Kirpan was diverted to render assistance to a sinking Oil & Natural Gas Commission's work boat off Krishna-Godavari basin.
- 4.7 **Anti Smuggling /Gun Trafficking:** In a major anti smuggling/gun trafficking operation, the Eastern Naval Command conducted a joint operation with the Coast Guard and was successful in locating and intercepting the LTTE supply vessel MV Mariama in March 1999. Eventually, the crew were forced to abandon and scuttle the ship to avoid being captured. Further on May 3, 1999, the IN participated in an-

other joint operation with the Coast Guard 'OP Bingo' to intercept a LTTE vessel, Showa Maru. In yet another major anti poaching operation in North Andamans in May 1999, the Eastern Naval Command, Coast Guard and local police carried out joint operations and were successful in apprehending approximately 25 poachers and their equipment. Anti-poaching operations were again successfully carried out in the Nicobar Islands in end August 1999.

4.8 In mid October 1999, around one hundred poachers were spotted near Tilenchong Island in the Nicobar group of islands. The Navy and the Coast Guard, undertook a major anti-poaching operation in which about 86 poachers were apprehended. The Navy, in association with the Coast Guard has contributed immensely in checking undesirable activities of smuggling, poaching and illegal settlement in the Andaman and Nicobar Islands.

4.9 **Operation Tasha:** The Eastern Naval Command has been involved in the Low Intensity Conflict Ops (LICO) in the Palk Bay due to interlinked problems of smuggling, gun-running, terrorist activities and the influx of refugees. The operation, code named OP TASHA, is in its tenth year now and has proved to be of considerable deterrent value. Ships and aircraft are regularly deployed on patrol and the entire Palk Bay and the IBL are being kept under surveillance. A large number of vessels and fishing craft are boarded and investigated on a daily basis.

4.10 **Operation Swan:**With the onset of the monsoon, the joint coastal patrol (JCP) by Navy, Police and Customs personnel is usually suspended by early June every year. In order to deal with the prevailing situation on the LOC and to exercise strict vigilance against suspicious movements of hostile ships/crafts along the coast, the Naval Detachments located at Dahanu, Vasai, Murud, Srivardhan, Dabhol, Ratnagiri and Deogarh were manned during the monsoon also.

4.11 **Sagar Rakshak Dal:** The Navy was instrumental in the implementation of the Sagar Rakshak Dal in 263 coastal villages under the supervision of Maharashtra Police since July 1999. The aim of the scheme is to enhance the ongoing coastal security surveillance along the Maharashtra coast. A naval training team comprising of two Marathi speaking senior sailors was constituted for training more than 1000 SRD (SAGAR RAKSHAK DAL) members between July 16 to August 6, 1999 in all the five coastal districts.

4.12 **Anti Piracy Operation:** Following a tip off on a vessel reported to have been taken over by pirates, the Indian Navy and the Coast Guard launched a joint operation code-named 'Rainbow' from November 13-17, 1999 and by utilising a graduated response approach apprehended the ship and the crew. Even as the pirates attempted to flood the engine room to scuttle the ship, the Naval and Coast Guard team deployed their damage control teams to prevent the ship from sinking. The action of the navy

has earned praise from international organisations as this is one of the few rare instances when pirates have been successfully dealt with.

4.13 **Fleet Exercises:** Regular tactical exercises, including amphibious exercises were conducted in which the three Services and the Coast Guard participated. In view of the prevailing security situation, the Eastern Fleet was deployed on the West Coast in the month of May and June and conducted joint exercises. The major exercises conducted in the year includes Springex (west coast), Summerex (west coast), IN-IAF EW exercise and Amphex 'Triumph 98'.

EXERCISES WITH FOREIGN NAVIES

4.14 **IN/RSN Exercises:** The first Bilateral exercise with Republic of Singapore Navy ships 'Maitri' was conducted in March 1999 off Kochi. Three ships of the RSN participated in the exercise.

4.15 **Exercise 'Blue Crane':** Exercise 'Blue Crane' a tri-service peace keeping exercise of the 14 nations comprising the South African Development Community (SADC), was held in Apr 1999 off their coast. INS Sujata participated and was the Command and Control platform during the exercise. The Indian Navy was the only Navy outside the region invited to participate.

4.16 **PASSEX with French Navy:** Indian Naval ships also conducted exercises with French Naval ships visiting Indian ports in the



On the high Seas preparing to tow the Coast Guard vessel

Arabian sea and in the Bay of Bengal in March/April 1999.

COOPERATION WITH FOREIGN COUNTRIES

4.17 **Milan 99.** The biennial get-together of friendly navies of the Bay of Bengal littoral countries was hosted at Port Blair in the month of March 1999. The event, which has been gaining in popularity, was attended by the navies of Thailand, Sri Lanka, Bangladesh, Indonesia and Singapore. In addition, delegations from Thailand and Indonesia also attended. The event was a major success and helped foster and strengthen the bonds of friendship and cultural ties while developing professional relationships between the navies.

4.18 **Milan West 99:** The Indian Navy took a first step in organising a 'Milan' on the West Coast at Kochi in March 1999. As on the East Coast, the aim was to provide a forum for the professional interaction for the littoral navies of the Arabian Sea and Indian Ocean and thereby develop and strengthen the cultural and professional relationship. The event, being the first one on the West Coast, elicited encouraging response with delegations/ships from the navies of Maldives, Mauritius, Oman, Sri Lanka and UAE attending.

4.19 **Goodwill Visits:** The Carrier Battle Group consisting of aircraft carrier Viraat, the destroyer Ranvijay and missile corvette Kora visited Abu Dhabi in the Persian Gulf in the months of February/March 1999. The visit of the Navy's only aircraft carrier was the

first in more than a decade and was instrumental in showcasing the might of the Indian Navy in an area where many other extra regional navies have been present. The IN ships also visited the ports of Chittagong (Bangladesh), Port Victoria (Seychelles), Port Louis (Madagascar), Abu Dhabi (UAE), Penang (Malaysia), Belawan (Indonesia) and Singapore. PASSEX were conducted during most of the port visits with the host countries' navies. Ships from Egypt, France, Malaysia and Thailand visited Indian ports.

TRAINING OF FOREIGNERS IN INDIA

4.20 Foreign Naval Personnel are being trained in IN training establishments under various schemes namely International Training and Economic Co-operation (ITEC), the Special Aid Scheme and Self Financing Schemes (SFS). The number of foreign trainees in our training establishments in the last two years is as follows :-

	1997-98	1998-99
(a) Officers	94	130
(b) Sailors	131	203
	-----	-----
	225	333
	-----	-----

4.21 Training 1999-2000: During the year, the number of foreign trainees as on October 1999 with the Indian Navy is as follows :-

Country	Officers	Sailors
ITEC		
(a) Bangladesh	08	—
(b) Malaysia	05	—

(c) Mauritius	02	—
(d) Seychelles	—	07
(e) South Africa	02	—
(Reciprocal Basis)		
(f) Indonesia	02	—
(g) Tanzania	02	—
(h) Ghana	03	—
(j) Kenya	01	—
Special Aid		
(a) Maldives	05	08
(b) Sri Lanka	13	49
Self Financing Scheme		
(a) UAE	01	—
(b) Iran	—	01
(c) Nigeria	05	—
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	49	71
	-----	-----

FOREIGN DELEGATIONS

4.22 There has been a marked increase in foreign delegations visiting IN training establishments. Visits by such delegations help the Indian Navy to display our training capabilities and infrastructure with the aim of attracting a larger number of foreign trainees, especially from Afro-Asia countries. Delegations from the following countries visited our training establishments since end 1995 :-

- (a) Sri Lanka - May 22 to June 10, 1996
- (b) Oman - March 22-24, 1996
- (c) USA - September 24-26, 1996

4.23 IN training delegations visited the following countries :-

- (a) USA - July 08-23, 1995

- (b) UAE - June 18-22, 1996
- (c) Russia - July 06-15, 1999

AVAILMENT OF COURSES OVERSEAS

- 4.24 The IN normally avails courses offered in UK, USA and Australia (under their programmes). During 1997-98, eighteen courses have been availed abroad by the Naval personnel. This also includes one course each in Singapore and Bangladesh.
- 4.25 Due to India's detonation of nuclear weapons during May 1998, countries like UK and USA and Australia had imposed a ban on exchange of training with them. However, IN officers have been deputed to South Africa, Japan, Indonesia, Argentina and Singapore during 1998-99.
- 4.26 Owing to improvement in the bilateral relationships with UK, USA, courses for 1999-2000 have been accepted. Accordingly following courses/symposium have been attended by Indian officers :-
- (a) Advance Command & Staff Course - UK
 - (b) MSc Naval Architecture - UK
 - (c) MSc Scientific Applications Software - UK

- (d) Naval Command Course - USA
- (e) IT Management Course - USA
- (f) Sea power Symposium - USA
- (g) Staff College - France

- 4.27 In addition to the above one course each in South Africa and Singapore have been availed during 1999-2000.

FORCE LEVELS

- 4.28 **New Acquisitions:** INS Mysore, the second indigenously built destroyer and Fast Attack Craft P-81 were commissioned during 1999.
- 4.29 **Deletions:** IN ships Arnala, Androth, Hosdurg, Kesari, Prabal, Prachand and LCU L-31 have been decommissioned this year TRAINING
- 4.30 **ISO Certification:** In the pursuit of excellence in training, 11 training establishments in the Navy have received ISO certification this year. The standard of training in the IN has been well appreciated and many foreign navies send their officers and sailors for training with the Indian Navy.

SPORTS AND ADVENTURE ACTIVITIES

- 4.31 **Arjuna Award:** NG Dingko Singh, CPO STD has been honoured with the Arjuna

Award for boxing.

- 4.32 **SAF Games At Kathmandu:** The following sportsmen/ coaches represented the country in the South Asian Federation Games held at Kathmandu, Nepal from September 25 to October 04, 1999 :-

(a) LB Yadav, MSCPO II-110100B:

Represented as Chief Coach of the National Wrestling team which won Seven Gold and One Silver Medal out of eight weight categories.

(b) S Prasad, CHA(AH)-109467R :

Assistant coach of the National Wrestling team.

(c) S Kumar, MCELR II-177778T :

Won Team Gold in 22 Free Pistol event.

(d) NG Dingko Singh, 154432H :

Won Gold medal in CPO STD Bantam weight class boxing.

- 4.33 Regular adventure activities such as hot air ballooning, rafting, trekking, powered hang gliding, para jumping, para sailing, skydiving, wind surfing, kayaking, mountaineering and skiing have been organised for Naval officers/sailors and their families.

5

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INDIAN AIR FORCE



Su-30 with clouds as background

5.1 Air power will play a prominent and indeed dominant role in any future armed conflict. Air power also has become a prime means of coercive diplomacy. The revolution in military affairs (RMA) has imparted new capabilities to instruments of air power and space technology.

5.2 The Indian Air Force is arguably the Service, most dependent upon modern technology to retain her edge over the adversaries. Indeed, the cutting edge in the next millennium would require excellence in two areas: its people and its level of technology. If we fall short in any of these, the Air Force would be less capable of meeting the challenges ahead. Modernisation of the Air Force is required on a continuing basis and deserves due attention and funding.

OPERATIONS

5.3 Kargil Operations-'Op Safed Sagar' - The past summer, Pakistan attempted to seize strategic Indian territory. It occupied various heights on the Indian side of the LOC in the Kargil Sector, with the aim of modifying the alignment of the LOC to its advantage and had threatened the critical Srinagar-Leh highway. India responded decisively by sending a strong reposit with ground forces and permitting offensive employment of the Air force to clear the armed intruders.

5.4 The terrain in the sector and the very high altitude was not conducive to aerial warfare. Employment of the Air Power in such a scenario was unprecedented and not an-

anticipated. The IAF operations were a saga of valour, adroit application of power, imaginative innovation and adaptation that ensured reversal of the enemy's game plan. It once again reiterated the tenet that air superiority and dominance in the air was essential for victory in any war. The IAF thus became the pioneer in mountain aerial warfare.

5.5 To enable the air and ground operations, the IAF ensured area air superiority. The IAF flew various offensive, defensive and reconnaissance missions.

5.6 The offensive missions comprised of fighters and helicopters, while the logistics support with fixed wing aircraft and helicopters maintained the lines of supply and communications. In all the IAF flew a total of :-

(a) Fighters - 1730 sorties

(b) Transport - 3427 sorties

(c) Helicopters - 2474 sorties

5.7 The pounding of the enemy in the hills and its lines of communications swiftly shifted the tide in our favour. All aerial bombardment was withheld for 48 hours to allow the enemy to retreat faster - as per the agreement between the two DGMOs.

5.8 The IAF lost three aircraft in these operations, a MiG-21 and Mi-17 each to enemy SAMs and a MiG-27 to engine failure. Five aircrew lost their lives.

AIR DEFENCE

5.9 The IAF air defence has many strengths and deficiencies such as those in air defence, including sensors and C3I facilities, and are being addressed urgently.

INTERCEPTION OF PAK ATLANTIC AIRCRAFT

5.10 A Pakistani Atlantic Maritime Reconnaissance and anti-submarine warfare aircraft which had violated the Indian airspace on August 10, 1999 was intercepted and shot down by an Indian Air Force MiG-21 aircraft. The aircraft made a series of air violations between 1100 and 1117 hours. On the final violation, when the IAF interceptors attempted to challenge it, the Pak aircraft turned offensively into the interceptors. The Atlantic was finally shot at 1118 hours.

5.11 Similar Pakistani aircraft had intruded into the Indian airspace in the same sector on several occasions in the past, and had been snooping at strategic locations like "Bombay High" and on our Naval ships. The IAF will ensure the sanctity of Indian air space and foil hostile intrusion.

ELECTRONIC WARFARE (EW)

5.12 Great strides have been made in equipping combat aircraft with electronic warfare systems. Tactics and Standard Operating Procedures have been revised and updated for the effective application of force multipliers. Steps have been instituted to enhance EW training. Additional EW equipment has also been procured so as to equip all com-



MI-17 firing Roerets during-Kargil Operations

bat aircraft with proper EW suites.

AIR TRANSPORT OPERATIONS

5.13 As an aftermath of the Kargil operations, the IAF was entrusted with a mammoth task of airlift of supplies to the Kargil sector to guard the inhospitable and unfriendly terrain. With a deadline of October 30, 1999 the IAF had the additional task to airlift 6323 tons by transport aircraft and 4445 tons by helicopter. This was in addition to the already large air logistics task. The IAF went flat out to execute this task, as shown below:

AIR LOGISTIC TASK : 1999-2000

5.14 Northern Sector

Type of Aircraft	Original Task	Addition AI Task	Total Task	Achieved Task Upto Nov 15, 1999
IL-76	11400 T	4620 T	16020 T	8871 T*
An-32	3600 T	1703 T	5303 T	2465 T
Total	FW 15000 T	6323T	21323 T	11336 T
Mi-17	4500 T	4295 T	8795 T	5211 T
Cheetah	500 T	150 T	650 T	368 T
Total	RW 5000 T	4445 T	9445 T	5579 T*

*Task expected to be completed within the financial year.

5.15 Eastern Sector

Type of Aircraft	Original Task	Addition AI Task	Total Task	Achieved Task Upto Nov 15, 1999
An-32	4000 T	Nil	4000 T	1763 T
Total FW	4000 T	Nil	4000 T	1763 T
Mi-17	7440 T	Nil	7440 T	2995T
Mi-8				1206 T
Total RW	7440 T	Nil	7440 T	4161 T

AIR TRAFFIC CONTROL

5.16 In addition to their normal duties, The Air Traffic Controllers (ATCOs) of the IAF are trained to man the national and international airfields in an emergency. IAF controllers were attached to civil airfields for 10 days in February 1999; to meet a situation created by a strike by IAAI employees.

OPERATION SAHAYTA (CYCLONE RELIEF IN ORISSA)

5.17 The super cyclone which devastated the coastal belt of Orissa required airlift and dropping of supplies and food to provide relief to the survivors. A total of 1441.045 tons of food and supplies were airfield and dropped in support of the operations in 390

sorties.

5.18 In order to avoid a disaster, wherein the ammonia plant at Paradip was on the verge of explosion due to failure of power supply and the consequent rise in plant temperature, the IAF flew in two generators in inclement weather and was able to help in averting another calamity.

MAINTENANCE 5.19

5.19 Overhauls :

(a) **MiG-29:** Indigenous repair and overhaul facilities were setup in April 1996. Good progress has been achieved in the procurement of capital equipment and technical publications. Training of Indian specialists is under progress. A host of spares is being indigenised with the help of Hindustan Aeronautics Limited (HAL). Some aircraft have already been overhauled. Technology has also been developed indigenously to increase the time between overhauls (TBO). A project is also being initiated with the assistance of agencies like National Aerospace Laboratory, Indira Gandhi Centre of Atomic Research (IGCAR), Hindustan Aeronautics Limited (HAL), Defence Research and Development Organisation (DRDO), and Aircraft and System Testing Establishment (ASTE), to increase the Total Technical Life (TTL) of different aircraft.

(b) **MiG-27:** The Time Between Overhauls (TBO life) has been increased as an in-house exercise.

(c) **MiG-23 MF:** The IAF and HAL have de-



Mi-17 always on stand by?

veloped the technology for second overhaul indigenously. HAL will also henceforth supplement the existing overhaul facilities with the IAF.

- (d) **Mirage 2000:** HAL now has the approval of the Dassault aviation to extend overhaul facilities to other Mirage operators in the world.

IMPORTANT SUBSTITUTION

- 5.20 In pursuance of the national aim of self-reliance to the extent possible, the IAF is collaborating with the industry to form a mutually advantageous relationship. During the last two years, the IAF has organised five exposition-cum-seminars in association with CII in various regions of the country. Medium and small-scale entrepreneurs affiliated to CII were motivated to establish indigenous sources of supply and to assist the IAF repair agencies, Base Repair Depots (BRDs), in their import substitution activities. Over 600 entrepreneurs have expressed their interest in working with various BRDs. About 1200 development projects for spares and items are under progress at various BRDs with the help of entrepreneurs. The next such event is planned at Kolkata in February 2000 .

FLIGHT SAFETY

- 5.21 There has been progressive improvement over the decades. However, there is still scope for further improvement. Some of the problems arise out of the level of technology and obsolescence in certain areas. The three major causes for accidents are technical defects, human error and bird strikes.

- 5.22 **Prevention of Bird Strikes:** The IAF had no accidents due to bird strikes during the previous two years. However, during the current year there have been two accidents due to bird strikes. There were 44 incidents involving bird strike till October 1999, as compared to 91 in 1997-98 and 71 in 1998-99. The Flight Safety Zone close to airfields is being cleared of material attractive to birds. However, the progress is slow. In this context, Civil administration will need to play an active role. Bird observations, scaring measures, vegetation clearance measures are being enhanced, to minimise the bird strike cases. Microlights are also being inducted.

- 5.23 **Inter Ministerial Joint Sub Committee on Bird Strikes (IMJSC)** - Paucity of funds is slowing down progress on the 1990 recommendations of the IMJSC. The budget has been revised upwards to Rs.118 crore in the Ninth to Eleventh plans. Ten more bird prone areas namely Bagdogra, Bathinda, Chandigarh, Gorakhpur, Halwara, Jamnagar, Kalaikunda, Pathankot and Suratgarh have been identified for institution of bird combat measures.

MODERNISATION

- 5.24 The Government is cognisant of the modernisation needs of the IAF and steps are being taken to enhance the budgetary allocation.
- 5.25 **Aircraft Upgrade Programmes** - The upgrade of MiG-21 Bis is underway with Russian collaboration. Plans to upgrade helicopters and other fighter aircraft are in progress.

- 5.26 Light Combat Aircraft - Full-scale development of the Light Combat Aircraft (LCA) is in progress. Indian Air Force is in close interaction with the Aeronautical Development Agency.

PROCUREMENT & MODERNISATION

- 5.27 **SU-30** - During the year against a contract for 10 more Su-30, Russia delivered additional Su-30 aircraft. Development of the IAF variant (Su-30 Mk-I) is progressing well, though slightly behind schedule. These acquisitions will help to offset some of the deficiencies due to obsolescence.
- 5.28 **Induction of EW Systems** - For reconnaissance, navigation and attack in bad weather and at night, new electro optical aids are under induction.



Combat Aircraft "JAGUAR" taking off from Air Force Station during the exercise Vijay Chakra

- 5.29 **Radar and Communications Systems:** Under the Air Defence Ground Environment System (ADGES) plan, some indigenously produced Indra Radars have already been inducted into the IAF. With the

planned induction of more radars, the low-level detection capabilities will provide adequate defence in depth in the important sectors.

- 5.30 Since 1995, RCPO has been engaged in the task of modernising and updating the radar and communication infrastructure as per the requirements identified by the IAF and also in setting up a back-up satellite communication network for meeting the critical communication requirements. The RCPO is also pursuing a project for development of a Futuristic Automatic Data Handling System (FADHS).
- 5.31 In the field of communication, RCPO has been involved in updating the existing Air Defence Communication network of the IAF from analog to digital links which are being set up afresh. A Satellite Communication Network is also provided for vital locations as a back-up. Bulk encryption is separately being provided for the terrestrial network as well as the satellite communication network.
- 5.32 **Navigation Systems** - An indigenous Global Positioning System has been developed for fighters and helicopters. Most of the IAF fleet has been fitted with the GPS.
- 5.33 **Aircraft Simulators** - In tune with technology and the times, the IAF intends to make use of simulators extensively. Upgrade of the old KTS-4 valve based simulators, originally procured from abroad for the MiG-21 aircraft was done indigenously by a private company. Upgrades of the other

simulators, including that of Mirage 2000 and Jaguar are also being pursued. Other typed and role simulators are also being considered.

- 5.34 **Pechora Missile System** - The Pechora Weapon System in service with IAF is of a certain vintage. As it will be in use for some time to come, a decision has been taken to upgrade the system by installing digital equipment. Similarly, the life of these systems is being extended indigenously.
- 5.35 **Pilot-less Target Aircraft** - 'Lakshya', the indigenous Pilot-less aircraft developed by the DRDO has been inducted into the IAF. This is a surface launched, reusable aircraft flying below the speed of sound. 'Lakshya' will provide training to aircrew in air to air firing, thus eliminating the need for costly target towing aircraft and reducing operational costs.

ADMINISTRATION

- 5.36 **Colour Presentation** - The President of India has approved the presentation of the President's Standard to 35 Squadron and Air Force Administrative College.

ADVENTURE

- 5.37 The Air Force has been actively pursuing adventure activities in rafting, mountaineering, powered hang-gliding, para-sailing, paragliding, sky diving, rock climbing, horse riding, skiing, trekking and motor cycle riding. New horizons in adventure sports are being explored. Participation in the Trans Himalayan motor cycle rally, the world record flag jump at the North Pole

and the formation of a women officers sky diving team are a few examples of Air Force adventure activities at the global level.

MEDICAL

- 5.38 **Medical Care** - The modernisation of IAF Hospitals and Dental Centres has been taken up in right earnest. Medical equipment worth Rs.4 crore was procured for various AF Hospitals out of funds allocated from the National Defence Fund and the Air Force Non Public Fund. Procurement of additional modern equipment worth Rs.2 crore are in the planning stage. The Air Force Command Hospital in Bangalore has done a laudable job in eye care by transplanting two corneas in September 1999. Twenty five kidney transplants were also done at this Hospital. The departments of Ophthalmology and Urology of the Air Force Hospital in Bangalore thus achieved a milestone.

WELFARE

- 5.39 The IAF remembered all personnel who made the supreme sacrifice for the nation in wars since 1947 including the recent operations in Kargil. At a ceremony held on November 27, 1999 the Chief of Air Staff presented a scroll, a memento, and a cheque of Rs.1 lakh each to the next of kin of the war heroes, out of the collections made from a day's salary by all personnel of the Air Force.
- 5.40 As a special gesture, the Government has permitted widows of Defence Personnel who have not remarried to apply for com-

mission even if they have children. The upper age limit has been relaxed by four years.

- 5.41 **Housing Projects** - The construction of accommodation for families and the improvement of living conditions have been given a high priority. A 'Fast Track Procedure' was adopted for early completion of the 'Married Accommodation Project'. 2354 dwelling units have been planned in 1999-2000 and the progress has been satisfactory.
- 5.42 **Family Welfare Schemes** - The emphasis on family welfare schemes continues. A Radiotherapy Unit for ex-Servicemen started functioning at the Super Specialty Veterans Hospital (SSVH) New Delhi, since January 1999, for treatment of cancer.
- 5.43 **Senior Citizens' Home** - A pioneering project in the IAF for senior citizens and their families has been completed at the Institutional Area in Tughlakabad, New Delhi in November, 1999. A physiotherapy centre is also planned within the complex.

QUALITY ASSURANCE

- 5.44 In the past, Quality Assurance was by and large an internal matter within respective Branches. For unbiased Quality Assurance, the Joint Directorate of Quality Assurance was transferred to the Inspector General Branch from Mar 09, 1998. They have identified and created a computerised database for clothing and general stores.

CLOTHING AND GENERAL STORES

- 5.45 The changing socio-economic scene in the country has made it necessary to change the range of clothing and general stores. As a result of suggestions, improved quality of shoes, hospitals bed sheets, towels, socks and woollen jerseys have already entered the supply pipeline.

INDUCTION & TRAINING

- 5.46 **Recruitment of Airmen** - A total of 776 airmen were recruited during the period of the report. Another 545 are planned to be recruited in the rest of the financial year.
- 5.47 Training of officers has been rationalised with all officers commencing their initial training at the Air Force Academy. Flying Training has also assisted in the weeding out of weak pilots.
- 5.48 **Initial Training of Officer Cadets** - A combined training syllabi have been reviewed to improve training standards so that the level of confidence, situational awareness and decision making is of the highest levels now.
- 5.49 **Review of Flying Training** - The flying training syllabi have been reviewed to improve training standards so that the level of confidence, situational awareness and decision making abilities are enhanced. Stringent standards have been adopted to weed out weak pilots at the earliest possible. Flying training of Army, Navy, Coast Guard and friendly foreign countries is now conducted at Basic Flying Training

School at Allahabad.

- 5.50 **Training of IAF Personnel Abroad** - Some IAF personnel are pursuing higher studies or are on exchange programs in the USA and Bangladesh. A general agreement on training of IAF personnel in Russia has been concluded, to commence in April 2000.

- 5.51 **Training of Foreign Students** - Presently, officers and airmen from Bangladesh, Kenya, Malaysia, Nepal, Nigeria, Qatar, Sri Lanka, Tanzania and the UAE are undergoing training at various training establishments. In addition Botswana, Ghana, Mauritius, Yemen Arab Republic, Indonesia, Sierra Lone and Namibia have been offered training facilities.

CONCLUSION

- 5.52 The responsibilities of the IAF are multifarious : from air defence of the nation to providing reconnaissance, battle field air strikes and counter air operations during hostilities. It also shoulders the peace time responsibilities of aid to civil authorities during natural calamities, movement of personnel to maintain law and order and to cater to the requirements of the troops guarding our border outposts in the high ranges of the Himalayas, the deserts of Rajasthan and the inaccessible regions of the North East. The deep sense of commitment, sacrifice and dedication to a cause displayed by the officers and men of the IAF exemplifies the true ethos of selfless service to the nation even at the risk of ones own life.

6

COAST GUARD



Coast Guard helicopters with underslung pollution control chemical spray pods

6.1 The Coast Guard was set up as an Armed Force of the Union in 1978 on the recommendations of the 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 million sq. kms., under regular surveillance in order to prevent poaching/smuggling and other illegal activities. In addition, the Coast Guard's charter of duties includes pollution control at sea, search and rescue (SAR) and the protection of the marine environment.

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 to make it co-terminus with the National Development Plan .

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

Sl.No.	Type	No.
(a)	Fast Patrol Vessel	02
(b)	Interceptor Boats	02
(c)	Pollution Control Vessel	04
(d)	Advanced Offshore Patrol Vessel	02
(e)	Hovercraft	06

(f)	MRSA	03
(g)	Twin Engine Helicopters	04

ORGANISATION

6.4 The Command and Control of the Coast Guard is exercised by the Director General, Coast Guard , New Delhi. It has three Regional Commands with the regional headquarters situated at Mumbai, Chennai and Port Blair. The entire coast line 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, Calcutta 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. Presently, the Coast Guard has a force level of 35 ships, 17 interceptor boats/crafts and 34 aircraft. Coast Guard Ship Sarang and two Chetak helicopters were inducted this year.

OPERATIONS

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

(a) **Operation Vijay** : The surveillance off the International Border and the Gujarat Coast has gained more importance due to the re-

cent Kargil conflict. CG ships and aircraft were deployed for Operation Vijay (May 26 to August 06, 1999) for 184 ship days and 451 aircraft hours. The enhanced patrolling is still being maintained.

(b) **Operation Tasha** : Consequent to the withdrawal of the Indian Peace Keeping Force (IPKF) from Sri Lanka, protection of the Tamil Nadu Coast against infiltration of militants was entrusted to the Navy and Coast Guard. One Coast Guard ship is on patrol in the Palk Bay at all times. One IB/IC from Mandapam is also on patrol alongwith one Dornier aircraft for air surveillance. From January to October 1999, Coast Guard ships have collectively been deployed for 348 days at sea while Coast Guard aircraft were on task for 225.49 hours for this operation.

(c) **Operation Swan**: In 1993, consequent to the Mumbai serial bomb blasts, large scale smuggling of arms and explosives was reported from sea routes adjoining the Maharashtra and Gujarat coasts. To counter this, Operation Swan was launched in co-ordination with the 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 January to October 1999, CG ships have been deployed for 303 days at sea while CG aircraft were on task for 320.59 hours for this operation.

(d) **Operation "Nakabandi"** : With increased hostilities in Sri Lanka, the influx of Tamil refugees have commenced again. To check



Coast Guard helicopter in formation flying

the influx of refugees and to curb the clandestine activities in Palk Bay and Gulf of Mannar, Operation "Nakabandi" was launched on August 13, 1996. During the current year from January to October 1999 about 3869 refugees belonging to 1145 families have reportedly come to India. CG Ships have apprehended 16 Sri Lankan fishing boats with 86 crewmember in the current year.

- (e) **Operation Olive:** An operation code named 'Olive' was launched off the Orissa Coast on November 12, 1998 with a view to protect the endangered species of Olive Ridely turtles. The operation was terminated on May 24, 1999. During the operation, Coast Guard ships completed 178 days at sea and Coast Guard aircrafts undertook 27 sorties and clocked 126.38 hrs. 34 fishing vessels operating in prohibited areas were apprehended for violation of the Orissa Marine Fisheries Regulation Act and handed over to the state forest department. As a result of intensified patrolling by Coast Guard ships, fishing activity in the restricted area has reduced considerably. The operation was very effective and resulted in nesting of large number of turtles this season.
- (f) **Indo-Maldivian :** Joint Exercise DOSTI-IV: An Indo-Maldivian Joint Exercise Dosti-IV was conducted off Male from October 4-8, 1999. CG ships Vijaya (with helicopter embarked), Tarabai, Avvaiyyar and one Dornier each from CGAS Daman and CGAS Chennai took part alongwith

two Maldivian CG ships. Various exercises were demonstrated on law enforcement, GMDSS, SAR, oil pollution response etc., for MALE Coast Guard personnel. The CG team also delivered lectures on the various topics mentioned above to the Maldivian Coast Guard personnel.

- (g) **Apprehension of Burmese Nationals from Tillan Chong Island:** Coast Guard Ship Varaha while on patrol off Tillan Chong Island (Nicobar) apprehended nine donghies alongwith 16 Myanmarese nationals including one dead and one injured on October 13/14, 1999. Out of the nine donghies, four sank due to poor material state while towing to Kamorta Island on October 15, 1999.

ANTI-SMUGGLING AND SEARCH & RESCUE (SAR) OPERATIONS

- 6.7 The details of anti-smuggling, search & rescue and other operations are given below :-
- (a) **Anti Smuggling Operations:** CG ships and aircraft carry out routine anti-smuggling patrol and apprehended contraband worth of Rs.260.32 crore till October 1999.
- (b) **Search and Rescue Operations (SAR):** During the period January to October 1999, Coast Guard ships and aircraft undertook 36 SAR missions and were instrumental in saving 52 lives at sea after receipt of distress messages from the International Maritime Co-ordination Centre (INMCC) in Bangalore. This has strengthened the SAR responses in the Indian Ocean under the

new Global Maritime Distress Safety System (GMDSS) operation. Coast Guard ships and aircraft undertook 771 sorties in response to distress messages and have saved 945 lives from 1981 till date.

- (c) **Security of Offshore Installations:** CG ships and aircraft are deployed for patrolling the oil rigs on a regular basis. 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 every quarter.
- (d) **Anti-Poaching Activity:** During the current year, Coast Guard Ships on patrol in the Indian EEZ apprehended a total number of 36 fishing trawlers with 238 crew engaged in illegal fishing without valid documents. Since inception, the Coast Guard has apprehended 641 foreign fishing vessels with 6704 crew. Regular patrolling by the Coast Guard in the Indian EEZ has acted as a deterrent to poachers, though the number of ships available is still limited in relation to the total area to be kept under surveillance.

ASSISTANCE RENDERED

- 6.8 **Fishing Vessels:** During the period under review, Coast Guard ships and aircraft assisted 01 fishing boat and 02 merchant ships in distress at sea. The CG ships also carried out mid sea repatriation of Indian fishermen from Sri Lankan Naval Ships. 159 fisherman and 604 Indian crew were repatriated from Pakistan.



Republic Day Parade Naviks Marching in unison

SECURITY

- 6.9 The details are as follows:-
- (a) **The National Data Buoy Programme of The National Institute of Ocean Technology:** CG ships and aircraft are providing security for National Data buoys laid in various positions in the Arabian Sea and the Bay of Bengal for collection and monitoring of Oceanographic Data by the Department of Ocean Development.)
- (b) **VVIP Seaward Security:** During the period under review, Coast Guard ships and aircraft were deployed to provide seaward security to various dignitaries including the President of India and the Vice-President of India.

MANPOWER PLANNING, RECRUITMENT AND TRAINING

- 6.10 Basic training of Coast Guard personnel is conducted at Naval Training establishments. Since April 1999, the Coast Guard has recruited 15 Officers (including Women Officers), 23 Yantriks and 151 Naviks. For the period from November 01, 1999 to March 31, 2000 induction of 14 Officers, 100 Naviks and 15 Yantriks is planned. CG personnel are deputed for reputed specialised courses like Staff Course at DSSC Wellington, CDM Secunderabad and the Naval Staff College in the USA. Besides these, for the last three years, Coast Guard pilots are

being trained in the Basic Flying, Air Traffic Controller and Qualified Flying Instructor courses with the Indian Air Force.

ENVIRONMENTAL PROTECTION & POLLUTION RESPONSE

- 6.11 The Coast Guard is the primary agency for protection of the maritime environment of India under the National Oil Spill Disaster Contingency Plan. So far, the Coast Guard has undertaken 33 oil spill operations. During the current year, CG ships and aircraft carried out three operations to prevent and control marine pollution in Indian waters. Details are appended below: -
- (a) **June 14 - 19, 1998:** United Arab Emirates vessel MT Ghanim Power was towed safely to harbour to prevent break up and subsequent pollution. Rs.56,39,361 was levied towards hire charges for the operation.
- (b) **June 9 - 26, 1999:** Liberian vessel MV Pacific Acadian ran aground at Mul Dwarka, Gujarat on July 8, 1999 causing an oil spill. The CG response team brought the spill under control and cleaned up the area. Rs.43,73,120 was levied towards hire charges for the operations.
- (c) **July 30 - September 15, 1999:** Indonesian vessel MV Karunia Pacific ran aground

North East of Nancowry Island on July 30, 1999. The CG response team stood by for immediate response till salvage by the Navy was completed.

NATIONAL INTEGRATION

- 6.12 The Coast Guard has been a true picture of a big family consisting of members from different religions. 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, brotherhood are the essence of this efficient and motivated service, where they portray the true picture of National Integration.

USE OF HINDI

- 6.13 This Headquarters encourages the use of Hindi in office work. During the period, under review 50% correspondence was done in Hindi. Coast Guard Bulletins and Coast Guard Orders are printed in Hindi also. The incentive schemes introduced by the Government are also implemented and 6 personnel of this Headquarters were awarded cash prizes. The Official language trophy is also being awarded to the Directorate for maximum work in Hindi. The Hindi fortnight was organised from September 14-17, 1999.

7

DEFENCE PRODUCTION & SUPPLIES



7.1 The Department of Defence Production was set up in 1962, in the aftermath of the Chinese aggression, to create an indigenous defence production base which is self-reliant and self-sufficient. In November, 1965, Department of Defence Supplies was created to forge linkages between the civil industries and defence production units. The 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 and their capacities have been augmented and modernised selectively keeping in mind the emerging requirements of the Armed Forces. Presently, 39 Ordnance Factories and 8 Defence Public Sector Undertakings (DPSUs) are engaged in the task of manufacture of equipment and stores for Defence Services. One more Ordnance Factory is planned to be set up at Nalanda, Bihar. In addition, capacities of civil sectors are also utilised 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 Ltd (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 General of Aeronautical Quality Assurance (DGAQA)
- (iii) Directorate of Standardisation
- (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 anti-tank ammunition.

7.5 The defence sector corporates lend diversity, operational flexibility and enhanced efficacy borne out of autonomy and commercial disposition. Ordnance factories and DPSUs make use of civil and export sectors in order to enhance the viability without detracting from defence commitments. These measures forge interaction between the defence production sector and civil industry to contribute to steady growth in the overall turnover of these units.

7.6 The total value of issues by ordnance factories and defence public sector undertakings is as follows:-

(Rupees in crore)		
Year	Ordnance Factories Total Sales	PSUs Total Sales
1997-98	3071.00	6063.10
1998-99	4012.00	5536.10
1999-2000 (Targets)	5382.00	5454.00
1999-2000 (Achievements upto Dec. 1999)	2867.00	4920.67

7.7 Defence Public Sector Undertakings and Ordnance Factories have made exports of Rs.32.71 crore upto October 31, 1999 as against the target of Rs.242.99 crore for the year 1999-2000.

ASSISTANCE TO ARMY DURING 'OPERATION VIJAY'

7.8 Heavy Vehicle Factory, Avadi sent technical teams to various places in forward areas and depots for rendering technical support and providing spares for 'Ajeya' tank for ensuring improved availability during 'Operation Vijay'. Ordnance Factory Board also enhanced targets of production of 15 important items of ammunition and equipment stores. The production levels now laid down for 1999-2000 represent a substantial growth varying between 60% to 230% over the production levels of these items in 1998-99. Bharat Dynamics Limited sent two teams, one each for ten Flame Weapon System and the Konkurs Weapon System, to the operational area along with test

equipments and spares to extend service support. Besides, carrying out inspection of Konkurs and flame launchers, the team imparted training and instilled confidence by demonstrating missile firings. Similarly, Hindustan Aeronautics Limited positioned teams of airframe engine, communication specialist at locations in Northern Command to assist in the maintenance of the Cheetah helicopters with the Army. Composite teams of specialists were also posted to attend to the immediate and critical requirements of the Indian Air Force fleets of MiG-21, MiG-27 and Jaguar Aircraft operating locations. More than 600 items required for maintenance were supplied on priority basis.

**PERSPECTIVE PLANS FOR DEFENCE
PUBLIC SECTOR UNDERTAKINGS AND
ORDNANCE FACTORIES**

7.9 Defence Public Sector Undertakings and Ordnance Factories are preparing Perspective Plans in consultation with the Services. These plans attempt to bring out the actions that need to be taken in the context of decisions already taken; the decisions that are expected to be taken by the Government and the company in the coming years for meeting defence needs and the possible time frames thereof upto the terminal year of the 10th Five Year Plan. The Perspective Plans are derived from a long-term mission of diversification with higher technology products and services keeping defence preparedness as its priority and at the same time making inroads in the civil/commercial sectors with a new thrust on exports by adopting state-of-the-art technology. Per-

spective Plans in respect of Hindustan Aeronautics Limited, Mazagon Dock Limited, Goa Shipyard Limited, Garden Reach Shipbuilders and Engineers Limited and Bharat Electronics Limited have been finalised.

Y2K IN THE MINISTRY OF DEFENCE

7.10 Defence was one of the 11 critical sectors selected by the Government of India for monitoring of Y2K activities. The Department of Defence Production and Supplies was given the responsibility for monitoring Y2K compliance activities in the Ministry of Defence. Directorate of Standardisation, an inter-service organisation, was nominated as the nodal agency for collection, collation and monitoring of information.

7.11 Ministry of Defence had selected 35 organisations consisting of Army, Navy, Air Force, Public Sector Undertakings and Inter-Service Organisations which were to be covered for the purpose of Y2K. For ensuring Y2K compliance, the task was divided into EDP systems, embedded systems and Inventory and Pay-roll management. All systems in the organisations were made Y2K compliant. Simulation and testing were carried out by the organisations themselves and an External audit was carried out for each organisation by another within the Ministry of Defence. For the purpose, technical support was provided by Bharat Electronics Limited and Hindustan Aeronautics Limited.

7.12 The Command /Control and Fault Monitoring Cells formed in all organisations were

made operational from December 24, 1999 to January 7, 2000 and round the clock from December 28, 1999 to January 3, 2000 during the transition period to ensure that the defence sector should not have any adverse effect of the Y2K bug at the turn of the century. No malfunctioning was reported from these organisations and the smooth transition was intimated to the National Control Room established for the purpose.

7.13 The activities of the organisations under the Department of Defence Production and Supplies are given in the succeeding paragraphs:

SUPPLIES WING

7.14 The most important implications of various recent strategic developments in the Asian region for India has been an added impetus for achievement of self-reliance in defence. There has been a noticeable improvement in the broadening of the indigenous production base for defence equipment and stores.

7.15 The sole objective of Supplies Wing is to locate and develop broad based indigenous supply sources both in the public sector as well as in the private sector for complicated and intricate equipment. The major functions of Supplies Wing which is the nodal agency for evolving purchase policies for the Ministry of Defence are :-

(a) Identification & productionisation of items for import substitution.

(b) Productionisation of DRDO developed items through the private sector industry.

7.16 The institutional framework for carrying out the tasks of import substitution is available in the form of 8 (eight) Technical Committees (TCs) which provide technical advice to the Supplies Wing to achieve these objectives. Each committee is headed by a Technical Officer of the rank of Major General/Brigadier or equivalent. These Committees maintain a compendium of civil industry capable of undertaking the task of indigenisation of defence equipment stores after conducting surveys and assessing capabilities. After identifying items for indigenisation keeping in view the commercial viability and strategic needs, these Committees ensure timely supply of defence equipment/stores under overall guidance of the Supplies Wing.

7.17 A Central Technical Committee (CTC) under the chairmanship of Secretary(Defence Production & Supplies) supervises the work of the Technical Committees. The indigenous sources are developed after following a set procurement procedure. The Technical Committees function as an integral part of DGQA.

7.18 In order to encourage civil industry for indigenous development of defence stores, a scheme of National Award for Excellence in indigenisation was introduced in the year 1993-94. The efforts made by the industry in substituting the inputs of defence equipment & stores are duly recognised by the

Supplies Wing and deserving units are presented with suitable awards. To help the civil sector to familiarise itself with the requirement of Armed Forces, permanent sample rooms are maintained in the four metropolitan cities. For ensuring enhanced & meaningful interaction, conferences are held from time to time.

ACHIEVEMENTS

7.19 Normally, the Supplies Wing deals with the items which require ab-initio development. However, during the current year in order to meet the operational requirement under "Operation Vijay", the Wing has also played an important role in meeting the urgent requirements of Armed Forces by placing orders in the shortest possible time. The following table gives details of items ordered and their value for three years:-

Year	No of systems/ sub-systems ordered	Value (Rs in crore)
1997-98	2097	149.14
1998-99	3335	199.25
1999-2000 (upto 31.10.99)	1650	118.82

INTERACTION WITH INDUSTRY

7.20 Since 1985, a two tier institutional mechanism is in existence to foster interaction between defence services and industry for optimum utilisation of capacities available both in Defence PSUs and civil industry. It consists of an Apex Body headed by the Secretary, Defence Production and Supplies

and three discipline-wise functional groups. Major associations of trade and industry are members of the Apex Body and Functional Groups.

7.21 Consequent to the receipt of reports of the 6 Joint Task Forces with industry set up in pursuance of the meeting held by the Raksha Mantri in June, 1998, it has been decided to work out detailed plans of action to implement major recommendations made in these reports. To begin with, two Core Groups have been formed with representatives of Services, DRDO and Confederation of Indian Industry (CII) to look into all aspects of the following two factors:-

- (i) Information Technology and Communication
- (ii) Components

ORDNANCE FACTORIES

7.22 The Ordnance Factories organisation plays a key role in attending self-sufficiency and self-reliance for the defence preparedness of the country. The importance of the Ordnance Factories have been proved in the past as well as during 'Operation Vijay'. The Ordnance Factories Organisation consists of 39 factories, (one is in the planning stage) some of which are the oldest industrial establishments in the country. The first ordnance factory was established in 1801 at Cossipore, near Calcutta. By 1947, the number of factories had grown to 16. The growth of the organisation has been particularly rapid after Independence. These ordnance factories play a vital role in equipping the armed forces as well as para-

military forces with weapons, ammunition, tanks, infantry combat vehicles, transport vehicles, clothing, general stores and other equipment. These factories are geographically spread all over the country. There are ten factories each in Maharashtra and Uttar Pradesh, six factories each in Madhya Pradesh and Tamil Nadu, four factories in West Bengal and one factory each in Andhra Pradesh, Orissa and the Union Territory of Chandigarh. The factory in the planning stage is being set up at Nalanda, Bihar. The 16 pre-Independence ordnance factories had to contend with an inadequate civil industrial infrastructure. Hence, these 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.

7.23 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.

ORGANISATION

7.24 The ordnance factories organisation is headed by the Directorate General Ordnance Factories (DGOF). In 1979, a board was established at Calcutta as per the recommendations of 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 Additional DGOF/ Members, are in charge of 5 oper-

ating 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

PRODUCT TECHNOLOGY

7.25 Capacities exist to produce a wide range of arms and ammunitions for the Infantry, Artillery and Armoured Corps of the Army, for the Navy and Air Force. The factories produce military transport vehicles, infantry combat vehicles, armoured vehicles, optical and opto-electronic instruments, field cables, summer and winter uniforms, tentages, parachutes, miscellaneous leather goods, floats bridges, general stores, civil blasting explosives etc. Facilities also exists for design and manufacture of captive special purpose machine tools for production of arms and ammunition components.

7.26 Besides supply of arms, ammunition and

other items to the Armed Forces, the needs of the police and the paramilitary organisations are also catered to. Items are also produced for the Railways, Public Sector Undertakings and other Government Departments.

7.27 The ordnance factories have taken up continuous upgradation of products and manufacturing technologies to meet emerging requirements of the defence forces. A futuristic approach marks the establishment of new facilities.

GROWTH

7.28 Ordnance Factories output for sales have been steadily growing over the years with a record production achievement of Rs. 4012 crore during 1998-99 representing an increase of more than 30.6% over the sales of Rs. 3071 crore during 1997-98. 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.

7.29 In 1999-2000, the Ordnance Factories are set to achieve production for sales of Rs.5382 crore in accordance with the projected requirements of defence and other indentors. This will represent a growth of 34.1% over the level attained in 1998-99 of Rs. 4012 crore.

HIGHLIGHTS

7.30 Some of the significant achievements in ordnance factories in last few years have been as follows:

- (i) Thirty Eight ordnance factories have obtained Quality System Certification as per ISO 9000/9002 standards.
- (ii) Ordnance Factory, Bolangir has established filling of Shell 155 mm-77 B, Shell 155 mm-M 107, round 125 HE, Cartg 30 mm HE (I)/AP (T)/HE(T) and has issued items to the tune of Rs.72.5 crore during the year 1998-99.
- (iii) Medak Gun produced by Ordnance Factory Project Medak (OFPM) has been commissioned on Coast Guard Vessel KAMALADEVI and Sea Trials conducted off the Mumbai Coast. The performance has been found satisfactory. Production of new transport vehicles of 2.5 Ton and 5/7.5 Ton capacity has been established and these vehicles are being supplied to the army
- (iv) Ordnance Cable Factory, Chandigarh (OCFC), has secured approval from Electronic Components Standardisation Organisation (ECSO) Bangalore, for manufacture and supply of "Miniature Electrical Cables to Specification ISS-51002". These cables are used by electronic equipment manufacturers such as Bharat Electronics and Indian Telephone Industries.
- (v) Ordnance Parachute Factory, Kanpur has developed and Manufactured Main Parachute 350 Sq. Mt. for the Heavy Drop System for AN-32 Aircraft, Parachute for Prithvi Bomblet, Harness for PSU - 36 Mig-29 Aircraft, Lakshya Parachute consisting of Pack Cover of Main and Drogue, Main Recovery and

Drogue Parachute and Pilot Parachute BMK - 41 for Canopy and Harness.

- (vi) The Ammunition Factory, Khadki (AFK) has won the prestigious Rajiv Gandhi National Quality - Best of All Award for 1997 and Commendation Certificate for 1996. AFK won the Award competing against the entire private Sector and Public Sector Industry in the Country.

RESEARCH AND DEVELOPMENT ACTIVITIES

7.31 In house R&D activities towards Product & 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) Aluminium Alloy Light Bridge MLAB-MLC-60 has been dispatched from Ordnance Factory for assembly/evaluation/line load tests.
- (ii) Rocket Medium Range Electronic Counter Measures (MRECM) Launchers with 12 tubes each, developed indigenously by Gun Carriage Factory (GCF) Jabalpur, have been successfully tried out by Navy.
- (iii) Ammunition Factory, Khadki (AFK), developed explosive the bolt and cart valve for Chkar Explosive, Pyro Squibs Operator and Pyro Charge UDP4 - 2 for Navy. 5000 Carrgs. AK- 47 were produced and trial evaluated at Infantry

School, Mhow.

- (iv) Ordnance Factory, Bhandara has developed propellant for Explosive Reactive Armour Sheet and Propellant for CLMC V.

DIVERSIFICATION

7.32 Ordnance Factories produce a wide varieties of chemicals for commercial use by different industries in the civil sector. Ordnance Factories manufacture wide range of textiles, leather goods and sporting arms and ammunition for the civil sector.

MODERNISATION OF ORDNANCE FACTORIES

7.33 The approach for modernisation encompasses upgradation of process technology through renewal and replacement, abandoning obsolete processes and products, not investing where reliable trade sources can be developed, setting up plant and machinery for new technology through in-house R&D, technology transfer from DRDO brought in for new products, processes and technologies. The basis of planning of future capacities and modernisation of Ordnance Factories is undertaken to meet the requirements of the Services. Though most of the Ordnance Factories have now modernised facilities, some of the lines of production, in number of existing factories are very old. This has affected their performance at optimum efficiency and desired productivity. Priority is accorded to the replacement of old machines and modernisation is being undertaken keeping in view the requirements of the Armed

Forces. In the last ten years, Rs.2200 crore have been spent under the capital budget and Rs.560 crore under the renewal and replacement budget.

ENERGY CONSERVATION

- 7.34 Energy conservation measures are adopted as a continuous process embedding all spheres of activities. Reduction in energy consumption is achieved through improved utilisation and technological upgradation. Application of renewable sources of energy for low temperature heating have been adopted in appropriate areas. Improvement in utilisation is being pursued to achieve a target of restricting energy consumption to 4.7% of value of production in the current year, as against 5.1% in the previous year.

POLLUTION CONTROL

- 7.35 Pollution control is an important concern that is monitored closely and the specified level of control has been largely achieved. Programmes have been launched in the Ordnance Factories organisation to achieve the objectives of the national policy on environment. Effluent and emissions are held within the specified limits, periodical environmental audits are carried out and better house keeping is enforced as recommended in their audits.

SAFETY

- 7.36 The corporate safety policy has been reformed during 1996 to install stringent safety standards, safety consciousness and vigilance in the ordnance factories. Accident prone and hazardous areas have mer-

ited 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 emphasised.

- 7.37 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 the 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

- 7.38 To purify the environment by fighting pollution, Ordnance Factory Organisation undertakes afforestation as an ongoing process . It is Planned to plant 44,025 new trees in 1999-2000.

PRODUCTIVITY BONUS

- 7.39 Productivity linked bonus(PLB) equivalent

to 32 days' wages based on levels achieved during 1998-99 has been paid to eligible employees, which was the same level obtained in 1997-98.

COMPUTERISATION IN ORDNANCE FACTORIES

- 7.40 In the Ordnance Factory Board and in 39 Ordnance Factories, Computerised Applications have been implemented in the area of:
- On-line Production Planning and Control (PPC)
 - Pay-roll
 - Personnel Information System (PIS)
- 7.41 Data Communication through dialup modem has been set up in all Ordnance Factories. In 1998-99, a Satellite-based Wide Area Network (WAN) has been established connecting 23 Ordnance Factories and the Ordnance Factory Board for Voice Communication. Video Conferencing facility is available at five locations viz. Calcutta, Pune, Kanpur, Chennai and Jabalpur. A Turnkey Project for upgrading the existing PPC System to state-of-the-art technology and establishment of Local Area Network (LAN) is nearing completion in all 39 Ordnance Factories and the Ordnance Factory Board. A project for integrating LAN and WAN and development of MIS at Board level is contemplated.

QUALITY MANAGEMENT

- 7.42 Manufacture of military equipment calls for stringent specifications and performance standards under extreme ambience. Quality

improvement in every sphere of activity is therefore accorded highest attention at all levels. Out of 39, 38 Ordnance Factories have secured accreditation under IS-14000/ISO-9000. Implementation of Total Quality Management have been given as a thrust and challenging area for all Ordnance Factories.

OTHER MEASURES

- 7.43 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 on a monthly basis and twice in a year to address productivity related matters and review the functioning of the local productivity councils.
- 7.44 The unit level productivity councils meet on a monthly basis to examine measures for improving productivity and reducing costs.

RAJBHASHA

- 7.45 The progressive use of Hindi is given due importance in OFB. The following measures help implement Rajbhasha:-
- (i) All the codes/manuals of the OFB have been published bilingually and are in regular use.
 - (ii) Electronic/manual typewriters and bilingual computers and telex are extensively used for official work at the factories and Headquarters..
 - (iii) Publication of Hindi magazines and observance of Hindi Day/Week at every

factory and the organisation of Hindi competitions. Various awards as encouragement are given to the employees who acquire and use Hindi for official work.

- (iv) Regional Rajbhasha Conferences and Workshops to impart practical aspects of the use of Hindi are held regularly.

PUBLIC SECTOR UNDERTAKINGS

- 7.46 The value of production, sales, investment and profit of the 8 defence PSUs are given at Appendices I-III.

HINDUSTAN AERONAUTICS LIMITED (HAL)

- 7.47 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, helicopters, engines and their accessories. The Company has 12 divisions located in six states. Its registered office is at Bangalore.

- 7.48 Significant achievements of HAL during the year are:

- (i) Successful development of a Low Cost Attack Helicopter (LANCER) and successful completion of its firing trials.
- (ii) The Advanced Light Helicopter (ALH) prototypes completed stringent hot weather trials. The prototypes are moving fast towards certification.
- (iii) The Company has won the National Top Research & Development Award,

viz., DSIR National Award 1998 for R&D efforts in industries in mechanical and engineering sector for design and development of ALH.

- (iv) The Company has received a development order for the Intermediate Jet Trainer. The full-dimensional mock-up of this was created and displayed at Aero-India 1998.
- (v) The Company achieved the highest ever sales of Rs.2048 crore and production of Rs.2089 crore respectively crossing Rs.2000 crore mark in both the cases during 1998-99.
- (vi) Improvement in Quality & Safety Measures is an on going process in the company. The company has sustained their ISO 9000/9001/9002 Certification.
- (vii) 2390 items were indigenised during April-September, 1999. Anticipated Foreign Exchange savings was Rs.14 crore per annum at current price level.
- (viii) The Company paid 20% dividend for the year 1998-99.

BHARAT ELECTRONICS LIMITED (BEL)

- 7.49 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 the defence services, para-military organisations and other governmental users such as All India Radio, Doordarshan, Department of Telecommunications, Police

Wireless Departments, Meteorological Department etc.

7.50 On line computerisation for materials management, state-of-the-art test facilities, facilities for carrying out environment and reliability checks, electro-magnetic Interference/Electro Magnetic Compatibility Testing facility, antenna testing facility, back-up support from standardisation technical information and documentation, computer aided design and manufacture have made BEL a modern and professional electronic company.

7.51 Significant achievements of BEL are:-

- (i) The BEL initiated a number of steps to overcome the sanctions imposed by US Government in May, 1998 and set up task forces in all units to identify alternate components, alternate sources, re-design wherever necessary, screened industrial/commercial grade components for re-engineering of the circuits/packaging to make them conform to MIL grade etc. The BEL has overcome the effect of these sanctions to a large extent due to these measures.
- (ii) The BEL established dedicated Bharat Electronics Quality Institute (BEQI) during the current year to disseminate the quality practices acquired over the years. The Institute will impart training to middle and senior level officers with a thrust on all aspects of Quality Management.
- (iii) The Hyderabad Unit of BEL received the Defence Research and Development

Organisation (DRDO) "Technology Absorption Award for 1998" from the Prime Minister.

- (iv) The BEL has been accorded 'Very Good' rating as per the MOU signed with the Government for the year 1999-2000.

BHARAT EARTH MOVERS LIMITED (BEML)

7.52 The Bharat Earth Movers Limited, a public sector undertaking under the administrative control of Ministry of Defence, was established in May 1964 and commenced operations from January 1965. With the disinvestment of shares of BEML by Government of India, as of end March 1999, Government holds over 61% of equity shares in the company and is a major shareholder. The BEML's present status is "a partly owned government company". It has three manufacturing units located at Bangalore, Kolar Gold Fields (KGF) and Mysore, all in the State of Karnataka.

7.53 Of the BEML's manufacturing and supplies of wide range of products, earth moving equipment comprising Dozers, Excavators, Dumpers, Loaders, Walking Draglines, Rope Shovels etc., are being supplied to coal, cement, steel, power and irrigation, agriculture and other sectors including overseas markets. In the case of Railway products, they are being supplied to Indian Railways. The company has created exclusive production facilities for manufacture of Heavy Duty Trucks, Tank Transportation Trailers and other aggregates like BMP Transmission/Ejector & Aircleaner Assemblies for ICV BMP-II vehicles, etc.

ACHIEVEMENTS

- (i) All divisions of the company continue to hold accreditation to ISO 9001/9002 certifications.
- (ii) As a part of the Total Quality Management (TQM) implementation, the concept of viewing the next operations as a customer was introduced in all divisions.
- (iii) The R&D division which has been dedicated to the Nation, has established various testing centers in the fields of fluid power engineering, material science, structural engineering and power line.
- (iv) The company has won Safety Awards - the 14th time by Bangalore Complex, the 6th time by Mysore Complex and the 1st time by Engine Division.
- (v) Prime Minister's "Shram Shri Award" for the year 1998, was received by Shri V Natarajan, highly skilled turner of the Earthmover Division, KGF Complex.

MAZAGON DOCK LIMITED (MDL)

7.54 The Mazagon Dock Limited, which was established in 1960, is the premier defence shipyard in the country, has a capacity to build warships upto 6,000 DWT and merchant ship upto 27,000 DWT. Its product range includes submarines, missile boats, destroyers, frigates and corvettes for the Indian Navy and patrol vessels for the Coast Guard. It has diversified products for the oil exploration sector through production and installation of wellhead platforms



Low Cost Light Attack Helicopter (Lancer) designed, developed & produced by HAL

and diving services for coating/laying sub-sea pipelines.

HIGHLIGHTS

7.55 The significant events during the year have been:

- (i) INS Mysore, the second ship of Destroyer class was delivered by the MDL. It was commissioned in the Indian Navy on June 2, 1999 by the Prime Minister.
- (ii) A 1600 Cubic Meter Hopper Suction Dredger for export to France was launched on October 25, 1999.
- (iii) In February, 1999, approval was accorded by the Government for converting outstanding loans of Rs.98.55 crore plus accumulated interest of Rs.25.17 crore upto March 31, 1999 aggregating to Rs.123.72 crore into 7% Redeemable Cumulative Preference Shares. This preference shares capital will be redeemed in 5 equal installments commencing from 1999-2000.
- (iv) During the year 1998-99, the company has achieved most of the committed targets of the performance criteria outlined in Memorandum of Understanding signed with the Government and is rated as 'Very Good'. The company has also signed MOU with the Government for the year 1999-2000.

GARDEN REACH SHIPBUILDERS & ENGINEERS LIMITED (GRSE)

7.56 The Garden Reach Shipbuilders and Engi-

neers Ltd was incorporated as a joint stock company in 1934, under the name M/s Garden Reach Workshop Ltd (GRW). The Government of India acquired the company in 1960 and was rechristened as "Garden Reach Shipbuilders and Engineers Limited (GRSE). Since then, it has grown and diversified its activities and is now a multi-unit shipyard with a Shipbuilding Division and an Engineering and Engine Division. The company builds and repairs warships and auxiliary vessels for the Navy and the Coast Guard. Its product range includes frigate carrier & 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.

7.57 Its significant achievements during the year have been:

- (i) Fast Attack Craft, GRSE Yard No.2049 was launched in November, 1999.
- (ii) Contractor Sea Trials for a Naval Fleet Tanker, a Fast Attack Craft and a Frigate was carried out.
- (iii) The company developed a process for galvanization of Bailey Bridge components. Commercialisation of galvanized Bailey Bridge is expected to start from next year.
- (iv) The GRSE developed an Electro Catalytic Cells for Sewage Treatment Plant and Hydrochloride Generator.
- (v) The company achieved most of the targets outlined in the Memorandum of

Understanding signed with the Government and its performance was rated as 'Excellent'.

GOA SHIPYARD LIMITED (GSL)

7.58 The Goa Shipyard Limited was established in the year 1957. After the liberation of Goa, it became a Public Sector Undertaking under the Ministry of Defence in 1967. Goa Shipyard Limited builds a variety of modern, medium size and special purpose ships for the Defence and Civil sectors.

7.59 Significant achievements of the Goa shipyard Limited during the year have been as under:

- (i) Extra Fast Attack Craft-II has been delivered to the Indian Navy on May 29, 1999.
- (ii) Advanced Offshore Patrol Vessel-III has been delivered to the Coast Guard on May 30, 1999.
- (iii) Grane-I has been delivered to a foreign customer on May 28, 1999.
- (iv) Survey Vessel-II has been launched on November 24, 1999.
- (v) Indira Gandhi Rajbhasha Award for Public Sector Undertakings in Region 'C' has been won and received by CMD, GSL on May 14, 1999.

BHARAT DYNAMICS LIMITED (BDL)

7.60 The Bharat Dynamics Limited was established in 1970 for manufacture of Guided Missiles. Initially the production of the first

generation Anti Tank Guided Missile (ATGM) SS11 B1 with collaboration from M/s Aerospatiale of France was taken up. The production of the second generation ATGM, Milan, under collaboration from M/s Euromissile, France was started in 1985. In 1989 the company started manufacturing Konkurs ATGM System under licence agreement from the erstwhile USSR. The BDL is the prime production agency for Missiles developed by the DRDO. The Company has a full-fledged Design and Engineering division for developing and updating products required by the Services. Some of the products developed In-house and delivered are the Flame Launcher, ATGM Simulator, JATO Booster etc. The company is maintaining a sustained growth over a decade and has increased its turnover from Rs.89 crore in 1989 to Rs.321 crore in 1999.

7.61 The Company's achievements during the year are as follows:

- (i) Information Technology (IT) has been given the thrust for enhancing productivity. On-line computerisation for Material Management, state-of-the-art test facilities and introduction of Computer Aided Design (CAD), Computer Aided Manufacturing (CAM) facility have made the BDL a modern and professional company.
- (ii) The performance of the company has been rated "Excellent" for the third consecutive year.
- (iii) The company is successfully adding at least one production division in the list

of ISO 9002 accreditation every year. The Company received ISO 9002 accreditation for its Prithvi Division during the current year.

- (iv) The company deputed its engineers to extend product support to the Armed Forces during "Operation Vijay".

MISHRA DHATU NIGAM LIMITED (MIDHANI)

7.62 The Mishra Dhatu Nigam Limited (Midhani), was incorporated in 1973 at Hyderabad for manufacture and supply of special metals and superalloys to serve the strategic needs of the country in Defence, Atomic Energy, Space, Aeronautics, Electronics, etc with a view to attain self-reliance in this sophisticated field. Midhani went into commercial production by July, 1983. Today, the Midhani manufactures some of the very complex alloys which only a few advanced countries in the world produce.

7.63 The achievements during the year have been:-

- (i) A high grade titanium alloy, Titan-31 for aerospace and other critical applications meeting international standard of Macro quality levels and ultrasonic inspectability was developed.
- (ii) The ISRO's first commercial venture PSLV-C2 was successfully launched on May 26, 1999 and placed three satellites (Indian, German & Korean) in space was built with Midhani's

maraging steel hardware and titanium alloy gas bottles.

- (iii) The company has scaled new heights by supplying titanium mill forms for dental implants, bone plates, pacemaker's surgical devices and body implements. Development work is in progress for indigenous production of low cost knee hinge joints, compression hip screws, hip prostheses, screw, clamps, plates, intra medullary nails and rush nails to stringent international specifications. These items would be extremely useful to our Armed Forces as well as civilian population.
- (iv) The company has successfully productionised Molybdenum boats (Titanium-Zirconium containing molybdenum or 'TZM' type) required for use as high temperature carriers for sintering, which were hitherto being imported.
- (v) A new superalloy Superni-706 M - a high strength alloy with good corrosion and oxidation resistance was developed and supplied for cryogenic application in the space programme.
- (vi) A special grade of duplex stainless steel MDN 329, supplies were made in the form of forged blocks for making chamber blocks for carbon-monoxide pumps for use in Refineries.
- (vii) The company has been re-certified to ISO-9002 standards for a further period of three years with all operating

divisions conforming to stringent quality systems.

OTHER ORGANISATIONS IN DEPARTMENT OF DEFENCE PRODUCTION AND SUPPLIES

DIRECTORATE GENERAL OF QUALITY ASSURANCE (DGQA)

ORGANISATION & FUNCTIONS

7.64 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) & 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 the Armament discipline only). The task performed by these three tiers are complementary and compatible to each other and are integrated to achieve maximum efficiency.

7.65 Main functions of DGQA are:

- (i) Formulation/control of specification, drawings, technical literature and documents for defence equipment & stores.
- (ii) Undertaking quality assurance by

testing & technical evaluation for service use.

- (iii) Providing all technical data and other basic inputs for standardisation, codification and cataloguing to the Directorate of Standardisation.
- (iv) Establishment of sources for procurement.
- (v) Product improvement based on feedback 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.

ACHIEVEMENTS

7.66 Inspection of stores: The value of stores inspected & accepted by DGQA during 1997-98, 1998-99 & 1999-2000 are as under:

Year	Inspected	Value (Rs. in crore) Accepted
1997-98	7031.59	6367.82
1998-99	8211.47	7377.99
1999-2000 (upto Oct'99)	5180.11	4714.43

DIRECTORATE GENERAL OF AERONAUTICAL QUALITY ASSURANCE (DGAQA)

7.67 The Directorate General has its Headquarters at New Delhi with Resident Inspection Establishments at various production cen-

tres in the country, namely, Hindustan Aeronautics Limited, Bharat Electronics Limited, Indian Telephone Industries, Midhani, ECIL, BDL and also at various Ordnance Factories engaged in the production of Air Armament stores and Airfield Lighting equipment and ALISDA, Bangalore. It is performing the following functions:

- (i) Quality assurance during design/development, production, overhaul and repair of military aircraft, accessories and aeronautical stores, air armament, rockets and missile system, and group support equipment for military aircraft.
- (ii) Technical association with DRDO and other agencies during the process of type approval, lifting and life extension studies of aircraft and accessories.
- (iii) Establishment of indigenous sources for production of aeronautical stores.
- (iv) Association with accident/defect investigation of military aircraft/aeronautical stores for establishing the causes thereof and to suggest remedial measures to improve flight safety.
- (v) Participation in standardisation activities related to preparation of joint services/national specifications and codification.
- (vi) "Nodal Agency" for Missile Systems Quality Assurance Agency (MSQAA) for IGMDP.

7.68 It has inspected Aeronautical Stores of the

value of Rs.711.58 crore during the current financial year upto October, 1999. Aeronautical Stores of the value of Rs.1400 crore is likely to be inspected during the period from November 1999 to March 2000.

- 7.69 It is being developed as a central agency for maintaining a computerised Data Bank of indigenously developed items by various agencies, its easy retrieval and usage and to facilitate import clearance activity in conjunction with the IMMOLS Network of IAF.

DIRECTORATE OF STANDARDISATION

- 7.70 To control item proliferation within the Defence Services, Directorate of Standardisation was constituted in 1962. Nine standardisation cells have been located at nodal stations to provide a booster to the Standardisation activity. The basic objective of the Directorate of Standardisation is to establish commonality in equipment & components among the three Services so that the overall inventory of the Defence Services is reduced to the 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 & Cataloguing of Defence Inventory &

- (iii) Entry Control

ACHIEVEMENTS

- (i) Twenty-four important documents covering main equipment/assemblies, sub-assemblies have been published till October 1999.
- (ii) 340 standard documents which have completed 5 years, have been revised.
- (iii) 300 items were considered for variety reduction under 15 Joint Services Rationalised Lists. This quantity was reduced by 34 items leaving 266 items, thus bringing about a 11.3% variety reduction.

CODIFICATION AND CATALOGUING

- 7.71 In continuation of the process of accelerating the pace of codification, 15,84,000 items were codified till October 99 which represents an increase of more than 63% over the corresponding period last year. The annual target for codifying items is likely to be surpassed as the Directorate has already codified 3.30 lakh items till October 1999 against its annual target of 3.83 lakh till 31.3.2000. This has been possible due to upgradation of the Networking System and the EDP Cell of the Directorate.

HARMONISATION

- 7.72 In conjunction with the Bureau of Indian Standards (BIS), the Directorate of Standardisation has prepared/finalised JSG on "Hospital Waste Management" and "Guide on Hospital Case Services" for the first time in the country.

DIRECTORATE OF PLANNING & CO-ORDINATION

- 7.73 The Directorate of Planning and Coordination was set up in 1964 as a deemed attached office of the 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 organisation, the users, R&D agencies and the quality assurance organisation. In furtherance of its role, the Directorate represents the Department of Defence Production and Supplies in the General Staff Equipment Policy Committee, the R&D panels, standardisation committees, task forces and various monitoring 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 cases for setting up of Ordnance Factories in the country at green field sites. The Directorate is the nodal point in the Department for international co-operation on defence production. Recently, one of the most important tasks that has been entrusted to the Directorate is in the area of providing thrust to defence exports.

- 7.74 Besides indigenous manufacture of armoured vehicles, the setting up of facilities of filling of high calibre ammunition as well as overhaul of Ajeya tanks and their engines, product improvement of artillery

guns and limited series production of Main Battle Tank Arjun are some of the major programmes presently being progressed by the Directorate.

DEFENCE EXHIBITION ORGANISATION

- 7.75 The Defence Exhibition Organisation (DEO) was established in 1981, It is primarily responsible for organising and coordinating defence exhibitions in India and abroad. It maintains a 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 these pavilions. The pavilion provides an overview of the wide range of defence infrastructure in the country. The pavilion regularly participates in the India International Trade Fair, held in November each year. The Defence Pavilion has been adjudged first for excellence in display among the Central Government Pavilions in the India International Trade Fair, 1999 and the DEO has been awarded the Gold Medal for the third year in succession. The highlight of the Defence Pavilion was the impressive display of the Pakistani weapons captured at Kargil as well as equipment with our Services.
- 7.76 The second edition of the revised catalogue on Defence Products available for exports

has been published and released by the Hon'ble Raksha Mantri on October 12, 1999.

7.77 DEO also assists the Department of Defence Production & Supplies (DDP&S) in vendor awareness and development programme of the production units, in co-operation with the Directorate General of Quality Assurance (DGQA)

7.78 As part of the export promotion effort, DEO coordinates the participation of Defence Public Sector Undertakings and the Ordnance Factory Board in selected international exhibitions every year. During the current financial year, Defence Public Sector Undertakings, Ordnance Factory Board and Defence Exhibition Organisation participated in the LANGKAWI, International Maritime and Aerospace Exhibition held at LANGKAWI, Malaysia from November 30 to December 5, 1999.

INTERNATIONAL DEFENCE EXHIBITION 1999 (IDEX'99)

- 7.79 A joint pavilion was put up by Indian Defence Industry at IDEX 99 at the International Exhibition Centre, Abu Dhabi from March 14 to March 18, 1999. The OFB and all Defence PSUs except BEML were represented.
- 7.80 Secretary (DP&S), Joint Secretary (Export) and a functional working level team visited IDEX-99 at Abu Dhabi.
- 7.81 A large number of representatives from various countries visited the Indian Defence Industry pavilion and made relevant en-

quiries with prospects of potential defence co-operation with India. It provided a platform for mobilisation for DEFEXPO INDIA'99 held recently at Pragati Maidan, New Delhi from October 12 to October 16, 1999. This opportunity was availed to meet the representatives from some of our target countries.

INTERNATIONAL LAND AND NAVAL SYSTEMS EXHIBITION - DEFEXPO INDIA 99

- 7.82 The first ever Land and Naval Systems Exhibition was organised by Department of Defence Production and Supplies in association with the Confederation of Indian Industry at New Delhi from October 12-16, 1999. It was inaugurated by Raksha Mantri on October 12, 1999. There was excellent participation by both Foreign and Indian Companies in the Exhibition. The five day long Exhibition attracted 117 international companies from 16 foreign countries. In addition, 62 private sector industries from India including small scale industries also participated. The Indian Defence Industry was represented by 39 Ordnance Factories under the Ordnance Factory Board and 8 Defence Public Sector Undertakings. A Seminar on 'Force Multiplier Technologies for Navy and Land Warfare' was also organised by the Defence Research and Development Organisation. Delegations comprising of Ministerial and Chiefs of Staff/Senior Defence Officials from 27 countries visited the Exhibition. The Exhibition was complimented by foreign delegates and participants for reaching international standards in the very first exhibition itself.

WORKING RESULTS
VALUE OF PRODUCTION AND SALES

VOP=Value of Production
(Rs. in crore)

Name of PSU	1997-98		1998-99		1999-2000 (April-Dec'99) (Provisional)	
	VOP	Value of Sales	VOP	Value of Sales	VOP	Value of Sales
Hindustan Aeronautics Ltd.(HAL)	1838.13	1869.93	2089.03	2047.73	1443.14	1212.78
Bharat Electronics Ltd.(BEL)	1255.58	1261.30	1216.99	1199.16	790.57	597.85
Bharat Earth Movers Ltd.(BEML)	1285.96	1259.71	1244.15	1212.62	729.51	721.64
Mazagon Dock Ltd.(MDL)	994.59	1095.31	1701.69	253.99	539.08	2101.63
Garden Reach Shipbuilders & Engineers Ltd.(GRSE)	361.89	145.45	425.95	363.52	229.00	51.16
Goa Shipyard Ltd.(GSL)	111.32	27.24	78.65	44.87	47.69	164.16*
Bharat Dynamic Ltd.(BDL)	296.13	311.65	355.27	320.84	124.77	62.43
Mishra Dhatu (Midhani)	91.15	92.51	93.82	93.37	7.69	9.02
TOTAL	6234.75	6063.10	7205.55	5536.10	3911.45	4920.67
* upto November						

Appendix-II

Appendix-III

INVESTMENT

PROFIT AFTER TAX

(Rs in crore)

(Rs.in crore)

Name of the PSU	1997-98		1998-99		1999-2000 (Estimated)		Name of the PSU	1997-98	1998-99
	Equity Loans	Govt. Loans	Equity Loans	Govt.	Equity	Govt.			
HAL	120.50	48.70	120.50	NIL	120.50	-	HAL	147.52	177.74
BEL	80.00	26.27	80.00	17.26	80.00	17.26	BEL	53.40	53.63
BEML	22.50	25.25	22.50	14.40	22.50	-	BEML	10.65	0.62
MDL	199.20	98.55	199.20	98.55	199.20	-	MDL	23.75	16.23
GRSE	123.84	11.03	123.84	7.36	123.84	-	GRSE	15.38	42.57
GSL	19.40	0.80	19.40	0.20	19.40	0.20	GSL	14.40	1.94
BDL	115.00	-	115.00	-	115.00	-	BDL	39.64	62.27
MIDHANI	137.34	-	137.34	-	134.37	-	MIDHANI	2.64	2.18
TOTAL	817.78	210.61	817.78	137.77	814.81	17.46	TOTAL	307.38	357.18

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DEFENCE RESEARCH & DEVELOPMENT



VVL 8x8 Missile Prithvi Launcher

8.1 The mission of the Department of Defence R&D is technological self-reliance in defence systems and weapons. To accomplish this mission, the Department has the mandate to design, develop and to transfer technology for the production of state-of-the-art weapon systems, platforms, sensors and allied equipment to meet the requirements of the Armed Forces. It also provides services in the area of military science to improve the combat effectiveness of the troops. The Department is fully dedicated to provide the winning edge to our Armed Forces through superior technology of weapons and scientific services and undertakes R&D projects/programmes to realise the objective.

8.2 The Department is engaged in the field of Aeronautics, Armament, Missiles, Combat Vehicles, Advanced Computing and Networking, Electronics, Opto-electronics, Engineering systems, Life Sciences, Materials, Naval R&D and specialised training in these areas. Thrust has also been given to the development of critical components and technologies to reduce vulnerability arising from technology control regimes.

PROGRAMME MANAGEMENT & REVIEW MECHANISM

8.3 The Department has a network of 52 laboratories/establishments of the Defence Research & Development Organisation (DRDO), including the Centre for Military Air-worthiness and Certification (CEMILAC) which is located all over the country. The Department also administers the Aeronautical Development

Agency (ADA), a society funded by the Department, which is engaged in the development of the Light Combat Aircraft (LCA).

8.4 DRDO has a management structure which provides resources to all laboratories to undertake design and development of weapon systems in areas of their core competence. There are several review mechanisms to review programmes and projects by research institutions/ financial experts. These mechanisms include R&D Panels, steering committees, multi-tier management boards of major projects, the DRDO Council, the Defence R&D Council headed by Raksha Mantri, status reviews by Service Chiefs and special review by Raksha Mantri. In order to reduce the design-development-productionisation time cycle of high cost and high technology projects, DRDO is adopting modern techniques such as 'concurrent engineering'.

8.5 Infrastructure and need-based management structures have been created to develop, manage and integrate high cost and high technology programmes and projects by pooling national resources and expertise available in academic institutions, R&D centres and public and private industries as well.

PROGRESS OF R&D PROGRAMMES & PROJECTS DURING THE YEAR

8.6 Pilotless Target Aircraft (PTA) - Lakshya, a high sub-sonic re-usable aerial target remotely piloted from the ground and designed to impart training to air-borne

and air defence pilots for weapon engagements, is under limited series production. The first batch of Lakshya have been delivered to the Air Force in September 1999.

8.7 A large number of indigenously developed 5.56 mm calibre Indian Small Arms (INSAS) rifle (fixed butt), LMG and common ammunition for the INSAS family have been produced and issued to the Army. The Army has also accorded the bulk production clearance for 5.56mm INSAS rifle (folding butt) and LMG (folding butt) versions. The weapon system has been effectively used by the Indian Army during OP Vijay.

8.8 Free flow production of indigenously developed 125 mm Fin Stabilised Armour Piercing Discarding Sabot (FSAPDS), soft core ammunition for use on T-72 tanks has been fully established. The technology for production of indigenously developed anti-tank influence mine has been transferred to ordnance factories organisation and these mines has been produced and issued to the Army.

8.9 Agni-II, surface-to-surface, Intermediate Range Ballistic Missile (IRBM), with a range of more than 2500 km and payload of 1 tonne has been test fired on April 11, 1999 from a mobile launcher. During this flight, features like multi-staging, control and guidance and re-entry technology were tested and proved.

8.10 The Army version of the surface-to-surface



Agni-II on Launcher

missile Prithvi (150 km) with a pre-fragmented warhead and associated ground system is under production. It has been inducted into the Army. The Dhanush, the naval version of Prithvi, has been extensively evaluated for performance and a flight test from a ship is planned in the first quarter of 2000. The Air Force version of Prithvi, having a range of 250 km, has also been developed.

- 8.11 36 developmental flight trials of Remotely Piloted Vehicle (RPV) - Nishant, an unmanned aerial vehicle for battlefield surveillance, reconnaissance, real time engagement and damage assessment, have established the reliability and consistency in performance of the airborne system. Nishant has been tested in its landing bag configuration for damage free recovery. The system is being readied for user trials.



Nishant in Flight

- 8.12 The multi-span bridging system Sarvatra having 5 spans each of 15 m and capable of covering a 75 m obstacle has undergone its final phase of user trials in October 1999. The mobility, stability and

manoeuvrability of the vehicle have been proved. Technical trials of a longer version of bridging system using trestles of 20 m span are completed.

- 8.13 The Advanced Experimental Torpedo (AET) is an effective system against surface as well as submerged targets. User evaluation trials of the AET are in progress and are likely to be completed soon. BDL has been nominated as the production agency.
- 8.14 Technical trials of the Wire Guided Torpedo (WGT), a heavy weight torpedo, which can be launched from a submarine have been successfully completed. User demonstration trials are to follow.
- 8.15 Technical trials of the Processor Based Exercise Mine (PBEM)/ Processor Based Moored Mine (PBMM) under water mines the state-of-the-art mines, which can be initiated by acoustic, magnetic or pressure influences have been completed. These are presently undergoing user evaluation trials.
- 8.16 User-cum-troop trials of Pinaka, the multi-barrel rocket system have been conducted successfully during October 1999. A specially fabricated single tube launcher has been effectively used by the Indian Army in the recent operations.
- 8.17 The programme of development of the Light Combat Aircraft (LCA), a state-of-the-art system employing advanced technologies has crossed a major milestone during

the year by successfully completing the low speed taxi trials on the first technology demonstrator (TD1). The aircraft is getting ready for its maiden flight.

- 8.18 The second LCA technology demonstrator TD-2 is undergoing system integrity checks. This aircraft is built to the same standard as TD-1. Significant efforts are being made for indigenous development of technologies affected by US sanctions. Hardware-software integration checks are nearing completion. Design studies on the Naval version of the LCA are in progress. Work has commenced on two prototype vehicles PV1 and PV2.
- 8.19 Three prototypes of the Kaveri engine (K1, K2 & K3) have undergone extensive ground testing for approximately 208 hours during the year. The fourth engine (K4) is undergoing assembly trials. The K2 engine has been successfully tested with its full authority digital control unit, KADEC. The weight reduction programme of the Kaveri engine is in progress to meet the Preliminary Flight Rating Test (PFRT) and Production Release (PR) requirements of the LCA.
- 8.20 Design work in the Kaveri marinisation programme has been completed. The low pressure (LP) compressor, the Kaveri engine core compressor and the LP turbine specifically designed for marine engine application have been completed. A high bypass ratio and low specific fuel consumption small gas turbine engine suitable for Unmanned Aircraft Vehicles(UAVs) has also been configured.

8.21 Two flights of Trishul, short range surface-to-air missile were conducted during April 13-16, 1999 against a Lakshya target. Two flights of the Naval version of Trishul were also conducted during May 24-26, 1999, the first flight against a simulated target and second flight in the sea-skimmer mode. The Trishul Control Vehicle (TCV-II) with a digital guidance unit(DGU) is ready for trials. Four flight trials for the naval version of Trishul were conducted between December 18-22, 1999 using the Naval Trishul launcher and the Naval tracking radar, RAWS-03 surveillance radar. Trishul has been proven successful for sea-skimming role. The multiple path reflection problem has been resolved.

8.22 Two guided flight trials of Akash the, medium range surface-to-air missile were conducted during September 30 to October 05, 1999. More missiles are at advanced stages of integration for the next phase of guided flights. Its MK-II warhead has been developed.

8.23 Two guided flight trials of the Nag anti-tank guided missile were carried out with a day version seeker during December 4-6, 1999. The Nag Missile Carrier III (NAMICA-III) is ready for trials. Development work on the day and night seeker is in progress.

8.24 Various sub-systems of the Samyukta EW system for the Army were integrated and the core system demonstration is in progress. The engineering version of the two variants of Sangraha EW for use in helicopter/light

aircraft has been delivered after meeting all the safety of flight tests (SOFT). These have been integrated on the airborne platform and are ready for flight evaluation.

8.25 The Gallium Arsenide Technology Enabling Centre (GAETEC), has produced and delivered monolithic microwave integrated circuit (MMIC) amplifier modules. These have also been type approved by the Aeronautical Qualification Agency.



S Band Satcom Terminal

8.26 Indigenously developed S-band Satcom terminals have been deployed during the recent operations and the technology has been transferred to industry. Some microwave components adversely affected by the sanctions have been realised indigenously. HV/VHF/UHF interception posts have been developed and are being handed over to the Services. VHF Composite Net Radio (CNR) has been developed and demonstrated. It has frequency hopping and secrecy features for speech and data transmission. A Digital Radio Frequency Memory (DRFM) based advanced technique for EW applications has been developed.



Composite Net Radio

8.27 A hybrid electric vehicle has been developed on a standard Swaraj Mazda chassis. It has three modes of operation i.e. electric mode, IC engine and hybrid mode. The Preliminary Design Reviews (PDRs) of major systems of the futuristic infantry combat vehicle Abhay have been completed.

8.28 A 5 kW phosphoric acid fuel cell (PAFC) has been developed. Work on a higher capacity fuel cell is in progress. Advanced Cathodic Protection (ACP) system including a 3 Amp capacity auto-control unit to accommodate a zinc-silver and zinc-silver chloride sensing electrode has been fabricated successfully. Corrosion prevention coating for wet surfaces have been developed and laboratory trials have been successful. Silicon modified alkyd resin based paint has been developed for ship exterior application.

8.29 The technical trial of Mihir, the dunking sonar developed for fitment in the Advanced Light Helicopter (ALH), have been successfully completed. Flight trials are being progressed.

8.30 Panchendriya, a composite submarine sonar had been developed. The sonar had been successfully tried out on a ship. A derivative of Panchendriya is also under development.

8.31 A method has been standardised for the disposal of TNT and RDX/TNT filled un-serviceable/rejected shells after extensive field trials. A promising antidote against sulphur mustard has been developed, providing enhanced protection to the animals in the lab testing.

8.32 Blast resistant construction technology has been successfully demonstrated for storage of high explosives and propellants. The new design concepts are cost effective and provide virtually complete protection to explosives/ammunition stored at exposed sites. The Vehicle Mounted Spraying System (VMSS) designed and developed for preparation of operational helipad in desert area has been introduced into Service.

8.33 The Software for Division level wargames testing for training of officers has been installed at Air Defence College in Gopalpur.

SUPPORT TO SERVICES

8.34 Meals ready to eat (MRE) and survival rations for troops have been supplied during the recent operations. These rations do not require any cooking as the contents are thermally processed and can be consumed readily with a little warming if required. Fresh milk and local greenhouse grown leafy vegetables during fro-

zen winter are being supplied to Siachen troops. Two phase aptitude tests have been developed for both officers and soldiers for recruitment and selection into the Armed Forces.

8.35 DRDO was entrusted with bulk production and supply of 24 items comprising of special winter and mountaineering equipment for use in high altitude areas. The total requirement was successfully met within a short span of 4 months. In addition, 4 new items have been developed and introduced for use in extreme cold weather systems. 35,000 litres of oil OX-320 for use in various gun systems and hydraulic fluids and lubricants for precision gun systems have also been supplied.

8.36 In order to keep vehicles moving in sub-zero temperatures, an engine start kit for 'B' vehicles comprising a coolant, battery, vehicle heater and lubricants and oils which can function upto -50°C have been developed. Turbo-charging of BMP-II engines has also been successfully carried out to obtain more power output from the engine at high altitudes.

8.37 A self contained digester for disposal of human waste by microbial degradation in an eco-friendly manner for use in high altitude areas has been developed. The digesters installed at various high altitude areas are functioning satisfactorily. Rapid ascent to high altitude in susceptible individuals often leads to High Altitude Pulmonary Oedema (HAPO). A successful attempt

has been made to treat patients especially those severely ill with HAPO, by the combined administration of NO and O₂ at high altitude. The modified HAPO bags have been introduced in the Services after extensive trials at high altitude.

8.38 A Central Heating System for Medical Aid Complexes and a 4.5 kW Electric Wind Generator were installed and made operational in a forward area.

8.39 Avalanche forecast warnings for the areas of J&K including Siachen and Himachal Pradesh were issued with good accuracy. Fifteen state-of-the-art automatic weather stations (AWS), have been installed in J&K (including Siachen area) and Himachal Pradesh. The data from these AWS, is being used extensively in avalanche forecasting and in development of forecasting models.

INNOVATIONS/INVENTIONS

8.40 The Intellectual Property Rights (IPR) awareness was increased among DRDO scientists. 45 patent applications and 2 copyright applications were received from laboratories in the areas of food technology, biomedical science, high energy materials, composite materials and instrumentation. Patent applications on "An improved process for chemical destruction of sulfur mustard by chemical conversion into non toxic products" were filed in USA, Russia, Germany and Netherlands. Patent applications on "A new and effective antidote against sulfur mustard compound" were filed in USA,

UK & Netherlands. Similarly, one divisional patent application on “Nickel based super alloys” was filed in USA. A total of 13 patent applications were accepted by the Patent Office for grant of patents after examination.

THRUST ON BASIC RESEARCH

- 8.41 DRDO has 4 research boards viz., the Armament Research Board, the Naval Research Board, Life Sciences Research Board and the Aeronautical R&D Board (AR&DB). These Boards provide grants-in-aid for collaborative defence related research. A low speed, low turbulence wind tunnel has been operationalised at IIT, Kharagpur. A centre of excellence in Aerospace System Design and Engineering has been set up at IIT Mumbai and a Centre of Excellence for Composite Structures Technology has been sanctioned to set up a National Aerospace Laboratory, Bangalore with associate centre at Indian Institute of Science, IIT Kanpur and IIT Kharagpur.
- 8.42 The Boards motivate and encourage young researchers in universities, academic institutions and industry to apply their innovative ideas and skills to undertake fundamental research needed to accelerate self reliance efforts.

DRDO - INDUSTRY INTERACTION

- 8.43 Eight DRDO laboratories/establishments, working in the areas of advanced materi-

als, robotics and artificial intelligence, communication systems, life support systems, corrosion protection, advanced composites and desert technologies have been opened to the Industry. The aim is to foster spin-off benefits of defence technologies.

QUALITY ASSURANCE INITIATIVES

- 8.44 During the year 1999, four labs received ISO 9001 Certification. Lectures, training courses and workshops are regularly conducted.

SOCIETAL MISSIONS & SERVICES

- 8.45 All the 30 de-salination plants installed under the project ‘SUJALAM’ Phase-1 were handed over to the Government of Rajasthan.
- 8.46 Seven tonnes of processed ready-to-eat food were air dropped for Orissa cyclone victims.
- 8.47 On addition, 9 Water Purification plants capable of supplying a total of 21,000 litres of drinking water per hour and 1 electro-dialysis desalination plant capable of supplying 30,000 litres per day were installed in and around Erasama, the worst affected areas of the Orissa cyclone.
- 8.48 Project Tulsi is a project funded by the Ministry of Social Justice & Empowerment for the screening of tribal/rural women for early detection of cervical cancer using the

Cytoscan system developed by DRDO. About 25,000 rural/tribal women have been examined.

- 8.49. The improved, light weight, modular version of ‘Above knee’ and ‘Below knee’ prototypes of Artificial Limbs have undergone trials. An MoU has been signed with the Army Base Workshop, Bangalore for production to meet the requirements of the Armed Forces.
- 8.50 Plastic aspheric lenses have been successfully developed and clinically evaluated for people having low vision. The Ministry of Social Justice & Empowerment have launched a programme for bulk production and application of these lenses through trade.

HUMAN RESOURCE DEVELOPMENT

- 8.51 A total of 219 personnel, including officers from three Services and other organisations, have been selected under Research & Training Schemes to undergo ME/M.Tech/MSc courses in 28 disciplines at 12 Universities/Institutions. This is in addition to candidates sponsored by Lab Directors/under their delegated powers. The Institute of Armament Technology has been accorded the status of Deemed University. Institute of Technology Management has been recognised for conducting a 6-month Technology Management module for MBA (Technology Management) under Bharathidasan University.

9

INTER-SERVICE ORGANISATIONS



Wounded soldier during Kargil war is operated Base Hospital

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 of 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.

9.3 The MES has a long and eventful history and has come of age, growing along with

the engineering profession and the needs of the modern hi-tech armed forces of independent India. Today, it handles an annual workload which exceeds Rs.3300 crore.

9.4 The MES functions under the overall control of Engineer-in-Chief, who is the adviser to the Ministry of Defence and the three Services on construction engineering. It is structured to design works which are executed through contracts under the supervision of officers and staff consisting of both civilians and 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.

9.5 The MES has specialised in wide spectrum of civil works, ranging from conventional building and factories to sophisticated complex laboratories, marine works, jetties, dockyards, wharves, workshops, slip-ways, 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.

9.6 A few important time-bound projects completed/in progress by the MES during 1999-2000 are given below:-

A. COMPLETED WORKS

(i) Storage Accommodation at Banar-Jodhpur:

A time bound project costing Rs.12.97 crore for storage facilities at Banar-Jodhpur has been completed in scheduled time. The work was commenced on June 9, 1998 for a completion period of 15 months. The work has been physically completed on September 8, 1999 within its original date of completion.

(ii) Provision of Married Accommodation for 96 OR at Sukna (Siliguri Zone):

Work was sanctioned by Government of India in March 1997 for Rs.299.22 lakh and amended for Rs.303.73 lakh in December 1997. The work commenced on March 2, 1998 and completed in September 1999 well before probable date of commencement (PDC).

B. WORKS UNDER EXECUTION/PLANNING DURING 1999-2000

(i) Project Quick Shelter (Phase II): Quick Shelter Projects at a cost of Rs. 33.99 crore covering 9 high pressure stations of 1059 dwelling units was sanctioned by the Government in 1998-99. All the works at 9 stations are in progress.

(ii) Project Quick Shelter Phase III : During financial year 1999-2000, the Government has approved Quick Shelter Project (Phase - III) costing Rs.40 crore covering a 18 high pressure stations of 1520 dwelling units. Go-ahead sanction has been accorded for all the works.

(iii) Provision of OTM Accommodation



Indian Engineers in action with bridging equipment

for College of Defence Management (CDM) at Secunderabad: A prestigious project for provision of OTM Accommodation for CDM at Secunderbad costing Rs. 613.57 lakh was sanctioned by the Government on March 10, 1998. The contract for building work including internal/ external Services has been accepted on September 15, 1999 after obtaining financial concurrence. The Project commenced on October 11, 1999 with its completion date as April 10, 2001.

(iv) **Provision of OTM Accommodation for Arty Regiment at Kamptee:** Go-ahead sanction for a prestigious work costing Rs.26.25 crore was accorded by the Government on September 7, 1998. Administrative approval for the work has been accorded for Rs.2538.42 lakh by the Government on September 21, 1999 based on lowest tender under Fast Track Procedure. The contract has been accepted by Chief Engineer (Fy), Hyderabad Zone and work commenced recently. It is a time-bound project and shall be completed by September 2001.

(v) **Provision of OTM accommodation for MH at Agartala (Job No.E/1668):** Admin approval for the work was accorded by the Government on February 4, 1997 for Rs.456.57 lakh. The work commenced on May 3, 1999. The work is planned to be completed by March 2001.

(vi) **Provision of OTM Accommodation for new Military Hospital at Jabalpur:** The Project was sanctioned by the Government

for Rs.355.27 lakh in February 1997 and corrigendum issued for Rs.436.67 lakh on July 28, 1999. The work commenced on December 14, 1998. The project is expected to be completed ahead of scheduled time by March 2001.

(vii) **Computerised Inventory Control Project at COD Delhi Cantt. (Special Work):** The controlled environments to computers can be provided by specialised accommodation having temperature and humidity control devices. After careful evaluation, computerised inventory control project was sanctioned by the Ministry of Defence on June 15, 1998. The provision of this facility would result in high rate of efficiency of computers by avoiding data losses. This is the first OTM Accommodation which has been taken up by MES on Fast Track Procedure. The Administrative Approval for this work was accorded on September 7, 1999 for Rs.112.85 lakh. The work is progressing at good speed and expected to be completed ahead of scheduled date.

(viii) **Military Hospital at Chennai:** A prestigious project for provision of 249 bedded hospital at Chennai costing Rs.14.92 crore has been sanctioned by the Government. The tender has been received and is awaiting financial concurrence by the Government. PDC of the project is 2003.

(ix) **Modernisation of INHS ASVINI, Mumbai:** Construction of Rs.63.86 crore (Phase I) project of the existing 825 bedded hospital, sanction by the Government on

December 23, 1997, is in full swing. The Dental Block has been completed and handed over to the users during February 1999. The work has been appreciated by the Army and Naval authorities. The work on Nursing block is likely to be completed during the year. The entire project is expected to be completed by May 2001.

(x) **Naval Officers Mess, New Delhi:** The work of this prestigious Mess building costing approximately Rs.8.60 crore commenced in December 1997. The Mess building is designed in octagonal modules with superior finishes and includes Air Conditioning. The complex has an integrated sports facility with Swimming Pool. The work is in advanced stage of completion and is expected to be completed by March 31, 2000 and would have high quality of matching, interior decoration and furnishings.

(xi) **Naval Academy at Ezhimala:** Government has approved proposal to set up a Naval Academy at Eshimala, Kanur District, Kerala at an estimated cost of Rs.166.94 crore, is in advance stages of planning. Preliminary work on soil investigation and material survey has since been completed. Conceptual design of Cadets' accommodation, Cadets' mess and external services have been approved by the Project Management Board. Detailed design by the consultants is in progress. The work is likely to commence by March 2000 and will be executed in 48 months.

(xii) **Resurfacing of Runway at Air Force**

Station at Bagdogra: Resurfacing of the Runway has been sanctioned at a revised cost of Rs.12.66 crore by the Government in September 1999. The work comprises mainly of flexible overlay for 1745 M and rigid overlay 500 M on either end over rigid pavement. The work is already in progress and is likely to be completed by end of 2000.

(xiii) **Air Force Officers Mess, New Delhi:** The prestigious project at Zakir Hussain Marg, New Delhi is in progress at a cost of Rs.10.07 crore. The project comprises of officers' mess for 900 officers with single officers' accommodation including all external services. The work is planned to be completed by October 31, 2000.

(xiv) **Software Development Institute, Bangalore:** This work has been sanctioned by the Government at a cost of Rs.13.14 crore. The scope of work comprises of all facilities required for this prestigious institute like labs, rig stations, computer stations to provide latest technology for upgradation of various weapon systems. The tenders for the



MES Team is at work

work are under finalisation. Work is to be completed by July 2002.

9.7 The following have been the thrust areas during the year:

- (i) **Quality Management:** Total Quality Management has been the buzz word for the MES. To improve the quality of works and services being provided by the MES, the Department has launched a drive to obtain ISO-9001 certification. Action is in hand to obtain ISO-9001 certification for the premier Design and Consultancy establishment of Chief Engineer(Design &Consultancy) Pune, Chief Engineer Delhi Zone and CWE(P) Delhi.
- (ii) **Revision of Defence Works Procedure(DWP):** QMG's Branch has taken up a case with the Government for appointment of Inter Services Committee for revision of DWP 1986. FAST TRACK PROCEDURE is proposed to be incorporated in the Defence Works Procedure for speedy implementation of Defence Projects.
- (iii) **Review of Scales of Accommodation and Furniture of Defence Services:** A committee has been constituted under the chairmanship of a Major General to review the exiting Scales of Accommodation and Furniture. The deliberations of the Committee is in progress and their views/ recommendations are expected shortly.
- (iv) **Users Interaction and Satisfaction:** Efforts are being made to secure greater involvement of users in planning and execution of projects. For-

mation of Project Management Groups consisting of Users, Engineer Executives and Staff authorities is being given importance for quick decision making on functional and technical requirements in the implementation of projects to reduce cost and time over runs. Progress achieved in this direction is satisfactory.

- (v) **Automation in MES:** As part of programme for Automation in MES, the MES formations have been provided with adequate number of computers, fax machines, plain paper copiers, electronic typewriters, etc. Action is in hand to replace the outdated models and make up the deficiency in the next two years.
- (vi) **Re-structuring of MES:** The Study Group for "Review and Re-structuring of MES" convened by the Army Headquarters has recommended to re-align the jurisdiction of Zonal Chief Engineers in conformity with the boundaries of the supported field or static formations to ensure better integration as also to enhance their accountability. Accordingly, this recommendation has been accepted and implemented by the E-in-C. Also further dedication of Commanders Works Engineer to supported field/ static formations has been laid down for better integration of Works Services.

ARMED FORCES MEDICAL SERVICES

9.8 **The Mission:** Ensuring sound health and medical fitness of the Armed Forces person-

nel is a critical component, for in the absence of this, these personnel would not be able to do full justice to the diverse jobs expected to be performed by them in heterogeneous environments both on borders and while on internal security duties and this is a mission, which, the Armed Forces Medical Service (AFMS) headed by a Director General is accomplishing exceedingly well. The AFMS is primarily responsible for providing comprehensive health care to the serving Armed Forces Personnel, their families and dependents numbering approximately 66 lakh. In addition, ex-Servicemen and their families numbering about 1.35 crore are also entitled to free treatment from Services sources and so are the para-military organisations like Assam Rifles, Rashtriya Rifles, Coast Guard as well as to DRDO and Border Road personnel, while posted in the field. AFMS 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.

9.9 The AFMS are the largest and amongst the best organised health care delivery systems in the country. To meet the requirement of troops in combat zones, 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 func-

tional. These hospitals and facilities have been linked together by a system of patient transferred into a regionalised health care. While the peripheral hospitals having basic specialist facilities, the eight Command/Army Hospitals have super specialist centres with state-of-the-art equipment and facilities. Despite financial constraints, all efforts have been made to modernise the hospitals to cater for the demands of increasing clientele for higher levels of care.

BRIEF ACTIVITIES OF AFMS

9.10 **Medical Research in the Armed Forces:** Armed Forces Medical Research Committee (AFMRC), responsible for research activities in the Armed Forces Medical Services, meets yearly at Armed Forces Medical College, Pune to discuss and select new research proposals and also to review progress of on-going projects. A sum of Rs.90 lakh has been sanctioned by the DRDO for the conduct of AFMRC Projects for the current financial year. The Armed Forces Medical College have highly qualified and competent specialist officers including super specialists who are engaged in these research projects.

9.11 **Health Education Campaign:** Health Education Campaigns are arranged at all units to make personnel and their families aware of steps to be taken to promote health and prevent diseases. Campaigns in prevention of HIV and AIDS, Poliomyelities, Obesity, Alcoholism, etc. have been undertaken.

9.12 **Y2K Problem in Medical Equipment :** Direc-

torate General Armed Forces Medical Services has been very cautious and aware of the problem and has taken timely action to ensure that patient care is not adversely affected due to Y2K affects. To ensure Y2K compliance for all the medical equipment in all the Services hospitals and other medical units, was a challenging task which was handled in time and before the end of millennium, all medical equipment were Y2K compliant and Services hospitals rendered the same level of medical care to its clientele.

MAJOR ACHIEVEMENTS:

9.13 **Modernisation of Artificial Limb Centre (ALC) and its Sub Centres:** Two ALC Sub Centres at Lucknow as well as Delhi have been upgraded. Three Sub Centres are being established at Chandimandir, Bangalore and Guwahati. ALC, Pune is also being modernised. ALC, Pune has developed hightech cost effective Carbon Fibre Limb in collaboration with DRDO and the same has gone for mass production at 515 Base Workshop at Bangalore. All the amputees will be provided with Carbon Fibre Limb now onwards and also the old amputees will be replaced with Carbon Fibre Limb as and when they report to ALC for replacement. State-of-Art important Limbs are being provided to all casualties of OP Vijay.

9.14 An amount of Rs.14.40 crore has also been allotted from National Defence Fund for the five ALC sub centres:

a)	Purchase of equipment @	Rs.2 crore
	for each Sub-Centre.	
	-	Rs.10 crore

b)	For purchase of Prosthesis	
-		Rs.2.60 crore
c)	For upgradation of three Spinal Cord Injury- Centres at Command Hospital (WC), Command Hospital (CC), Base Hospital, Delhi Cantt.	
-		Rs.1.80 crore
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Total	-	Rs.14.40 crore
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9.15 **Exemption of Custom Duty** : Authority for issuing of Custom Duty Exemption Certificate (CDEC) has been given to DGAFMS with effect from October 27, 1999.

ISSUES OF GENERAL INTEREST

9.16 **Armed Forces Medical College, Pune** : The annual intake for MBBS Course at AFMC, Pune is 130 (105 boys and 25 girls). 46159 candidates appeared in the written test for admission to the 99th session for MBBS course at AFMC, Pune. Based on their merit, 922 candidates were interviewed. Finally, 130 candidates were admitted to AFMC for the MBBS Course 1999.

9.17 **Advanced Courses**: Medical Officers of Armed Forces Medical Services (AFMS) on a competitive basis are selected for Advanced course during which they acquire Post Graduate Degree also from Pune and other Universities. 103 officers have been detailed in December 1999.

9.18 **Study Leave**: Selected medical officers for specialised training in various branches of Medicine and Surgery are granted study

leave for a maximum period of two years. The number of officers selected for grant of study leave in India for the year 1999 is 26.

9.19 **Upgradation of one post of Brigadier to Major General in Army Dental Corps** : One post of Brigadier has been upgraded to Major General in the Army Dental Corps for appointment as Commandant and Command Dental Adviser, Central Command, Lucknow and thereby the number of posts of Major General has been increased from one to two in the Army Dental Corps.

9.20 **Revival of Appointments of ADMS in Divisions** : The 34 appointment of ADMS in Divisions (in the rank of Colonel) have been revived in the Army Medical Corps. The appointment restored will be substantive and will be considered as stroke appointments to be held by Admn./specialised cadre officers.

9.21 **Short Training Courses in civil Institutions in India**: 18 officers have been detailed for training in professional subjects on short courses at various civil institutions in India from November 11, 1998 to October 10, 1999.

9.22 **Care of handicapped children** : A computerised database of personnel having handicapped children has been prepared and installed at relevant Directorates/Record offices.

9.23 **Baby Friendly Hospital Initiative (BFHI) in Service Hospitals**: Directions have been issued by DGAFMS to service hospitals to

adopt baby Friendly Hospital Initiative (BFHI) and to get certificate from the UNICEF and plaque from the National Task Force.

9.24 **Material on the Progressive Use of Hindi**: DGAFMS is a technical Directorate dealing with technical matters pertaining to medical service. As far as implementation and progress of Hindi is concerned, all efforts are being made to achieve the targets given in the Annual Programmes for the implementation of the Official Language Policy of the Union.

9.25 On the eve of the Golden Jubilee of the office of the DGAFMS, the Golden Jubilee issue of the annual magazine "URMI" was published. An environment has been created in the office for the progressive use of Hindi and all the officers and staff are being inspired to do most of their official work in Hindi.

9.26 **Hospital Waste Management**: A WHO sponsored hospital waste management project is under progress at Command Hospital (AF), Bangalore. Hospital waste inventory has already been made and waste segregation scheme has been introduced. A Microwave provided by WHO for waste disinfection has been commissioned in the Dialysis Department of Command Hospital (AF), Bangalore.

DIRECTORATE GENERAL DEFENCE ESTATES

9.27 The Directorate General of Defence Estates is the apex body of the Defence Estates Or-

ganisation having its offices in various parts of the country. It is entrusted with the task of administration of Cantonments; 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 in 24 Cantonments to which the Act applies. The defence lands are situated in 62 Cantonments as well as outside including the camping grounds and abandoned Airfields. Defence lands in the form of about 49000 old grant sites and 3500 leases for residential and other purposes are also managed by this organisation. The Government have permitted additions/alterations, repairs, etc. in case of old grant sites/leases under the Liberalised Land Policy of 1995.

- 9.28 During the current year, an anticipated expenditure of Rs.33.5 crore has been envisaged on account of land acquisition for the three services. Land held on hiring and requisition and Defence use is 51680 and 25525 acres respectively within annual outlay of Rs.11 crore as expenditure on account of rent/recurring compensation. Besides, 1875 buildings have been hired by the organisation for residential and office accommodation within outlay of Rs.5 crore as expenditure during the current year.
- 9.29 Efforts are continuing to ensure minimising fresh acquisition of Land and optimising the existing land use for the benefit of Defence Forces through an in-house control mechanism of audit of Defence Land.

9.30 There are 62 Cantonments in India. These are located in 16 States and the National Capital Territory of Delhi. The Cantonment Boards are autonomous bodies functioning under the overall control of the Central Government in the Ministry of Defence under the provisions of Cantonments Act, 1924. Cantonment Boards comprise elected representatives besides ex-officio and nominated members with the Station Commander as the President of the 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 the Director General Defence Estates/ Ministry of Defence at the apex level. The resources of the Cantonment Boards are limited as the bulk of the property in the Cantonment is Government owned on which no tax can be levied. The Central Government provides financial assistance by way of grant-in-aid to a certain extent to balance their Budget. During 1999-2000, Rs.21.78 crore have been allocated on this account for discharging the mandatory civic duties like provision of public health, sanitation, primary education & street lighting etc.

OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER

9.31 The office of Chief Administrative Officer (CAO) is responsible for providing civilian manpower and infrastructural support to the Services Headquarters and the Headquarters 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.

9.32 The functions of CAO's Office are discharged by six Divisions. The Administration Division provides administration cover to over 10,000 civilian manpower posted in Army Headquarters and ISOs. The recommendations of the Vth Pay Commission in so far as related to pay & allowances were implemented by this Division in a record time. Personnel Division deals with the placement of civilian personnel in the Service Headquarters and ISOs, their promotion and deputation outside the organisation. Recruitment Division is responsible for framing policy on recruitment rules in consultation with DOP&T and effecting direct recruitment against all vacancies against civilian posts in the Service Headquarters and ISOs through prescribed channels. Finance and Materials Division provides material support which includes procuring and provisioning of office equipment, stores, furniture and stationary to all offices of Army Headquarters and ISOs. Estates & Works Division performs estate function in respect of Defence Pool residential accommodation to house senior Defence officers posted to the Headquarters. Presently, it manages 2328 residential units and 324 hired houses. The upkeep and maintenance of office buildings is also undertaken by this Division through CPWD. The training and welfare activities are looked after by Training, Coordination & Welfare Division.

9.33 For training purposes, a Training Institute functions under Training, Coordination & Welfare Division to impart induction training in office procedure etc. to fresh staff in clerical and stenographers streams. Other short term courses of relevance to work being performed by civilian manpower including use of Personal Computers are also organised. Civilian officers are also sent to various training Institutes spread all over India for training purposes.

9.34 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 during the Service. Its scope has now been enlarged to include ex- gratia payment in case of accidental death of a full service member.

9.35 The interest of women employees working in the Ministry of Defence is being looked after by the Women's Cell of the Ministry of Defence functioning under the chairmanship of JS(Trg) & CAO. The cell is presently helped by its 22 nodal Women Cells constituted in offices in the Lower Formations of the Ministry. Recently, in pursuance to the guidelines issued by the Hon'ble Supreme Court in

their judgment in a case, a Complaints Committee has been constituted in this Office to look into the complaints relating to sexual harassment of women employees at work-place. Besides, a Grievance Cell headed by an officer of Director level also functions in this office to look after grievances of serving/retired civilian employees. During the current year upto November 1999, 351 grievance cases have been settled by this Cell.

9.36 Sports and cultural activities are also given a place of importance. Civilian employees are encouraged to join different sports activities. Every year, the sportspersons of this Organisation participate in various competitions at different levels and win prizes for their Organisation. Some of them even participate in national games and have the rare honour of representing the country in International Meets. Shri Devi Chand, an employee of the cadre was selected as participant for the World Bench Press Championship - 1999 held in Vasa, Finland during December 10-12, 1999.

9.37 The office of CAO has been able to maintain its prime position in the Ministry of Defence for the past several years in implementation of the Official Language policy of the Government and progressive use of Official Language. This momentum has been maintained by celebrating 'Hindi Day, Hindi Pakhwara, Hindi Mas' and by organising several workshops on Raj Bhasha. Its annual publication 'Samvaad' has been honoured by Hindi Academy of

NCT ,Delhi in the Non-commercial category.

9.38 The Chief Security Officer and personnel under his command ensure the physical security of office buildings in the Defence Security Zone under the supervision of JS(Trg) & 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

9.39 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 various Inter Service Organisations. With its Headquarter in New Delhi, the Directorate of Public Relations has 24 offices across the country. The Directorate is manned by Indian Information Service Officers and Service Officers.

9.40 Defence publicity during the year was of particular significance. The two-month long "OPERATION VIJAY" in Kargil from mid-May to mid-July was marked by unparalleled acts of bravery of our armed forces who inflicted heavy casualties on the aggressors. The success of Indian armed forces in "OPERATION VIJAY" was highly publicised in the national and international media by arranging press visits to various places in Kargil, press briefings at Srinagar and Delhi, besides issuing handouts, press releases and photographs. A trip to the

- Rann of Kutch was organised by the Directorate for the national and international media immediately after an intruding Pakistani aircraft was shot down by our vigilant Air Force. The visit helped in projecting India's viewpoints.
- 9.41 Wide publicity was arranged for Defence Minister's announcement for a Central Vigilance Commission probe into major defence deals since 1985-86. The Minister's decision would go a long way in ensuring transparency in defence purchases.
- 9.42 The country crossed a major milestone when AGNI-II with a range of over 2000 kms, was successfully test fired on April 11, 1999. The Defence Research and Development Organisation achieved perfection and sophistication of a very high order by carrying out the launch in text book fashion with pin-point accuracy. The event was given due publicity and a press conference by the Defence Minister was also organised immediately after the test.
- 9.43 The super cyclone in Orissa brought out the humanitarian role of the armed forces that was asked to provide relief and rehabilitation. Over 5000 army personnel were deployed in the disaster stricken areas to help in evacuation, distribution of food items, restoration of communications and medical aid. The Indian Air Force flew more than 400 sorties and airlifted 1370 tons of loads. The Indian Navy cleared Paradip Port and salvaged more than 50 boats. The massive relief and rescue operations carried out by armed forces were provided due publicity.
- 9.44 The Defence Minister, Shri George Fernandes, undertook a five-day visit to Japan at the invitation of his Japanese counterpart in January 2000. During the first ever visit by a Defence Minister to Japan, Shri Fernandes held wide-ranging talks with the Japanese leaders. The visit marked the beginning of strategic dialogue between New Delhi and Tokyo. A media team comprising both print and electronic, was sent to Tokyo to cover the visit. Later, a press conference was arranged in New Delhi in which the Defence Minister explained in detail the importance and implications of the visit.
- 9.45 Necessary media coverage was arranged for the first-ever exhibition of land and naval systems 'DEFEXPO-99' organised by the Ministry of Defence in association with Confederation of Indian Industry which was held in New Delhi during October 1999. Foreign exhibitors from 16 countries, besides 77 Indian companies, participated in the exhibition.
- 9.46 The Defence Minister's visit to key defence locations and units in various parts of the country, especially J & K was highlighted in the media. Suitable publicity was also arranged for visiting dignitaries who called on the Defence Minister as well as three Service Chiefs.
- 9.47 The appointment of Shri Harin Pathak, Minister of State for Defence Production and Supplies was given wide publicity. Dr.V.K.Aatre was appointed as the new Scientific Adviser to Defence Minister in December 1999 as successor to Dr APJ Abdul Kalam who was elevated to the post of Principal Scientific Advisor to the Government of India. This was widely covered by print as well as electronic media.
- 9.48 The welfare package for Armed Forces personnel was thoroughly revamped by increasing the ex-gratia for Kargil martyrs to Rs.10 lakh, besides assistance for house and children's education. A committee under the chairmanship of the Defence Minister, Shri George Fernandes, was set up by the Prime Minister Shri Atal Behari Vajpayee to bring in uniform welfare assistance. This was widely covered by the media in the aftermath of the Kargil conflict.
- 9.49 Due publicity was provided to the conferring of Param Vir Chakra on Republic Day, 2000 to Captain Vikram Batra (Posthumous), Lieutenant Manoj Kumar Pandey (Posthumous), Grenadier Yogender Singh Yadav, Rifleman Sanjiv Kumar and Ashok Chakra on Major Sudhir Kumar (Posthumous).
- 9.50 Achievements of the Defence Public Sector undertakings viz Bharat Electronics Ltd, Mazagon Dock Ltd, Garden Reach Ship Builders & Engineers Ltd, Hindustan Aeronautics Ltd, Bharat Earth Movers Ltd, Goa Shipyard Ltd, Bharat Dynamics Ltd, Mihsra Dhatu Nigam Ltd and Ordnance Factory Board were suitably publicised.
- 9.51 Publicity was provided to the various activities of the different Inter-Services Organisations like National Cadet Corps, Coast

- Guard, Armed Forces Medical Services, Directorate General of Defence Estates, History Division, Services Sports Control Board, School of Foreign Languages, National Defence College, etc.
- 9.52 Notable among other events and decisions publicised during the year include Indian Navy on peace keeping missions abroad, capture of Koba Queen by Coast Guard, Operation Sahayata, Visit of Commander-in-Chief of Myanmar Navy, Welfare measures for families of earlier war heroes, Official Website of Ministry of Defence, Oman Army Commander's visit to India and Defence-Industry partnership in 'Information Technology'.
- 9.53 At the Headquarters, more than 700 press releases were issued; over 90 press conferences were organised 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 arranged. A number of media parties were conducted at various locations and defence establishments to focus on important issues.
- 9.54 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, Vijay Diwas, NCC Day and Raising Days of different formations of the three Services and Inter Services Organisations.

- 9.55 Photo Section is an important publicity unit of the Directorate with its eight units attached to the Regional Offices of the Directorate. The Section supplied over 7000 photographs to the print, focussing different defence related events. Its photos issued during the 'OPERATION VIJAY' were widely used in the media and well appreciated with Capt Deepak Das, Senior Photographic Officer getting an award from the Ministry of Information and Broadcasting.
- 9.56 The Directorate brings out fortnightly journal for the armed forces, "Sainik Samachar", in 13 languages, viz., Assamese, Bengali, English, Gorkhali, Hindi, Kannada, Malayalam, Marathi, Oriya, Punjabi, Tamil, Telugu and Urdu. The multi-colour magazine in improved format has been well received.
- 9.57 Broadcasting Section of the Directorate maintained close liaison with All India Radio and arranged broadcast for various entertaining and informative programmes for the armed forces. The programme, 'Sainikon ke liye' prepared by this Section was broadcast over All India Radio daily for the benefit of armed forces personnel posted in the far flung areas of the country

ARMY PURCHASE ORGANISATION

- 9.58 Army Purchase Organisation (APO) in the Ministry of Defence is entrusted with the responsibility of the procurement and the timely supply of dry ration items for the consumption of the Defence Forces of Union. 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 Public Sector Undertakings like the State Trading Corporation and Hindustan Vegetable Oils Corporation Limited, State Public Sector Undertakings like the Madhya Pradesh Export Corporation and Punjab State Civil Supplies Corporation and through the national Cooperative Federations like the national Cooperative Dairy Federation of India and the national Dairy Development Board and through various State Level Cooperative Consumer Federations. Tinned items like vegetables, fruits, jellies and jams, tinned milk, meat and fish products, coffee, egg powder, etc. are procured from private parties through open tender. During the period under report, two new items, i.e. Cheese Tinned and Desi Ghee have been introduced for procurement by APO. 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 and competitive prices.

- 9.59 During the year under report, APO procured emergency additional requirements of food rations for the Defence Forces for "OPERATION VIJAY". All the additional demands received from the Army Headquarters for supply to the Armed Forces involved in the Kargil Conflict were met by APO in toto at the shortest notice. In addition, APO also successfully concluded contracts for additional demands of milk products, meat tinned and canned items received from the Army Headquarters.

9.60 During the year 1999-2000, a budget provision of Rs.780 crore has been provided for procurement of the above items by this Organisation.

9.61 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 despatches of the goods to different Supply Depots as per the Despatch Instructions issued by Army Headquarters. Payments for the supplies are made by the Controller of Defence Accounts, after due authentication by the Officer Commanding, Composite Food Laboratories.

DIRECTORATE GENERAL OF DEFENCE PLANNING STAFF

9.62 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 conceptualises and evolves Defence Plans.

9.63 In the recent past, some important facets of

defence planning addressed by the DG DPS include evolution of the "National Defence Policy" and an "Approach Paper to the 10th Defence Plan".

9.64 The Directorate is currently carrying out a comprehensive "Strategic and Technological Environment Assessment" to meet the changing geo-political situation and the rapid technological developments that will impinge on the national security in the first two decades of the 21st Century.

9.65 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, 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.

SERVICES SPORTS CONTROL BOARD

9.66 The Services Sports Control Board is responsible for conducting and coordinating various sports activities of the three Defence Services.

9.67 During 1999-2000, the performance of Services sportsmen at the National and International level was quite encouraging. In the present day scenario when sportsmen generally perform well only when their efforts

are compensated by material benefits, services sportsmen continued to maintain high morale in the true spirit of sportsmanship. The achievements of services sportsmen during the period under review are given below.

9.68 INTERNATIONAL EVENTS

(a) **World Ranking Boxing Tournament** : The tournament was held at Mauritius from June 7-14, 1999. Sgt. A.Haridas Singh represented the country and won a Silver Medal.

(b) **Training-cum-Competition (Boxing) Programme** : The competition was held in Cuba from June 10 to July 2, 1999. The following boxers from services represented the country:

- (i) Nb Sub Gurcharan - 1 Gold and 2 Silver Medals
- (ii) Sig/Man Ramanand - 1 Gold and 1 Silver Medal
- (iii) Hav C.A.Kuttappa - 1 Bronze Medal

(c) **8th Asian Triathlon Championship** : The championship was held at Sokcho City, South Korea on July 7, 1999. Hav Kaptan Singh represented the country and won a Gold Medal.

(d) **AAFI International Athletics Meet** : The meet was held at Bangalore on July 12, 1999. Hav Anil Kumar won a Gold medal and equalled the record of Milkha Singh in 200 mts run.

(e) **Training-cum-Competition (Boxing) Programme** : The competition was held in Mauritius from August 7-22, 1999. The following boxers repre-

sented the country.

- (i) Hav J. Fernandes- Gold Medal
- (ii) Hav C.A.Kuttappa - Silver Medal
- (f) Asia Pacific Aquatics Championship : The championship was held at New Delhi from August 22-24, 1999. Rect. Yogesh watve represented the country and won a Silver Medal.

9.69 NATIONAL EVENTS :

51st Senior National Weightlifting Championship 1998-99 : The Services weightlifters performed well in the Senior National Weightlifting Championship 98-99 held at Bangalore from June 16-20, 1999. The Services team won 6 Gold, 7 Silver and 3 Bronze Medals and were placed as IInd in the overall Championship.

ARMED FORCES FILMS & PHOTO DIVISION

- 9.70 The Armed Forces Films & 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.
- 9.71 The Central Defence Film Library of this Division maintains a rare collection of films and photographs depicting Indian Forces in action in various theatres of World War-II. Nearly 350 units/formations/training establishments draw these films for training purposes, presentations and seminars.
- 9.72 During the period under report, five films have been completed and eleven Defence

training films are at various stages of production in AFFPD. An exhaustive video shooting of Vayu Shakti - 99, an exercise by IAF at Pokhran has also been done covering the air bases at Jodhpur, Jaisalmer and Bikaner. During this period, 877 training films/video cassettes have been distributed to various users and 5,211 colour/black & white prints have been made. 4,946 colour/black & white negatives have been exposed. The Art section has worked on 1,752 pieces of Art work.

- 9.73 The Mobile Cinema Unit of AFFPD procured/distributed documentary films and news magazines containing information on family welfare and cultural values from Films Division, Ministry of Information & Broadcasting to troops in the forward areas.

SCHOOL OF FOREIGN LANGUAGES

- 9.74 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 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 (till recently 13) to personnel of the three Services of the Indian Armed Forces. It also caters to the needs of the other Ministries of the Government of India, such as the Ministry of External Affairs and the Cabinet Secretariat, etc.
- 9.75 The courses offered by the SFL are as follows:-
 - (i) Interpretership Course.
 - (ii) Certificate of Proficiency Course.

- (iii) Advance Diploma (Intensive) Course.
- (iv) Short-term Courses/Capsule Course

- 9.76 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 languages with utmost fluency. The course is need-oriented; it has been designed and formulated solely to meet the specific needs of the Armed Forces. It is a highly specialised course which has no parallel anywhere else in India. It is only at the SFL that languages of strategic importance such as Sinhala, Bahasa Indonesia, Burmese and Tibetan are taught at such a high level. In fact, in the whole country, the SFL is the only institute where a course in Sinhala is offered.
- 9.77 The Certificate of Proficiency Course is followed by the Advanced Diploma Intensive Course. Both are part-time courses and each of one year duration. Together, these two courses are equivalent to the 3-year Diploma Courses of the Universities.
- 9.78 Short-term courses are purely need-based programmes. They are conducted as and when necessary, especially for officers requested for and for officers being sent on UN Missions.

9.79 The SFL frames the standard and syllabus for the Ministry of External Affairs; National Defence Academy, Pune; Army Education Centre and Training College, Pachmarhi; Cabinet Secretariat and the Ministry of Home Affairs. It conducts their examinations and issues diplomas to the successful candidates. For the IFS probationers, it is obligatory to pass the Advanced Diploma (IFS) Examination conducted by this Institute.

HISTORY DIVISION

9.80 The Historical Section was created after the end of World War II to write detailed official history of the War with particular reference to the operations conducted by the Armed Forces of undivided India. After partition, it served as Combined Inter-Services Historical Section (India & Pakistan). The history of the Armed Forces in Second World War (1939-45) was brought out in 24 volumes by the Combined Inter-Services Historical Section (India & Pakistan). It was wound up in 1963.

9.81 In the meanwhile, Historical Section (India) was established in 1953 to complete and publish the account of the official History of 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 17 volumes. The Historical Section has now been designated as History Division with effect from April 1, 1992.

9.82 The History Division functions as military

archives and reference organisation of the Ministry of Defence and Indian Armed Forces. It also provides expert advice to the Ministry of Defence and Services headquarters on the matters relating to heraldry and ceremonials. During the period, over 4600 operational records were received from the Service HQ, Units and Formations for custody and permanent retention in the History Division. About 250 Service officers and scholars visited the record room to consult records and books in connection with research assignments pertaining to military history. In addition, this office has provided information relating to military history in respect of over 350 written queries received from the various units and formations, as also scholars from India and overseas.

9.83 The Heraldic Cell of the History Division has been assisting the Services HQ and the Ministry of Defence by suggesting names for new establishments, designing crests & badges and coining suitable mottoes for units/formations.

NATIONAL DEFENCE COLLEGE (NDC)

9.84 The National Defence College(NDC) 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 39 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. Many of the former students of the college have reached the very top of their professions in India and abroad.

9.85 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 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.

9.86 The 39th NDC Course commenced with effect from January 11, 1999 and 81 officers attended the course as per details given below:-

- (a) Army - 35 officers
- (b) Navy - 5 officers
- (c) Indian Air Force - 10 officers
- (d) Civil Service - 13 officers
- (e) Foreign Officers - 18 officers

9.87 The officers from the following friendly countries participated in 39th NDC Course:-

- (i) Myanmar
- (ii) Oman

(iii) Bangladesh	(d) Research Activities - Thesis Writing	and captains of the industry.
(iv) Mauritius	(e) Seminars	9.91 On some of the important issues, where there were differing perceptions, or where views from multi-disciplinary sources were required, the panel discussions were arranged. A number of foreign dignitaries and senior officers visiting India also came to the College and gave talks and lectures.
(v) Indonesia	9.89 The course consists of seven study capsules and for 39th NDC Course, these were conducted as per details given below:-	9.92 Almost 218 experts were invited to speak to course members of 39th NDC Course. They provided valuable and diverse inputs for the studies.
(vi) Ghana	(a) Socio-political study of India - January 13 - February 19, 1999	
(vii) Nigeria	(b) Economy, Science and Technology - February 22 - April 6, 1999	
(viii) USA	(c) International Security Environment - April 7 - May 18,	
(ix) Nepal	(d) Global Issues - May 19 - June 16, 1999	
(x) Korea	(e) India's Strategic Neighbourhood - July 19 - August 20, 1999	
(xi) Sri Lanka	(f) Study on Selected Topics - August 23 - 27, 1999	
(xii) Senegal	(g) India's Immediate Neighbourhood - August 30 - 7, 1999	
(xiii) Uganda	(h) Strategies and Structures for National-Security October 5 - November 26, 1999	
(xiv) Thailand		
(xv) France		
(xvi) UAE		
(xvii) Kazakistan		
9.88 The Course curriculum consists of the following:-		
(a) Study Capsules	9.90 Eminent persons with great expertise in their respective fields were invited to speak at the College. Guest speakers included a mix of academicians, professors, diplomats, journalists, politicians, civil service officers	
(b) Lectures and Panel Discussions		
(c) Field Tours		

FIELD TOURS

9.93 The Field Tours form an extremely important part of the curriculum. These help in validating the knowledge gained in the class room by relating it to the ground situation. 39th Course undertook the following tours:-

(a) **Domestic Tours** : The following tours were undertaken:-

Sl.No.	Tour	Duration
(i)	Socio-Political Tour	February 1-5, 1999
(ii)	Economic Tour	March 15-19, 1999
(iii)	Frontier Tour	April 19-23, 1999
(iv)	Foreign Students Tour of Defence Industries Training and Establishment	August 23-27, 1999
(v)	Air Force Tour	September 28-30, 1999
(vi)	Naval Tour	October 11-14, 1999

(b) **Foreign Countries Tour** : Visits to major military installations and industrial agencies and personal con-

tact 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 June 21 to July 2, 1999 in five groups as follows:-

- (i) Kenya/Tanzania - South Africa
 - (ii) Kenya - Russia
 - (iii) Tanzania - Hungary
 - (iv) Thailand - Malaysia
 - (v) ROK - Myanmar
- (c) **SAARC Tour** : The Course members visited the SAARC countries from September 13-16, 1999. 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.

RESEARCH ACTIVITY - THESIS WRITING

9.94 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 thesis were evaluated and the best five were selected for the award of Pyare Lal Gold Medal, and Book Prizes.

VISITS BY FOREIGN DELEGATION

9.95 Following delegations from abroad visited

the College during 1999:-			
Sl. No.	Country	Date	Composition
(a)	Maldives	January 28, 1999	Maj Gen Abdul Sattar Anbaree, Minister of State for Defence and National Security.
(b)	France	February 19, 1999	Col. H. Switzer, Defence Attache, Embassy France , N. Delhi with 2 persons.
(c)	Bulgaria	February 23, 1999	Mr & Mrs George Ganchev, MP and Chairman of Bulgarian Parliamentary Group
(d)	Mangolia	Mar 23,1999	A three member delegation, Dr. K. J. B a y a s a k h , Director of the School of Foreign Service, Khymbaga Olzvol Ambassador and Professor Klyan J Bor.
(e)	France	May 25, 1999	Maj Gen Lluis Zeller, Comdt, French Army Academy of St. Cyr, with 2 persons.
(f)	Bangladesh	September 6, 1999	Maj Gen AM Mansur Ahmed, Comdt of NDC of Bangladesh with 25 persons. .
(g)	UK	October 4, 1999	Royal College of Defence Studies

(h) Kenya October 4, 1999 Kenya National Defence College team.

NATIONAL DEFENCE COLLEGE(NDC)

9.96 The National Defence College(NDC) is the nerve centre for all college studies and plays an important role in promoting the academic life of this institution. It stocks literature having relevance to the seven studies conducted at the college and subjects of thesis taken up by the course members as part of syllabi. At the college, constant efforts were made to update and upgrade the library material through acquisition of new books, magazines, periodicals both Indian and Foreign and reports generated by different agencies. The Library data base is fully computerised and can be accessed through LAN from any computer in the College.

LOCAL AREA NETWORK

9.97 The operationalisation of Local Area Network at the NDC during the year 1998- 99 with sophisticated server and latest multimedia computer workstations and printers immensely helped the course members in their thesis research work. The network was extensively used by all t11e course members throughout the period under review.

INTERNET ROOM

9.98 An Internet line of 64 KBPS band width was leased for NDC from VSNL during the year 1998-99. A LAN with ten computers was connected to this internet line, ena-

bling ten users to browse simultaneously.

- 9.99 This facility was very widely used by the course member to have access to useful data concerning their research work. The terminals were also fruitfully utilised for sending/receiving E-Mail and communicating with eminent researchers worldwide.

INFRA-STRUCTURAL IMPROVEMENTS

- 9.100 The following infra-structural improvement were undertaken during the year :-
- (a) False ceiling and accoustical paneling in the Lecture Hall.
 - (b) Renovation of Lecture Hall Corridor.
 - (c) Special repairs to the roof of NDC Library , Dining Hall and Outhouses at NDC.
 - (d) Provision of Independent Telephones for Foreign Officers undergoing course under ITEC Scheme. .
 - (e) Air conditioning of 2X Swaraj Mazda Buses of NDC.

CONCLUSION

- 9.101 Constant efforts have been made to provide a wide spectrum of tangible and intangible high quality inputs to the Course members so as to widen their horizon of knowledge on issues concerning the nation security and strategy. The feed back received from the Course members was exceedingly positive and encouraging.

COLLEGE OF DEFENCE MANAGEMENT

- 9.102 The Institute Defence Management, Secunderabad, established in June 1970, was renamed as the College of Defence Management (CDM) in 1980. The CDM conducts training programmes oriented towards the application of management concept 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.

DEFENCE SERVICES STAFF COLLEGE (DSSC)

- 9.103 The Defence Services Staff College is one of the oldest Military Training Institutions, which was established in 1905 in Deolali and has been functioning at Wellington since 1958. The Defence Services Staff College imparts training to middle level officers of the three Services besides a few civilian officers and officers from friendly foreign countries. The College conducts a 45 weeks training programme from June to April every year.
- 9.104 The Staff Course at DSSC aims at impart-

ing training in operational and staff functions in an inter-Service and joint-Service environment. The training enables the officers to perform effectively any staff/operational appointments as Maj/Lt Col and equivalent ranks in other services. The present three Chiefs of Staff had received their middle level training in DSSC.

MINISTRY OF DEFENSE LIBRARY

- 9.105 The Ministry of Defence Library, a Central Defence library, provides literature on relevant subjects to officials responsible for planning and policy formulation in the Ministry of Defence, the three Services headquarters, Inter-Service Organisations and other allied Defence establishments located in Delhi. During the year, the library added 1163 books, subscribed 141 journals and 23 newspapers. The library, at present, holds over 50,000 books. It specialises in Defence and related subjects besides catering to the needs of general reading clientele. Besides 575 photocopies of articles circulated to senior officers by way of SDI/RSD Services, the library issues three bulletins periodically on new additions/books, articles from journals/newspapers. The reading material for the library is selected by a Book Selection Sub-Committee constituted by the Ministry of Defence.

10

RECRUITMENT AND TRAINING



Final Step to join officers fraternity the GCs at IMA entering the Chetwode Hall after their passing out Parade

10.1 The Armed Forces epitomise the ideals of service, sacrifice, patriotism and our country's composite culture.

10.2 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 into the Army is carried out according to Recruitable Male Population (RMP) of each state.

RECRUITMENT OF OFFICERS

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

RECRUITMENT THROUGH THE UPSC

10.4 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. On an average, about 1.7 lakh candidates appear in the UPSC examination and the UPSC recommends about 13-14 thousand candidates every year. The selection rate in this entry stands at approximately 11% which ensures full subscription based on infrastructure available at the training academies.

10.5 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. The UPSC also holds an examination for entry into the National Defence Academy (NDA) twice a year. Candidates on completion of the 10+2 Examination or while in the 12th standard, are eligible to compete in this examination. 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

10.6 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 and 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

10.7 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

10.8 To alleviate the shortage of Technical Officers (Engineering) in the Army, the Government has approved the Short Service Commission (Technical) Entry Scheme. This envisages recruitment of qualified technical graduates through the SSBs, to attend the Officers Training Academy (OTA), Madras, after medical tests, for a 10 months 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

10.9 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

10.10 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

- 10.11 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 Commission 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

- 10.12 Government has approved the creation of a 6,000 strong Support Cadre of Special Commissioned Officers. These posts will be filled up by eligible JCOs and OR. Under this entry, serving JCOs/NCOs/OR in the age group of 30-35 years, with an Army Senior School Certificate Pass (Class XI CBSE Pattern) qualification, will be eligible for commission after screening/selection through Service Selection Board and a Medical Board. They will undergo a pre-commission training of six months duration. The officers so commissioned will earn

promotion upto the rank of Colonel. The rules for substantive promotion and acting promotion will be the same as for regular officers. These officers will be employed in units as sub unit Cadres/QM job/ERE appointments etc. upto the rank of Major. They will retire at the age of 57 years after serving about 20-25 years as officers. The scheme will not only improve the career prospects of the existing JCOs/NCOs/OR but will also help in making up the deficiency of officers in the Army to a considerable extent.

10 + 2 TECHNICAL ENTRY SCHEME

- 10.13 Under this scheme which is being introduced shortly, candidates with 10+2 qualification, after selection through SSB, will be sent for military and engineering training at IMA and the College of Military Engineering, Pune. Initial six months military training will be followed by Degree Engineering training of 4 years. This scheme will help in bringing down the deficiency of officers in Technical Arms/ Services.

RECRUITMENT OF OTHER RANKS (OR)

- 10.14 Recruitment to the Army is carried out according to the Recruitable Male Population (RMP) of each State. The RMP of a state is reckoned to be 10% of the male population of that state. 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

- 10.15 A new system of recruitment has been intro-

duced with effect from April 01, 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, at least 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.

DISPENSATIONS IN EDUCATIONAL STANDARDS

FOR RECRUITMENT OF GD SOLDIERS

- 10.16 For recruitment of General Duty (GD) category soldiers in the Indian Army, the prescribed minimum educational qualification is Matric/ SSC. To facilitate representation in the Army of people from remote, border, hilly and backward areas, certain dispensations in educational qualifications, valid upto March 31, 2001 have been given.

DISPENSATION FROM CLASS X TO CLASS VIII

- 10.17 These are enunciated below :
- i) **Jammu and Kashmir** : The whole

- State of J&K (except Ladakh Region and Samba Tehsil and Kathua District of Jammu Region).
- ii) **Uttar Pradesh** : All personnel from the border tehsils of Uttarkashi District (Bhatwari Tehsil), Okhimath and Joshimath Tehsils of Chamoli District and Didihat, Dharchula and Muniari Tehsils of Pithoragarh District.
- iii) **Rajasthan** : All personnel from the border districts of Jaisalmer, Barmer and Shergarh, Osian and Phelodi Tehsils of Jodhpur District.
- iv) **Gujarat** : All Personnel from Rapar and Lakhpat Tehsils of Kutch.
- v) **Sikkim** : All personnel from Sikkim State.
- vi) **Lakshadweep and Minicoy Group of Islands**: All inhabitants of Lakshadweep and Minicoy Group of Islands.
- vii) **Andaman and Nicobar Group of Islands** : All inhabitants of Andaman Nicobar Group of Islands.
- viii) Class/Community-wise dispensations are provided to all Nepalese and Indian domiciled Gorkhas, Kiam-Khanis from Rajasthan, and Mahars from Maharashtra, Andhra Pradesh, Madhya Pradesh and Karnataka, and Rawat community from Ajmer, Rajasmad, Bhilwara, Udaipur & Chittor Districts of Rajasthan.
- ix) All personnel from Assam, Manipur, Mizoram, Nagaland and Tripura (except tribals from these states).

10.18 Dispensation from Class X to Class V pass

has been given to all personnel from Arunachal Pradesh, Meghalya, Lahaul, Spiti and Kinnaur districts of Himachal Pradesh and tribals from all the States.

- 10.19 Dispensation to be literate in their own language is provided for all personnel from Ladakh Region of Jammu and Kashmir.
- 10.20 The rules also provide for relaxation in prescribed physical standards in respect of certain specified backward, remote and tribal regions. Relaxation in physical standards is also given to one son and one grandson of serving or retired soldiers and widows of battle casualties. A provision for instant enrolment also exists for one son of battle casualty who die in war or war like situation during peace time.

PUBLICITY FOR RECRUITMENT

- 10.21 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 & Non-Technical), Univer-

- sity 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., which are covered in these newspapers. A composite advertisement on various entries in the Army is also brought out periodically both in English and Hindi. Concerned Zonal Recruitment Offices(ZROs)/ 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 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) Each year, at the Defence pavilion at the India International Trade Fair, New Delhi, a stall is established where recruiting information is provided to visitors. This is also done in

other organised fairs, which are career oriented and meant for students.

TRAINING

10.22 Several features distinguish human resource management in the Defence Sector. Training aims to equip the soldier with necessary inputs to make him not only an efficient fighting man, but also to be 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.

SAINIK SCHOOLS

10.23 Sainik Schools, established as joint ventures of the State and Central Governments in 1961, are functioning with the aim of allowing all sections of society to be able to aspire to become officers in the Armed Forces. At present, 18 Sainik Schools, one each in all major States are governed by the Sainik Schools Society under the Ministry of Defence.

10.24 The objective of Sainik Schools is to bring public school education within the reach of the common man and to cater to their educational aspirations, not only to prepare them for entry into the NDA, but also di-

rected to provide an educational background aimed at all round maturing of their personality. Sainik Schools have been fulfilling their objective to prepare its cadets academically, physically and mentally for entry to NDA over the years for which adequate and varied infrastructure and equipment is provided.

10.25 The success of an academic organisation is measured by assessing the success of its alumni. Sainik Schools have created a name for themselves by their significant contribution to all the three wings of the Armed Forces. Its alumni have reached upto the General's Cadre in the Armed Forces hierarchy. They also hold several respectable positions in various walks of life in those instances where they have not joined the Armed Forces. In the last 37 years, the Sainik Schools have done yeoman service to the nation in general, by providing responsible citizens who have excelled in all walks of life.

10.26 Sainik Schools have lived up to their reputation by maintaining good academic results over the years. During the year 1999, Class X students of Sainik Schools produced 99.6% successful results and 94% for Class XII in the CBSE Examinations. A total number of 98 students joined the National Defence Academy during the year. Besides the NDA, a number of Sainik School students joined the Naval Academy, the Armed Forces Medical College and the Military Academy. As on date, more than 6,000 officers serving in defence forces are alumni of the Sainik Schools.

MILITARY SCHOOLS

10.27 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

10.28 The aim of these schools is to impart quality education to enable the boys 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 (RIMC), DEHRADUN

10.29 The Rashtriya Indian Military College (RIMC) was established in March 1922 to provide necessary preliminary training while studying at school itself to boys to become officers in the Armed Forces. The College admits students purely on a merit basis in Class VIII through a written examination-cum-viva voce test under the aegis of the State Governments throughout India twice every year i.e. in February and in August. The students are provided education on the lines of residential public schools upto Class XII. Approximately 75% - 80% of RIMC students join the NDA after competing in the examination conducted by UPSC. The students admitted in RIMC have risen to the highest ranks of the services.

**NATIONAL DEFENCE ACADEMY(NDA),
KHADAKWASLA**

10.30 The National Defence Academy (NDA) is a premier Joint Services training institution. It imparts academic as well as basic service training. On passing out from NDA, cadets are awarded B.A. or B.Sc. degree of the Jawaharlal Nehru University. The Academy is a unique institution where inter-service aspects are developed in the formative stages of an officer, thus, developing a bond of friendship and respect for each other's service. After passing out from the NDA, the cadets proceed to their respective services/academies for specialised training before being commissioned in the Armed Forces. At present, there are 1,917 cadets undergoing training at the NDA, including 71 cadets from Bhutan, 6 cadets from Palestine and 2 cadets from Maldives.

**INDIAN MILITARY ACADEMY(IMA),
DEHRADUN**

10.31 The Indian Military Academy (IMA) was established in 1932. The IMA trains Gentlemen Cadets (GCs) for commission into the Army. The various modes of entry into IMA are:-

- On graduation from NDA
- On graduation from Army Cadet College, which is a wing of the IMA itself.
- Direct entry graduate cadets, who join on qualifying in the Union Public Service Commission Examination and the Services Selection Board.
- Technical Graduates
- University Entry Scheme for engineering college students in Final/Pre-

Final year of studies.

10.32 The IMA also imparts training to Gentlemen Cadets from friendly countries such as Bhutan, Maldives, Mauritius, Nepal, Seychelles, South Africa and Sri Lanka.

10.33 The present strength in IMA is 1,649 Gentlemen Cadets which includes 1 Gentlemen Cadet from Bhutan, 2 from Palestine, 1 from Nepal, 1 from Maldives and 30 from Sri Lanka.

10.34 The IMA has another Wing known as Army Cadet College (ACC) which caters for training Service cadets selected for commission. The academic format is similar to the 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, recognised by the Jawaharlal Nehru University.

**OFFICERS TRAINING ACADEMY (OTA),
CHENNAI**

10.35 The Officers Training Academy was established in 1963 as Officers Training School to meet the increased demand of officers in the Army. It was redesignated as Officers Training Academy (OTA) with effect 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 and from 1965 onwards, the Academy started training cadets for Short Service Commission, after which the former commission was dispensed with.

10.36 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 to 50 per course i.e. 100 per year.

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

S.No.	Type of Course	Educational Qualification
1.	Short Service Commission (Non-Technical)	Graduation
2.	Short Service Commission University (Technical)	Graduate in Engineering
3.	Women's Special Entry Scheme	Graduate/Post Graduate

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

COLLEGE OF COMBAT, MHOW

10.39 The College of Combat was established on April 1, 1971. It is the premier All-Arms Tactical Training Institution for officers and performs the important functions of evaluation of new concepts and doctrines in the fields of tactics and logistics.

10.40 The College imparts training to officers of

all Arms and Services at various levels of Command viz. sub unit (Junior Command), unit (Senior Command) and formation (Higher Command). Inter-arms and inter-services aspects are included in the training which is aimed at enabling officers to handle mixed groups of various arms and services at levels appropriate to the course. Officers from Para Military Organisations are also allotted vacancies on the Senior Command (13 weeks) and the Junior Command (13 weeks) courses. In addition, officers from friendly foreign countries also attend these courses. The Higher Command Course (45 weeks) is restricted to officers of the Indian Army, the Navy and the Air Force. Besides the above courses, a new four weeks course has commenced in 1996 viz. 'The Formation Commanders Orientation Programme' for Brigadiers approved for the rank of Major General. The aim of the course is to prepare selected potential divisional commanders for command of their formations in field and peace.

DEFENCE SERVICES STAFF COLLEGE (DSSC)

10.41 The Defence Services Staff College is one of the oldest military institutions, which was established in 1905 in Deolali and has been functioning at Wellington since 1950. The Defence Services Staff College imparts training to middle level officers of the three services besides a few civilian officers and officers from friendly foreign countries. The College conducts a 45 weeks training programme from June to April every year. During 1999-2000, 33 officers from friendly foreign countries are attending the 56th Staff Course.

10.42 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

10.43 The High Altitude Warfare School (HAWS) in its present form was established in April, 1962. The School is commanded by a Brigadier and imparts training in High Altitude Mountain and Winter Warfare to Officers, JCOs and NCOs of the Indian Army and some friendly foreign countries. The following courses are conducted at HAWS:-

- (a) Winter Warfare Basic Course
- (b) Winter Warfare Advance Course
- (c) Mountain Warfare Course
- (d) Mountain Warfare Advance Course

10.44 The HAWS has the distinction of being the only training establishment which has taken part, both in 1965 and 1971 wars besides Low Intensity Conflict Operations in J&K. The School contributes significantly towards preparing troops for operations in the Siachen Glacier - the highest battlefield in the world - and other High Altitude Areas. The institution is operationally active. Expert teams were provided for opening four land routes in the Siachen Glacier so that troops could be kept supplied even when air supply

was not possible. A number of mountain rescue teams have been trained so that units are self sufficient in dealing with emergency situations.

10.45 With the present capacity, the school trains 100 Officers and 410 JCOs/NCOs every year.

COUNTER INSURGENCY & JUNGLE WARFARE SCHOOL(CIJW)

10.46 The Counter Insurgency & Jungle Warfare School(CIJW) in its present form was established on May 01, 1970 as a Category 'A' Establishment and is located at Veirengte.

10.47 The School motto 'Fight the Guerilla like a Guerilla' is unique and symbolic of the CIJW techniques. The School is presently training officers and men in fighting Low Intensity Conflict Operations (LICO).

10.48 The following courses are conducted at the CIJW School :-

- (a) Low Intensity Combat Courses
- (b) Language Courses for JCOs/NCOs in Nagamese, Manipuri and Tangkhul.

10.49 A number of students from Para Military Forces as well as friendly foreign countries such as Iraq, Kenya, Nepal, Singapore, Sri Lanka and the USA also attend above courses.

10.50 The CIJW is training 120 Officers, 460 JCOs/NCOs and giving pre-induction

training to companies of para military forces. CIJW has also done well in looking after the interests of tribal villages in the close vicinity by establishing a Junior School, which has become very popular and well known.

INFANTRY SCHOOL, MHOW

- 10.51 The Infantry School is the largest and the oldest Military Training Institution of the Indian Army. The origin of the institution can be traced back to the year 1885.
- 10.52 The present Infantry School owes its origin to a decision taken shortly after Independence to amalgamate the country's various tactical and weapons training institutions into one single School of Instruction at Mhow.
- 10.53 The School is responsible for:-
- (a) Developing new tactical doctrine battle techniques and battle drills pertaining to infantry and introducing them with the approval of the Army Headquarters.
 - (b) Continuous study and keeping abreast of tactical and technical development in India as well as abroad in all matters pertaining to functions of the School.
 - (c) Carrying out trials of weapons, equipment and ammunition pertaining to Infantry as directed by Army Headquarters.
 - (d) Conducting courses of instructions.
 - (e) Training the Army Shooting Team and the National Shooting Team in "Precision Shooting".

10.54 Infantry School is located in two places. The Weapons Wing and the Young Officers Wing are located at Mhow while the Junior Leaders Wing is located at Belgaum.

10.55 The institution is training Officers, JCOs and OR not only from the infantry but also from other arms and services and, in addition, Para- Military Forces and Civil Police Organisations. A number of friendly foreign countries are making use of the facilities.

10.56 The Army Marksmanship Unit at the Infantry School has produced excellent results in shooting competitions at national as well as international levels.

COLLEGE OF DEFENCE MANAGEMENT

10.57 The Institute of Defence Management, Secunderabad was established in June 1970. It was renamed as the College of Defence Management (CDM) in 1980. The CDM conducts training programmes oriented towards the application of management concepts and techniques to defence situations in all facets : operations, logistics, intelligence and training. The prominent 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.

MILITARY MUSIC

10.58 Training is imparted regularly to military bands at the Military Music Wing of the

Army Educational Corps Training College at Pachmarhi. A number of courses, ranging from one year to three 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

- 10.59 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
 - (e) Inculcate leadership qualities in Army personnel.

NATIONAL DEFENCE COLLEGE (NDC)

10.60 The National Defence College (NDC), inaugurated on April 27, 1960 is the only institution in the country that imparts knowledge on all aspects of national security and strategy. Senior Defence and Civil Service Officers participate in a 47 weeks comprehensive programme of national security and strategy. The training at NDC is highly specialised to equip the participants with future planning of national strategy in the context of world polity. The NDC alumni have also risen to the highest mili-

tary posts in countries such as Australia, Malaysia and Sri Lanka. The 39th NDC Course concluded on December 2, 1999. 81 officers from the Army, the Navy, the Air Force and friendly foreign countries participated in it. 218 experts on various subjects were invited to speak to course members of 39th NDC Course. The following seven studies were conducted during the this Course:-

(a) Socio-political study of India

- (b) Economy, Science and Technology
- (c) International Security Environment
- (d) Global Issues
- (e) India's Strategic Neighbourhood
- (f) India's Immediate Neighbourhood
- (g) Strategies and Structures for National Security
- (h) Study on Selected Topics

10.61 As part of the course curriculum, student officers visited 16 countries viz. Kenya,

Tanzania, South Africa, Russia, Hungary, Thailand, Malaysia, ROK, Myanmar and SAARC countries viz. Nepal, Bhutan, Bangladesh, Sri Lanka and Maldives. Delegations from Bangladesh, Maldives, France, Bulgaria, Mongolia, the U.K. and Kenya visited NDC during 1999. State-of-the-art equipment and computers alongwith lease line internet connection have been provided to the NDC to enable it to conduct research activities and thesis writing.

11

RESETTLEMENT AND WELFARE OF EX-SERVICEMEN



Financial Assistance provided to a ex-servicemen for purchase of truck under Staff Employment Schemes

11.1 In order to maintain a youthful profile of the Armed Forces, over 55,000 service personnel are retired/released every year at a comparatively young age. The majority of service personnel at the time of retirement are at an age where they have numerous unfinished responsibilities which necessitate their taking up a second occupation. As per statistics maintained, a total of 15,15,828 ex-Servicemen (ESM) and 2,96,734 widows have been registered and reported to be surviving as on June 30, 1999. The ex-Servicemen population is mainly concentrated in the states of Uttar Pradesh (2,63,170), Punjab (1,86,514), Haryana (1,58,064), Maharashtra (1,39,223), Kerala (1,24,869), Tamil Nadu (1,01,451), Rajasthan (1,00,592) and Himachal Pradesh (76,357). The Directorate General of Resettlement (DGR) under the Ministry of Defence (MoD) has been established to look after all matters connected with resettlement and welfare of ESM and their dependents. A Kendriya Sainik Board (KSB) under the Chairmanship of the Raksha Mantri has been established for laying down general policies for the welfare of ESM and their dependents, for the administration of welfare funds, and also for coordinating the work of the Sainik Boards in the country. At the state level, the Rajya Sainik Boards (RSBs) and at the district level the Zila Sainik Boards (ZSBs) have been established. The Govt of India bears 50% of the expenditure incurred on the organisations of RSBs, the remaining expenditure is borne by the respective State Governments.

RESETTLEMENT

11.2 Efforts are constantly on to explore various

avenues for employment of ex-Servicemen. The Central Government is providing the following avenues for resettlement/re-employment of ex-Servicemen:-

- (a) Training programmes to re-orient retiring defence personnel towards civil employment;
- (b) Reservation of posts for providing re-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 of the Directorate General of Resettlement. Emphasis has been on employment/self-employment oriented training programmes so that new resettlement avenues, both for officers and other ranks, are opened. A number of new courses and job-oriented training programmes have been included in the training schedule. Training includes inputs on managerial science as well as technology 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 During the training year 1999-2000 (till October, 1999), 88 officers have been

trained in various disciplines. 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.

JCOs/OR AND EQUIVALENT TRAINING

11.5 Training programmes are also conducted for retiring as well as retired JCOs/OR and their equivalent from the three Services. These programmes include vocational courses like Security Management, Export/Import Management, Marketing/Sales Management and Tourism & Travel Agency Management. To improve their employment potential courses like Computer Hardware Maintenance, Diploma in Medical Laboratory and X-Ray/ECG Technology, Ceramic Handicrafts, Electroplating, Machinist and Lens Making, Computer Science & Applications, 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) is 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 as well as ex-Servicemen resettlement training schemes.

11.6 The details of the personnel imparted training in various fields during the last five years till October 1999 are as follows:

SCHEME	1995-96	1996-97	1997-98	1998-99	1999-2000 (Upto Oct. 99)
Officers Training	1061	1145	1150	606	88
JCOs/OR Training					
Vocational Training	5200	5692	5114	5824	2672
On-the-Job-Training	1178	1360	1228	1419	794
ITI Training	1027	1250	1324	1292	1894

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 Govt 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 ex-Servicemen. 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, J&K, Kerala and Meghalaya, are providing reservations to ex-Servicemen in State Government jobs. It has, however, not been possible to have statutory backing to the reservations being provided to ex-Servicemen because of the overall ceiling of 50% reservations imposed by the Supreme Court and given that 49.5% reservation has already been provided in Government jobs for SC/ST/OBC. Therefore, the reservation being provided to ex-Servicemen is not of a vertical nature as is 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. Besides, with the shrinking of job opportunities in civil employment, large scale unemployment in the country and ever increasing competition, difficulties are faced in providing re-employment to ex-Servicemen.

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 Group 'C' and 'D' posts and also in Group 'A' & 'B' posts which are filled otherwise than by way of competitive examinations. The age relaxation is restricted to 5 years in Group 'A' & 'B' posts which are filled by competitive examinations.

RELAXATION IN EDUCATIONAL QUALIFICATION

11.10 Ex-Servicemen are being granted relaxation in the prescribed educational qualification. Army Class I, II and III certificates have been equated to 8th, 6th and 4th class respectively in the civil field. For reserved vacancies for which the minimum educational qualification is matriculation, an ex-Servicemen who has put in atleast 15 years of service and has passed Army class I certificate or equivalent is considered eligible. For the reserved jobs for which the minimum educational qualification is graduation, an ex-Serviceman, 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 Resettlement registers/sponsors security agencies for providing security guards to various Public Sector Undertakings and industries in the private sector. The scheme offers self-employment opportunities to retired Defence Officers and employment opportunity to ex-PBOR. The Department of Public Enterprises (DPE) had issued instructions to all the PSUs to get security personnel through DGR sponsored security agencies. The scheme had shown good results. However, in December 1997, the said instructions were unilaterally withdrawn by the DPE. The matter was taken up with Ministry of Industry, who have revived the scheme with effect from February 1, 1999. Instructions have been issued to all the Departments of Government of India to implement the

scheme for PSUs under them.

PLACEMENT OF JCOs/OR

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

PLACEMENT OF JCOs/OR

	1994	1995	1996	1997	1998
Central Government	4977	5080	5385	4023	5188
State Government	5678	4962	4076	4815	2823
Private Sector	5802	5628	4390	5424	3306
Security Agencies	3494	6150	8821	8873	7140
TOTAL	19951	21820	22672	23135	18457

*Provisional

OFFICERS EMPLOYMENT

11.13 During the year (until October 31, 1999), a total number of 396 officers were registered with the DGR for employment assistance, of which 261 officers were sponsored for employment. There has been a significant drop in fresh registration cases due to enhancement of the retirement age since May 1998.

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 have formulated several schemes for encouraging and giving financial support by way of loans to ex-Servicemen entrepre-

neurs interested in setting up small and medium industries. Important Self-Employment Schemes are SEMFEX-I, SEMFEX-II and SEMFEX-III. Applications for sanction of loans are submitted by ex-Servicemen directly to the concerned Zila Sainik Boards in their respective States. The applications are scrutinized and those who satisfy eligibility criteria as well as 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).

YEARWISE BREAKUP OF NUMBER OF CASES CLEARED FOR SETTING UP PRODUCTION UNITS UNDER VARIOUS SCHEMES, LOAN AMOUNT SANCTIONED AND ACTUAL DISBURSAL OF LOAN

Amount in lakh

SCHEME	1994-95	1995-96	1996-97	1997-98	1998-99
SEMFEX-I					
(i) Number of Cases	134	31	10	12	8*
(ii) Amount Sanctioned	97.20	25.60	13.75	5.50	7.76*
(iii) Disbursal	75.45	24.12	10.41	5.50	7.76*
SEMFEX-II					
(i) Number of Cases	538	571	415	359	635

(ii) Amount Sanctioned	325.44	448.97	289.16	179.76	604.79
(iii) Disbursal	264.49	355.79	192.87	171.04	498.41
SEMFEX-III					
(i) Number of Cases	182	66	39	45	13
(ii) Amount Sanctioned	81.44	52.37	119.39	57.13	22.24
(iii) Disbursal	66.09	32.94	105.47	48.84	25.19

*Provisional

EX-SERVICEMEN COAL TRANSPORT COMPANIES

11.15 Special provision exists for sponsoring ex-Servicemen coal transport companies for the execution of work in the coal subsidiaries of 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. 114 companies of ex-Servicemen employing over 6000 personnel are operating in six different coal subsidiaries of Coal India Limited.

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

11.16 Ministry of Petroleum and Natural Gas have reserved 8% of the oil product agencies i.e. LPG, petrol pumps, kerosene depots etc for disabled soldiers with disability of 50% and above attributable to military service and widows and dependants of those who died in war/peace due to causes attributable to military service. The DGR

sponsors eligible candidates for selection by the Oil Selection Board constituted by the Ministry of Petroleum & Natural Gas. Final allotment is made by their concerned oil company. Approximately 70-80 'eligibility certificates' are issued every year by the DGR.

ALLOTMENT OF ARMY SURPLUS CLASS VB 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 vehicles depots. On an average, 2000 applications are registered every year under this scheme.

RESERVATION OF CSD & 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 have reserved 10% of the 262 selected items, manufactured by the ex-Servicemen entrepreneurs under the Defence Purchase Programme. Only the ex-Servicemen's manufacturing units are eligible.

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

- 11.19 The ex-Servicemen 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 lakh under the scheme so far.

ALLOTMENT OF PARKING SITES IN NEW DELHI

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

ALLOTMENT OF TYPEWRITERS/ DUPLICATORS

- 11.21 Ex-Servicemen are eligible to apply for a maximum of 5 repairable typewriters and one duplicator through DGR. These typewriters and duplicators are allotted by the Directorate of Military Records & Forms through Regional Stationery Depots on nominal payment. An average of 60 applicants are allotted these machines every year which include officers and JCOs. As per the feedback received, these 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 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 60 years of age. 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. The Rajasthan Government is also considering giving preferential treatment to ex-Servicemen for allotment of milk vending booths.

WELFARE

- 11.23 The Kendriya Sainik Board (KSB) under the chairmanship of Raksha Mantri has been established for laying down the general policy on the welfare of ex-Servicemen and their dependants; for the administration of welfare funds and also the coordination of the work of the Rajya Sainik Boards (RSBs) and Zila Sainik Boards (ZSBs). The expenditure on the resettlement work in the states is shared by the Central Government as well as the State Governments in the ratio of 50:50. The KSB also administers the Armed Forces Flag Day Fund collected on Flag Day through sale of car flags and token flags. Various welfare activities are financed from the interest earning of the Fund. Financial assistance is provided to institutions such as Paraplegic Homes at Kirkee and Mohali, the Red Cross Society, Cheshire Homes, Military Hospitals, St. Dustan's After Care Organisation and the Homes for taking care of old and physically

handicapped ex-Servicemen and their dependants. Financial assistance is also provided to individual ex-Servicemen and their families who are in a state of penury to meet specific needs.

FINANCIAL ASSISTANCE FROM RAKSHA MANTRI'S DISCRETIONARY FUND (RMDF)

11.24 A portion of the earnings of Armed Forces Flag Day Fund is set apart as Raksha Mantri's Discretionary Fund and is used to provide financial assistance to poor and needy ex-Servicemen who are in penury. This is given 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 The 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 streams are available through the 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 provided 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 been specially created from the funds provided by the Services and KSB for providing medical facilities to ex-Servicemen pensioners and their dependants.

(ii) Ex-Servicemen suffering from serious diseases are given financial assistance of upto 80% (in case of PBOR) and 60% (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/angioplast, kidney/renal transplantation, dialysis, cancer and spastic paraplegics. Assistance for dialysis is restricted to Rs 75,000/- only.

(iii) Leading hospitals throughout the country have been empanelled from where the ex-Servicemen can get treatment for serious diseases on payment of 40% of the total expenditure. The remaining 60% is paid directly to the hospitals by the KSB. For this purpose, the ex-Serviceman is required to submit a letter issued by KSB, to the hospital.

(iv) Ex-Servicemen not availing medical facilities from military hospitals can choose to draw Rs 100/- every month for medical purposes.

(g) **Travel Concessions :** The following concessions are available to war widows/gallantry award winners, which can be availed on production of identity cards issued by KSB:-

(i) **Rail Travel Concession :** A 75% concession 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 for 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.

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

- (j) **Grant for Repair of Houses** : Financial assistance is provided especially to war widows/war disabled for repair of houses on 50% cost sharing basis with the state governments upto an extent of Rs 10,000/-.
- (k) **Sainik Rest House Facilities** : Over 252 Sainik Rest Houses have been created in the country which provide transit facilities to ex-Servicemen and their dependants at nominal rates.
- (l) **Cash Award/Annuity/Cash in lieu of Land for Gallantry/Non-Gallantry Award Winners** : The States/UTs provide Cash Award/Annuity/Cash in lieu of Land for Gallantry/Non Gallantry Award Winners.

BENEFITS TO THE WIDOWS OF THE SOLDIERS KILLED OR TO THE SOLDIERS INJURED IN THE KARGIL OPERATION

- 11.26 The widows/Next of Kin of the soldiers killed during enemy action or war like engagements are given an ex-gratia amount of Rs.10 lakh. Families or Next of Kin of those who are killed during border skirmishes and action against militants, terrorists, extremists etc. are given an ex-gratia amount of Rs. 7.5 lakh.
- 11.27 The following packages of financial benefits have been given to the families of soldiers killed and to soldiers invalidated out of service due to the injuries sustained in the Kargil operation out of the National Defence Fund(NDF):
- (a) Ex-gratia compensation to the soldiers invalidated out of service due to battle injury : The defence personnel

who are invalidated out of service are paid ex-gratia amounts on the following scales:-

LEVEL OF INJURY	
AMOUNT OF EX-GRATIA	
Upto 50%	Rs.3 lakh
More than 50% but upto 75%	Rs.4.5 lakh
More than 75%	Rs.6 lakh
(b) Housing Grant : A sum of Rs.5 lakh is given to all war widows/ NoK(in case the deceased defence personnel was a bachelor) and to those defence personnel invalidated out of service due to war injuries for construction/acquisition of a dwelling unit or for renovation, modification/ addition of the existing dwelling unit on the land provided by the State Government or on her/his own land.	
(c) Education Grant : The family of defence personnel killed are paid an education grant of Rs.1 lakh per child subject to a ceiling of Rs.2 lakh per family. The funds would be made available to the Regimental Centres. They will deposit the amount in banks or in post offices in long-term fixed deposit. The interest earned from such deposits would be made available to the widow or to the children, as the case may be, to meet educational expenses. The principal amount would be paid to the child on attaining the age of 18 years in case of girls and 21 years in case of boys.	
(d) Financial assistance to dependent	

parents of defence personnel killed in action: In the case of each dependent parent, a sum of Rs.1.2 lakh would be made available to the Regimental Centres concerned. The Regimental Centres would make a fixed deposit in a bank or a post office and would disburse the interest earned thereon on a monthly basis to the dependent parents.

- (e) **Financial and other benefits granted by the States/UTs** : Various States/UTs have also announced financial and other benefits such as housing facility, employment assistance and educational concessions to the children /family of the defence personnel killed/wounded.
- (f) **Allotment of LPG Dealership/Distributorship** : In addition to the normal 'Defence Quota' of 8%, the Ministry of Petroleum & Natural Gas have earmarked 500 LPG dealerships/distributorships for being allotted to the Next of Kins of Kargil casualties.

ACHIEVEMENTS 1999-2000

- 11.28 The major welfare measures/achievements made by the Kendriya Sainik Board during 1999-2000 are mentioned below:-
- (a) The Vth meeting of the Managing Committee of the Armed Forces Flag Day Fund (AFFDF) was held on June 10, 1999 under the chairmanship of Hon'ble Raksha Mantri. Important decisions taken during the meeting are as under:-
- (i) Rates of financial assistance pro-

vided by KSB to ESM (PBOR) for treatment of serious diseases has been increased from 60% to 80%.

(ii) Inclusion of the following in the list of treatment of Serious Diseases:

(aa) **Stroke** : Acute Phase Management of Stroke (Cerebro Vasular Accident).

(ab) **Prostate Surgery** : RURP only.

(ac) **Arterial Surgery** : Arterial Reconstruction/ Re-vasvularisation, Aneurysmal Surgeries of Carotid Artery, Thoracic and Abdominal Aorta, Carotid Angiography of Aorta.

(iii) Sanction of a grant of Rs.2 lakh each to Military Hospital Kirkee (Pune), Base Hospital Delhi, Army Hospital (R&R), Delhi, INHS Ashwani, Mumbai and Command Hospital AF, Bangalore which are providing treatment involving joint replacement surgeries, for providing prosthesis for ESM and their dependants.

(iv) Sanction of Rs.40,000/- per year to ESM/dependants for treatment in Armed Forces Hospitals which are providing dialysis facilities to ESM.

(v) Gorkha ESM of Indian Armed Forces, domiciled in Nepal will now be provided financial assistance from KSB for treatment of specified serious diseases at par with the ESM of India.

(vi) A Committee is to be constituted to look into the feasibility of providing adequate medical cover to ESM. Representatives from Ministry of Health as well as Ministry of Finance will also be included in the Committee.

(b) Based on the recommendations of the

Ministry of Defence, during the recent past, a few states viz. Andhra Pradesh, NCT of Delhi and Goa have enhanced the rates of monthly financial assistance to Rs 300/-, 750/-, and 800/- respectively for World War II veterans/widows.

(c) The State Governments of Bihar, Goa, H.P. and Kerala have since implemented the rates of Cash Grants attached to Gallantry/Distinguished Service Awards as recommended by Ministry of Defence.

(d) During the period (till Oct 1999), a record amount of Rs.17.27 Lakh has been sanctioned as financial assistance to 193 ex-Servicemen/dependants, from Raksha Mantri's Discretionary Fund (RMDF) for medical treatment/ daughter's marriage/ house repair/children's education.

(e) During the period ending October 30, 1999, 238 ESM/dependants have been provided financial assistance of Rs107.40 Lakh for treatment of serious diseases from Armed Forces Flag Day Fund.

PENSION TO ARMED FORCES PERSONNEL

11.29 The service conditions of Armed Forces personnel differ greatly from civilians owing to exigencies of service. The Armed Forces personnel are called upon to serve in difficult areas/hilly terrains, under highly unfavourable climatic conditions etc. far away from their families. 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. The service personnel are retired/released at a younger age as compared to civilian employees. Approximately 50,000 service personnel retire every year. In recognition of their difficult service conditions, early retirement and their supreme sacrifice of life during the performance of onerous duties, Armed Forces personnel are granted pensionary benefits at a 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 pension are enumerated in the succeeding paragraphs.

RETIRING/SERVICE PENSION

11.30 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 PBOR it is 15 years (20 years in the case of Non Combatants Enrolled (NCsE)). Retiring/Service pension admissible to the Armed Forces personnel is calculated at 50% of the average reckonable emoluments, as in the case of civil pensioners subject to a minimum of Rs.1275/- per month and maximum of upto 50% of the highest pay applicable to Armed Forces personnel. With effect from 01.01.1996, pension would not be less than 50% of the minimum pay in the revised scale of the pay introduced w.e.f.

01.01.1996 for the rank, rank and group (in the case of PBORs) held by the pensioner. However, keeping in view their early retirement, Armed Forces personnel are given the benefit of added years of service while calculating their qualifying service for pension. The benefit of added years of service ranges 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. In the case of officers, pension is calculated on the basis of the average of pay drawn during the last 10 months of service. In the case of personnel below officers rank, it is calculated with reference to the maximum pay of the rank held for 10 months preceding retirement. 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 as compared to civilians.

DISABILITY PENSION

- 11.31 A person who is medically boarded out of service on account of a disease/injury/wound attributable to or aggravated by military service, is entitled to disability pension, provided the disability assessed by the Medical Board is more than 20%. 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 which depends on the degree of disablement. The amount of service element is equal to the normal retiring/service pension. With ef-

fect from 01.01.1996, the service element subject to a minimum of Rs.1275/- 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.300/- p.m. on the recommendations of a Medical Board. In all other cases, where the personnel are invalidated out of service with a disability neither attributable to nor aggravated by 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 invalidating gratuity depending upon the length of service. Proposals relating to grant of disability pension at enhanced rates in the context of the 5th Central Pay Commission's recommendation are under active consideration in consultation with the nodal Department i.e., Department of Pensions and Pensioners' Welfare and the Ministry of Finance. Necessary decision in this regard is likely to be taken and notified in due course.

WAR INJURY PENSION

- 11.32 War Injury Pension is sanctioned to an individual who sustains injury/disability in war or war like operations. In case of invalidment on account of war injury, war injury pension at the rate of last pay drawn is paid to the individual if the degree of disablement is 100%. Where war disability is less than 100%, the amount of war injury pension is proportionately reduced but the amount of war injury pension payable is not less than 60% of the reckonable emoluments

in the case of Commissioned Officers and 80% of the reckonable emoluments in the case of personnel below officer rank in the event of invalidment on this count. Armed Forces personnel who are retained in service despite war injury and retire subsequently are given an option either to draw lump sum compensation in lieu of war injury or to draw war injury pension at the time of subsequent retirement foregoing lump sum compensation. War Injury Pension at the above rates is also paid in cases where disability is assessed at less than 20% on invalidment. As in the case of disability pension, decision with reference to the 5th Central Pay Commission's recommendation regarding enhancement of the rates of War Injury Pension is yet to be taken and notified.

FAMILY PENSION

- 11.33 **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 subject to a maximum limit of 30% of the highest pay applicable to Armed Forces personnel. The amount of minimum family pension which was Rs.375/- per month earlier has been raised to Rs.1275/- per month with effect from 01.01.1996 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. 01.01.1996 for the rank and group last held by the pensioners/deceased individual. If the deceased

personnel had rendered 7 years or more service then the family is given family pension at double the rate of the first 7 years or upto the time when 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.

11.34 With effect from 01.01.1996, Ordinary Family Pension is admissible also to (i) parents who were wholly dependent on 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.

11.35 **Special Family Pension:** If the death of a service personnel is on account of causes attributable to or aggravated by Service, the family is paid Special Family Pension as under:-

Reckonable Emoluments	Rates of Special Family Pension (per month)
(a) In case of widow having children	In all cases 60% of the emolument subject to minimum of Rs.750/- and maximum of Rs.2,500/-

(b) In case of widow having no children	1) Not exceeding Rs.1500/-	50% of reckonable emoluments.
	2) Exceeding Rs.1500 but not exceeding Rs.3000/-	40% of reckonable emoluments subject to a minimum of Rs.750/-
	3) Exceeding Rs.3000/-	30% of reckonable emoluments subject to a minimum of Rs.1200/- and maximum of Rs.2500/-.

Decisions in pursuance of the recommendations of the Vth Central Pay Commission are yet to be taken and notified. Necessary proposals to this effect are presently under active consideration of the Government.

11.36 Keeping in view the hardships being faced by the special family pensioners, necessary orders for consolidation of Special Family Pension in pre - 01.01.1996 cases without restriction on the maximum ceiling of Rs. 2500/-, have already been issued by the Government. Pending issuance of final orders on the basis of the decisions to be taken on the 5th Pay Commission's recommendations relating to enhancement of the rates of Special Family Pension, interim orders have been issued by the Government for regulation of Special Family Pension in

post 01.01.1996 cases at the existing percentage of Special Family Pension in the new pay scales effective from 01.01.1996 in the case of officers and 01.01.1996/ 10.10.1997 in the cases of PBORs. The existing maximum limit of Rs. 2500/- has been revised, as an interim measure to Rs. 8235/- in the case of widow without children and Rs. 9000/- in the case of widow with children. Further it has been provided for in the aforesaid letter that in those cases where the amount of Special Family Pension works out to be less than the Ordinary Family Pension calculated at the enhanced rates as per decision taken on the 5th Central Pay Commission's recommendations notified by the Government, the latter amount would be authorised as an interim measure. In all such cases, the Special Family Pension would be revised as soon as Govt's decision on the 5th Central Pay Commission's recommendations relating to grant of Special Family Pension is taken and notified.

11.37 **Liberalised Special Family Pension:** In the event of death of Armed Forces personnel in war or war like operations, counter insurgency operations or in an encounter with or in an incident involving armed hostilities, terrorists/extremists, anti-social elements etc., their families are granted liberalised special family pension equal to the last pay drawn by the deceased personnel at the time of his death. Pension at this rate is payable to the widow until her death or disqualification. In case, the personnel is not survived by a widow but is survived by a child/children only, in addition to special family pension at the prescribed rates,

children education allowance is also paid. In the absence of wife and children, pension at the prescribed rates is admissible to the parents of the deceased.

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

11.38 On the basis of the recommendations of the Vth Central Pay Commission, orders have been issued by the Ministry of Defence 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 01.08.1997, as under:-

- (a) Death occurring due to accidents in the course of performance Rs.5.00 Lakh of duties
- (b) Death occurring in the course of performance of duties Rs.5.00 Lakh at-

tributable to acts of violence by terrorists, anti-social elements etc.

- (c) Death occurring during (i) border skirmishes -Rs.7.50 Lakh and (ii) action against militants, terrorists, extremists etc.
- (d) Death occurring during enemy action in -Rs.7.50 Lakh w.e.f. international war or such like engagements 01.08.1997 which are specifically notified by the MOD -Rs.10.00 Lakh w.e.f. 01.05.1999

11.39 Appropriate orders in pursuance of the Vth Central Pay Commission's pension related recommendations in respect of the Armed Forces personnel have been issued except for the recommendations relating to disability pension/special family pension/war injury pension etc., which are under active consideration of the Government. As soon as necessary decisions from the nodal Department i.e. Department of Personnel and the Ministry of Finance become avail-

able, orders in respect of Armed Forces personnel would be issued by the Ministry of Defence.

11.40 The number of Defence Pensioners is estimated to be about 17 lakh. Pension to Defence Pensioners is disbursed through 25,000 branches of public sector banks, 540 Treasuries, 60 Defence Pension Disbursing Offices and 4 PAOs scattered all over India. The annual expenditure on Defence pensions during last five years has been as follows:-

Year	Pension Disbursed (Rs. Crore)
1995-96	3197.12
1996-97	3683.00
1997-98	4947.42
1998-99(RE)	7270.00
1999-2000(BE)	7348.64

12

COOPERATION BETWEEN THE ARMED FORCES AND
CIVIL AUTHORITIES



Medical Camp

12.1 The Army's basic responsibility is to safeguard the territorial integrity of the nation against external aggression. The Indian Army has to be extremely vigilant all the time to meet various challenges due to the country's long borders encompassing different geographical and climatic conditions such as desert terrain on the west, snow covered mountains in the north and thick mountainous rainforest in the east. The responsibilities of the Army have increased manifold due to counter insurgency operations in Kargil and Dras sector in Jammu & Kashmir and the North Eastern parts of the country. In addition, the Army is often required to assist the civil administration during internal disturbances to maintain law and order as well as to organise relief operations during natural calamities such as floods, earthquakes, cyclones and to maintain essential services like supply of food and medical aid. The Indian Army played an important role in the relief operations in the Orissa cyclone.

COUNTER INSURGENCY OPERATIONS

12.2 The Army has been assisting the State Governments of Jammu & Kashmir as well as the North Eastern States in counter insurgency/anti militancy operations. Details of these operations are as follows :-

(a) Jammu & Kashmir

(i) **General:** The insurgency in Jammu & Kashmir has entered its tenth year and shows no signs of abating. The seizure of Kashmir has become an obsession for Pakistan and is deeply embedded in its national psyche. Pakistan intends to maintain

the presence by focussing on Kashmir as the core issue in order to bring in international mediation. Consequently, there has been no let up in support from ISI of Pakistan to the militants and its engaging India in a Proxy War in accordance with her policy of 'bleeding by a thousand cuts'. Assistance is being provided by the setting up training camps, imparting of training, aiding and abetting infiltration/ exfiltration under the garb of cross border firing, provision of sophisticated weaponry and communication equipment as also financial support.

(ii) **Situation Pre OP VIJAY :** The successful conduct of the Assembly elections with a reasonably high voter turnout percentage in October 1996 indicated the desire of the people to shun the gun culture and to return to normalcy. The year 1998 showed a marked improvement in the situation in J&K reflected by the record number of participants in the Amarnath Yatra, the decline in recruitment and increase in cooperation of the local populace with the security forces, the increased effectiveness of the civil police and above all a boost in tourism and business activities in the state.

(iii) **Situation during OP VIJAY :** During Op Vijay, there was a certain dilution in the counter insurgency grid due to de-induction of forces to the Kargil Sector. The militants, emboldened by the temporary void, executed some stand off attacks against isolated Army posts. An increase in infiltra-

tion attempts was also reported.

(iv) **Current Situation :** Pakistan, having been comprehensively defeated in the Kargil misadventure, has reverted with a renewed zeal to raise the level of the Proxy War in J&K. To checkmate the designs of Pak, the Army has embarked on a strategy to counter the rise in militancy and re-establish its moral ascendancy. Despite its operational commitments and a belligerent Pakistani posture along the Line of Control and the International Border, additional Army battalions have been deployed on anti-infiltration tasks to effectively prevent the militants from sneaking in. Besides, additional battalions have also been deployed in the hinterland to strike at militant hide-outs and flush them out from forested areas and higher reaches.

(b) North Eastern States

(i) **General :** The over four decades old insurgency in the North East continues to simmer while retaining its low key posture, interspersed with limited periods of high intensity violence. Over the years, the security canvas in all the insurgency affected States has been vitiated to the extent that insurgency continues to be exploited by some unscrupulous elements to fulfil their narrow parochial interests. However, owing to senseless targeting of innocents, of late, a positive trend has been noticed specially in Assam and Nagaland wherein, some sections of the populace have begun to raise

their voice against the atrocities committed by the militants. In addition, the lower rung militant cadres specially in Assam, are showing signs of frustration owing to privations being faced by them vis-a-vis the top leadership and as such, are surrendering to the State administrative/ Security Forces. During the period under report, 821 militant cadres have surrendered along with 287 weapons.

(ii) **Army's Involvement:** Notwithstanding the environmental complexities in the North East, the Army has, through protracted operations, been able to suppress the insurgency to manageable levels. Unstinted operations by security forces have resulted in bringing NSCN (IM), the mother militant group, to the negotiating table. Besides, it has considerably marginalised ULFA and Bodo militants in Assam and the Valley based insurgent groups in Manipur. The pressure on ULFA



Relief Operation by 117 Engr Regiment in Orissa

and Bodo militants has forced them into safe havens in South Bhutan.

ASSISTANCE DURING NATURAL CALAMITIES

ARMY

12.3 During the period under review, the Army's assistance was sought by the various State Governments, for relief and rescue operations in a number of flood/earthquake affected areas in the country. Army personnel evacuated thousands of marooned people besides assisting the Civil Administration in medical and material relief. Of significance, were the relief/rescue operations in the following States/Areas :-

(a) **Earthquake in Garhwal Region (Chamoli):** An earthquake measuring 6.8 on the Richter scale hit the Garhwal region hills at about 0040 hours on March 29, 1999. The epicentre of the earthquake was 30 km under the surface of the earth near Chamoli-Gopeshwar area. Our troops, under the overall control of Head Quarters 9 (I) Mountain Brigade Group, provided timely assistance in the affected areas. The details of specific aid provided are as under:-

(i) Ration :

- (aa) 1700 food packets were distributed in the villages near Chamoli and Mandal.
- (ab) Public Distribution Scheme Ration (850 kg) was heli-dropped in the villages around Mandal, Chamoli and Rudraprayag.

(ii) **Clothing and Tentage :** The following items of clothing/tentage were provided to the needy people: -

- (aa) 150 Blankets
- (ab) 200 Woolens
- (ac) 100 Tents (180 lb)
- (ad) 20 Tarpaulins

(iii) **Water Supply :** There was a complete break down of water supply in the region. A water point was established near Gopeshwar Town by Army engineers. Five water tanks were operated round the clock with effect from March 30, 1999 till normal water supply was restored by the Civil Administration.

(iv) **Medical Aid :** Medical Officers and Nursing Assistants with four ambulance vehicles were deployed for round the clock medical aid to the affected people. In all, 492 persons were treated by the Army medical authorities.

(v) **Vehicle Support :** Eight Jongs, five 1-tons, twenty four 3-tons and three recovery vehicles were employed for evacuating the injured people to safer places.

(b) **Floods in Madhya Pradesh (Hoshangabad)**

(i) A flood relief column of 269 Engineer Regiment carried out rescue and relief operations in Hoshangabad District from September 7-24, 1999. On September 17, 1999, the flood re-

- lief column alongwith stores was inducted from Bhopal to Hoshangabad by 2 cars, 8 civil trucks and 1 signals lorry.
- (ii) **Personnel** : The flood relief column comprised of the following personnel :-
- | | |
|---------------|------|
| (aa) Officers | - 3 |
| (ab) JCOs | - 4 |
| (ac) OR | - 91 |
- (iii) **Equipment** : The major equipment comprised of following: -
- | | |
|-------------------|------|
| (aa) BAUTs | - 8 |
| (ab) OBMs | - 7 |
| (ac) Life Jackets | - 58 |
| (ad) Oars | - 32 |
- (iv) **Deployment** : On September 17, 1999 at 0900 hours a meeting was held in Flood Control Room between District Magistrate Hoshangabad and Maj LDVP Rao, officer-in-charge of Flood Relief Column. Reconnaissance was done to prioritise the deployment of rescue and relief teams. One team was deployed in Sanjay Nagar Colony, Bengali Colony and SPM Colony in Hoshangabad under one JCO; two teams under an officer were deployed in Malakhed, Barkhed, Bandraban, Raipur, Balabhet and Jaisalpur villages. One medical team under one medical officer provided medical cover in these villages. Two teams under a JCO

were deployed in Ghanera, Nasirabad, Janakpur, Dhana, Tamcheru, Mudiakheda, Biker, Khirpura and Chaplasar villages. Two teams under one JCO were deployed in Sandia, Umarha, Khairgaon and Ghatrouli villages.

- (v) **Aid Provided** : The following aid was provided:-
- | | |
|------------------------|------------------|
| (aa) Evacuation | - 1,663 |
| (ab) Food packets | - 15,099 packets |
| (ac) Medical aid | - 889 persons |
| (ad) Dry ration | - 36 quintals |
| (ae) Personal property | - 17 quintals |
- (c) **Floods in West Bengal (Birbhum, Nadia).**
- (i) On request from the State Government, flood relief columns were despatched to Burdwan and Birdhum by Head Quarters Bengal Area on September 26, 1999 at 0130 hours (Ex 9 Engineer Regiment/5 Rajput). While 4,763 marooned people were rescued from Purbasthali I & II and 1,250 people from Mangalkot, 649 people were rescued from Village Kalna. 150 people were provided medical aid at Mangalkot. Ration under Public Distribution System was distributed at Mangalkot, Purbasthali in association with civil administration officials. In addition,

- 1,100 kg rice, 900 kg chiwda, 200 kg gur, 500 kg bleaching powder and halogen tablets were distributed. 1,400 kg ration and food packets were distributed and 24 people were provided with medical aid at Bolpur. 43 and 22 persons were rescued from Mayapur and Kalingar respectively. The flood relief columns had been de-requisitioned with effect from 1600 hours on October 6, 1999 in Burdwan District. A rescue team was positioned at Krishnanagar at 0900 hours on September 28, 1999. An additional column was requisitioned at Shantipur with effect from September 30, 1999 at 0900 hours to October 2, 1999 till 0700 hours. This column was then re-deployed at Krishnanagar.
- (ii) Rescue and relief work was carried out and 185 people from Krishnanagar, 280 people from Krishnapally and 27 families from Faqirdanga were evacuated. Medical aid was provided to 8,135 people in the above localities. Temporary shelter under tarpaulin was provided to 200 people. Public Distribution System ration was distributed to 2,295 people in association with civil administration officials. In addition, foodgrain was also provided to 960 families. Vehicle cover was provided to 422 cattle. The civil



Cyclone Relief operation in Orissa

administration was also assisted in ferrying poll officials to and from the District Head Quarters and polling stations in the flood affected areas.

(d) **Cyclone in Orissa - OP Sahayata**

(i) Severe devastation had been caused in the coastal area of Orissa and Andhra Pradesh due to a cyclone originating from the Bay of Bengal on the night of October 17/18, 1999. The civil authorities of Orissa requisitioned Army aid through the Ministry of Defence for relief and rescue operations in the worst hit areas.

(ii) Initially 35 Army columns and three field ambulance units were mobilised for relief and rescue operations in Orissa. Later two more field ambulances were mobilised and were deployed on November 16/17, 1999. A strength of more than 5,000 Army personnel was employed in the affected areas. With the Army's sustained rescue and relief operations, conditions in Bhadrak, Puri, Balasore and Jajpur improved considerably.

(iii) The tasks undertaken by the Army were :-

(aa) Assistance in the restoration of surface communications

(ab) Rescue of marooned civilians.

(ac) Provisioning of medical aid

(ad) Distribution of food packets

(ae) Assistance in the restoration of power

(af) Restoration/provisioning of essential signal communications

(iv) General Officer Commanding 23 Infantry Division was nominated as the overall Force Commander and was located at Bhubaneshwar. He was placed in charge of coordinating the aid as per the requirements of the State administration. In addition, Sub Area Commander Danapur and Commandant, Punjab Regimental Centre were also present at Bhubaneshwar. General Officer Commanding in Chief, Central Command also carried out aerial reconnaissance on November 2, 1999 and interacted with the State administration. Communications were established by the Overall Force Commander with the State Government, Army Headquarters/Ministry of Defence, Headquarters Eastern and Central Commands and the five Sectors. Three INMARSAT terminals were made functional at Bhubaneshwar, Balaikuda and Bhadrak. A total of 1,672 km of roads were cleared and

made fit for vehicular traffic. In addition, the following aid has been provided by the Army:-

(aa) Civilians evacuated - 22,288

(ab) Civilians medically treated - 33,722

(ac) Food items distributed - 4,259 tons

(ad) Medical kits distributed - 9,450

(ae) Potable water distributed - 2,48,000 litres

(af) Kerosene Oil distributed - 371.382 (KL)

(ag) ATF distributed - 330.4 (KL)

COAST GUARD

12.4 Aid to Paradip Port : Paradip was hit by a super cyclone on October 30, 1999. Hundreds of fishermen were missing. Coast Guard ships launched Search and Rescue operations immediately. The CG Ships Vikram, Chandbibi, Sucheta Kripalani, Jijabai, one helicopter and one aircraft carried out SAR, looking out for missing fishermen. The ships were also utilised for transfer of relief material from Haldia and Vizag. The District Headquarters at Paradip provided communication facilities to civil authorities and assisted port authorities in the relief effort together with the Navy.

NAVY

12.5 The Navy was requisitioned by the Andaman & Nicobar administration on September 12, 1999 under section 130 of Cr. P.C. with a view to disperse unlawful

activity at Port Blair. Flag marches were undertaken on September 12-13, 1999. Road blocks were cleared and localities under disturbance were brought under control. Five officers and 157 sailors were involved in providing aid to the civil administration from September 12-14, 1999. The response of the Navy in providing assistance was deeply appreciated by the A&N Administration.

AIR FORCE

12.6 **Operation Sahayta (Cyclone Relief In Orissa)** : The super cyclone which dev-

astated the coastal belt of Orissa required airlift and dropping of supplies and food to provide relief to the survivors. A total of 1,441.045 tons of food and supplies were airlifted and dropped in support of the operations in 390 sorties.

12.7 In order to avoid a disaster, wherein the ammonia plant at Paradip was on the verge of explosion due to failure of power supply and the consequent rise in plant temperature, the IAF flew in two generators in inclement weather and was able to assist in averting another calamity.



Relief Operation by IAF in Orissa

13

NATIONAL CADET CORPS (NCC)



Jubilant NCC cadets (Boys & Girls) during Republic Day camp

GENERAL

- 13.1 The National Cadet Corps, the premium youth organisation of the country, has completed eighty two years of service to the nation since its inception in 1917 as University Corps. In 1948, it was established with the present name under an Act of Parliament. NCC has been providing developmental opportunities to the youth of our nation from all walks of life. The organisation has always endeavoured to bring in a sense of unity, discipline, commitment, dedication and Indian values and ethos amongst the youth.
- 13.2 The NCC has grown substantially from its authorised strength of 1.67 lakh NCC Cadets in 1948, to approximately 11.93 lakh cadets (including an additional 30,000 cadets strength sanctioned by the Ministry of Defence in December 1998 for enrolment in Andhra Pradesh). The NCC today is functioning in 7,220 schools and 5,043 colleges which includes 122 Navodaya Vidyalayas consisting of 8,100 Cadets. The wing-wise distribution of the authorised cadet strength is as under:-
- a) Army Wing : 9,10,031
 - b) Air Wing : 65,150
 - c) Naval Wing : 63,450
 - d) Girls Wing : 1,54,762
- 13.3 Andhra Pradesh has been granted an additional strength of 30,000 cadets for enrolment. This has been achieved during the current year. To absorb this additional strength in a phased manner, it was planned to upgrade four existing NCC units and raise one Group Headquarter and eight units, to include two Remount Veterinary Corps (RVC) units, which is under progress.
- ### TRAINING OF PERMANENT STAFF
- 13.4 **Course conducted at Training Schools:** To look after the training, orientation and upgradation needs of the NCC, Officers Training School (OTS), Kamptee and Women Officers Training School (WOTS), Gwalior conduct courses of various types to meet the training requirement at different levels. Some of the courses run by these institutions are as under:-
- a) **Refresher Course for Associate Officers:** A total of twelve courses have been planned to be conducted at OTS Kamptee, during the Training Year 1999-2000. 860 officers are expected to undergo training in these courses. Six Courses involving 430 officers have already been completed on schedule. The remaining courses will be completed as per schedule by March 2000.
 - b) **Refresher Course for Permanent Instructional (PI) Staff:** 2,490 PI Staff (both JCOs and NCOs) are scheduled to undergo refresher training during the current Training Year. Twenty courses have been planned for them. Ten courses have already been conducted while the remaining will be conducted as planned.
 - c) **Pre-Commission Courses:** These courses are run for newly commissioned Associate NCC Officers (ANOs). A total of 475 ANOs are scheduled to undergo training spread over five courses. 250 officers have already completed their training.
- 13.5 **Civil Defence Management Course:** The Civil Defence Management Course Serial 225 was held from July 15-30, 1999, at National Civil Defence College (NCDC), Nagpur. 10 ANOs attended the course. Civil Defence Instructors Course Serial 140 was held from July 7 to August 20, 1999 at NCDC Nagpur. 10 JCOs attended this course.
- ### TRAINING OF CADETS
- 13.6 Camp Training: Various training camps conducted during the Training Year 1999-2000 were:-
- a) **Annual Training Camps(ATCs):** 410 Annual Training Camps were organised and 2,10,000 cadets attended these camps during the first half of the Training Year 1999-2000.
 - b) **National Integration Camps(NIC):** These are attended by cadets from across the country. This year, 69 camps have been planned at different places in which 50,000 cadets are likely to participate. In addition, an NIC has been planned at Port Blair in which 64 cadets from the mainland and 50 from the islands will participate.
 - c) **Centrally Organised Camps :** 3,760 cadets attended Centrally Organised Camps at various places during the first half of the Training Year.
 - d) **Vayu Sainik Camp(VSCs):** Once in a year, a combined Vayu Sainik Camp is organised for a period of 12 days.
-



NCC Horse Power on Display

562 Senior Division (SD) Cadets and 320 Senior Wing (SW) cadets attend the camp at Air Force station Jalahalli (Bangalore) every year. This year, the camp was conducted from November 2-13, 1999.

- e) **Nau Sainik Camp(NSC):** This is also organised once a year for 12 days. 400 SD cadets and 160 SW cadets attend the camp. This year the camp was conducted at Vishakhapatnam from November 2-13, 1999.
- f) **Thal Sainik Camp(TSC):** Annual Thal Sainik Camp was conducted in the NCC Camp, Garrison Parade Ground, Delhi Cantt from November 21 to December 2, 1999. The Camp was attended by 640 Cadets.

13.7 **Gliding and Flying:** Gliding facilities are provided at 34 Air Squadrons. In spite of the fact that the NCC's serviceable holding of gliders has fallen as low as 25% of its authorisation, the NCC Air Squadrons have carried out 7,386 launches during the first half of the year. Power flying is done on Pushpak/Cessana aircraft, in thirteen selected flying clubs. The NCC Air Squadrons have carried out a total of 96:50 hrs of power flying during the first six months of the year. Besides, undeterred by a host of difficulties, the organisation is steadily moving ahead to switch over from the gliders to micro light flying.

13.8 **Sea Training:** NCC cadets of the Naval Wing, during their sea training and attachment, are imparted intensive training in Naval subjects like Navigation Communi-

cation, Gunnery, Seamanship, Damage Control & Ship Safety, First Aid, and Ship Husbandry. This year, over one hundred cadets were attached with ships of the Eastern and Western Naval Command for technical training. In addition, 150 cadets were attached for sea training and six cadets sailed on board INS SHARDA on a goodwill visit to Madagascar, Seychelles, Maldives and Mauritius.

13.9 **Attachments:** NCC Cadets are also trained in medical care and experience the functioning of the services as follows:-

- a) 464 girls cadets were trained by various Military Hospitals.
- b) As in previous years, this year 4,650 cadets were scheduled to be attached to the Army, Navy and Air Force Units for 14-28 days for training. Due to the preoccupation of formations, the attachments had to be cancelled at the very outset itself.
- c) 128 cadets underwent attachment training with the Indian Military Academy, Dehradun and 16 girls cadets with Officers Training Academy, Chennai for two weeks each.

13.10 **Adventure Training:**

- a) **Mountaineering Courses:** Basic and Advanced Mountaineering Courses are conducted at regular interval at HMI Darjeeling, NIM Uttarkashi and MAS Manali. 148 vacancies on the above courses were allotted for cadets.
- b) **Adventure Courses:** Every year, the NCC sponsors 69 boys and 52 girl

cadets of the junior Division/Wing for adventure courses at HMI Darjeeling, and NIM Uttarkashi.

- c) **Mountaineering Expedition:** Since 1970, the NCC has conducted 44 Mountaineering expeditions, of which 24 were for boys and 20 for the girls. This year, the Boys Expedition Team successfully climbed Manali Peak (5,669M) in July 1999 and the Girls Team climbed Shitdhar Peak (5,250M) in the Western Himalayas in September 1999.
- d) **Cycle and Motor Cycle Expedition:** These were organised at both the national as well as state levels.
- e) **Para Sailing:** 546 Parasails have been sanctioned by the Government of India to be issued at the scale of 6 Parasails per Group Headquarter spread over a period of six years i.e. one Parasail per year. Regular launches are organised by the Directorates. 43,535 cadets were trained in parasailing till June 1999.
- f) **Para Jumps:** Every year, twenty boy and twenty girl cadets are trained at Para Training School, Agra.
- g) **Slithering:** 10 SD and 10 SW cadets were trained in slithering to participate in the demonstration during the PM's Rally in the year 2000.

NCC SPECIAL ENTRY SCHEME, OTA CHENNAI

13.11 The fourth course of the NCC Special Entry Scheme at OTA Chennai, for Short Service Commission in the Indian Army commenced in October 1998. Fifteen cadets

were selected and all fifteen have joined the course.

YOUTH EXCHANGE PROGRAMME

13.12 The following Youth Exchange Programmes were planned and successfully executed during the period under review:-

- a) **Singapore:** One officer and 4 NCC cadets (2 girls and 2 boys) of Air Wing attended the NCC Air Wing Programme at Singapore from June 5-19, 1999. In addition, one officer and 4 NCC cadets (2 boys and 2 girls) participated in the Naval Programme of Singapore during the same period.
- b) **United Kingdom:** A team of eight NCC cadets (4 boys and 4 girls) visited the United Kingdom from July 20 to August 8, 1999 to attend the Air Training Camp of the Air Cadets Corps of the United Kingdom. This programme was revived this year after its suspension last year.
- c) **Sri Lanka:** A team of two NCC cadets (one boy and one girl) visited Sri Lanka during October 21-28, 1999.
- d) **Nepal:** One officer and four cadets proceeded to Nepal in February 2000, to participate in the Army Day Camp of Royal Nepalese Army.
- e) **Bangladesh:** Eight NCC Cadets (four boys and four girls) visited Bangladesh in December 1999, to participate in their Victory Day celebrations.

COMMUNITY DEVELOPMENT

13.13 As part of a cadet's growing up process, the NCC undertakes a number of community development programmes. Some of these

are listed below:-

- a) **Deployment of NCC Cadets during General Election:** For the first time in the history of National Cadet Corps, cadets lent a helping hand in ensuring the smooth conduct of the Thirteenth General Elections held in September/October 1999. Volunteers were asked from amongst NCC cadets above 18 years of age. There was a huge response from the cadets. However, the actual deployment was left to the discretion of the State Governments. In all, 1,335 ANOs and 48,350 cadets were deployed on various poll related duties during the General Elections 1999. Their role during the poll has received wide acclamation from all concerned.
- b) **Help to the Families of Kargil Martyrs:** NCC cadets throughout the country expressed solidarity with our brave soldiers who fought in Kargil by helping their families, specially those located in far flung and remote areas. Help was extended in the form of writing letters, making Government/ private agencies aware of the hardship faced by our soldiers and also by taking canteen facilities to their doorstep. In addition, a large number of cadets donated blood for soldiers wounded in the Kargil operation.
- c) **Disaster Relief:** Consequent to the devastation wrought by the super cyclone which hit the coast of Orissa in October 1999, NCC cadets from the State were pressed into service to as-

sist the ongoing relief operations. Over 800 cadets participated in the burial of decomposed bodies of human beings and animals, the restoration of civic amenities and normalcy in villages/towns, provided medical aid, distributed packets of food and clothes.

- d) In addition, NCC cadets are also participating in adult literacy, traffic control, village adoption, child welfare, anti dowry, anti leprosy, blood donation, eye donation and tree plantation campaign.

PARTICIPATION IN OTHER ACTIVITIES AT NATIONAL LEVEL

13.14 The NCC Cadets also participated in the following activities conducted at the national level:-

- a) **All India GV Mavlankar Shooting Competition:** The 11th All India GV Mavlankar Shooting Championship was conducted at Ahmedabad in Gujarat during October 21-30, 1999. Thirty two cadets, i.e. one boy and one girl cadet from each of the 16 NCC Directorates, participated in the event.
- b) **National Rifle Association of India Shooting Championship (NRAI):** The 42nd NRAI Shooting Championship was held at Bangalore from January 21 to February 4, 1999. NCC cadets securing more than 60% points in the All India G.V. Mavlankar Shooting Championship were eligible to participate in this tournament. 10 cadets were selected to participate in the

event.

ACHIEVEMENTS

13.15 **Awards:** During the period under report, the following Service and NCC awards were presented to service officers and cadets.

- a) Services
 - i) VSM : 1
 - ii) COAS Commendation : 7
 - iii) CNS Commendation : 1
- b) NCC Awards
 - i) Raksha Mantri's Padak : 1
 - ii) Raksha Mantri's Commendation Card : 1
 - iii) Defence Secretary Commendation Card : 4
 - iv) DGNCC Commendation Card : 17

13.16 Welfare of Whole Time NCC Officers and Whole Time Lady Officers: The Government

has approved the accumulation of 300 days of leave and encashment at the time of retirement for Whole Time NCC Officers and Whole Time Lady Officers.

13.17 Government approval has also been accorded to the grant of medical facilities by DGAF to WTOs/WTLOs/GCIs after retirement as applicable to Armed Forces Officers.

SERVICES SPORTS

13.18 The Services have made a major contribution in bringing up the standard of sports in the nation by producing a number of international level Sportsmen. The names of Dhyan Chand, Milkha Singh and Dingko Singh have become synonymous with the Services ethos of relying on sheer determination, honesty and selflessness to reach peaks of sporting glory. The Services achieved a major break through when in

1996 they were permitted by the Indian Olympic Association to field teams in the National Games and became the only Board to be granted this unique privilege. Also the Indian Armed Forces have had the distinction of becoming member of the International Council of Military Sports (CISM) during 1998. The Ministry of Defence initiated numerous measures for attracting fresh sports talent by having direct enrolment in non-commissioned ranks, special increments for outstanding performances at national and international levels. The Sports Authority of India launched Army Boys Sports Companies Scheme to groom young talent by providing them the disciplined environment of the Army. The scheme is paying rich dividends and the products of the Boys Sports Companies have already started winning laurels at the international level.

14

GENERAL



Group photo graph of recipients of Param Vir Chakra & Ashok Chakra awardees during Republic Day Parade. (L to R): Father of Maj Sudhir Kumar (Posthumous) – Ashok Chakra; Father of Capt Vikram Batra (Posthumous) – Param Vir Chakra; Rifleman Sanjay Kumar – Param Vir Chakra; Hav Yoginder Singh Yadav – Param Vir Chakra; Father of Lt Manoj Kumar Pandey – (Posthumous) – Param Vir Chakra

14.1 The Ministry of Defence encourages and promotes both academic and adventure activities through autonomous institutions which are provided regular financial assistance. The 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 Their important activities during the period are as follows:

INSTITUTE FOR DEFENCE STUDIES AND ANALYSES

14.3 The Institute for Defence Studies and Analyses (IDSA) was established in November 1965 to initiate studies and research on problems of national security and the impact of defence measures on economic, political and social developments. Over the years, the Institute has evolved as a premier research institution carrying out policy-related authoritative studies on national and international security issues. The Institute is a registered body under the Registration of Societies Act III of 1860 (Punjab Amendment Act 1957) as amended from time to time, and is governed by an Executive Council elected by the members of the Institute. The Institute is accessible to political leaders, scholars, the media, civil and defence service officers and others who have an interest in problems of national security.

14.4 The Standing Committee on Defence of the

Parliament continues to draw heavily upon the literature, information and expertise of the Institute in its work. Numerous institutions, including the defence establishments, in India and abroad continued to draw upon the experience and expertise of the Institute to support their training, research and orientation programmes. Interaction with the defence services continued to flourish. The Ministries of Defence and External Affairs continue to take active interest in supporting the activities of the Institute.

14.5 The Institute organised a major international conference on "Asian Security in the 21st Century" in January 2000. This was the second conference in the series attended by 31 foreign participants composed of policy makers and opinion shapers from Asian countries and major powers. There has been high level enthusiastic response from across the world. The conference was inaugurated by the Defence Minister and the External Affairs Minister delivered the closing address. The Institute also organised a national seminar on "Limited War- Challenges and Prospects" in January 2000. In addition, the Institute organised the following international conferences:

- (i) India - UAE Bilateral Dialogue in New Delhi in April 1999.
- (ii) Indo-Iranian Dialogue in New Delhi in August 1999.
- (iii) India- Kyrgyz Strategic Dialogue in Bishkek in September 1999.
- (iv) India-Germany Strategic Dialogue in New Delhi in November 1999.

14.6 The following research projects are currently being pursued in the Institute:

(a) Under 1998-2000 Fellowship Programme:

- (i) The Rise of ISI and India Shri B.M. Chengappa
- (ii) Future challenges and Role of ASEAN Dr. GVC Naidu
- (iii) Afghanistan and Central Asia: Challenges for India's Security Shri P.Stobdan
- (iv) Military Doctrine of China: Changes since 1991 and their implications Shri MV Rappai
- (v) The Operational Logic of Small Nuclear Forces Dr Rajesh Rajgopalan
- (vi) Indo-Israel Relations Dr. Mrs. Farah Naaz
- (vii) Conversion of Military Industry in the PRC: Problems and Prospects Shri Deba R. Mohanty
- (viii) Intra - SAARC Economic Relations and the Political Factors: Looking Ahead for Economic Security Ms G. Padmaja
- (ix) Armed Forces in 21st Century and Evolution of a Joint Doctrine Brig VK Anand
- (x) India's National Security Strategy for the 21st Century Col Gurmeet Kanwal
- (xi) Maritime Surveillance: An Indian perspective Lt.Cdr DK Mathews
- (xii) Surface to Surface Missiles and Air Strategy Gp.Capt.AK Sachdeva

- (b) Under 1999-2001 Fellowship Programme:**
- (i) India's Conventional Defence in a Nuclear Scenario AVM Kapil Kak
 - (ii) Philosophy for Restructuring of the Indian Army to Meet Future Challenges Maj.Gen.VK Shrivastav (w.e.f.Dec 99)
 - (iii) Security Policy of South Africa Mrs. Ruchita Beri
 - (iv) Russia's China Policy after the Cold War : Relevance for India Dr. (Mrs) Jyotsna Bakshi
 - (v) Ballistic Missile Defence and the Future of Deterrence Mrs. Tara Kartha
 - (vi) India's Nuclear Doctrine and Strategy Dr. (Mrs) Savita Pande
 - (vii) ASEAN Regional Forum Dr. Uday Bhanu Singh
 - (viii) Limited War: China's Warfighting Doctrine for 21st Century Dr. Swaran Singh
 - (ix) The Indian Ocean & India's Security: Development and Defence Shri Rahul Roy Chaudhry
 - (x) India and Japan: Co-operating for Peace in Asia Mrs. Sanjana Joshi
 - (xi) Chinese Armed Forces: a Fifty- Year Assessment and Future Projection Dr Srikanth Kondapalli
 - (xii) Geopolitics of Energy Security : Challenges and Options for India Ms Shebonti Ray Dadwal
 - (xiii) Transnational Ms Kshitiji Prabha

- Terrorism: Implications for India's Foreign Policy and National Security
 - (xiv) Secessionism, Ethnic Insurgency and Security of India's Northeast Mrs. Sreeradha Datta
 - (xv) Force structure for the Indian Army: A Viable Systematic Approach Col. HPS Klair
 - (xvi) Maritime China: Implications for Regional Security Cdr V.Sukhuja
 - (xvii) Impact of NE Insurgency on India's Security Cmdt D Kotwal
 - (c) Other Projects:**
 - (i) IDSA-ICRIER Project on "Peace, Security and Economic Growth: India and South Asia in the 21st Century" led by Jasjit Singh
 - (ii) DAE supported project on "Strengthening of Safeguards (93+2)" in the nuclear non-proliferation regime. Completed in 1999
 - (iii) DAE supported project on "India's Nuclear Deterrent : Policy Options".
- 14.7 During the year , research staff of the Institute published the following books:-
- (i) India's Defence Spending, by Jasjit Singh, published by Knowledge World in association with IDSA, New Delhi, 2000
 - (ii) Kargil 1999: Pakistan's Fourth War for Kashmir, edited by Jasjit Singh, published by Knowledge World in

- association with IDSA.
 - (iii) Asian Security in the 21st Century, edited by Jasjit Singh, published by Knowledge World in association with IDSA, 1999
 - (iv) Asian Strategic Review 1998-99, edited by Jasjit Singh, published by IDSA, New Delhi, 1999
 - (v) Bharti Parmanu Shstra (Nuclear India in Hindi) edited by Jasjit Singh, published by Prabhat Prakashan, New Delhi, 1998.
 - (vi) China's Military, by Dr. Srikanth Kondapalli, Knowledge World in association with IDSA, 1999.
 - (vii) Tools of Terror: Light Weapons & India's Security by Tara Kartha, published by Knowledge World in association with IDSA, New Delhi, 1999.
 - (viii) Building A Common Future: Indian and Uzbek Perspective on Security and Economic Issues, edited by P. Stobdan, published by Knowledge World in association with IDSA, New Delhi, 1999.
 - (ix) Indo-Russia by Dr. Jyotsna Bakshi, 1999
- 14.8 In addition, the following monographs were also published by the IDSA research faculty:
- (i) India and ASEAN by GVC Naidu, October 1998, Published by IDSA, Delhi Paper No.8
 - (ii) Nuclear Safeguards, published by IDSA, New Delhi, 1999
 - (iii) Sun Zi and China's Strategic Culture, published by IDSA, 1999

MOUNTAINEERING INSTITUTES

- 14.9 The Ministry of Defence administers, jointly with the concerned State Governments, three Mountaineering Institutes namely, the Himalayan Mountaineering Institute (HMI), Darjeeling in West Bengal, the Nehru Institute of Mountaineering (NIM), Uttarkashi in Uttar Pradesh and the Jawahar Institute of Mountaineering & Winter Sports (JIM), Aru with temporary HQ at Batote (J&K). These Institutes are run as private Registered Societies. The Raksha Mantri is the President of these Institutes. The Chief Minister of the respective State is the Vice-President of the Institute. These Institutes are governed by separate Executive Councils consisting of members elected by the General Bodies, nominees from amongst donors and/or persons who are likely to promote the cause of the Institute and representatives of Central and the State Governments. A representative each of the Ministry of Defence and the State Government acts as Secretary of the Institute.
- 14.10 The HMI, Darjeeling was founded in November 1954 by the then Prime Minister Pandit Jawaharlal Nehru to commemorate the first ascent of Mount Everest by late Tenzing Norgay along with Sir Edmund Hillary on May 29, 1953. With the establishment of this Institute, an impetus to mountaineering as a sport was provided in India. To give further boost to mountaineering and to inculcate the spirit of adventure in youth, the NIM, Uttarkashi was set up in October 1965 and the JIM at Aru in J&K in October 1983. Due to disturbances in the valley, students were reluctant to come to

Aru for training. Accordingly, it was decided to shift the Institute temporarily to Batote on the Jammu side of Banihal in August 1990. However, in view of certain adverse reports regarding the law and order situation, the training courses conducted by the Institute were temporarily suspended from April 1996. The Institute is now conducting some courses on an ad-hoc basis.

- 14.11 The Executive Council of JIM in its meeting held on November 6, 1997 approved the proposal of the State Government of J&K to locate the Institute at Sonamarg area. The State Government agreed to provide land & infrastructure. A reconnaissance of the area conducted subsequently revealed that the permanent set up of the Institute could not be located at Sonamarg, as the area becomes inaccessible during winter. Further progress in regard to the permanent location of the Institute is still being awaited from the State Government.
- 14.12 The broad objectives of the Mountaineering Institutes are :-
- to impart theoretical and practical training in mountaineering and rock climbing techniques;
 - to awaken interest in and love for mountains and exploration; and
 - to encourage and provide training in Winter Sports.
- 14.13 The Institutes conduct Basic and Advanced Mountaineering Courses, Method of Instruction Courses (MOIs), Search & Rescue Courses and Adventure Courses. The syl-

labi, duration, age limit of participants and grading system for various types of courses are uniform at all the Institutes. During the lean period, the Institutes detail their Instructors to conduct rock climbing courses at the request of Mountaineering Clubs/Organisations around the country. The Instructors also join various expeditions.

- 14.14 Trainees for these courses come from all parts of the country and include Army, Air Force, Navy, ITBP and BSF Personnel, NCC Cadets and private students.

- 14.15 In the year upto December 1999, the Institutes conducted the following courses :-

Institute	Basic	Advanced	Adventure	MOI	S&R
HMI	5	2	5	1	—
NIM	5	3	5	1	1
JIM	3	—	4	—	—

- 14.16 The number of Students trained in these Courses are as under :-

Institute	Basic	Advanced	Adventure	MOI	S&R
(HMI/ NIM/ JIM)					
Men	664	271	493	35	26
Women	126	43	183	2	2

- 14.17 The Institutes at Darjeeling and Uttarkashi have separate stores of mountaineering equipment for loan to Indian Mountaineering Expeditions at nominal hire charges.

- 14.18 The Indian Adventure & Mountaineering Association launched a Millennium In-

dian Everest (Khangshung Face) Expedition during March-June, 1999, under the leadership of Smt. Santosh Yadav, the only woman in the world to have climbed Mount Everest twice. The expedition was successful in putting three members of the expedition team on top of the Mount Everest on May 28, 1999 from the Khangshung Face, which is the most difficult and challenging route. Two of these climbers viz. Hav. Amar Prakash & Shri Kushang Sherpa are instructors of HMI.

14.19 The Principal of NIM led the first Indian successful Expedition to Mukut Parbat East (7,130 M) via an unattempted and technically difficult east face during June-July 1999. The Vice-Principal, Medical Officer, eight instructors & five trainees of the Institute, including four girls, climbed the peak on July 9 & 11, 1999.

14.20 The trainees of the 103 Advanced Mountaineering Course conducted by NIM from September 11 to October 8, 1999 were taken to Bhagirathi II (6,512 M) during the course of the training. 20 trainees, besides the Vice-Principal, Medical Officer & 6 Instructors of the Institutes, climbed the peak.

CEREMONIALS, HONOURS & AWARDS

14.21 The Ministry of Defence is responsible for organising National functions like the Republic Day Parade, Beating Retreat Ceremony, Independence Day Celebration and the Martyrs' Day Function. Defence Investiture Ceremonies at the Rashtrapati Bhawan for presentation of Gallantry and

Distinguished Service Awards 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 a large number of other agencies. The Ceremonial functions organized during 1999-2000 are as under:-

INDEPENDENCE DAY - 15TH AUGUST, 1999

14.22 On 15th August, 1999, 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, to the accompaniment of the National anthem played by a Services Band. 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 by children and NCC Cadets from schools in Delhi and a release of balloons.

14.23 The following gallantry awards were announced on the Independence Day 1999:-

Kirti Chakra	-	6 (6 Posthumous)
Vir Chakra	-	2 (1 Posthumous)
Shaurya Chakra	-	26 (14 Posthumous)
Bar to Sena Medal (G)	-	2
Sena Medal (G)	-	141 (44 Posthumous)
Nao Sena Medal (G)	-	3
Vayu Sena Medal (G)	-	2

14.24 The following gallantry and distinguished service awards were also announced on the Independence Day, 1999 for 'OP VIJAY':-

Param Vir Chakra	-	4 (2 Posthumous)
Maha Vir Chakra	-	9 (6 Posthumous)
Vir Chakra	-	55 (31 Posthumous)
Sarvottam Yudh Seva Medal	-	1
Uttam Yuddh Seva Medal	-	7
Yuddh Seva Medal	-	8
Bar to Sena Medal (G)	-	1
Sena Medal (G)	-	83 (32 Posthumous)
Vayu Sena Medal (G)	-	24 (5 Posthumous)
Mention in the	-	73

ANNUAL DEFENCE INVESTITURE CEREMONIES, 1999

14.25 Investiture Ceremonies were held on 22.10.1999 and 28.10.1999 at the Rashtrapati Bhavan at which the awards announced on Independence Day-1998 and Republic Day-1999 were presented to the recipients by the President.

The number of awards given at these ceremonies is given below:-

GALLANTRY AWARDS

Kirti Chakra	-	8 (6 Posthumous)
Vir Chakra	-	4 (1 Posthumous)
Shaurya Chakra	-	65 (34 Posthumous)

DISTINGUISHED SERVICE AWARDS

Param Vishisht Seva Medal	-	16
Uttam Yuddh Seva Medal	-	02
Ati Vishisht Seva Medal	-	22

14.26 Yuddh Seva Medal, Bar to Vishisht Seva Medal, Vishisht Seva Medal, announced on January 26,1999 and Bar to Sena Medal, Sena Medals, Nau Sena Medals and Vayu Sena Medals announced on August 15, 1998 and January 26, 1999 were presented by the respective Chiefs of Staff and Senior Commanders at separate Investiture Ceremonies.

AMAR JAWAN CEREMONY, 2000

14.27 The Prime Minister placed a wreath at the Amar Jawan Memorial, under the arch of the India Gate on January 26,2000 to pay homage to the memory of those who sacrificed their lives in safeguarding the freedom of the nation. War widows and children of war casualties were invited to witness the Ceremony.

REPUBLIC DAY PARADE, 2000

14.28 In a brief investiture ceremony at Rajpath, the President presented 4 Param Vir Chakra (2 Posthumous) and 1 Ashok Chakra (Posthumous) to the recipients/ NOKs. After the Investiture Ceremony, the President took the salute at the Parade on January 26,2000. His Excellency Olusegun Obasanjo, President of the Federal Republic of Nigeria was the Chief Guest. The Services contingents comprising of mounted, mechanised and marching columns from the Army, the Navy and the Air Force, followed by contingents of the Para Military Forces, Delhi Police, Home Guards, NCC and NSS participated in the parade. Defence Research and Development Organisation displayed model of Agni-II and two other

equipment. Thirty one tableaux, 14 national bravery awards winning children on elephants and cultural items presented by children from different parts of the country and Delhi schools were the other attractions of the parade. An item titled 'Drums of India', a display on motor cycles by BSF and a fly past by Air Force and Naval aircraft were the concluding items of the parade. A large number of balloons were also released at the end of the parade. The tableaux and children items reflected the cultural diversity of the nation and presented a glimpse of the progress and achievements of the country in various fields.

HONOURS & AWARDS

14.29 The following bravery and distinguished service awards were announced on the Republic Day,2000.

	Annual Awards	'OP VIJAY'
Ashoka Chakra	01	-
Mahavir Chakra	-	01
Kirti Chakra	4(3 Posthumous)	-
Vir Chakra	01	17(4Posthumous)
Shaurya Chakra	19(8 Posthumous)	-
Sarvottam Yuddh Seva Medal	-	01
Param Vishisht Seva Medal	24	-
Uttam Yuddh Seva Medal	01	01
Bar to Ati Vishisht Seva Medal	02	-
Ati Vishisht Seva Medal	45	-
Yuddh Seva Medal	05	13

Bar to Vishisht Seva Medal	02	-
Vishisht Seva Medal	88 (1 Posthumous)	-
Bar to Sena Medal (G)	01	-
Sena Medal (G)	113 (38 Posthumous)	106 (48Posthumous)
Nao Sena Medal (G)	03	-
Vayu Sena Medal (G)	03	-
Sena Medal (D)	18(1 Posthumous)	16
Nao Sena Medal	08	-
Bar to Vayu Sena Medal	01	-
Vayu Sena Medal	13	-
Mention in Despatches	69 (1 Posthumous)	128(43Posthumous)

BEATING RETREAT CEREMONY, 2000

14.30 The Beating Retreat Ceremony organised at Vijay Chowk on January 29,2000 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 Rashtrapathi Bhavan, North Block, South Block, Parliament House and buildings on both sides of Rajpath.

MARTYRS' DAY CEREMONY, 2000

14.31 On January 30, 2000, 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 re-

spect to the memory of the Father of the Nation.

OFFICIAL LANGUAGE DIVISION

14.32 It is the responsibility of the Official Language (OL) Division of Ministry of Defence to implement the Official Language policy of the Government of India in the Ministry of Defence, its subordinate offices, Public Sector Undertakings, etc. The Division comprises of one Director(OL), one Deputy Director(OL), four Assistant Directors(OL) and other staff. Implementation of orders/instructions regarding the use of Hindi in official work is monitored by the Official Language Division through various channels, such as quarterly progress reports, quarterly meetings of Official Language Implementation Committees, Hindi Salahakar Samities and inspections of the offices etc., spread all over the country. The other main functions of this Division are :-

- (i) to translate the material received from various offices/sections of the Ministry;
- (ii) to impart training to staff mainly in Hindi, Hindi stenography and Hindi typing through the Hindi Teaching Scheme of the Ministry of Home Affairs; and
- (iii) to propagate and promote the use of Hindi in official work by organising Hindi workshops, seminars, etc. and by encouraging the staff members through various incentive schemes introduced in the Ministry.

Annual Programme

14.33 In order to streamline the work, OL Division

prepared an annual action plan in the beginning of the year under report and achieved all the targets fixed for the year, such as the organisation of Hindi workshops; conducts inspections; nomination of 120 officials for training in Hindi, Hindi stenography and Hindi typing courses; organisation of four meetings each of the two Official Language Implementation Committees and the Hindi Fortnight during September 14-28, 1999. Evaluation work is in progress for awarding prizes to the best in-house journals published by various Defence Organisations during the year.

Translation Work

14.34 This Division remained engaged in translation work throughout the year. About 12,500 pages were translated into Hindi during the year under review which include translation of general orders, notifications, resolutions, administrative and other reports, Parliament Questions, etc. in compliance with the provisions of Section 3(3) of the Official Languages Act. Besides, material relating to PAC matters, Audit paras, Consultative Committee meetings, papers to be laid in the Parliament, VIP references, Republic Day, Independence Day and the Investiture ceremony was also translated into Hindi during the year.

Hindi Training

14.35 Keeping in view the targets fixed for imparting training to the staff in Hindi, Hindi stenography and Hindi typing, efforts were made to nominate the maximum number of officials in these classes. During the year, out of the 67 officials nominated for Hindi

classes, 19 were for Hindi (Prabodh, Praveen and Pragya), 29 for Hindi stenography and 19 for Hindi typing.

Hindi Workshops

14.36 In order to encourage more and more staff to work in Hindi, 3 Hindi workshops were organised till December during the year in which 48 officials participated. It was aimed at motivating the officials to use Hindi in their official work. For this purpose, participants were provided practice exercises in their respective subjects and were also apprised of the provisions of the Official Language Act and Rules to facilitate them to work in Hindi with more confidence. The subordinate offices, Inter-Service Organisations and Public Sector Undertakings under the Ministry of Defence were also advised to organise such Hindi workshops in their respective offices to encourage their staff to use Hindi in their official work. Officers of OL Division assisted them in organising Hindi workshops and provided them necessary guidance in this regard.

Monitoring

14.37 The overall monitoring regarding the progressive use of Hindi in the Ministry of Defence Secretariat, three Service Headquarters, Inter-Service Organisations and Defence Undertakings is done by two separate Departmental Official Language Implementation Committees, which meet at an interval of three months. Four meetings each of the two Committees were held during the year under review in which progress made in the use of Hindi was reviewed and re-

medial measures suggested. These Committees also provided necessary guidance to the subordinate offices to discharge their duties properly and effectively.

Golden Jubilee Celebrations

- 14.38 As the Golden Jubilee Year of Hindi as the Official Language of the Union is being celebrated throughout the country between September 14, 1999 to September 14, 2000, Ministry of Defence has also prepared a comprehensive plan to celebrate this year in a big way. To start with, a Hindi Fortnight was observed during September 14-28, 1999 in the Ministry as well as in its subordinate offices and Defence Undertakings. An Additional Secretary in the Ministry of Defence inaugurated the function on September 14, 1999 in which messages of the Home Minister, Defence Minister and Cabinet Secretary were read out. All the officers and staff members of the Ministry of Defence were requested to do their official work in Hindi during the Hindi Fortnight. To achieve this end, various competitions were organised during the fortnight in which 344 officials participated and out of which 73 officials were selected for award of 119 prizes amounting to Rs.26,000/-

Salahakar Samities

- 14.39 There are two Hindi Salahakar Samities in the Ministry of Defence, one for the Department of Defence and the Department of Research & Development and the other for the Department of Defence Production & Supplies. The tenure of both the Committees has since expired. After the constitu-

tion of 13th Lok Sabha, the reconstitution process of both these Committees has already been started. Nomination of 2 MPs each from both the Houses of Parliament by the Ministry of Parliamentary Affairs and 2 MPs by the Committee of Parliament on Official Language to these Committees are awaited. The meetings of these Committees will be convened only after the reconstitution is finalised in consultation with the Department of Official Language, Ministry of Home Affairs.

DEFENCE COOPERATION WITH FOREIGN COUNTRIES

- 14.40 The enhancement and strengthening of defence cooperation with foreign countries continued to be an important objective and component of our overall defence and foreign policy. Consequent upon the significant changes that have taken place in recent years in the global political and strategic environment, and even as our traditional defence ties have been maintained, defence related cooperation with a large number of countries has been progressed.
- 14.41 The fourth Meeting of the Indo-UK DCG was held in New Delhi during March 30-31, 1999. An excellent base was established for the further strengthening of the relationship. The fifth meeting of the DCG is scheduled to be held in London in August 2000.
- 14.42 The Royal Air Force Aerobatic Team, the Red Arrows carried out Aerobatics display at Hindon Air Force Station in India on November 22, 1999.
- 14.43 The Second meeting of the Indo-French High Committee on Defence Cooperation was held in July 1999 in New Delhi. During the meeting, substantive discussions took place on the ways and means of further strengthening defence cooperation between the two countries. It was recognised that while defence cooperation is energised through intensification of the strategic dialogue, military cooperation and industrial as well as R&D cooperation, it should also be seen in the setting up of a long term and enduring relationship based on wider understanding and strong mutuality of interest. The increasing role of technology in the defence sector was acknowledged and so identified as a priority area of closer cooperation between the two countries.
- 14.44 A high powered Russian delegation headed by Mr. I. Klebanov, Deputy Prime Minister of the Russian Federation visited India in November 1999 in connection with the sixth meeting of the Indo-Russian Group on Military Technical Cooperation. The Joint Working Group reviews and monitors the progress of the implementation of the ongoing long-term programme of Military Technical Cooperation between the two countries.
- 14.45 The Defence Ministers of Russia and the Kyrgyz Republic, the Commander-in-Chiefs of Myanmar Navy, Oman Army, Russian Air Force, Zambian Army, Vietnamese Navy, CDR Lesotho Air Force and a delegation of Royal Brunei Armed Forces visited India during the year 1999-2000.

14.46 Indian delegations participated at the various Defence Cooperation meetings held on subjects such as Peace-Keeping Operations, Confidence Building Measures (CBMs), Disaster Management, Search and Rescue (SAR), International Security, Politics and Economics and Production of Defence Policy Documents. We attach great significance to such activities.

14.47 Exchange of visits at the level of Service

Chiefs is an important measure for promoting goodwill between our Armed Forces and their foreign counterparts. During the period under review, the Chief of Army Staff (COAS) visited Qatar, Poland, Czech, USA/Honolulu, France and Myanmar. The Chief of Air Staff (CAS) visited France, Hungary, Israel and Bangladesh. The Chief of the Naval Staff (CNS) went to Russia, Thailand and Singapore. Vice Chief of Army Staff visited

Singapore and Sri Lanka while Deputy Chief of Army Staff visited the UK.

14.48 Raksha Mantri visited Japan during January 10-14, 2000. This was the first ever official visit of a Defence Minister of either of the countries. A significant outcome of this visit was a decision to commence a regular security and defence related dialogue between the Defence Establishments of India and Japan.

15

ACTIVITIES AND ACHIEVEMENTS OF VIGILANCE UNITS

VIGILANCE MATTERS

- 15.1 The Vigilance Division in the Ministry of Defence looks after all vigilance matters and provides link between the Ministry/ Department and Central Vigilance Commission. 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 Prime Minister's Office and Raksha Mantri's Complaint Boxes are also being dealt with by the Vigilance Division.
- 15.2 For administrative convenience, the vigilance work in respect of the Department of Defence and the Defence Research & Development Organisation is being looked after by one Chief Vigilance Officer (CVO) and in respect of the Department of Defence Production & Supply by another CVO.

JOINT CONSULTATIVE MACHINERY

- 15.3 In order to mitigate the problems of the workers in the Defence Organisations and promote harmonious relations with them, a three tier system of Joint Consultative

Machinery (JCM) is functioning in the Ministry of Defence. These are : Department Level JCM Council under the chairmanship of Defence Secretary; Headquarters Level JCM Council under the chairmanship of Adjutant General (AG), Chief of Personnel (COP) and Air Officer in-charge Personnel (AOP) in the Army Headquarters, the Naval Headquarters and the Air Headquarters respectively and Unit Level JCM Council under the chairmanship of Head of the Unit concerned. Interaction with the workers is maintained through convening of periodical meetings at all levels. Productivity Linked Bonus is also granted to the entitled categories of workers as an incentive for good work and optimise the output. 4 civilian workers have also been selected during the year for Shram Shri series awards to be conferred by the Prime Minister.

DEPARTMENT OF DEFENCE PRODUCTION & SUPPLIES

- 15.4 JS(HAL) is the Chief Vigilance Officer in the Department of Defence Production & Supplies. The Ordnance Factory Board, DGQA, DGAQA, Directorate of Standardisation

and eight Defence Public Sector Undertakings are under the administrative control of this department. Each of these organisations has its own CVO/VO. The meetings of all the CVOs are held periodically to review the functioning of the Vigilance Wings as well as the pending cases. Last such meeting was held under the chairmanship of JS(HAL) & CVO on October 5-6, 1999. The position of pending cases with each PSU/Organisation as on September 30, 1999 is annexed.

REDRESSAL OF PUBLIC GRIEVANCES

- 15.5 The Public Grievances petitions received through the Department of Administrative Reforms & Public Grievances as well as direct from the petitioners are reviewed on fortnightly basis. The Public grievances petitions are also received through complaint boxes named as "Raksha Mantri's Complaint Box" that have been installed at the receptions of various buildings where the offices of Ministry of Defence are located. The Public Grievance cases received through RM's Boxes are also reviewed on fortnightly basis.

DETAILS OF PENDING CASES AS ON SEPTEMBER 30, 1999

Organisations	Pending Investigation CVOs	Under Investigation	Action on investigation Report	Pending over 6 months after CVC's Ist stage advice	ORal enquiries pending against Gaz/Gazetted officer over one year	Pending major penalty proceedings against Gazetted officers over one year	Pending maor penalty proceedings against Non-Gazetted officers over one year	Pending with With inquiry Officers over 6 months Non-Gazetted	Pending with Inquiry Officers over 6 months Gazetted	Suspension cases over six months
OFB	-	1	-	-	2	2	1	-	-	1
DGQA	-	4	-	-	13	-	-	10	3	-
DGAQA	-	-	-	-	-	-	-	-	-	-
Dte. Of Standardisation	-	-	-	-	-	-	-	-	-	-
HAL	-	3	-	-	-	1	11	3	5	4
BEL	-	-	-	-	12	-	-	-	-	-
BEML	-	1	1	-	-	1	7	-	-	-
MDL	-	-	-	-	1	7	-	-	-	-
GRSE	1	-	-	-	2	-	-	-	-	2
GSL	-	-	-	-	-	-	-	-	-	1
BDL	10	-	1	-	-	-	-	-	1	-
MIDHANI	-	-	-	2	1	-	-	-	-	-
TOTAL	11	9	2	2	31	11	19	13	9	8

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 occupants from defence land and property.
13. 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 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 (BRML).
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 Science 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 coordinating 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 and other material assistance to individuals, institutions and bodies corporate, for study and for the training of manpower on aspects of Science and 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 fore 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, Department, 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 asnd 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 advise Heads of branches of the Armed Forces Headquarters in the discharge of their financial responsibility.

9. To function as the accounting authority for Defence Services.

10. To prepare the Appropriation Accounts for the Defence Services.

11. To discharge the responsibility for payments and internal audit of Defence expenditure through the Controller General of Defence Accounts.

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 occupants from defence land and property.
13. 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 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 (BRML).
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

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5. To assist in the formulation and implementation of Defence Plans.

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