

SEVENTH REPORT
STANDING COMMITTEE ON DEFENCE
(1999-2000)

(THIRTEENTH LOK SABHA)

MINISTRY OF DEFENCE

MODERNISATION OF THE INDIAN AIR FORCE

Presented to Lok Sabha on 18 December, 2000.

Laid in Rajya Sabha on 18 December, 2000.



LOK SABHA SECRETARIAT

NEW DELHI

December, 2000/Agrahayana, 1922 (Saka)

CONTENTS

COMPOSITION OF THE COMMITTEE (1999-2000)

INTRODUCTION

REPORT

**COMPOSITION OF THE STANDING COMMITTEE ON DEFENCE
(1999-2000)**

Dr. Laxmmarayan Pandey—*Chairman*

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INTRODUCTION

I, the Chairman, Standing Committee on Defence (1999-2000) having been authorised by the Committee to submit the Report on their behalf, present this Seventh Report on the subject 'Modernisation of the Indian Air Force'.

2. The subject was selected for examination originally by the Standing Committee on Defence (1998-99). Briefing by the representatives of the Ministry of Defence was held on 5 May, 2000 and oral evidence on 5 October, 2000. The Committee considered and adopted the report on 8 December, 2000.

3. The Committee wish to express their thanks to representatives of the Ministry of Defence for appearing before the Committee and for furnishing the material and information in a very short span of time. The Committee also express their thanks for the free and frank views expressed by the representatives of the Ministry of Defence on threat perceptions, our capability and plans for 'Modernisation of the Indian Air Force'.

4. For facility of reference and convenience, the observations/ recommendations of the Committee have been printed in thick type in the body of the Report.

NEW DELHI;
December 8, 2000
Agrahayana 17, 1922 (Saka)

DR. LAXMINARAYAN PANDEY,
Chairman,
Standing Committee on Defence.

REPORT

INTRODUCTORY

1. The Indian Air Force is fourth largest in the world. India's strategic imperatives demand that its force be kept in top gear at all times. Experience has shown that the sources of threat to the security of the country are as real today as they were, say, four decades ago. Further, the combat capabilities of the adversaries have increased manifold with the regular acquisition of sophisticated weapon systems, war planes, missiles, not to talk of the nuclear warheads. The fact remains that the periodic peace talks or confidence building measures have not stopped India's adversaries from acquiring newer and newer weapon systems to strengthen their fighting forces.
2. This leaves India with no option but to strengthen our defence. The whole question of modernisation of Air Force has thus to be viewed against the threat perception and the overall strategic imperatives.
3. **The Committee, in the course of its study, found that the Government thought of modernisation of air force as a serious option very late. The Committee has been informed by the representatives of the Defence Ministry that the Indian Air Force is likely to face a serious problem of depletion of fighter planes in a couple of years due to obsolescence. In terms of percentage the depletion is going to be of the order of 40%. Any Air Force which loses at once as many as forty percent of its aircraft will be extremely vulnerable especially when the security scenario does not reassure the prospect of prolonged period of peace.**
4. **The Committee are of the view that the Government did not address the problem of modernisation of the Air Force with any degree of seriousness. The result is that today this crucial wing of the defence forces is facing the serious problem of depletion of a large percentage of its aircraft.**
5. **The Government have been found wanting in responding to the urgent and essential needs of modernising the Air Force so as to make it a force which could effectively deter the adversaries from embarking on any misadventure. The lapses are inexcusable.**
6. **The Committee hope that the Government would make up for the lapses of the past and strengthen the Air Force in terms of equipment and manpower.**

CHAPTER I

INDIAN AIR FORCE—INCREASING OBSOLESCENCE

7. Air Force is a technology sensitive force; and rapid technological advances have quickened the pace of obsolescence in this force. Thus the modernisation of IAF becomes a continuous requirement and has to be undertaken within clearly defined long and short-term perspectives. This is due to long gestation period of aviation projects and requirement of large fiscal resources.

8. The Indian Air Force has an authorised force level of 39.5 Squadrons. Since modernisation has not taken place in time, the force faces serious depletion of aircraft in the coming ten to twelve years. A very large number of aircraft are of 1960s and 70s vintage which are nearing the end of their life and which need to be replaced. Therefore, induction of sizeable number of state of the art aircraft has become an absolute necessity within the next ten years. Neglecting this vital task will only sharpen the technological asymmetry with our adversaries with all the attendant risks.

9. The Defence representative has put the issue in sharp focus in the following statements:

"The hon'ble members are well aware of the pitfalls of technological asymmetry with our adversaries and the dividends air supremacy pays in any conflict. The technological asymmetry cannot be overcome by numbers alone and air supremacy certainly needs state of the art systems and equipment. Thus the IAF is giving due consideration to both these aspects to maintain its level of preparedness in the future."

However, induction of a very large number of aircraft within the next 12 years is admittedly an impossible proposition. The Air Force therefore has planned the upgradation of certain existing aircraft and induction of some state of the art aircraft and other equipment to maintain the required level of preparedness.

10. Upgradation of the current aircraft in order to extend their life can provide only a short term solution to the problem. High technology aircraft alone would give the Indian Air Force the required technological superiority. However, considering the resource constraint the Air Force has decided to have 40-45% high technology aircraft and the remaining 55-60% of medium technology aircraft.

11. Besides the aircraft, a critical system like the air defence radars, too is facing obsolescence which needs urgent modernisation, shortage of spares for the transport fleet and its modernisation is another problem which needs to be tackled urgently. Similarly, the training facilities and other infrastructure are inadequate which have the potential of seriously affecting the quality of the human resources available to the Air Force.

12. Serious inadequacies affecting the Indian Air Force have been brought to the notice of the Committee.

13. A disturbingly large number of aircraft having to be phased out during a short period is a serious problem. The fact that about 40% of the aircraft will have to be replaced during the next ten to twelve years underscores the absence of any long term plan for the modernisation. Air Force, being technologically intensive, needs constant modernisation by continuous infusion of modern technology. It can sustain the air superiority only through technological superiority. Neglect of modernisation has led to greater obsolescence and an imminent depletion of strength to an alarming level.

14. The Committee feels that this situation could have been avoided if the Government in the past had taken timely measures to undertake the modernisation of the Air Force in a planned manner.

15. The Committee therefore conclude that the Government have been remiss in strengthening the Air Force which plays a crucial role in protecting the country from the aggressor.

16. The Committee have been informed that the technological obsolescence is affecting not only the fighter aircraft, but also the air defence radars. It is rather puzzling that even this item could not be replaced intime. The transport fleet suffers from perennial shortage of spares. These aircraft too need replacement within seven to ten years.

17. A major factor in the induction of state of the art aircraft or upgradation of the current aircraft or modernisation of the infrastructure is the assured availability of adequate resources. Major reductions in the defence allocation during the past decade have put the modernisation of Air Force out of gear. The Committee have been told that the Air Force has placed before the Government the estimate of resources which are required for its modernisation plan.

18. The Committee desire that the Government should accord top priority to the modernisation of the Air Force and provide adequate resources to carry it out. The allocation of resources should be done in a planned manner. The Committee learn that in the current plan there is a sudden increase in the annual allocation to the extent of 56%. The Committee welcome this increase and recommend that the trend should be sustained in future years also. At the same time the Committee hope that the Air force will fully utilize the fund.

19. The Committee desire that the Ministry and the Air Force should jointly assess the real requirement of the Air Force and allocate resources and the increase should be made in a progressive manner so that the entire money allotted is absorbed by the Force.

20. The Defence Secretary has assured the Committee that the Government would not allow the squadron strength to be depleted at all. While taking this assurance seriously, the Committee desire that the Government should implement the entire modernisation plan of the Air Force in all seriousness so that the disabilities caused by prolonged neglect could be removed and the force could regain its superiority.

CHAPTER II

MODERNISATION PLAN

21. The Ministry of Defence made detailed presentation on its modernisation plan before the Committee. The following strategies are being adopted for the modernisation of the Indian Air Force :

- (i) Acquisitions of modern war planes to maintain a combat force level;
- (ii) Mid-life upgradation of various aircraft in a phased manner;
- (iii) Induction of Force-Multipliers to enhance operational effectiveness;
- (iv) Induction of major Air Defence (AD) and other ground based systems;
- (v) Improving training and infrastructure facilities;
- (vi) Establishment of Aerospace command.

1. Acquisition of Modern War Planes to maintain a Combat Force Level

22. The Ministry of Defence have stated that there is going to be a planned induction of various aircraft during the Current, Tenth and Eleventh Five Years Defence Plans. The projection for acquisition takes into account what is already in the pipeline in terms of firm proposals or for which nearly firm proposals have been formulated in Air Headquarters. The on-going induction plan includes the induction of Squadrons of SU-30, MK-I aircraft and also induction later on by licenced production. Procurement of Mirage-2000 dash-5 aircraft is planned. It is stated that a formal proposal for acquisition of a few squadron of Mirage-2000-5 in the 10th and 11th plan has been submitted to the Ministry of Defence. Indigeneous production of Jaguar aircraft by HAL in the Tenth Plan also will slow down the process of reduction in force levels. In addition, acquisition of additional MiG-21 or MiG-29 to maintain the force level at an acceptable level is also under consideration at Air Headquarters. All these above acquisitions have been necessiated due to continuous slippages in the LCA programme.

23. The Ministry of Defence have stated that with the extension of service life of AN-32 transport aircraft and upgrade of HS-748 AVRO aircraft, there is expected to be no serious shortfall of transport aircraft till the year 2009-2010. The study project for life extension of AN-32 upgrade has already commenced and upgrade of AVRO aircraft is likely to be awarded to HAL shortly. The Air Force has however, felt the need for medium lift (15 to 20 tonne payload) class of transport aircraft for which the HAL is preparing a feasibility report. There is also a plan to acquire executive jets for WIP duties.

24. The Ministry of Defence have further stated that although, the LAP has a fleet of helicopters, in order to meet enhanced task of air maintenance after Kargil, a contract was signed for acquisition of additional Mi-17 helicopters for which price negotiations have been completed.

25. During the on-the-spot study visit of the Committee to Jam Nagar, Bhuj, Naliya and Border Areas in the Rann of Kutch, the Committee were apprised of the difficulties being faced by the LAP due to the lack of modern helicopters for carrying out patrolling and transport role in these areas.

26. The Committee note that the Indian Air Force has chalked out a detailed programme of acquisition and licence production along with upgradation of various aircraft to ensure that gaps are filled up and the authorised strength of the Squadrons is maintained in the light of phasing out of 60's and 70's vintage aircraft.

27. The Committee had earlier also pointed out that there were already considerable delays in the acquisition process as seen from the SU-30 contract which was signed in 1997. Till date, only a few aircraft have been received. The Committee hope that such delays will not be allowed in future acquisitions. It may be true that contracting for a combat aircraft is time consuming. However an unduly prolonged negotiation and the long process of final acquisition for years together will only lessen the utility of the aircraft especially when technological obsolescence is very fast in this sector. The Committee therefore, hope that all contracts will be persued vigorously and executed in a time bound manner keeping in view the urgency factor.

28. The Committee also note that, as licenced production route is to be followed for ma; 'or acquisitions such as *SU-30*, Mirage, MiGs and the Advanced Jet Trainer and that the transfer of technology and development of the production line will require perspective planning, the Committee hope that there are no delays once the production and maintenance of the aircraft comes into Indian hands. The Committee hope that finances will be committed in the budget year-wise to accommodate immediate payment, debt repayment and to put up the infrastructure required to manufacture of various types of aircraft in India.

29. The Committee also recommend that the process of acquisition of new helicopters i.e. Mi-17 helicopters should be completed on priority basis so as to bring relief to the IAF in the border areas and difficult terrain where the helicopter becomes the sole mode of the transport.

II. Mid-life upgrade of Aircraft in a phased manner

30. The Ministry of Defence have stated that in order to further augment the modernisation of the IAF, mid-life upgrade of aircraft in a phased manner is being carried out. The major aircraft systems include the MiG-21 Bis, MiG-27, Jaguar and MiG-29. Major portion of these upgradations are to be carried out in the Tenth Plan Period.

Modernisation of MiG-21 Bis Aircraft

31. As stated by the Ministry of Defence earlier the contract for the upgradation of 125 MiG-21 Bis aircraft with an option to upgrade 50 additional aircraft was signed in March 1996 with Russians as the prime contractor. Two aircraft were to be upgraded in Russia as part of the design and development programme. The remaining 123 aircraft were to be upgraded at HAL, Nasik. The design and development work on the two aircraft in Russia was planned to be completed in August, 1998. The series upgradation work at HAL on the remaining 123 aircraft was planned to be completed in 2002.

32. The Ministry of Defence have further informed that all the new systems contracted for the upgradation of the MiG-21 Bis aircraft had been integrated on the upgraded MiG-21 Bis aircraft. Flight testing of the new system was in progress in Russia. Flight test task upto 75% was successfully completed. The remaining task was expected to be completed by July, 2000. The aircraft was planned to enter operational service in 2001.

33. The Ministry of Defence have now stated during evidence that design and development work is currently in the final phase of flight testing in Russia and would be completed by the end November, 2000. As part of the upgradation, a study is in progress to extend the life of MiG-21 Bis aircraft to 40 years. The series of upgradation of 123 aircraft at HAL, Nasik has already commenced and will be completed within the Tenth Plan period viz. by the year 2004.

34. The Ministry of Defence have further stated that upgradation of MiG-27 and original Jaguar aircraft is to be carried out at HAL to enhance their operational employability. HAL has been asked to ensure commonality of equipment on all the upgradations undertaken by them and also to go in for transfer of technology/repair and overhaul capability. The nature and extent of the MiG-29 upgradation is under close examination at Air Headquarters. Upgradation of Mi-35 helicopters is presently going on. The upgradation of Mi-17 and AVRO helicopters will be actively pursued thereafter.

35. The Committee note that the Ministry of Defence are planning to carry out mid-life upgradation of aircraft already available with the IAF i.e. MiG-21 Bis aircraft,

MiG-27, Jaguar, MiG-29 in order to bridge the gap in technology to make the fleet of aircraft more viable for the next few years and also slow down the phasing out of the aircraft from the service.

36. The Committee note that two MiG-21 Bis aircraft were sent to Russia for upgradation work. Later on upgradation work was to be carried out at HAL, Nasik on the remaining 123 aircraft. The Committee note that as per earlier time schedule, the design and development work on the two aircraft in Russia was planned to be completed in Russia by August, 1998. The series upgradation work at HAL on the remaining 123 aircraft was expected to be completed by 2002. During the examination of Demands for Grants, the Ministry had stated that flight test task upto 75% had been successfully completed. The remaining task was expected to be completed by July, 2000. However, the Ministry of Defence have now stated that the design and development work is currently in the final phase of flight testing in Russia and would be completed by November, 2000. The Ministry now state that the upgradation of 123 aircraft at HAL, Nasik will now be completed within the Tenth Plan viz. by the year 2004.

37. The Committee take serious note that the Ministry of Defence has been extending the time period for upgradation work on the MiG-21 Bis aircraft from time-to-time. The Committee hope that the time schedule as laid down now i.e. completion of upgradation work on two aircraft by November, 2000 and on all remaining aircraft by 2004 will be firmly adhered to by the Ministry of Defence. The Committee hope that a similar trend will not be allowed to continue in the upgradation of other aircraft. The Committee also hope that a firm check will be made on the expenditure carried out on these projects so that upgradation proves to be a financially viable option. It should be ascertained whether the upgradation of old fleet of Aircraft would be a viable option or the better option will be to procure new aircraft with latest technology.

Delay in the Light Combat Aircraft (LCA) Programme

38. The LCA project was sanctioned in 1983 with an original cost estimates of Rs-560.00 crores. The go ahead for FSED phase I i.e. Technology Demonstration phase was given in 1991. The cost was later revised to Rs-2188.00 crores in June, 1993 with revised schedule for the first flight to take place in June, 1996. Subsequently first flight test of the light combat aircraft was scheduled for early 1997. Later development flight testing of LCA was planned in the first half of 1999, and the first flight of TDI was to take place in May, 2000.

39. The Ministry of Defence had stated earlier that Initial Operational Clearance (IOC) by IAF is estimated to occur in the year 2004 and Final Operational Clearance (FOC) would be taking place about two years thereafter. Both would need investments for production in advance of these target periods, apart, of course from satisfactory performance of the TD and PV (Prototype Vehicle) aircraft. The Air Force have however,

during evidence expressed their concern over the fact that they would not be getting the LCA for induction into IAF squadrons before the year 2010-2012.

40. The Ministry of Defence have stated in their action taken reply to the recommendation of the Committee contained in their Third Report on the Demands for Grants for the financial year 2000-2001 that the first technology demonstrator (TDI) LCA is undergoing high speed taxi trials prior to its maiden flight and that there has been a further delay of about 3 months in undertaking first flight of LCA due to mechanical as well as software snags. The first flight of TD-I was to be carried out in September/October, 2000.

41. The initial flight trials of LCA are planned with GE-404 engine. Kaveri has completed more than 1000 hours of testing on multiple test beds which include 50 hours of high altitude testing at CIAM, Russia. As per current estimates, Kaveri engine is expected to be integrated with LCA in 2002. There are plans to build and simultaneously test about 20 Kaveri engines to accelerate development before production release. The final schedule of induction of Kaveri engine with LCA in the Indian Air Force by 2005 is expected to be maintained.

42. The Ministry of Defence were asked during evidence to clarify the position regarding the LCA programme. The witness from the Air Force stated before the Committee as under:

"About the progress on the LCA, I would submit that there was a plan to carry out the first flight by October, 2000. We see that it is unlikely to take place this year. May be by the first quarter of next year the aircraft may be able to fly. But as far as operationalising is concerned, as you have seen in my presentation, we have not taken this into account for induction purposes till the Eleventh Plan. We are planning to induct two other aircraft to take care of the slippages in the LCA programme since we expect that the fully developed aircraft will be available operationally not before 2012, and probably by 2015".

43. The Committee note that huge investment has been made in the LCA programme. The Ministry of Defence have also admitted the slippages as regards the time schedule and escalation in cost. The Committee are extremely unhappy to note the way the Ministry of Defence have been extending the time schedule laid down by them for manufacture of the Light Combat Aircraft. The Committee also note the variations in the statements from the different sources of the Ministry of Defence regarding the time schedule for manufacture and induction of LCA into the IAF.

44. The Committee note that the first flight according to the new time frame was to take place by October, 2000. It was later thought that the same would take place only by the first quarter of next year. The Air Force now feels that the fully developed operational aircraft will not be available before 2012 and probably by 2015.

45. "The LCA is a state of the art combat aircraft. This project was sanctioned in 1983. The long delay in the development of this aircraft has contributed enormously to the creation of a situation where the Air Force is facing an imminent depletion of strength. Frequent changes in the schedule have created a sense of uncertainty about the final induction of this aircraft and forced the Air Force to think about other options like acquisition or production, on transfer of technology basis, modern aircraft from other countries. This requires considerable resources. Almost Rs.3000 crores have been invested in the LCA and the Committee tend to agree with the Air Force that it may not be inducted before 2015. This would mean that it would have taken 32 years before the LCA would be inducted.

46. The Committee strongly feel that the Government should view this situation seriously and conduct a performance audit of the project. The Committee want indigenous efforts to succeed but it can be useful to the country only when the result is produced within a reasonable time. The Committee demand that the Ministry of Defence come out with a fixed and irrevocable date of induction of LCA and clear the confusion on this score after review of the project at prototype stage.

47. The Committee hope that all possible steps will be taken to put the LCA on the production line at the earliest possible after reviewing at the prototype stage so that it can be inducted into IAF during the 10th Plan period *i.e.* by 2007.

III. Induction of Force Multipliers

48. Force multipliers enhance the battle potential of the existing combat assets of the Air Force. The Ministry of Defence have stated that the Indian Air Force is in the process of induction of certain force multipliers. The main plan for induction includes the Unmanned Aerial Vehicles (UAV) in the current plan period and Airborne Warning And Control System (AWACS) and Flight Refuelling Aircraft (FRA) during the Tenth Plan.

Unmanned Aerial Vehicle (UAV)

49. The Ministry of Defence have stated that with the UAV induction, the recce and surveillance capability both by day and night would improve significantly. The Ministry of Defence have stated that there is a programme for all weather surveillance and Electronic Warfare (EW) which is expected to be carried out in the Tenth Plan period.

Airborne Warning and Control System (AWACS)

50. The Ministry of Defence have stated that the technology for the AWACS as formulated by the LAP is not readily available from any single source and therefore entails protracted discussions/negotiations with a number of vendors. The Ministry of Defence have stated that discussions are on with the vendors and contract would be signed soon.

Flight Refueling Aircraft (FRA)

51. The Ministry of Defence have stated that the acquisition of Flight Refueling Aircraft (FRA) involves a number of vendors. The negotiations for this are in the final stage and are likely to be completed during this year itself *i.e.* by 2000.

Electronic Warfare Equipment (EW)

52. The Ministry of Defence have stated that acquisition of various EW systems through indigenous development/outright purchase to increase the survivability of our aircraft is a thrust area. The programme includes providing minimal self protection suite of Radar Warning Receiver (RWR) and Counter Measure Dispensing System (CMDS). The indigenous production of RWR is going on and purchase of a large quantity of CMDS is pending negotiations.

53. The Committee during their on-the-spot study visit to Dwarka, Jam Nagar and Kutch regions observed that early warning equipment was very much required in the Kutch and Saurashtra sectors to ignite quick reaction to air intrusion in these sectors. Also there was a felt need to induct 3-Dimension Radars which have range, height and height finding advantage.

54. The Committee have been told that the IAF has been asking for the AWACS and FRA for almost a decade. We understand that negotiations are still going on (or procuring these systems. The Defence representatives have said that the technology for AWACS as formulated by the IAF is not available with any single vendor. Therefore, lengthy negotiations have to be held with a number of vendors. The Committee feel that the Force Multipliers are a key factor in the modernisation process and their timely acquisition and induction are very essential for enhancing the combat capability of the Air Force. The Government have not explained to the Committee why these systems had not been acquired earlier when the Air Force had demanded it ten years ago. Negotiations cannot go on endlessly. The Committee feel that the unusually long delay in the Governmental decision making process is taking place in the matter of all major acquisition projects relating to the defence. The Committee desire that Ministry of Defence should urgently process all the pending proposals submitted by the Defence Forces posted at the border areas, particularly Jam Nagar, Bhuj and Naliya where the Study Group of the Standing Committee on Defence visited.

IV. Induction of Air Defence and other Ground based Systems

55. The two main aspects of our defence are detection and destruction of the enemy aircraft. The air defence system is facing obsolescence. The Ministry of Defence have stated that in order to give ground support to its combat Squadrons there is a need to update and induct new equipment in the IAF. The equipment proposed to be acquired include Air Defence Radars (ADR) , Aerostat Surveillance Systems, Integrated Command and Control System (ICCS) and Air Defence (AD) Missiles.

(a) AD Radars

56. The Ministry of Defence have stated that the medium powered radars available with the IAF are to be phased out by the end of the Eleventh Plan and would require replacement as they have already become obsolescent. The Ministry of Defence had planned to acquire Low Level Transportable Radars (LLTRs) during the Ninth Plan in 1998. Since there have been delays in evaluation of the radars, the radars are likely to be acquired in the beginning of Tenth Plan. The Ministry of Defence have also stated that acquisition of three light weight low level radars for deployment in the mountains has been delayed.

(b) Aerostat Surveillance System

57. The Ministry of Defence have stated that evaluation and technical discussions for the acquisition of Aerostat Surveillance System are over. The commercial negotiations are to take place. The system is to be inducted in the Tenth Plan period.

(c) Integrated Command and Control System (ICCS)

58. The Ministry of Defence have stated that the acquisition of the ICCS Systems is under active consideration of the Government. The Ministry of Defence have stated that study and evaluation of the technical proposals are in progress.

(d) Air Defence (AD) Missiles

59. It has been stated by the Ministry of Defence that it plans to upgrade and refurbish all the Pechora class Air Defence (AD) Missiles in the Tenth Plan. In the event of phasing out of these missiles in the Eleventh Plan AKASH MK-II would take over. The induction of AKASH is planned during the next ten years to match the phasing out of the various AD Missiles. TRISHUL is also planned to be inducted into the IAF. The Ministry of Defence have stated that the development programme of AKASH and TRISHUL Missiles have been considerably delayed and it is hoped that they will be inducted in the planned time frame.

60. During a recent visit of the Standing Committee on Defence to Air Force Stations at Jam Nagar, Bhuj and Naliya, the Defence authorities projected that there has been a long standing demand for modern equipment and weapons like Low Level Radars, Surface to Air Guided Weapons, Computer Aided Command and Control Communication Systems and Protection System from SSM attack from the adversary.

61. The Committee note that the delay has affected the ground support systems too. These systems of the IAF need to be upgraded simultaneously with the acquisition of new aircraft. Acquisition of vital equipment required for surveillance at borders such as Light Weight Low Level Radars for deployment in the mountains has been

delayed. The Committee are very unhappy to note that the induction of Low Level Transportable Radars (LLTRs) which was planned to be manufactured during the Ninth Plan in 1998 has been delayed due to delay in evaluation of the Radars. It is difficult to understand why the evaluation of radar has taken such a long time. No explanation has been offered by the Government in this regard. These Transportable Radars may be of immense importance in modern warfare. The Committee desire that the Ministry should explain as to why the evaluation has taken such a long time.

62. Surface to air missiles play a crucial role in the air defence. The Committee have been told that the Russian missiles in the inventory of air force are old and need replacement. In order to put in place an effective air defence, more capable, lethal and potent surface-to-air missiles are needed.

63. As per the plan presented before the Committee in regard to the missiles, the Pechora class of missiles will be upgraded during the tenth plan and eventually replaced during the eleventh plan by Akash missiles. Thus, Akash missiles will be inducted only some time during the Eleventh Plan. It has been admitted by the Ministry that the missile programme has been considerably delayed. There is as yet no firm commitment about the probable time when the induction will take place. This is yet another instance where the indigenous development of weapon systems become a victim of plans without any definite time frame.

64. The Committee desire that the development and production of Akash and Trishul missiles should be fast-tracked so that they could be inducted sooner. The time frame drawn up by the Air Force at present is too long.

65. The Committee recommend to the Government that adequate funds should be released for modern equipments and weapons like Low Level Radars, Surface to Air Guided Weapons, Computer Aided Command and Control Communication Systems and Protection System from SSM attack.

V. Training and Infrastructure

66. During the tenth plan the aim of the Air Force is to stabilise *and* establish sound training pattern for the air and ground crew. To achieve this object there is a proposal to upgrade the base at Bidar and establish an air force engineering college as well as upgrade the existing facilities at the air force technical college. Upgradation of most of the airbases and creation of additional ranges for training are also necessary to improve the quality of training of the pilots as well as the infrastructure. There scenes to be a proposal to establish some airbases in the south to protect the southern peninsula.

Acquisition of Advanced Jet Trainer (AJT)

67. The Ministry of Defence during evidence while giving an update on the acquisition of AJT had stated that the acquisition has taken a long time and there are problems which still persist. The Price Negotiations Committee (PNC) have started their work and they are going into the details of the pricing of the components, subcomponents, and sub-sub-components of the AJT. The Ministry of Defence stated that once these details are known to them they can come to a final decision something in three weeks. They also stated that once the pricing details are obtained from British Aerospace (BAES), within a month or two the negotiations will be finalised and the contract is expected to be signed in January or February 2001.

68. The Ministry of Defence have further informed that the delivery of the aircraft will commence between 24 and 36 month's after signing the contract. This time frame is due to the fact that new aircraft is to be manufactured. The Hawk being manufactured at present is to specific order by various other customer Airforces whose requirements of on-borne systems/components are different from ours.

69. During evidence the concerned Air Marshal stated as under :

"There is a serious problem with the Hawk in its present configuration or, what we call. Standard of Preparation. This aircraft has some American components. The problem is the American equipment which would be prone to sanctions if it goes in the IAF. We want to avoid that. We are going in for customer furnished replacement equipment".

70. The Ministry further stated during evidence that:

"Initial lot of aircraft are going to come from England. The bulk of the IAF needs are going to be manufactured in India, thereafter. The advantage of this Transfer of Technology (ToT) is that if we feel some components are getting obsolete we can upgrade this aircraft even after ten years. And that there is no problem of obsolescence".

Training Establishments

71. The Ministry of Defence have stated that the IAF's aim is to stabilise and establish sound training patterns for the air and ground crew by the end of the Tenth Plan. They have stated that they plan to make the AJT Training infrastructure as the trend setter and role model in the IAF. The training base at Bidar is to be upgraded to accept the AJT for which the planning process has already started. Additional infrastructure improvements are also under consideration at Jallahalli and Tambaram where airmen are being trained.

Infrastructure Improvement and Ranges

72. The Ministry have projects for computerising the logistics management which is to be completed in the current plan. Similar improvements are proposed for communication between Air and Command Headquarters like establishing optical fibre links and satcom. Three additional Air to Ground Ranges are proposed to be established

and facilities at the existing Ranges are to be further modernised. There is also a move to accelerate the progress of the development of the Range connected with the AJT.

73. The Committee during their on-the-spot Study visit to Air Stations at Jam Nagar, Bhuj and Naliya were apprised of the problems being faced by these Stations in terms of the inadequate facilities and the infrastructure present there like the need for Blast Pen (Hardened Shelters) for Aircraft, Modernisation of Sarmat range of Air Force Station, Jam Nagar, establishment of reverse osmosis water filtration plant to eliminate water problems in the area.

74. The Committee feel that the existing training facilities need to be augmented substantially. Although there are concrete proposals for upgrading airbases, establishing an engineering college etc. during the coming plan there is no firm assurance from the Government that there would be a steady availability of resources. The Committee want the Government to assure that funds would be made available for the plans relating to training and infrastructure.

75. The Committee note with concern that the Advanced Jet Trainer (AJT) has not yet been acquired. Although shortlisting of the two aircraft, viz. the Hawk and Alphajet was done sometime in 1986, the Government is still in the process of procuring one of them. The Committee has been informed that at present the Price Negotiations Committee is actively engaged in studying the details of the pricing of the components, sub-components of the AJT. The negotiations are likely to be completed soon and the contract is expected to be signed in January or February, 2001. The Ministry of Defence have informed that the delivery of the aircraft will commence between 24 and 36 months after signing the contract. The time frame set is due to the fact that the aircraft is going to be newly manufactured and to specific order for systems and components. The Ministry have laid emphasis on the fact that the aircraft has some American components which are likely to be replaced. There is a proposal for transfer of technology which will ensure that there is no problem of obsolescence.

76. A detailed report was made by the Standing Committee on Defence on AJT during the Twelfth Lok Sabha in which the Committee had expressed its serious displeasure about the way in which the whole project was dealt with by the Government all these years. Even after the loss of lives of a large number of young pilots and aircraft the Government have never shown any sense of urgency in procuring the trainer aircraft. It was known that MiG-21 was quite unsuitable for stage III training, yet this aircraft continues to be used for this stage of training. Even if the agreement is signed in January 2001, the actual delivery will take place after two to three years from the date of agreement. Thus the AJT is not likely to be available for another three years. It has been said that an interim arrangement is being contemplated of which no details are available to the Committee.

77. The Government has, through various papers supplied to the Committee, tried to explain the delay in the acquisition of AJT. The Committee find that even

after shortlisting the Hawk and Alphajet as far back as in 1986, periodic evaluation of other aircraft from other countries was also done. But all along the Hawk and Alphajet remained shortlisted. It has taken the Government almost 15 years to move into the stage of agreement. It is beyond comprehension that a trainer aircraft which is characterised as an urgently required item by the Air Force could not be acquired even after 15 years of their shortlisting.

78. The Committee recommend that the time frame now laid down for acquisition of AJT is monitored and firmly adhered to and suitable arrangements are made before commencement of delivery in a period of 24 to 36 months, in the event of the phasing out of MiG-21 and Hunter trainers and until that time the new trainer aircraft are made available to the Air Force.

79. The Committee note that the Ministry of Defence are stated to be making efforts to improve infrastructure and Ranges related to training and that additional facilities are being developed to accommodate the AJT as the new fighter trainer aircraft. The Committee hope that these changes will be carried out speedily to keep pace with the acquisition and use of AJT in the fighter pilot training.

80. The Committee are in agreement with the assessment of the Air Force that the Southern peninsula is inadequately protected and therefore some airbases should be established in the south both for defensive and offensive air operations. The Committee desire that the Government should take immediate decision in this regard and start the work.

81. The Committee also recommend that the long standing demands of the IAF Personnel posted in the tough terrain in the Rann of Kutch and nearby area should be met to provide all facilities such as adequate housing, shelters for men and aircraft, brick fencing of the Air Force Stations and proper sea water filtration plants. The Ranges should also be modernised alongwith Control Towers which is vital for protection of our interest in this strategically important sector.

VI. Aerospace Command

82. As stated by the Ministry, it has become essential to establish an aerospace command and extend its frontiers to space. It has been proposed to impart a defence orientation to our successful space programme by including surveillance sensors communication and navigation satellites. Air Headquarters are in the process of conceptualising the use of space and various doctrines for establishment of aerospace command in the Tenth Plan.

83. The Committee find that the Air Force is in the process of conceptualising the aerospace command. The Air Force visualises its role as central to the space

doctrine, as the Air Force is the 'natural inheritor of the space medium'. The Committee agree that in the context of the militarisation of space, a defence orientation to our space programme is almost inevitable.

84. The concept of aerospace command was however, evolved in other parts of the world nearly a decade ago. But the Air Force proposes to undertake this study within the next five years. It is also said that the work during this phase would largely be exploratory, the purpose being to generate possible options and concepts.

85. While appreciating the proposal to undertake an exercise to evolve options and concepts of aerospace command the Committee desire that this exercise may be fast tracked. We are living in a world where the contours of the frontiers of conflict are changing fast and there is greater interfacing between science and war technology. Whether in the matter of acquisition of new weapon systems or in the matter of developing the designs or adapting or internalising new concepts there is the usual delay here which often renders the projects outdated. Since this has been the experience, the Committee would like to know whether the Government are interested in quick result in this area. The Committee want to be apprised of the steps being taken and the time frame fixed in this regard.

CHAPTER III

CONCLUSION

86. The Committee have in their foregoing pages, tried to take a close look at the strength and weaknesses of the Air Force, the Plan of modernisation, its threat perception, the inadequacies of the decision making structure and other related matters. The Committee have made observations and comments on the above aspect keeping in view the overall need to maintain confidentiality about these matters.

87. There is a need for reassessment of the role of the Air Force. From a supportive position, it has assumed an independent role. When the Plans for modernisation of the Air Force are made this crucial fact has to be borne in mind.

88. The Committee have been apprised of the perception of the Government on the nature and gravity of the threat India faces from various sources at present and in the near future. It is true that in the assessment of the threat potential, in the preparation of the programme of weaponisation and the overall strategic thinking and even in the general military posturing serious geo-political considerations come in, which can have a moderating influence on the defence build up. This has been alluded to by the Defence Secretary in his statement before the Committee. But at the same time India should not close its eyes to the admittedly massive modernisation of the war machine taking place in its neighbourhood. India has faced aggressions as many as four times during the past four decades. These aggressions should caution us against a complacent approach in matters of Defence. To build our Defence on the basis of the perceived restraint of our adversaries is to needlessly expose the country to risk. While modernising the Air Force and augmenting its strength, this factor should be kept in mind.

NEW DELHI;
December 8, 2000
Agrahayana 17, 1922 (Saka)

DR. LAXMINARAYAN PANDEY
Chairman
Standing Committee on Defence

**MINUTES OF THE ELEVENTH SITTING OF THE STANDING COMMITTEE
ON DEFENCE (1999-2000)**

The Committee sat on Monday, the 15th May, 2000 from 1500 hrs. to 1645 hrs.

PRESENT

Dr. Laxminarayan Pandey — *Chairman*

MEMBERS

Lok Sabha

2. Shri S. Ajaya Kumar
3. Col. (Retd.) Sona Ram Choudhary
4. Smt. Sangeeta Kumari Singh Deo
5. Shri Jarbom Gamlin
6. Shri Raghuvir Singh Kaushal
7. Shri Chandrakant Khaire
8. Shri K.E. Krishnamurthy
9. Shri A. Krishnaswami
10. Shri Hannan Mollah
11. Prof. Rasa Singh Rawat
12. Shri Madhavrao Scindia
13. Dr. Col. (Retd.) Dhani Ram Shandil
14. Dr. Jaswant Singh Yadav
15. Shri Vijayendra Pal Singh Badnore

Rajya Sabha

16. Shri Suresh Kalmadi
17. Shri Adhik Shirodkar
18. Dr. Raja Ramanna
19. Shri Shanker Roy Chowdhury
20. Dr. Y. Lakshmi Prasad
21. Smt. Ambika Soni
22. Shri Nilotpal Basu

SECRETARIAT

1. Shri Ram Autar Ram — *Director*
2. Shri K.D. Muley — *Assistant Director*

Representatives of Ministry of Defence

1. Shri T.R. Prasad, Defence Secretary
2. Shri P.R. Sivasubramanian, FA (DS)
3. Shri S.K. Misra, AS (M)
4. Shri P.K. Mishra, JS (Air)

Department of Defence Production & Supplies

1. Shri Dharendra Singh — Addl. Secretary (DP&S)

Department of Defence Research and Development Organisation

1. Maj. Gen. R. Swaminathan — CCR&D(R)

Air Headquarters

1. Air Mshl. P.S. Brar — PVSM, AVSM & Bar, VM, ADC,
VCAS
2. AVM S.C. Rastogi — VSM, ACAS (Plans)

2. The Chairman welcomed the Defence Secretary and his colleagues to the sitting of the Committee and invited their attention to the Direction 55 and 58 of the Directions by the Speaker, *Lok Sabha*.

3. The representatives of the Ministry of Defence then made a presentation before the Committee on the Modernisation of the Indian Air Force.

4. The Members of the Committee then put forward queries to the representatives of the Ministry of Defence. The representatives of the Ministry of Defence resolved the various queries of the Members.

5. A verbatim record of the proceedings was kept.

The Committee then adjourned.

**MINUTES OF THE THIRTEENTH SITTING OF THE STANDING
COMMITTEE ON DEFENCE (1999-2000)**

The Committee sat on Thursday, the 5th October, 2000 from 1500 hrs. to 1730 hrs.

PRESENT

Dr. Laxminarayan Pandey —*Chairman*

MEMBERS

Lok Sabha

2. Shri S. Ajaya Kumar
3. Shri S. Bangarappa
4. Col. (Retd.) Sona Ram Choudhary
5. Smt. Sangeeta Kumari Singh Deo
6. Shri Jarborn Gamlin
7. Shri Mansoor Ali Khan
8. Shri K.E. Krishnamurthy
9. Shri Ashok N. Mohol
10. Shri Hannan Mollah
11. Shri Rajendrasinh Rana
12. Prof. Rasa Singh Rawat
13. Shri A.P. Jithender Reddy
14. Shri Ramjiwan Singh
15. Dr. Jaswant Singh Yadav
16. Dr.(Smt.) Sudha Yadav
17. Smt. Ranee Narah

Rajya Sabha

18. Shri Kapil Sibal
19. Shri Adhik Shirodkar
20. Dr. Y. Lakshmi Prasad
21. Sardar Gurcharan Singh Tohra
22. Shri T.N. Chaturvedi
23. Smt. Ambika Soni
24. Shri Nilotpal Basu
25. Shri Kripal Parmar

SECRETARIAT

1. Shri Ram Autar Ram — Director
2. Shri K.D. Muley — Assistant Director

Representatives of Ministry of Defence Ministry of Defence

- | | | |
|-----------------------------|---|-------------------|
| 1. Shri T.R. Prasad | - | Defence Secretary |
| 2. Shri S.K. Misra | - | AS (M) |
| 3. Shri P.R. Sivasubramania | - | FA (DS) |
| 4. Shri P.K. Misra | - | JS (Air) |
| 5. Shri Anil Kumar | - | Dir (Air-II) |

DP&S

- | | | |
|-------------------------|---|------------------------|
| 1. Shri Ravindra Gupta | - | Secretary (DP&S) |
| 2. Shri Dharendra Singh | - | Addl. Secretary (DP&S) |

DRDO

- | | | |
|----------------------|---|-----------------------|
| 1. Shri K. Santhanam | - | Chief Adviser (Tech.) |
| 2. Shri Swaminathan | - | CCR&D® |

Air Hqrs

- | | | |
|----------------------------------|---|--------------|
| 1. Air Marshal S.G. Inamdar | - | DCAS |
| 2. Air Vice Marshal S.C. Rastogi | - | ACAS (Plans) |
| 3. Air Cmde P. Mehra | - | DASR |
| 4. WR. Cdr. A.Verma | - | DDASR (F) |

2. At the outset, the Chairman welcomed the Members of the Standing Committee on Defence and the Defence Secretary and his colleagues to the sitting of the Committee on the subject 'Modernisation of the Indian Air Force'.

3. He then read out Direction 55 and 58 of the Directions by the Speaker, Lok Sabha. The Ministry of Defence then made a brief presentation on the subject. The Committee then took evidence of the representatives of the Ministry of Defence on the various aspects of the subject 'Modernisation of the Indian Air Force'. The representatives of the Ministry explained and elaborated the queries from the Members.

4. A verbatim record of the proceedings was kept.

(The witnesses then withdrew)

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|----|----|----|----|----|
| 5. | ** | ** | ** | ** |
| 6. | ** | ** | ** | ** |

The Committee then adjourned.

**MINUTES OF THE FIFTEENTH SITTING OF THE STANDING
COMMITTEE ON DEFENCE (1999-2000) .**

The Committee sat on Friday, the 8th December, 2000 from 1500 hrs. to 1630 hrs.

PRESENT

Dr. Laxminarayan Pandey —*Chairman*

MEMBERS

Lok Sabha

2. Col. (Retd.) Sona Ram Choudhary
3. Smt. Sangeeta Kumari Singh Deo
4. Shri Jarborn Gamlin
5. Shri Mansoor Ali Khan
6. Shri A. Krishnaswami
7. Shri Hannan Mollah
8. Shri Cajendra Singh Rajukhedi
9. Prof. Rasa Singh Rawat
10. Shri A.P. Jithender Reddy
11. Shri Madhavrao Scindia
12. Dr. Col. (Retd.) Dhani Ram Shandil
13. Shri C. Sreenivasan
14. Dr. Jaswant Singh Yadav
15. Dr. (Smt.) Sudha Yadav
16. Shri Vijayendra Pal Singh Badnore
17. Smt. Ranee Narah

Rajya Sabha

18. Shri Suresh Kalmadi
19. Dr. Y. Lakshmi Prasad
20. Shri Kripal Parmar

SECRETARIAT

1. Dr. A.K. Pandey — Additional Secretary
2. Shri P.D.T. Achary — Joint Secretary
3. Shri Ram Autar Ram — Director
4. Shri K. D. Muley — Assistant Director

2. The Committee took up for consideration the Draft Seventh Report on the subject 'Modernisation of the Indian Air Force'. The Chairman invited Members to offer their suggestions for incorporation in the Draft Reports. The Members suggested some changes and desired that those be suitably incorporated into the body of the Report. The report was then adopted.

3. ** ** ** **

4. ** ** ** **

5. The Committee authorised the Chairman to finalise the Reports in the light of verbal and consequential changes and for presentation of the Reports to Parliament.

The Committee then adjourned.