

26

**STANDING COMMITTEE ON DEFENCE
(2016-17)**

(SIXTEENTH LOK SABHA)

MINISTRY OF DEFENCE

[Action Taken by the Government on the Observations/Recommendations contained in the Twenty First Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2016-17) of the Ministry on Defence on Ordnance Factory Board, Defence Research and Development Organisation, Ex-Servicemen Contributory Health Scheme, Directorate General of Quality Assurance and National Cadet Corps (Demand No. 20)']

TWENTY SIXTH REPORT



LOK SABHA SECRETARIAT

NEW DELHI

March, 2017/ Phalguna, 1938 (Saka)

TWENTY SIXTH REPORT

**STANDING COMMITTEE ON DEFENCE
(2016-17)**

(SIXTEENTH LOK SABHA)

MINISTRY OF DEFENCE

[Action Taken by the Government on the Observations/Recommendations contained in the Twenty First Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2016-17) of the Ministry on Defence on Ordnance Factory Board, Defence Research and Development Organisation, Ex-Servicemen Contributory Health Scheme, Directorate General Quality Assurance and National Cadet Corps (Demand No. 20)']

Presented to Lok Sabha on 09.03.2017

Laid in Rajya Sabha on



LOK SABHA SECRETARIAT

NEW DELHI

March, 2017/ Phalguna, 1938 (Saka)

CONTENTS

	PAGE
COMPOSITION OF THE COMMITTEE (2016-17)	
INTRODUCTION	
CHAPTER I Report.....	
CHAPTER II (A) Observations/Recommendations which have been accepted by the Government.....	
(B) Observations/Recommendations which have been accepted by the Government and to be commented upon.....	
CHAPTER III Observations/Recommendations which the Committee do not desire to pursue in view of the replies of the Government	
CHAPTER IV Observations/Recommendations in respect of which Replies of the Government have not been accepted by the Committee which require reiteration and commented upon.....	
CHAPTER V Observations/Recommendations in respect of which Government have furnished interim replies/ replies awaited.....	

APPENDICES

I	Minutes of the sixth sitting of the Standing Committee on Defence (2016-17) held on 16.01.2017	63
II	Analysis of Action Taken by the Government on the Observations/Recommendations contained in the Twenty First Report (Sixteenth Lok Sabha) of the Standing Committee on Defence (2016-17).....	65

COMPOSITION OF THE STANDING COMMITTEE ON DEFENCE (2016-17)

Maj Gen B C Khanduri, AVSM (Retd)

-

Chairperson

Lok Sabha

2. Shri Dipak Adhikari (Dev)
3. Shri Suresh C Angadi
4. Shri Shrirang Appa Barne
5. Shri Thupstan Chhewang
6. Col Sonaram Choudhary(Retd)
7. Shri H D Devegowda
8. Shri Sher Singh Ghubaya
- 9.* Shri B. Senguttuvan
10. Dr Murli Manohar Joshi
11. Km Shobha Karandlaje
12. Shri Vinod Khanna
13. Dr Mriganka Mahato
14. Shri Rodmal Nagar
15. Shri A P Jithender Reddy
16. Shri Ch Malla Reddy
17. Shri Rajeev Shankarrao Satav
18. Smt Mala Rajya Lakshmi Shah
- 19.# Shri Partha Pratim Ray
20. Shri Dharambir Singh
21. Smt Pratyusha Rajeshwari Singh
- 22.** Shri G Hari
- 23.\$ Capt Amarinder Singh

Rajya Sabha

1. Shri K R Arjunan
2. Shri A U Singh Deo
3. Shri Harivansh
- 4.^ Shri Rajeev Chandrasekhar
5. Shri Madhusudan Mistry
6. Shri Praful Patel
7. Shri Sanjay Raut
8. Dr Abhishek Manu Singhvi
9. Smt Ambika Soni
10. Dr Subramanian Swamy
- 11.@ Shri Om Prakash Mathur

* Nominated w.e.f on 13.02.2017

** Ceased to be Member of the Committee w.e.f. 13.02.2017

\$ Ceased to be Member of the Committee w.e.f. 23.11.2016

Nominated w.e.f. 02.01.2017

@ Ceased to be Member of the Committee w.e.f. 10.10.2016

^ Nominated w.e.f. 10.10.2016

SECRETARIAT

1	Smt. Kalpana Sharma	-	Joint Secretary
	2 Shri T.G. Chandrasekhar	-	Director
	3 Smt. Jyochnamayi Sinha	-	Additional Director
4	Shri Rahul Singh	-	Under Secretary
5	Shri Harish Chandra	-	Executive Assistant

INTRODUCTION

I, the Chairperson of the Standing Committee on Defence (2016-17), having been authorised by the Committee, present this Twenty-Sixth report on Action Taken by the Government on the Observations/Recommendations contained in the Twenty First Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2016-17) of the Ministry on Defence on Ordnance Factory Board, Defence Research and Development Organisation, Ex-Servicemen Contributory Health Scheme, Directorate General Quality Assurance and National Cadet Corps (Demand No. 20)'.

2. The Twenty First Report was presented to Lok Sabha / laid on the Table of Rajya Sabha on 03 May, 2016. The Report contained 50 Observations/Recommendations. The Action Taken Notes on the Observations/Recommendations were received from the Ministry of Defence in November, 2016.

3. The Committee considered and adopted this Report at their Sitting held on 16 January, 2017.

4. An analysis of action taken by the Government on the Observations/Recommendations contained in the Twenty First Report of the Committee is given in Appendix II.

5. For facility of reference and convenience, Observations/Recommendations of the Committee have been printed in bold letters in the Report.

**New Delhi;
1 February, 2017
12 Magha, 1938 (Saka)**

**Maj Gen B C Khanduri, AVSM (Retd),
Chairperson,
Standing Committee on Defence**

REPORT

CHAPTER I

This report of the Standing Committee on Defence deals with action taken by the Government on the observations/recommendations contained in the Twenty First Report (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2016-17 on Ordnance Factory Board, Defence Research and Development Organisation, Ex-Servicemen Contributory Health Scheme, Directorate General Quality Assurance and National Cadet Corps (Demand No. 20)' which was presented to Lok Sabha and laid in Rajya Sabha on 03 May, 2016.

2. The Committee's Twenty First Report (16th Lok Sabha) contained 50 observations/recommendations on the following aspects:-

Para No.	Subject
<u>ORDNANCE FACTORY BOARD</u>	
1	Budgetary Provisions
2	Delays in Projects undertaken by Ordnance Factories Board
3	Under Spending on Modernization of infrastructure
4	Research and Development (R&D) Activities
5	Manpower Shortage in Ordnance Factories
6	Restructuring of Ordnance Factories
<u>DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION</u>	
7, 8, 9, 10, 11, 12	Budgetary provisions for Defence Research and Development
13, 14	Need to Prepare a Technological Road Map
15, 16, 17	Manpower in DRDO
18, 19	Projects abandoned/closed by DRDO
20, 21, 22, 23, 24	Delays in Projects
25, 26	Kaveri Engine
27	Indigenisation of Research and Development Activities
28, 29	Quality Control
30, 31	Public Private Partnership
32, 33, 34, 35	Collaboration with universities/academic institutions
<u>EX-SERVICEMEN CONTRIBUTORY HEALTH SCHEME(ECHS)</u>	
36, 37, 38, 39, 40, 41, 42, 43	Ex-Servicemen Contributory Health Scheme
44, 45, 46, 47	Directorate General Quality Assurance
48, 49, 50	National Cadet Corps

3. Action Taken Replies have been received from the Government in respect of all the observations/recommendations contained in the Report. The replies have been examined and the same have been categorised as follows:-

(a) Observations/Recommendations which have been accepted by the Government:

Para Nos. 3, 5, 20, 25, 28, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41,42, 46, 47, 48, 49 and 50

(22 Recommendations)

These may be included in Chapter II of the Draft Report.

(b) Observations/Recommendations which have been accepted by the Government and to be commented upon:

Para Nos. 4, 6, 7, 8, 9, 10, 11, 16, 17, 18, 19, 21, 22, 23, 24, 26, 27 and 29

(18 Recommendations)

These may be included in Chapter II of the Draft Report.

(ii) Observations/Recommendations which the Committee do not desire to pursue in view of the replies received from the Government:

Para Nos. Nil

(00 Recommendations)

These may be included in Chapter III of the Draft Report.

(iii) Observations/Recommendations in respect of which replies of Government have not been accepted by the Committee which require reiteration and commented upon:

Para Nos. 1, 2, 12, 13, 14, 15, 30, 44 and 45

(09 Recommendations)

This may be included in Chapter IV of the Draft Report.

(iv) Observations/Recommendations in respect of which Government have furnished interim replies/ replies awaited:

Para No. 43

(01 Recommendation)

4. The Committee desire that the Ministry's response to the comments made in Chapter I of this Report be furnished to them at the earliest and in any case not later than six months of the presentation of this Report.

A. Budgetary Provisions

Recommendation (Para No.1)

5. The Committee had recommended as under: -

'The allocation at BE 2015-16 for Directorate General of Ordnance Factories was Rs. 3,644.30 crore. This has been reduced to Rs. 1,752.53 crore at RE stage. The reduction is Rs. 1,891.77 crore. The BE for the year 2016-17 is Rs. 1,953.29 crore. There is Rs. 1,691.01 crore less allocation during the year 2016-17 in comparison to BE 2015-16. In their earlier reports, the Committee have been expressing their concern over wide variations between the projections and actual allocations at the stage of BE and RE. The Committee in their 9th Report had desired that deduction from the Budget Estimate be kept to minimum and only on account of very valid justifiable reasons. The Committee are apprised that due to constraints of funds, Ordnance Factories Board was directed to prioritize its Capital fund requirement. In their 7th Report on Action taken by the Government on the recommendations contained in the 9th Report on Demands for Grants (2015-16) on Ordnance Factories and DRDO, the Committee had observed that the allocations for Ordnance Factories Board were sanctioned late, thereby compelling it to cut short its Committed Liabilities and thereby falling short of the financial targets. This further led to application of cut by the Ministry of Finance. Therefore, the Committee had desired that the timely allocations at BE stage should be provided. During 2015-16, Ordnance Factories Board was considering to increase the supplies in excess of Rs. 11,266 crore on the basis of requirements of Armed Forces. Ordnance Factories Board required an additional budget of Rs. 1,321 crore for an increased supply of Rs. 2,271 crore. However, at RE stage during 2015-16, there was reduction of Rs. 1,891.77 crore. This is a sorry state of affair. The Committee also observe that there is large scale deficiency of equipment in Army due to inadequate production capacity of Ordnance Factories Board. Therefore, there is a strong need to ramp up the capacity of Ordnance Factories Board. The value of production during the year 2015-16 up to Feb, 2016 is Rs. 10,925 crore against the target of Rs. 13,514 crore. The value of production during the year 2015-16 is higher in comparison to that in the year 2012-13, 2013-14 and 2014-15. Against the planned supplies of Rs. 64,870 crore, the actual supplies made during first four years of 12th plan is Rs. 45,387 crore. In view of the above deficiency of Ordnance Factories Board, need to further enhance its capacity to arrest shortage of ammunition and Vehicles of Army, the Committee are of the strong view that due importance should be given to Ordnance Factories Board and adequate budgetary provisions should be provided at the RE stage.'

6. The Ministry in its Action Taken Reply has stated as under:-

'The recommendations of the Committee are noted and it is assured that projections/requirements of the Ordnance Factories will be forwarded to Ministry of Finance for consideration at RE stage. In case the funds are not provided as per projections by the Ministry of Finance, the available resources will be optimally utilized based on prioritized requirements of Ordnance Factories.'

7. **The Committee while examining the Demands for Grants 2015-16 and 2016-17 had observed that due to delayed sanction of allocations and cuts imposed at RE stage, the Ordnance Factories Board was compelled to cut short its Committed Liabilities which resulted in shortfalls in meeting the financial targets. Ordnance Factories Board was considering to increase the supplies on the basis of the requirements of the Armed Forces. As a consequence of the cut applied at RE stage and mismatch between the projections and actual allocations, Ordnance Factories Board could not produce the equipment as per the orders placed by Army. Therefore, the Committee had desired that there is a need to further enhance its capacity to arrest shortage of ammunition and vehicles and adequate budgetary provision should be provided at RE stage. The Committee are not happy with the routine nature of reply which merely indicates that the projections/requirements of Ordnance Factories Board will be forwarded to Ministry of Finance at RE stage. In case, the funds are not provided, the available resources will be optimally utilised based on prioritized requirements of Ordnance Factories. This is reflective of the helplessness of Ordnance Factories. There is no question that the problem of shortage of ammunition with the Armed Forces cannot be minimised with this reduced allocations. Therefore, the Committee once again emphasise that adequate budgetary allocations should be provided to the Ordnance Factories Board.**

B. Delays in Projects undertaken by Ordnance Factories Board

Recommendation (Para No. 2)

8. The Committee had recommended as under: -

'The Committee note that there is long delay in completion of projects related to T-72 variants, engines for Armoured Vehicles, spares for T-72 and T-90 tanks, Akash Booster and Sustainer, large caliber weapons, HMX Plant, Pinaka, Ammonium Percolate, MPV and 125 mm FSAPDS. The delay ranges from 3 to 9 years. The major reasons for delay of these projects are due to delay in procurement of plant and machinery and delay in completion of civil works by MES. Against the required investment of Rs.2,394 Cr., the investment made till **February, 2016 is Rs.683.55 Cr. The Committee are concerned to note that Rs.1,710.45 Cr. are yet to be allocated.** The important projects have already been delayed considerably. During the course of deliberations with the representatives of Army and Ministry of Defence, the Committee were apprised that due to inadequate production capacity, there is a shortage of Armoured Vehicles with the Army. During examination of Demands for Grants in the year 2015-16, the Committee had observed that due to non-availability of funds as well as absence of commensurate load from Army, expenditure for augmentation of capacity for manufacturing of T-90 tanks from 100 to 140 Nos. was prioritized. The Committee are concerned to note that all this important items approved are nowhere near completion. The construction work of Ordnance Factory at Nalanda has also been carried forward to 12th Plan though it was initiated during the 10th Plan. The Committee also note that Ordnance Factories depend to a large extent on Military Engineering Services (MES) for execution of civil works related to their projects. Delay in completion of Civil Works by MES is one of the major reasons affecting the timely completion of the projects. The Committee view this delay very seriously which is affecting the operational preparedness of Army and other consumers of Ordnance Factories. The Committee feel that proper planning at the initial stage in consultation with all the stakeholders should be undertaken thoroughly deliberating upon the negative factors causing delays and a comprehensive strategy chalked out for timely completion of the projects within a realistic time-frame. The Committee desire that action taken in this regard may be communicated to them.'

9. The Ministry in its Action Taken Reply has stated as under:-

'The sanctioned investment, expenditure incurred till March 2016 and future plan of expenditure in respect of Projects related to T-72 variants, engines for armored vehicle, spares for T-72 & T-90 tanks, Augmentation of production capacity of T-90 Tanks, Large Caliber Weapons, HMX Plant are enclosed as **Annexure – Proj.**

Major reasons for delay in procurement of P&M are:

Tendering Stage:

- Limited vendor base since majority of the machine requirement is for customized SPMs/tooled up machine and very few offers are received in spite of repeated

Tender Opening Date (TOD) extensions to avoid Single Offers and promote competition.

- Global Tenders for high value and high-tech Plant & Machinery [P&M] (like Forging Plant, Chemical Plants, Metallurgical Plants etc.) and because of financial crisis in Europe during 2011-2013, some of the European suppliers failed to respond to Tender Enquiries (TEs) leading to retendering the cases.
- Till 2013, there was no provision for advance payment. Hence many P&M suppliers, particularly in case of high value P&M did not participate in TEs.
- Restrictions of export licence in respect of European countries, mainly Germany, Italy by their respective Government for supplying P&M to OFB.

Project of Nalanda:

The civil works for O F Nalanda initiated in 10th Plan was shifted to 12th Plan due to following circumstances:-

- ❖ Cancellation of Transfer of Technology (TOT) contract for Bi-Modular Charge System (BMCS) Plant with M/s Denel, South Africa in 2003, firm barred in June 2005. Technology absorption adversely effected.
- ❖ Suspension of project activities during June 05 to July 06 led to retendering of BMCS Process plants.
- ❖ Supply order on M/s IMI, Israel for supply of BMCS Plant put on hold in June 2009 and cancelled in March 2012.
- ❖ The civil works except for BMCS Plant has been completed. Administrative approval for civil works related to BMCS Plant was issued to DRDO for Rs. 226 Crore in January, 2014. Simultaneously, procurement process for BMCS Plant through indigenous sources was being progressed.
- ❖ Efforts for Indigenous procurement of BMCS Plant failed as no offer was technically acceptable. Global tendering (with Approval of Project Monitoring Board) is in progress. As the civil works related to BMCS Plant are required to be in synchronization with the design of BMCS Plant, the same shall be progressed after finalization of contract for BMCS Plant through GTE.

Execution of Civil Works through MES:

In order to execute civil works without time over run, following actions have been put in to place:

- a) General Manager (GM) of factories have been authorized to issue Administrative Approval (AA) for execution of civil works related to MOD/DDP/OFB sanctioned projects to be executed through MES/DRDO/Public Works Organizations. Thus, factory need not refer to OFB for convening the siting board to finalize scope of work, scrutiny of the same and issue of Administrative Approval (AA). This saves considerable processing time.
- b) Standard Operating Procedure (SOP) for civil works has been published in January 2014. Factories have been issued guidelines for measures to be taken while preparing Draft Project Report (DPR) so that variation in the scope of work envisaged in the DPR and to be executed remains minimum and variation between estimated cost and the AA remains within permissible limit.
- c) Financial Powers for execution of civil works departmentally by GMs, have been enhanced from Rs. 25 lakhs to Rs.5 Crore for Production Buildings.
- d) DRDO is also being roped in to execute specialized, high value and time-bound Civil Works. OF Nalanda, OF Korwa and major civil works related to Pinaka project have been assigned to DRDO.'

ANNEXURE – PROJ**(Rs. in Crore)**

Sanctioned investment	Likely Total Expenditure *	Expenditure Up to Feb'16	Expenditure Up to Mar'2016	Cumulative Expenditure		
				Plan 2016-17	2017-18	2018-19
2394	2038.66	683.55	732.83	1096.08	1644.08	2038.66

* Likely total expenditure is based on actual against the sanction based on estimates

Major components for the gap between sanctioned and expenditure (Rs. 1661.17 Crore) are:

Sl. No.	Item	Amount (Rs. Crore)	Remarks
1	Difference between estimates and actual on the project cost	355.34	Due to actual costs being lower than estimated costs
2	Engine Augmentation (EFA)	168	Cost of Flexible Machining System (FMS); order already placed in Aug,15; DP: Two years
3	T-90 Tank – 100 to 140 per annum	850	Project put on hold by MOD from Feb,14 to Oct,14. MES has already concluded civil works contract for Rs.281 Crore in Feb,16. P&M under various stages of procurement
4	Large Calibre Weapons	277	Out of Rs.250 Crore of P&M, order already placed for Rs.100 Crore; balance Rs.50 Crore P&M under advance stages of procurement

10. The Committee had noted that there was long delay in completion of projects related to T-72 variant engines for armoured vehicles, spares for T-72 and T-90 tanks, Akash Booster and Sustainer, large caliber weapons, HMX Plant, Pinaka, Ammonium Percolate, MPV and 125 mm FSAPDS. The delay ranges from 3 to 9 years. Therefore, the Committee had desired that proper planning at the initial stage in consultation with all the stakeholders should be undertaken by thoroughly deliberating upon the negative factors causing delays and a comprehensive strategy be chalked out for timely completion of the projects within a realistic time-frame. In the action taken replies, the Ministry has only repeated the reasons for the delay. On the remedial actions, the Ministry has just stated that financial powers of GMs for execution of civil works have been enhanced from Rs. 25 lac to 5 crore for production buildings. The Committee are perturbed to note that their

main recommendation for taking actions for proper planning at the initial stage in consultation with all the stakeholders has not been answered. Therefore, the Committee desire the Ministry to furnish the action taken thereon.

C. Research and Development (R&D) Activities

Recommendation (Para No. 4)

11. The Committee had recommended as under: -

'During the year 2015-16, the allocation for R&D in the Ordnance Factories at BE stage was Rs. 75 Crore. The allocation at RE stage was Rs. 85 Crore. The allocation at BE stage during the year 2016-17 is Rs. 67.12 Crore. In comparison to BE 2015-16 and BE 2016-17, there is a reduction of Rs.7.88 Crore. Against the allocation of Rs. 370.79 Crore during the 12th Plan period, Ordnance Factories Board has undertaken in-house R&D projects of Rs. 416.79 Crore for development of the products indigenously which are at various stages. The Committee note that some efforts are being made by Ordnance Factories to develop new products through in-house R&D efforts. However, the Committee are dismayed to note that the total allocation towards R&D continues to be on the lower side. The Ministry has furnished the percentage of R&D expenditure and compared with value of production produced during the years. The Committee feel that the allocations of funds should not be linked to the turnover of the Ordnance Factories rather it should be steadily increasing over the years. The Committee also note that while the Ministry is emphasizing on 'Make in India' projects, at the same time the allocations under R&D is not in commensuration with the avowed mission of the Government. Therefore, the Committee strongly recommends that adequate budgetary support should be provided for undertaking R&D activities by the Ordnance Factories.'

12. The Ministry in its Action Taken Reply has stated as under:-

'As recommended by the Standing Committee, allocation of funds towards R&D is not linked to the turnover of the Ordnance Factories and it has been steadily increasing over the years. Expenditure on R&D during 2015-16 has been Rs. 85 Crore (i.e. full amount of RE allocation has been used), which is approx. 52% higher than the expenditure on R&D in the year 2014-15 (i.e. Rs.55.82 Crore, all time high till 2014-15).

During 2016-17, although BE allocation is Rs. 67.12 Crore, it is expected that budgetary constraint shall not come in way in achieving targeted R&D expenditure of Rs. 96 Crore by suitable enhancement at RE stage.'

13. The Committee take note of the assurance given by the Ministry that budgetary constraints shall not come in the way of achieving targeted R&D expenditure of Rs. 96 crore by way of suitable enhancement at RE stage. The

Committee would like the Ministry to furnish the details of allocations made at RE stage. The Committee would also like to be kept apprised of the R&D initiatives taken by the Ordnance Factories Board.

D. Restructuring of Ordnance Factories

Recommendation (Para No. 6)

14. The Committee had recommended as under: -

‘The Committee in their 9th report had recommended for constitution of a high-level committee to go into the functioning and organizational structure of Ordnance Factories Board and give its recommendations on restructuring of Ordnance Factories to make them more professional to meet the present day requirements. However, the Committee are concerned to note that there are no known plans for restructuring of Ordnance Factories, hence, no budgetary provisions have been planned for the same. The Committee wish to mention that the Kelkar Committee had emphasized on restructuring of Ordnance Factories. The recommendations of importance as made by the Committee have not been taken into cognizance by the Ministry till date. The Committee deplore such casual approach of the Ministry and strongly recommend that credentials should be accorded to the Kelkar Committee recommendations on restructuring of Ordnance Factories. Action taken in this regard must be intimated to the Committee.’

15. The Ministry in its Action Taken Reply has stated as under:-

‘The issue of corporatization of Ordnance Factories has been deliberated upon in the past by several Committees set up by the Government. The Kelkar Committee had emphasized on restructuring of Ordnance Factories with the aim that it would enable the OFB to refocus on its areas of operation in a flexible manner so as to respond not only to market but also to strategic interests without compromising the interest of the labor.

In order to achieve the above aim and in order to keep pace with the rapid technological advancement and changing business scenario, OFB's role now includes:

- Focus on In-house R&D including process improvement and design
- Quality Management including Input material inspection
- Customer Diversification
- System Integration of platforms

To achieve the above role, the following activities have been initiated with the aim of providing greater autonomy in functioning to OFB in order to improve efficiency together with accountability:-

Strengthening of in-House R&D - Focus on in-House R&D has been identified. Twelve (12) Ordnance Development Centres have been opened in various locations/ divisions for major products and up-gradation activities. To strengthen and consolidate R&D functions, OFB further plans the following:-

- a) Upgrade Infrastructure in ODCs
- b) Research Assistance from Academic Institutes like IITs etc.
- c) Association with DPSU and DRDO – One MoU has been signed with BEL.

Increased outsourcing and vendor development – OFB Procurement Manual is being revised with emphasis on 'Make in India' and facilitating long term procurement.

Quality Management including Input material Inspection – OFB is being entrusted with 1st Party QA functions in addition to existing responsibility for input material inspection, as part of implementation of Raman Puri Committee recommendations on QA functions, in the pilot project mode. This is aimed at making OFB accountable for the Quality of its products with DGQA being responsible for FAI (Final Acceptance Inspection) as in the case of supplies from the private sector.

Adoption of Commercial Format of Accounts to ensure accountability – OFB has started preparing Annual accounts in commercial format and a formal approval of the same is being obtained from C&AG.

The successful implementation of the above mentioned measures will make the OFB more professional, efficient and accountable.'

16. The Committee have noted that the Ministry has taken various steps in order to keep pace with the rapid technological advancements like focusing on In-house R&D including process improvement and design, Quality Management including Input material inspection, Customer Diversification and System Integration of platforms. The Committee also note that Ordnance Factories Board is being provided greater autonomy in order to improve efficiency together with accountability. However, the Committee would like to know whether the implementation of the steps as narrated by the Ministry of Defence, would amount to complete adherence with the recommendations made by the Kelkar Committee.

E. Budgetary Provisions for Defence Research and Development

Recommendation (Para Nos. 7 to 11)

17. The Committee had recommended as under: -

The Committee note that there has always been a mismatch between the projected amount and allocation made at BE as well as RE stages and actual expenditure. During the year 2016-17, against the projected demand of Rs. 18,782.86 crore, the allocation, at BE is Rs. 13,593.78 crore. The BE during 2015-16 was Rs. 14,358.49 crore and the final allocation at RE was Rs. 124,91.21 crore. The difference between BE and RE is Rs. 1,867.28 crore. As against this, the actual expenditure is Rs, 11,603.11 crore. Thus, there is a surrender of funds to the tune of Rs. 888.1 crore. The allocation at BE has been continuously reduced from BE 2014 -15 to 2015-16 (Rs.15, 282.92 crore to 14,358.49 crore) and from 2015- 16 to 2016-17 (Rs. 4,358.49 crore to Rs. 13,593.78 crore). The difference between BE 2015-16 and 2016-17 is Rs. 764.71 crore.

The Committee also note that out of the total Defence Budget, the share of DRDO which was 5.79per cent in 2011-12 was reduced to 5.34per cent in 2013-14. This share had slightly improved to 6.05 per cent in 2014-15, but was again reduced to 5.52 per cent in 2015-16. The Budget Estimates for 2016-17 amount to 5.46 per cent of the Defence Budget. The share of (R&D) budget in the GDP of the Nation has also been declining over the years. It has reduced to 0.10 per cent in 2012-13 from 0.13 per cent in 2010-11. However, this share has slightly improved to 0.11 per cent and 0.12 per cent in 2013-14 and 2014-15 respectively. But it has reduced to 0.11 per cent in the Budget Estimates for 2016-17. As for the percentage share of R&D activities with respect to overall R&D Budget during 2016-17, it is only Rs. 64.40 per cent in comparison to 71per cent during 2014-15 and 67.60 per cent during 2015-16.

Of the 64.40 per cent funds earmarked for R&D activities, the requirement of funds for strategic schemes is Rs. 5,200 crore which is about 60 per cent. Rest of the allocations will be spent on infrastructure, pay and allowances and other items of expenditure. The Committee also note that each year, the budget requirement is projected by DRDO based on the ongoing projects/programmes and future requirements and nearly 80per cent of total budget is being utilised on Mission Mode (MM) Projects with deliverables for Armed Forces. Short falls in budget affect Technology Development (TD), Science and Technology (S&T), Development of Infrastructure and Facilities (IF), and projects related to Product Support (PS). Due to shortage of funds, projects and other ongoing activities are re-prioritized. Government is making all possible efforts to meet the budgetary requirement of DRDO, within the available resources, so that its flagship programmes do not suffer due to lack of funds.

During the course of deliberations, the representatives of DRDO admitted that the current budgetary allocation will not suffice even for ongoing projects and revenue commitments. Major projects for futuristic technology requirements of

tomorrow have been put on hold due to pending allocation of funds and infrastructure activities planned for future need additional funding. Therefore, DRDO require sustained annual commitment of funds year on year for taking up new projects. There is also an imperative need to carry out research and cutting edge technology development for building a strong indigenous technology base. The Committee strongly feel that undertaking these activities requires adequate budgetary support. The Committee are disappointed to view the depletion of budgetary allocation for DRDO which has the effect of jeopardizing the scientific and technological base of Defence forces. The Committee therefore, strongly feel that all possible measures must be taken immediately to meet the budgetary requirements of DRDO.

The Committee have been further apprised that for high value projects, DRDO has started the ground work which includes peer review of project proposal as these are of high priority category. The projects would be taken up once the allocation has been secured. The Committee strongly urge the Ministry to provide adequate funds for these high value and high priority projects so that the work already done on these projects does not go waste. The Committee may be apprised of the steps taken in this regard.'

18. The Ministry in its Action Taken Reply has stated as under:-

'In the light of the Committee recommendation for additional funds for DRDO, it is stated that a case has been initiated to request for additional funds from MoD(Fin) to meet the additional budgetary requirements of DRDO.

For high value projects/high priority projects which are awaiting sanction for want to additional funds, DRDO has initiated a case to request for additional funds from MoD(Fin) to meet the additional budgetary requirements of DRDO.'

19. The Committee had expressed concern over the inadequate budgetary support for ongoing projects and revenue commitments as a result of which major projects involving futuristic technology were put on hold. The Committee, therefore, recommended that all possible measures must be taken to meet the budgetary requirements of DRDO. The Ministry, in its ATR, has apprised the Committee that a request has been made for additional funds from Ministry of Defence (Finance) to meet the additional budgetary requirements of DRDO. The Committee may be apprised of the actual allocations provided additionally.

Recommendation (Para No. 12)

20. The Committee had recommended as under: -

‘Keeping in mind the depletion of allocation for R&D, both in absolute and percentage terms and depletion of the percentage share of R&D activities w.r.t. overall R&D Budget and overall resource crunch of Government of India, the Committee desire that the Ministry should explore the possibility of considering the budget for R&D platform development as a sum of R&D Budget of DRDO, DPSUs and Ordnance Factories as well as the Private Sector. The Committee are of the view that due care should be taken to synergize the R&D activities being undertaken by all these organizations in order to avoid duplication of Research and Development and saving on cost and time. As a consequence thereof, more funds can be made available for undertaking research work. The Committee also note that DRDO’s products and systems are being developed with partnership of more than 1000 industries including small and medium enterprises (SEM). In view of limited funds available with DRDO, the Committee are of the view that there is need to re-look at this aspect, as to how the industries will sponsor for manufacturing the products and DRDO will only assist them in design and development assignment, without spending from its own budget. The Committee desire that DRDO should take necessary steps in this regard under intimation to them.’

21. The Ministry in its Action Taken Reply has stated as under:-

‘We do agree with the suggestions of the Committee and the same needs to be re-looked as to how the industries will sponsor for manufacturing the products. DRDO has implemented the same in certain cases, examples of these include the case of development of Rustom-II wherein the industry partners are seeding in Rs 300 Cr in design & development activities which is ~20% of the product cost. Also in certain cases, the production contract has been taken up by PSUs which have sought design consultancy from DRDO. A policy regarding the same needs to be framed up.’

22. Keeping in mind the depletion of resource allocation for R&D, both in absolute and percentage terms and depletion of the percentage share of R&D activities w.r.t. overall R&D Budget and overall resource crunch of Government of India, the Committee had desired that the Ministry should explore the possibility of considering the budget for R&D platform development as a sum of R&D Budget of DRDO, DPSUs and Ordnance Factories as well as the Private Sector. This synergisation of R&D budget of all the organisations will help in avoiding duplication of Research and Development activities and thereby save on cost and time. The Ministry’s reply is silent on the action taken on this aspect of the

recommendation. Therefore, the Committee desire that the Ministry furnish action taken replies in this regard within three months of the presentation of this report.

With regard to the Committee's recommendation for having the modalities for sponsoring of the work of manufacturing of the products by SEMs and restricting the job of DRDO to design aspects only, the Ministry has stated that DRDO has implemented the policy in certain cases, where the industry partner has borne 20% of the product cost. However, a policy regarding the same needs to be framed up. Keeping in view the snail paced progress of work, the Committee strongly desire that the Ministry frames a policy at the earliest so that manufacturing of the products is sponsored to an adequate extent.

F. Need to prepare a Technological Road Map

Recommendation (Para Nos. 13 and 14)

23. The Committee had recommended as under: -

'The Committee observe that DRDO has developed the following major systems for the Forces viz. Army, Navy and Air force - Army: Prithvi, Agni, Akash, BrahMos, Lakshya Nishant, MBT Arjun Mk-I, AAD Mk-I, AERV, Sarvatra, Pinaka, ROV, Radar-3D TCR, WLR, BFSR, Samyukta EW, DivyaDrishti and Samvahak. Navy: Dhanush, LRSAM, BrahMos, Sangraha EW, Varuna ESM, Dolphin ESM, Humsa NG, USHUS,TAL, Revathi – Radar, Maareech, Varunasta, Submarines and Escape Set. Air Force: Prithvi, Akash, MRSAM, Lakshya, Eagle EW, LCA Tejas, AEW&C, Rohini, Aslesha, SAR-Radars, Avionics for MiG 29, Su-30, Laser Designator cum TI, Aerial Delivery Systems and CPSS.

The Committee, while appreciating the work done by DRDO, nevertheless, also feel concerned to note that even after 58 years, there is no clear cut technological road map prepared. DRDO is creating a platform and integrating a number of sub-components. But, R&D is about developing certain key technologies akin to that of ISRO's capability in space which has not been developed by DRDO so far. The Committee are of the view that as the custodian of R&D for national security, while laboratories are expanded, technologies too need to be developed, or else, no useful purpose will be served. Therefore, the Committee feel the need to emphasize on the Ministry that it is high time for DRDO to prepare a technological road map and develop certain key technologies on the lines of ISRO so as to strengthen our Defence base. The Committee further are of the view that DRDO should focus on key high technologies in coordination with DPSUs and the low end technologies can be assigned to capable reputed Private Sector by involving them in the system integration and providing adequate financial support. This will minimize the delay and limitations posed due to financial constraints. This will also further facilitate in creating a R&D network. The Committee desire to be apprised about the action taken in this direction.'

24. The Ministry in its Action Taken Reply has stated as under:-

'Initiatives were taken by DRDO after the presentation on Demand for Grants were presented and all the Seven clusters DGs have given a technology roadmap for each of the cluster for the next Ten years. This will be put up to Secretary, DR&D and will be finalized by end July 2016 for implementation.'

25. **The Committee note that after the presentation of Report on Demands for Grants, all the seven cluster DGs have been given a technology roadmap for each cluster for the next ten years. In the action replies furnished to the Committee, it has been stated that this will be put up to Secretary DE&D and will be finalized by the end of July 2016 for implementation. The Ministry may furnish the updated replies in this regard.**

In their earlier recommendation, the Committee had expressed concern about DRDO not developing certain key technologies akin to that of ISRO, even after long years since its establishment. Therefore, the Committee had desired that DRDO should focus on developing key high technologies in coordination with DPSUs and the low end technologies could be assigned to capable private sector by involving them in the system integration and providing adequate financial support. The Ministry has not replied on this aspect of the recommendation. The Committee desire the Ministry to furnish the requisite information relating to action taken in this regard.

G. Manpower in DRDO

Recommendation (Para No. 15)

26. The Committee had recommended as under: -

'Committee are happy to note that in DRDO, the existing strength of 7863 scientists, is almost equal to the sanctioned strength of 7878. Thus, the shortfall in manpower in the organisation is negligible. Also, the Committee appreciate the fact that from the year 2011 to 2015, the rate of exodus of scientists from the DRDO has decreased. This is a welcome development. The Committee feel in this regard that positive steps such as the 'Incentive Scheme' for Scientists could be initiated in the DRDO so as to minimize the attrition of Scientists from the organization to zero percent.'

27. The Ministry in its Action Taken Reply has stated as under:-

'Seventh Central Pay Commission (CPC) has not recommended Performance Related Incentive Scheme (PRIS) for Defence Research and Development

Organisation (DRDO) employees as given to Department of Atomic Energy (DAE) and Indian Space Research Organization (ISRO).'

28. **The Committee had recommended initiation of positive steps such as the Incentive Scheme for scientists so as to minimise the attrition of Scientists. The Ministry has stated that Seventh Central Pay Commission (CPC) has not recommended Performance Related Incentive Scheme (PRIS) for DRDO. The Committee find the decision of the Government in not providing incentives, similar to those being provided to the scientists of Department of Atomic Energy (DAE) and Indian Space Research Organization (ISRO) questionable. The Committee, in this regard wish to reiterate their earlier recommendation for pursuing the matter at the appropriate level so that the Scientists of DRDO too are provided performance related incentives.**

Recommendation (Para No. 16)

29. The Committee had recommended as under: -

'The Committee, however, feel concerned to note that there has been no review/increase in scientific manpower of DRDO since 2001, though the number of projects as well as technological and tactical Defence requirements have increased manifold. The Ministry has intimated in this regard that the proposal is pending with the Ministry of Finance. The Committee recommend that this matter may be taken up with the Ministry of Finance on top priority so that the manpower requirements of DRDO and India's strategic needs can be taken care of properly. This will further enhance research capability which can be exported and revenue earned thereof can be used for more R&D.'

30. The Ministry in its Action Taken Reply has stated as under:-

'The Cabinet Note seeking approval for authorisation of 436 additional posts in the first phase, out of total requirement of 1316 posts was forwarded to Cabinet on 08 Jun 2015. Prime Minister's Office vide PMO ID No. 4221110/Pol/2015 dated 31 Jul 2015 sought for the action taken report on the directions of Cabinet Committee on Security and the same was forwarded by DRDO on 14 Aug 2015 to PMO.

The 1316 additional posts as and when sanctioned are proposed to be filled up in a phased manner in three recruitment years as under:-

S. No.	Year	No. of Scientists	Work Cadre Officers	Total
(i)	First	420	16	436
(ii)	Second	420	20	440
(iii)	Third	420	20	440

Total	1260	56	1316
--------------	-------------	-----------	-------------

In the first phase, Scientists will be inducted in the following disciplines as under:-

S. No.	Discipline	Numbers
(i)	Electronics & Communication	122
(ii)	Mechanical Engineering	108
(iii)	Computer Science	75
(iv)	Chemistry / Chemical Engineering	35
(v)	Armaments / Material Science	28
(vi)	Physics	20
(vii)	Aeronautical / Aerospace	19
(viii)	Life Sciences	10
(ix)	Naval Architecture	3
		420
(x)	Critical Immediate requirement of works officers cadre	16
	Total	436

Normally, the recruitment process takes 12 months to complete i.e. from notification of vacancy to joining of selected candidates. Thereafter, the selected young scientists are detailed for induction training of the 6 months duration before they are deployed in research projects.'

31. The Committee appreciate that a note for the Cabinet, seeking approval for authorisation of 436 additional posts in the first phase, out of total requirement of 1316 posts has been forwarded on 08 July, 2015. Prime Minister's Office, *vide* PMO ID 4221110/POL/2015 dated 31st July, 2015 had sought for the action taken report on the directions of the Cabinet Committee on Security and the same was forwarded by DRDO on 14th August, 2015 to PMO. The Committee would like to be informed in detail of the progress made in this regard. The Committee would like the Ministry of Defence to take up this matter at the appropriate level so that the 436 posts are filled up in the first phase. The Committee desire to be intimated of the action taken / progress made in this regard.

Recommendation (Para No. 17)

32. The Committee had recommended as under: -

'On the requirement of scientists, the Committee note that various steps are being taken by DRDO to generate interest in Defence technologies among school and college students with the aim of encouraging them to take up Defence R&D as a career. While the Committee appreciate the efforts being made in this direction they feel that concerted efforts are needed to attract genuine young talent to opt for Defence R&D as a career. In this regard, the Committee opine that a detailed research of the best practices being followed by the major countries in the world be undertaken and an action plan based on this study drawn up for consideration. The viability of the practices followed internationally vis-à-vis the local scenario may be worked upon and shared with the Committee for their information and consideration and further examination in this regard. '

33. The Ministry in its Action Taken Reply has stated as under:-

'Proposal for augmentation of scientific manpower in DRDO is still pending with the Cabinet. In this regard the Action Taken Report sought by the PMO has already been submitted in August 2015.

As regards fellowships programmes, DRDO awards fellowships in a large number of areas of interest of the Organisation pertaining to different Clusters i.e. Armament & Combat Engineering System, Life Sciences, Electronics & Communication System, Missiles & Strategic System, Micro Electronic Device & Computational System, Naval Systems & Materials, and Aeronautical System. As on date, approximate 950 fellowships awarded by the Department are in progress. In the preceding year, the department has awarded as many as 96 fellowships. However, as per the existing recruitment policy and also due to the shortage of vacancies, it is not possible to necessarily absorb the fellows in DRDO. In this regard, they have to compete with other candidates.

As regards performance accountability of personnel, DRDO has a merit based promotion scheme wherein promotions are granted to scientists/technical staff only after a rigorous assessment by subject experts/external members. In the process, non-meritorious scientists/ technical staff do not get promotions and get eliminated. The 7th CPC has also made certain recommendations in this regard which are under consideration of the Central Government. As and when decision of the Central Government is notified in this regard, the department will accordingly develop its mechanism for further dealing with nonperforming personnel.'

34. The Committee appreciate the fact that DRDO follows an internal mechanism of merit based promotion scheme in regard to performance accountability whereby promotions are granted to scientists/technical staff only after rigorous assessment by subject experts/external members.

The Committee in this regard, desire to be apprised of the proposal for augmentation of scientific manpower in DRDO which is still pending with the Cabinet, so as to have an assessment of the effectiveness of the steps for augmenting the scientific manpower in DRDO.

The Committee would also like to be apprised of the recommendations of the 7th Central Pay Commission in this regard which are under consideration by the Central Government so as to enable in assessing the effectiveness of the recommendations in respect of performance accountability.

H. Projects abandoned/closed by DRDO

Recommendation (Para No. 18)

35. The Committee had recommended as under: -

'The Committee express their deep concern on the wasteful expenditure incurred by DRDO on closure of major projects like Airborne Surveillance Platform, Cargo Ammunition, GPS based system as an Alternative to Fire Direction Radar, Development of 30mm Fair Weather Towed AD Gun System, Light towed AD Gun system and 30 mm Light Towed AD Gun System after getting these projects sanctioned. The Committee desire that they be informed of the basis on which these projects were chosen and the specific reasons which forced the Government to close them. The Committee fail to understand as to why, at the initial stage itself, before the projects were sanctioned, the possible constraints and bottlenecks were not foreseen. The Committee opine that the reasons attributed for the closure of various projects like Probable Duration of Completion(PDC), extension not being approved, one out of two parallel methods being found more feasible, requirement of additional funds, etc. cited by the Ministry could have been tackled better at the initial stage itself through proper planning and following a concurrent engineering and development approach.'

36. The Ministry in its Action Taken Reply has stated as under:-

'DRDO has taken the following steps to minimize short closures of projects:-

- While undertaking new projects **pre-project activity** including preliminary design is being given greater focus.
- More stringent review mechanisms have been put in place e.g. various high level committees including, Steering Committees Advisory Committees and Monitoring Boards (Apex Board Executive Boards).
- Involvement of Services and production partners during development process and reviews -To know their views in advance including finalisation of GSQRs.
- Synergy among stakeholders - Quarterly interaction meetings.
- Increase in allocation is made in the next financial year and subsequently in the 13th Five year plan period ahead. Efforts for the same will be made.'

37. The Committee appreciate the fact that DRDO has taken various steps to minimise short closures of projects. However, the Committee feel the need for being apprised of the effectiveness of the measures, so as to have a clear idea of their impact in minimising short closure of projects.

Recommendation (Para No. 19)

38. The Committee had recommended as under: -

'The Committee recommend that in future there should be a scientific, technical and concurrent audit of every ongoing project by an independent agency so that such closures are avoided in future. The Committee also strongly feel that the Ministry should re-evaluate the reasons and also seek expert advice before taking a decision towards closing down any project of DRDO in future so as to avoid wastage of public funds as also help in sustaining the projects, which can prove to be beneficial for the country.'

39. The Ministry in its Action Taken Reply has stated as under:-

'Defence Research and Development Organization (DRDO) has already started taking concrete steps to conduct the Project Monitoring Board meetings, which is chaired by Secretary, DR&D and Executive Board which is chaired by cluster DG to minimize slippages at the initial stage itself. This is being done so that projects are not closed down abruptly without achieving the desired goals. To ensure the same, alerts are being sent for reviews due and approaching imminent milestones. Also, every project is monitored through RFD in which annual target is fixed for every project.

In continuation to the efforts to minimize delays, DRDO has revised the 'Procedures for Project Formulation and Management' (PPFM) effective from April 2016 onwards. Some of the major changes brought out in the revised PPFM

document include selection of projects based on attribute scale and ongoing workload, greater emphasis on pre-project activity, risk management, linking procurement plan with project sanction to avoid delays, in-depth costing guidelines and stringent review mechanism. Apart from this, increased attention is being given in the 13th Five Year Plan (FYP) wherein background details are being asked related to proposed new projects.

DRDO has also a mechanism, wherein before the closure of the project, the highest monitoring body reviews the projects, assess the status of completion and gives appropriate directives.'

40. The Committee appreciate the measures taken by Defence Research and Development Organization (DRDO) such as holding Project Monitoring Board meetings, revision of the 'Procedures for Project Formulation and Management' (PPFM), increased attention being given in the 13th Five Year Plan (FYP), reviews of the projects by the highest monitoring body before the closure of the project to minimise slippages at the initial stage etc. Nevertheless, the Committee feel that a scientific, technical and concurrent audit of every ongoing project by an independent agency is a necessity for the purpose of carrying out a strategy for avoiding such closures in future.

Recommendation (Para No. 21)

41. The Committee had recommended as under: -

'During the course of deliberations, the Defence Secretary acknowledged that DRDO, by itself, is also responsible for delay in its research work. The Committee, in this regard, take note of the problems faced by DRDO in the matter of non-availability of platform for trials. The Committee feel that a better coordination between DRDO and the Services could easily solve this bottleneck and also cut short the time frame in the development and testing of weapon systems. The Committee, therefore, feel that the Ministry should make concerted efforts in this direction so that testing and trial platforms are always available to them for crucial research and development work.'

42. The Ministry in its Action Taken Reply has stated as under:-

'A new category "Mission Mode-User Trials" have been introduced in order to expedite trials of developed systems/products.'

43. The Committee, in their 17th Report had noted that DRDO has established mechanisms for better coordination between the organisation and the Services and

the issue of trial platforms is being raised at various fora. The Committee also note that 'A new category, "Mission Mode-User Trials" has been introduced in order to expedite trials of developed systems/products.' The Committee, however, would like to be apprised of the progress made by DRDO in actuality so as to help in analysing whether the efforts, as stated to have been taken have helped in bridging the gap in so far as the issue of delays in research work is concerned. The Committee feel that if the present mechanism and efforts are not yielding the desired results, additional measures need to be initiated and taken up so as to avoid delays in implementation of projects.

Recommendation (Para No. 22)

44. The Committee had recommended as under: -

'The Committee note with immense surprise that although an elaborate mechanism is in place which includes adequate financial and administrative powers to Directors General of technology clusters to carry out research and development as per the mandate of DRDO, monitoring of all Cabinet Committee on Security (CCS) projects by the Cabinet Secretariat, etc., the projects are being delayed. The Committee, in this regard, feel that there is some lacuna in the implementation of this system. The Committee, therefore, recommend that more effective efforts are required to be made for ensuring timely completion of each project.'

45. The Ministry in its Action Taken Reply has stated as under:-

'DRDO feels that financial powers also need to be delegated down the line to Lab Directors and Programme/Project Directors with adequate checks. Procurement process also needs to be streamlined by cutting down on repeated approval processing which lead to time delays.

Action is being pursued for positioning of Financial Advisors (FAs) in labs and independent IFAs with cluster DGs so as to enable speedy processing of file. Revision of delegation of financial powers is also under process which is expected to improve the functioning.'

46. **The Committee appreciate the fact that the DRDO has accepted the recommendation of the Committee and various steps are being taken to ensure timely completion of each project by way of Delegation of financial powers to Lab Directors and Programme/Project Directors with adequate checks, bringing about improvement in procurement processes, positioning of Financial Advisors (FAs) in**

labs and independent IFAs with cluster DGs, and revision of financial powers delegated. Further, the Committee would like to be apprised of the progress made in effective implementation of these measures in ensuring timely execution of projects.

Recommendation (Para No. 23)

47. The Committee had recommended as under: -

'The Committee agree with the suggestions of the Defence Secretary and strongly recommend that a mechanism should be developed so that the DRDO, the production agency and the user agency work in tandem right from the conceptualization stage, which it is felt, can result in preventing unnecessary delay in the implementation of various projects of vital importance.'

48. The Ministry in its Action Taken Reply has stated as under:-

'We have taken the Services on board this time well ahead of time and involved them in formulating 13th FYP of DRDO. Inputs have been received which are under consideration before finalization of plan document.'

49. The Committee are happy to note that in pursuance of the suggestions and recommendations made, the Ministry has taken the Services on board this time and involved them in formulating the 13th Five Year Plan of DRDO, and have also received inputs from the Services which are under consideration before finalisation of Plan document. This, the Committee hope, would help in preventing unnecessary delays in implementation of projects. However, the Committee would like to be apprised of the actual results achieved through these measures so as to have a correct assessment of the impact of these mechanisms and to make an assessment of further steps that would be required to be taken in case of any inadequacies that may remain.

Recommendation (Para No. 24)

50. The Committee had recommended as under: -

'The Committee also recommend that keeping in view the huge public money involved in these projects and the fact that these directly affect the Defence preparedness of the country, accountability must invariably be fixed in case of inordinate delays in executing projects.'

51. The Ministry in its Action Taken Reply has stated as under:-

'No enhanced authority has been given to Project Directors till date. Accountability without authority is not fair. Delegation of financial powers, 2010 is getting revised.'

52. **The Committee appreciate that DRDO concurs with their recommendations regarding increasing accountability in case of inordinate delays in Defence projects by the way of giving additional authority to the Project Directors by revising the Delegation of Financial Powers, 2010. Besides, the Committee feel that strict internal checks and balances are required to be maintained for monitoring the work of the program/project directors. The Committee expect that this aspect would be looked into with due seriousness. The Committee also expect that appropriate measures are taken for strengthening the mechanism of accountability.**

I. Kaveri Engine

Recommendation (Para No. 26)

53. The Committee had recommended as under: -

'The Committee desire that infrastructure to test aero-engines should also be created within the country so that flying testing of engines can be done in a timely manner without carrying the engine to a foreign country and finding availability of slot testing agency etc.'

54. The Ministry in its Action Taken Reply has stated as under:-

1 'The design improvement and validation of aero engine components and modules through testing is a continuous activity to enhance and demonstrate engine performance and reliability. At present, only limited aerodynamic and structural testing can be conducted within the country. Hence, the required component testing facilities at an estimated cost of Rs.1330 crore are planned to be established by DRDO at Rajanakunte, Bengaluru for development of Ghatak engine and all future generation aero engines.

2 The existing Fan & Compressor Test Facility at Gas Turbine Research Establishment (GTRE) has inadequate capacity and has become obsolete. To carry out testing of Fan & Compressor for existing and future generation gas turbine engine programmes of GTRE, it is essential to have a dedicated Fan & Compressor test facility at GTRE. GTRE is working out the budgetary

cost of this facility to be established 'on turnkey basis' with an objective to initiate EPC approval by end of Oct 2016.

- 3 DRDO is planning to establish a twin test cell at GTRE to carry out the performance testing of gas turbine engines upto 130 kN thrust class. The proposed engine test cells will cater for performance and endurance test requirements of the present and future engines. One of the test cell will have the capability of testing engine with thrust vector nozzle. The cost of establishing this test cell (including the building) is estimated to be Rs.300 crore. GTRE has published a Global RFI for setting up of twin test cell in July. Response to RFI is expected by end Aug 2016.
- 4 Boeing Inc. USA has offered to establish a High Altitude Engine Test Facility (HAETF) of 90kN capacity in India for testing Gas turbine engine as an offset obligation in C17 Globemaster Acquisition Programme of MoD. US Government is requested to issue necessary approval (licence), when M/s. Boeing submits Technical Assistance Agreement (TAA) for HAETF, as Boeing needs to complete the offset credits against the subject programme. For this purpose, DRDO has acquired 100 acres of land at NagarjunaSagar, Telangana.
- 5 DRDO is studying the indigenous Flying Test Bed (FTB) requirements, for which a Joint Committee consisting of members from DRDO, IAF, HAL and DGAQA will be constituted.'

55. The Committee appreciate the fact that Component Testing Facilities are planned to be established by DRDO at Rajanakunte, Bengaluru for development of Ghatak engine and all future generation aero engines, dedicated Fan & Compressor test facility at GTRE. Further, the Committee would like to be apprised of the progress made on account of the steps being taken in this regard.

J. Indigenisation of Research and Development Activities

Recommendation (Para No. 27)

56. The Committee had recommended as under: -

'The Committee appreciate the fact that Defence Research and Development Organisation (DRDO) has a number of achievements to its credit like the development of the strategic Agni class of missiles, a family of radars and sonars for virtually every platform/application, Electronic Warfare (EW) systems, Main

Battle Tank (MBT), development of combat aircraft, etc. However, the Committee note that it is also a fact that the country is still heavily dependent on imports to meet its Defence requirements. Given the fact that technologically advanced countries are reluctant to part with their critical technologies with developing countries like India, it becomes all the more essential for our labs to develop each systems, sub-systems, component *ab-initio* including information, infrastructural and testing facilities. The Committee are also of the view that as original research takes a long time, therefore, DRDO may also think of developing a product through reverse engineering. The Committee recommend that the Ministry of Finance should provide adequate budgetary support in this regard so that indigenization of R&D activities can be taken up by DRDO on a war footing. The Committee also feel that there is a need for an increase in the budget for R&D activities of DRDO specifically targeted at reducing dependency on other countries in critical and high technology areas, which can lead to the country becoming self-reliant in Defence Production.'

57. The Ministry in its Action Taken Reply has stated as under:-

'Case has been initiated to request for additional funds form MoD(Fin) to meet the additional budgetary requirements of DRDO.'

58. The Committee note that a case has been initiated to request for additional funding from Ministry of Defence (Fin) to meet the enhanced budgetary requirements of DRDO. Further, the Committee would like to be apprised of the progress made in this regard. The Committee further reiterate that as original research takes a long time, DRDO may also consider developing the product through reverse engineering.

K. Quality Control

Recommendation (Para No. 29)

59. The Committee had recommended as under: -

'The Committee also feel it to be desirable on the part of DRDO to, at first, develop a product and later keep on improving on it by the way of 'categorizations/markings' viz. Mark I, II, III, IV etc, so that there is continuity in the assigned tasks to some extent. This approach would be preferable instead of aiming to create a 'perfect product' in one go. This will need a proper policy directive as also building the stages of the production systems for the initial and final products.'

60. The Ministry in its Action Taken Reply has stated as under:-

'As per recommendation of Standing Committee on Defence, DRDO proposed a Spiral Development Model in line with Mark I, II, III and so on to be included as a part of 'Make DRDO' category during amendment of Defence Procurement Procedure (DPP). DPP-2016 has been issued without inclusion of the same procedure. However, DRDO is still making all efforts to implement the same procedure by approaching MoD.'

61. The Committee appreciate the fact that DRDO has proposed a Spiral Development Model with categorisations such as Mark I, II, III and so on for inclusion in the 'Make DRDO' category as part of the amendments to Defence Procurement Procedures (DPPs). While this is in tune with the recommendation of the Committee, at the same time, however, the Committee feel that it would have been appropriate to include this as a part of the Defence Procurement Procedure – 2016. As a consequence of not including this in the revised DPP, the DRDO is still making all efforts to implement the same procedure by approaching Ministry of Defence. The Committee would like to be apprised of the progress made in the implementation of 'Spiral Development Model', as proposed by DRDO.

L. Public Private Partnership

Recommendation (Para No. 30)

62. The Committee had recommended as under: -

'During the deliberations, the Committee pointed out the gigantic gap in the availability of regular arms, ammunition and equipment ranging from 30 to 70 per cent, which adversely affects the ability to the combat our prime adversaries. The Committee stressed on the need for a complete revamp and re-orientation on how the DRDO functions and one of the major initiatives suggested by the Committee in this regard was to facilitate the active involvement of private sector, Universities, Indian Institute of Technologies and Indian Institute of Science which could play a major role in the resurgence of DRDO.'

63. The Ministry in its Action Taken Reply has stated as under:-

'DRDO is working in close synchronization with all its stakeholders through its programmes/ projects. Accordingly, it has developed, built and upgraded its industrial partner base. Today, over 1000 private industries and SMEs are vital partners in DRDO's development programmes. This number covers the entire spectrum ranging from Defence Public Sector Undertakings (DPSUs) and Ordnance Factory Board (OFB) to private industries, all of them have played a crucial role in the development programs of DRDO.'

In addition, DRDO collaborates with other science & Technology (S&T) Organisation, like Department of Space (DoS), Department of Atomic Energy (DAE) and Council of Scientific & Industrial Research (CSIR) for common requirements and applications. DRDO has set up specialized centres of technology in select academic institutions of repute to work, e.g. IIT Madras Research Park, DRDO has also selectively chosen its global partners and has Memorandum of Undertakings (MoUs) with over 30 countries worldwide for joint collaboration in requisite areas with complementary work share.'

64. The Committee, in their earlier recommendation had observed that there was gigantic gap in the availability of regular arms, ammunition and equipment, which ranges from 30 to 70 percent. The Committee have been apprised that DRDO is working in close coordination with all the stakeholders such as those from the private industry, SMEs, DPSUs, OFB, Science & Technology Organisations, Universities, IITs and by way of collaborations involving about 30 counties etc. The Committee are perturbed to note that despite several measures, there is still a shortage ranging from 30 to 70 percent. The Committee strongly feel in this regard that there is some lacunae in implementation. Therefore, the Committee desire that the Ministry takes corrective action so as to minimise the gap, which is substantive.

M. Directorate General Quality Assurance

Recommendation (Para Nod. 44 and 45)

65. The Committee had recommended as under: -

The Committee note that for the year 2016-17, DGQA has been allocated Rs. 1,075.37 crore against the projection of Rs. 1,099.99 crore. However, when asked if any compromises had been made or are likely to be made due to reduced budgetary allocation against the projections made by the DGQA, it replied in negative. The Committee also note that DGQA carries out inspection of defence stores supplied by Ordnance Factories, DPSUs, Trade Firms and ex-import. These inspections are done at various stages of –manufacture and at Final Acceptance stage. On an average, DGQA carries out approx. 18,000 inspections per month. Further, whenever a new system is inducted into the Army, DGQA is an integral part of the process and plays a pivotal role in all stages of induction right from the General Staff Qualitative Requirement (GSQR) formulation stage till the Joint Receipt Inspection of the store. Since DGQA seems to be satisfied with its budgetary allocation, the Committee hope that DGQA would continue in their efforts in taking all actions necessary to ensure that the Arms, Ammunitions, Equipments and Stores being inducted in the Armed Forces are superlative in quality and highly reliable in war/warlike situations.

The Committee note that DGQA suffered deficiency in manpower because of various cuts during initial stages and recruitment ban, especially in group 'C' and 'D' posts. As per the submission of the Ministry, the ban has been lifted and the process of recruitment has started. The Committee hope that the recent recruitment undertaken by DGQA addresses the problem of shortage of manpower adequately and they be apprised of the tangible outcome thereof.'

66. The Ministry in its Action Taken Reply has stated as under:-

'It is confirmed that the DGQA allocation for the year 2016-17 as well as projection thereof are correct.'

Manpower recruitment for DGQA has been initiated with the concerned authorities to the extent permissible.'

67. The Ministry has not touched upon the part of the recommendation wherein the Committee recommended taking `all necessary steps to ensure that the Arms, Ammunition, Equipments and Stores being inducted in the Armed Forces are of superior quality and reliable in war/warlike situations. The Committee desire to be apprised of the action taken by the Ministry and DGDQ in particular for supplying high quality reliable stores to the Army.

CHAPTER II

A) OBSERVATIONS/RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendation (Para No. 3)

The Committee note that modernization of infrastructure is a continuous **process in Ordnance** Factories with a view to update the plants and machineries **matching both the** qualitative and quantitative requirements of the products projected in the prospective plans. During the years 2010-11 to 2014-15, the Capital Outlay for modernization programme was Rs. 2,348.45 Crore, against which the actual expenditure was Rs. 2226.31 Crore. The Committee observed that Rs. 122.14 Crore has remained unutilized although Ordnance Factories Board manages 41 manufacturing units where the amount could have been utilized. During the years 2015-16, Rs. 500.05 Crore has been provided. The BE for the year 2016-17 is Rs. 735.68 Crore. The delays in many important projects like Pinaka Rocket Systems, T-90 tanks have resulted due to delay in augmentation of capacity for manufacturing by the Ordnance Factories Board. The Committee are not happy with the pace of modernization and under-utilization of funds by Ordnance Factories Board. The Committee opine that optimum utilization should also be given due importance and desire that appropriate steps should be taken to achieve modernization.

Reply of the Government

Reasons for shortfall are indicated in the table below:

Expenditure Head	2011-12 to 2014-15 (Rs. in Crore)			
	Fund available	Actual Expenditure	Shortfall	Reason for shortfall
M&E	593.64	592.52	1.12	
Works	709.81	699.87	9.94	Less expenditure by MES in 2014-15
RR	1045.00	933.92	111.08	Less expenditure in RR due to reasons stated above. RR (Renewal & Replacement) expenditure is booked under Revenue Head and is met from self-generated Annual Depreciation Fund of OFB. The accumulated depreciation fund gets carried over to the next financial year.
Total	2348.45	2226.31	122.14	

MOD allotment for 2015-16 was increased from Rs. 500.05 Crore to Rs. 648 Crore in capital outlay which has been fully utilized.

Capital Outlay (BE) for 2016-17:

Values (Rs. in Crore)

Head	Approved BE	Committed liability
M&E	490.00	514.19
Works	229.67	556.60
TOTAL	719.67	1070.79

It is apparent that committed liability already exceeds the approved BE for 2016-17.

Recommendation (Para No. 5)

The Committee had recommended as under: -

The Committee note that Ordnance Factories are suffering from acute shortage of manpower. The Committee found that against a sanctioned strength of **1,37,474 technical** personnel in various Ordnance Factories, the actual strength is **only 71,576 as on** January, 2016. This shows that there is a huge gap of almost 52.07 percent between the sanctioned and actual strength of technical personnel. The existing strength of non-technical staff is only 17,113 as against the sanctioned strength of 23,500 which is a significant shortfall. Similarly, the sanctioned strength of Group 'A' officers is 2,123. The actual strength is just 1,797. The Committee are concerned to note that this huge shortage of manpower in Ordnance Factories, particularly in the technical category will have a negative impact on manufacturing and ensuring improvement in the products. Therefore, the Committee recommend that immediate steps should be taken to bridge the huge gap between the sanctioned and actual strength in order to achieve manufacturing of technically advanced products by Ordnance Factories. The Committee will also like to know when the last exercise for manpower planning was conducted and whether the modern technology and computerization of processes resulting into improved efficiencies were taken into account.

The Ministry in its Action Taken Reply has stated as under:-

With regard to the shortfall in existing strength as against sanctioned strength, it is hereby intimated that the sanctioned strength of Ordnance Factories is intended towards catering to peak load requirements of Indian Armed Forces while existing strength is maintained for meeting the current load of the Armed Forces on annual basis. The flexibility is required to help Indian Ordnance Factories to augment the manpower at a very short notice in times of exigency. Further, promotions to the Employees are given based on the sanctioned strength of each cadre. As such the sanctioned strength is required for maintaining a healthy career progression of the work force while the existing strength is maintained to meet the work load requirements.

However, manpower is being sanctioned every year in respect of all categories of employees based on vacancies available in the recruitment grade and work load requirement. Last manpower sanction for direct recruitment in various technical & non-technical posts (total 4033 Industrial Employees & 965 Non-Industrial Employees) was accorded in May, 2016.

Recommendation (Para No. 20)

There are 93 ongoing major projects in different DRDO labs. These include Agni IV, Agni V, Nirbhay Cruise Missile, K-15, Nag, Astra, AWACS, Arjun Main Battle Tank, Tejas LCA, etc. The Committee are dismayed to note that out of 45 major ongoing projects (costing more than Rs. 100 crore), there have been cost revisions in 11 and time revisions in 16 projects. Besides, 13 projects are more than 5 years old, i.e. sanctioned prior to 2010. While 17 major projects (costing more than Rs. 100 crore) were sanctioned during the 11th Five Year Plan (April 2002 to March 2007), none has yet been completed. Moreover, three of these have been under closure, two under short closure and three under evaluation. The Committee are perturbed to observe that the projects being undertaken are not executed as per schedule and inordinate delay in execution of almost all the projects has become a common phenomenon. The Committee, while deploring this attitude, desire that concrete steps be taken to put in place a mechanism to oversee project execution so that they are implemented in a stipulated time-frame. Steps proposed to be taken in this direction may be intimated to the Committee.

Reply of the Government

As on date, there are 43 ongoing major projects (cost >Rs 100 Cr) in different DRDO labs (excluding strategic projects). Also, only 4 major projects sanctioned during the 11th FYP (Apr 2002 – Mar 2007) have not been completed so far. These are: LCA Navy, Astra, AEW&C System and LRSAM. All these projects are in advanced stages of testing and will be offered to User by end of 2017.

Recommendation (Para No. 25)

During the course of deliberations, the Committee expressed apprehension over the perennial delay in the development of the indigenous Kaveri engine to meet the requirement of LCA which was sanctioned way back in 1989. The Committee was informed by the Defence Secretary that a total amount of Rs. 2100 crore had been spent on this Project till date. The Committee was also apprised by the representatives of DRDO of the current status of the Project and the fact that solutions were being evolved with support of some experts within the country as well as outside for the completion of this project.

Reply of the Government

- 1 Kaveri Engine Development Project completed two important milestones i.e. altitude testing and Flying Test Bed (FTB) trials during the year 2009-10 and 2010-11 respectively. As on date, a total of 2687 hours of engine testing have been completed since inception of the project (1989). The project technical activities are continuing with the approval of Hon'ble RM within project cost ceiling of Rs 2105 crore.
- 2 Subsequent to the deployment of Light Combat Aircraft (LCA) 'Tejas' with General Electric (GE) engines, DRDO decided to power an Indian Unmanned Combat Air Vehicle (UCAV) 'Ghatak' with Kaveri 'dry' engine (without afterburner system) at an estimated cost of Rs. 2652 crore and PDC of 84 months from project sanction. Accordingly, DRDO submitted a project proposal. The Hon'ble Raksha Mantri and Ministry of Finance approved the proposal. The same was submitted to the Office of

the Prime Minister (PMO), prior to consideration of Cabinet Committee of Security (CCS).

- 3 The Office of Prime Minister (PMO) constituted an Independent Committee, consisting of Dr. R. Chidambaram (Principal Scientific Advisor), Dr. V. K. Saraswat (Member, NITI Ayog) and Dr. K. Radhakrishnan (Former Secretary, Department of Space) to review the project proposal on the feasibility and desirability of the Ghatak aircraft and engine programmes. The Report of this Committee has been submitted to the PMO for approval prior to submission to CCS. The Committee recommended 'in-principle' approval of UCAV 'Ghatak' development programme and immediate sanction of Ghatak (Kaveri 'dry') engine project with PDC of 84 months from sanction at a project cost of Rs.2652 crore.

- 4 This project proposal contains two segments, the first segment being the development of Kaveri engine flight demonstration with Flying Test Bed (FTB) trials in IL-76 aircraft and the second segment for the development of Kaveri 'dry' engine for powering UCAV 'Ghatak'. In order to meet this challenging task of aero engine development, DRDO has proposed to seek assistance from world's reputed engine houses for joint development.

Recommendation (Para No. 28)

The Committee feel that one of the important factors for quality management is the extent of knowledge of a user of the product to be produced for a specific project. So is the extent of his involvement in the conceptualization stage of the project on a permanent basis so that defects, if any, may be rectified during production stage itself and delivery of the product to the user may not get delayed for a long time. In this way, there would be a better scope for fixation of accountability, if the user does not suggest corrective measures/improvements and the product is not developed as per GSQR.

Reply of the Government

All Capital Acquisition under the Defence Procurement Policy (DPP) 2013, presently, follows the categorization viz Buy (Indian), Buy & Make (Indian), Make (Indian), Buy & Make and Buy (Global), where Defence Research and Development Organisation (DRDO) falls into the category of Make project (Strategic, Complex and Security sensitive system). The Defence Procurement Policy (DPP) only stipulate that it follows the Procedure for Project Formulation and Management (PPFM) procedure and is not elaborate.

DRDO agrees that the involvement of the user from the conceptualization stage to development, prototype testing, User trials leading to Limited Series Production (LSP)/Bulk Production is essential for induction of a safe and reliable system/product into the Services. To achieve this, the following steps are being suggested to be introduced as '**Make DRDO**' category during the amendment of DPP:-

- (a) The User Trials and DGQA trials procedures need to be evolved at the beginning itself along with formulation of Preliminary Staff Qualitative Requirement (PSQR). DRDO will define technical and environmental specifications based on the PSQR.

This would help in designing and developing a robust system, which would meet all reliability & safety conditions as well.

- (b) User will be participating in all stages to provide necessary inputs as follows:-
- (i) Vendor survey and identification of Development cum Production Partner.
 - (ii) Project monitoring as Committee Member
 - (iii) Development trial followed by User Assisted Technical Trial (UATT) & final User Trial.
 - (iv) Progress Review during LSP/Bulk Production leading to induction.

With the participation throughout at each stage from Conceptualization to Induction, the mistrust and gap between DRDO and User Services will be removed and a reliable and safe product/system can be inducted.

As per PPFM in DRDO promulgated in Feb 2016 for all Mission Mode (MM) projects, User is involved in all projects costing more than Rs 5 crores starting from feasibility study itself till User Evaluation trials.

In addition, Development cum Production Partner from PSU/OFB/Private Industries are also associated during development/prototype stage selected on competitive basis to have continuity and realization of quality products after satisfactory User Trial.

Recommendation (Para No. 31)

The Committee recommend that an environment may be created where Public Sector and Private Sector can work in collaboration, so that the R&D activities can be synergized and better coordination achieved. The Committee also feel that a level playing field needs to be provided to the Indian Private Industry and they may be allowed to tie up with foreign manufacturers to develop certain equipment based on the requirements of users.

Reply of the Government

DRDO is working in close synchronization with all its stakeholders through its programmes/ projects. Accordingly it has developed, built and upgraded its industrial partner base. Today, over 1000 private industries and SMEs are vital partners in DRDO's development programmes. This number covers the entire spectrum ranging from Defence Public Sector Undertakings (DPSUs) and Ordnance Factory Board (OFB) to private industries, all of them have played a crucial role in the development programs of DRDO.

Recommendation (Para No.32)

The Committee note that the budgetary provision to the Universities (under Extramural Research) has shown a decrease in the range of 30 per cent to 40 per cent in 2014-15 (Allotment – Rs.40.63 crore, Released Grant – Rs.38.9100 crore) as compared to the provision in 2013-14 (Allotment – Rs.60.00 crore, Released Grant – Rs.57.5998 crore). This has a negative connotation.

Reply of the Government

In the period 2015-16, the allotment was Rs. 45 Cr. and Release was Rs. 40.16 cr. In the period 2016-17, the Allotment is Rs. 65 Cr.

Research in niche areas of S&T is being pursued and the outcome is used in current and futuristic DRDO projects.

Recommendation (Para No.33)

The Committee had earlier recommended the opening of additional centres in various parts of the country, besides the seven centres of excellence established by DRDO at various institutions/universities in Bangalore, Chennai, Hyderabad, Coimbatore, Mumbai and Kolkata. The Committee felt that this initiative can foster knowledge-based growth of Defence-related discipline in the country, strengthen National resources of knowledge, know-how, experience, facilities and infrastructure. This will also catalyze the much needed cross-fertilization of ideas and experiences between DRDO and outside experts in scientific and technical fields that contribute to Defence technology.

Reply of the Government

DRDO has received approval from the Government to establish 'Jagadish Chandra Bose Centre for Advanced Technology' at Jadavpur University Kolkata.

This Centre will address DRDO research requirements in the following three areas:-

- (a) Secure System and Cognitive Technologies
- (b) Directed Energy Technologies and
- (c) Unmanned and Robotic Technologies.

DRDO has also received Government approval for establishing advanced technology research centre at IIT Bombay and the Centre will address the defence research requirements in the areas of Aero Propulsion, Hypersonic and Morphing Technology.

Creation of Joint Advanced Technology Centre at IIT Delhi is under process for the Government sanction.

Recommendation (Para No. 34)

The Committee recommend that the allotment of funds in this regard may be increased substantially for extension of such centers of excellence in various parts of the country as without the inflow of funds these projects will become unsustainable. The Ministry of Defence should accordingly take initiatives in this regard and the Committee intimated of the same.

Reply of the Government

DRDO has already received approval of the Government for establishing two new advanced technology centres namely

- (a) Jagadish Chandra Bose Centre for Advanced Technology at Jadavpur University, Kolkata, and

(b) Centre for Propulsion Technology at IIT-Bombay.

Proposed outlay for expenditure through projects and programs including research infrastructure at these two centres amount approx. Rs. 36 cr. For financial year 2016-17.

Recommendation (Para No. 35)

The Committee also note the findings of CAG as enumerated in Para VII of the Annual Report of the Ministry, wherein it is stated that DRDO gave Grants-in- Aid to IITs, University, etc. without proper monitoring and the money was utilized against the provisions of the scheme. The Committee are also of the view that proper care should be taken by the personnel involved in DRDO monitoring system so that such instances do not recur.

Reply of the Government

To mitigate the observations by CAG, following measures have been taken:

- (a) General Financial Rules (GFR) are being followed for sanctioning and management of the projects under Grant-in-Aid scheme of DRDO.
- (b) Standard Operating Procedure (SOP) has been reviewed by the Competent Financial Authority (CFA), observations/suggestions are being incorporated before it is put up for vetting.
- (c) Projects are being monitored through periodic reviews.

Recommendation (Para No. 36)

The Ex-servicemen Contributory Health Scheme (ECHS) was launched with effect from 01 Apr 2003. With the advent of this scheme, Ex-servicemen pensioners and their dependents who were only entitled for treatment in Service hospitals are now also authorized for treatment in those civil/private hospitals which are specifically empanelled with ECHS.

Reply of the Government

The contents are factual in nature and no comments are offered.

Recommendation (Para No. 37)

The committee note from the data supplied by the Ministry that only Rs. 2,363.54 crore are allocated against the projection of Rs. 3,600 crore in the Revenue Head of ECHS for the year 2016-17. The difference in the projection and allocation is a substantial amount of Rs. 126.46 crore, which would affect the overall working of ECHS in the field of Transportation, Stores, Information Technology, Medical Treatment Related Expenditure and Revenue works etc. In this regards, the Ministry submitted that the reduction in BE 2016-17 was based on the trend of expenditure as the expenditure in 2014-15 was to the extent of Rs. 2236.17 crores. However, the progress of expenditure will be monitored regularly during 2016-17 and additional allocation will be sought from the Ministry of Finance, if required, during the year at RE/supplementary stage. The

Committee have learnt that ECHS organization, which was part of the Army budget earlier, has now been shifted to Grant No. 20 - Ministry of Defence (Miscellaneous). The Financial Advisor (Defence Service), in his oral deposition before the Committee, submitted that this is the first year of rationalizing the Grants and provision of funds for ECHS should be taken care of at a later stage. The Committee would refrain from making any comment in this regard as of now as they have been assured by the Ministry, both in writing and during oral deposition, that the additional funds required by ECHS would be provided at the Revised Estimate or supplementary stage.

Reply of the Government

The contents are factual in nature and no comments are offered.

Recommendations (Para No. 38)

The committee note that in the Capital Head, Rs. 30 crore has been allocated for the year 2016-17 against the projection of Rs. 50 crore. However, Revised Estimate for 2015-16 was only Rs. 13 crore. When queried in this regard, the Ministry submitted that ECHS, being a growing scheme, various procurement processes are under progress at different stages with procuring authorities assisting the ECHS namely Directorate General Defence Estates, Directorate General Armed Forces Medical Services, Military Engineering Services and Master General of Ordnance. The lead time involved in adherence to all procedural requirements contributes toward element of delay/non expenditure. The Committee would urge that budgetary planning should be done in a highly professional manner for achieving optimum utilization of funds. They also desire that the Ministry being the umbrella authority, should ensure timely and coordinated efforts expeditiously with various organisations assisting ECHS and involved in procurement process and infrastructure building.

Reply of the Government

The contents are factual in nature. The observations of the committee have been noted for compliance.

Recommendation (Para No. 39)

All 28 Regional Centres of ECHS, with effect from 01 Apr 2015, have been brought under online bill processing system. The Committee appreciate this effort of the Ministry which was much required to speed up the processing and payment of empanelled hospitals bills. They further desire that a review of the online bill processing system be made at regular intervals with a view to updating the system accordingly.

Reply of the Government

Review of BPA's portal is being carried out regularly and 77 changes/modifications in BPA's application have been carried out since Apr 2012.

The observations of the committee have been noted for compliance.

Recommendations (Para No. 40)

The Committee have learnt that presently, only 339 districts out of 675 district of the Country are covered by the ECHS. As submitted by the Ministry, since ECHS is structured on the lines of Central Government Health Scheme (CGHS), the existing provision in CGHS for grant of Fixed Medical Allowance (FMA) to CGHS beneficiaries residing in non-CGHS cities is proposed to be extended to ECHS. The Committee desire that keeping in view the inability of the Ministry to cover all the districts under ECHS even after a lapse of thirteen years since advent of this scheme and welfare of ECHS beneficiaries living in such district, the proposal for grant of appropriate Fixed Medical Allowance be expeditiously approved and accordingly funds be released to ECHS. Moreover, the Committee would like the Ministry to set a timeline for covering all the districts under ECHS and the Committee be apprised.

Reply of the Government

CGHS is optional scheme whereas ECHS is a mandatory scheme. Granting of FMA to ESM requires framing new policy in consultation with different Ministry/Deptt. and approval of cabinet, is required. The proposal for granting FMA to ESM whose area is not covered by ECHS is under active consideration.

Recommendations (Para No. 41)

The Committee note that a total of 15,21,563 Ex-servicemen have enlisted with the ECHS alongwith 32,02,610 dependents. The beneficiaries of the scheme thus amount total to 47,24,173 as on 31 May 2015. ECHS membership is growing exponentially which calls for corresponding upgradation of infrastructure and service for ensuring acceptable satisfaction level among ECHS beneficiaries. The Ministry itself has submitted that existing system of medicines supply/issue is not commensurate with the actual requirement of medicines in ECHS. In view of the growing dissatisfaction among Ex-servicemen with regard to non availability/short supply of medicines, it was proposed to outsource pharmacy operations on pilot project basis at Polyclinics under two Regional Centres. The Committee would like to be apprised of the outcome of this pilot project within one month of the presentation of this Report.

Reply of the Government

Non issue/short supply of medicines is an issue that has been confronted since long. Outsourcing of Pharmacy operations is viable option and accordingly to overcome the above challenge, a proposal for Outsourcing of Pharmacy Operations in two Regional Centres as a Pilot Project is under consideration.

Since DGAFMS is not able to provide/provision medicines to all ECHS Polyclinics, an alternate solution like Outsourcing of Authorisation of Local Chemist is under active consideration.

Recommendations (Para No. 42)

The Committee note that at present medicines are available to veterans from Polyclinics. Option of reimbursement for specific limited condition is also available in ECHS. ECHS Polyclinics get their supply of medicines from Armed Forces Medical Stores Depot (Essential Drug List), Senior Executive Medical Officers (Other than EOL) and limited local purchase. The Ministry is of the opinion that CGHS has a better medicine supply system by adopting the concept of Authorised Local Chemist (ALC) in addition to Central procurement and the proposal for adopting same methodology is under consideration.

The concept of ALC entails that chemists are empanelled locally by means of tender enquiry and Polyclinics indent the medicines not available from these ALCs for issue to beneficiaries. The Committee would support the Ministry in any effort for welfare of those who make or are ready to make the supreme sacrifice for our country. Hence, they would like a status report at the earliest on the proposal for adoption of the concept of Authorised Local Chemist in ECHS.

Reply of the Government

A case for introducing the concept of ALC (Authorised Local Chemist) is under active consideration in consultation with MoD (Finance).

Recommendation (Para No. 46)

The Committee had recommended as under: -

The oral deposition of the Defence Secretary before the Committee indicated a paradigm shift being planned in the role of DGQA from quality assuring and managing to audit the system. The Committee would like to have a detailed note from the Ministry on this perceived policy change for DGQA.

Reply of the Government

Detailed note is enclosed as Annexure 1

Annexure 1

PARADIGM SHIFT FROM QUALITY ASSURANCE TO QUALITY AUDIT

1. There has been paradigm shift from Quality Assurance to Quality Management and Process Audit of the manufacturer with a view that a controlled system would give Quality product automatically. To this the following process audits of various Ordnance Factories have been carried out in the year as shown against each:-

a)	2014-15	-	146
b)	2015-16	-	282

2. Raman Puri Committee was setup in Apr 2015 to draw up a strategy to transform the internal quality processes and to institute structural changes required in OFB system to achieve improvement in Quality of the products of OFB. The Committee submitted its report to the Ministry in Feb 16 which has been examined by the department of Defence Production and a decision has been taken to implement certain recommendations of the Report in a Pilot project mode in the select six ordnance Factories i.e. Ordnance Factory Khamaria (OFK), Ordnance Factory Badmal (OFBL), Gun Carriage Factory Jabalpur(GCFJ), Ordnance Factory Medak (OFM), Ordnance Factory Ambajhari (OFA), and Ordnance Factory Kanpur(OFC), to assess the impact of the recommendations on the Quality system in OFB.

3. With the approval of the competent authority, it has been decided to implement the following recommendations made by the Raman Puri Committee in six selected Ordnance Factories as a pilot project, with immediate effect :-

- a) Six Ordnance Factories selected for pilot project are Ordnance Factory Khamaria, Ordnance Factory Badmal, Gun Carriage Factory Jabalpur, Ordnance Factory Medak, Ordnance Factory Ambajhari, and Ordnance Factory Kanpur.
- b) Each factory will set up an execution team under the overall supervision of General Manager of respective factory for implementation of the recommendations.
- c) Accounts and Financial functions are to be separate in these factories and Integrated Financial Authority (IFA) system will be followed.
- d) Critical material inspection, Control Point (CP) inspection and Surveillance Point (SP) check would be the responsibility of the concerned Ordnance Factory. The Ordnance Factory will maintain the records of above inspections / checks. Manpower of DGQA establishments deployed in these Ordnance Factories would be under administrative control of the General manager of the Factory for the period of the pilot project.
- e) DGQA will conduct Final acceptance Inspection (FAI) in respect of the six select Ordnance Factories. DGQA will provide Proof ranges to OFB for conducting proof testing before submission of the stores to DGQA for FAI.
- f) To start with, Acceptance Test Procedures (ATPs) followed for inspection by DGQA while carrying out FAI shall remain the same. DGQA will permit one Request in respect of a lot submitted for FAI by OFB and lots resubmitted after RFR will be either as ACCEPTED or REJECTED by DGQA. In case of such rejections, OFB will take appropriate action for loss statement in respect of the store.
- g) User will conduct accelerated exploitation of stores of the six select Ordnance Factories as & when received after acceptance by DGQA.

4. With regard to the above, an implementation committee under the chairmanship of member (A&E)/OFB has been constituted in the Department of Defence Production, Ministry of Defence with following composition:-

- | | | | |
|-----|-----------------------|---|------------------|
| (a) | Member (A&E)/OFB | - | Chairman |
| (b) | Economic Advisor(DDP) | - | Member |
| (c) | Addl DGQA (PP&T) | - | Member |
| (d) | OSD(LS) | - | Member Secretary |

5. The Terms of Reference of the Committee are as follows:-

- (a) To monitor and review the progress of the pilot project on regular basis during the period of the project.
- (b) To issue necessary instructions to the concerned agencies for implementing the decisions arising out of such reviews.
- (c) To apprise Hon'ble RM about the progress of project at regular intervals.
- (d) Redressal of issues arising out of implementation of the pilot project in the selected Ordnance Factories.

6. To review the progress of the implementation of the Pilot project, the Committee has visited the following OFs / Estts so far :-

(a)	GCF Jabalpur	-	21 Sep 2016
(b)	Ord Factory Khamaria	-	22 Sep 2016
(c)	OrdFyAmbajhari	-	23 Sep 2016
(d)	OrdFy Kanpur	-	28 Sep 2016
(e)	OrdFyBadmal	-	04-05 Oct 2016

7. Modalities of transfer of responsibilities from DGQA to OFB in the selected Ordnance Factories for the pilot project, are being worked out.

8. Timelines have been set upto Oct 17 for decision to continue or otherwise with the new system.

Recommendation (Para No. 47)

The committee note that during the year 2011-12, NCC was allocated Rs. 984.01 crore, however, the actual were Rs. 713.81 crore; during the year 2012-13, NCC was allocated Rs. 1,128.80 crore, however, the actual were Rs. 791.87 crore; during the year 2013-14, NCC was allocated Rs. 887.12 crore, however, the actual were Rs. 874.03 crore. During the year 2014-15 NCC had been allocated Rs. 1,025.17 crore, however, actuals were Rs. 965.84 crore. During the year 2015-16, NCC had been allocated Rs. 1,021.39 crore, however, actuals were 950.15 croretill January 2016. For 2016-17 funds allocated to NCC are Rs. 1,188.23 crore and Rs. 1.15 crore for Revenue and Capital segments, respectively. The Committee's scrutiny of the above data revealed that NCC has been guilty of under spending every year. Therefore, the Committee desire that the Ministry and NCC Directorate should introspect on this trend and prepare the NCC budget based on realistic and achievable targets.

Reply of the Government

(i) It is submitted that the budgetary figures mentioned in the reports are what was allotted in the beginning of the financial year at the BE stage. However, the actual budget after the supplementaries and the RE and the total expenditure thereafter is as given below:-

FY	Budget allotted	Actual Expenditure	Expenditure (%)age
2011-12	898.48	713.81	79.45
2012-13	821.65	791.87	96.38
2013-14	954.06	874.03	91.61
2014-15	954.10	965.84	101.23
2015-16	1084.37	1113.76	102.71

(ii) As can be seen, there had been under spending by DGNCC vis-à-vis allocated budget during financial years 2011-12, 2012-13 & 2013-14. To improve this situation, various steps in consultation and guidance of MoD were initiated to ensure that the budget allotted is optimally utilized and it can be seen from the

above table that the budget has been utilized fully during the FY 2014-15 and 2015-16.

(iii) As for the financial year 2016-17, a very realistic Budget projection of Rs 1139.07 crores under the head Revenue and Rs 13.80 crores under Capital Head was made by the DGNCC. However, while, budget under Revenue Head has been provided more than the projected due to likely escalation on account of implementation of 7th Central Pay Commission recommendations. Against the projection of Rs. 13.80 crore under Capital Head, only Rs 1.15 Crores has been provided.

2. It may be pertinent to point out here that there is an inescapable requirement to provide adequate funds under Capital new acquisition head as a Contract for procurement of 110 microlights stands signed between Government of India and M/s Pipistrel, Slovenia on 12 Oct 2015 under which Rs 9.63 crores inclusive of Custom Duty is required to be paid during the current financial year. Similarly, non provisioning of adequate funds under Capital Works is also likely to affect a number of works which are under progress/process.

3. Further, against a projection of Rs 308.19 crore at Revised Estimates (RE) stage for financial year 2015 -16, an allocation of Rs 250.48 crore only was made under budget head of 'Revenue – Non salary'. Therefore, to meet the spillover liabilities of FY 2015-16, an additional budget of Rs 5.00 Cr is required on immediate basis.

4. Keeping all above factors in mind, following requirements of additional budget as detailed below has been projected under 1st batch of supplementary:-

(i)	Capital New Acquisition	Rs 9.63 Crore
(ii)	Capital Works	Rs 1.00 Crore
(iii)	Revenue Non-Salary	Rs 5.00 Crore

5. The balance of requirements would be projected to the Ministry of Defence at RE stage.

Recommendation (Para No. 48)

National Cadet Corps (NCC) was established under the NCC Act, 1948. Today it has presence in 670 districts of the country with authorised cadet strength of 15 lakh. NCC aims at creating a pool of organized, trained and motivated youth with leadership qualities in all walks of life, so that they become useful citizens and serve the Nation with all their might regardless of the career they choose. According to the data furnished by the Ministry, the total number of educational institutions at present covered by NCC is 10372 Schools and 5444 Colleges. In all, 4893 schools and 2966 colleges are presently waitlisted. The ongoing Expansion Plan is likely to be completed by 2018-19 and would reduce the current waiting list marginally as this expansion is based on priorities laid down by the Government.

Reply of the Government

1. Government sanction was accorded on 9th August, 2010 for increase in sanctioned strength of NCC from 13 to 15 lakh over a period of 5 years. Two phases of the expansion

plan of NCC have been completed and the enrolment for the third phase has already commenced. The final phase is likely to be completed by 2018-19.

2. The proposal on future 'Expansion Plan' by way of increasing 10 lakh cadet strength from 15 lakh to 25 lakh is under examination.

Recommendation (Paras No. 49 and 50)

The Committee are of the view that at this time when our Defence Services are confronting the problem of shortage of personnel and staff, inducting more schools and colleges into NCC, an institution aiming at developing character, comradeship, discipline, a secular outlook, the spirit of adventure and ideals of selfless service amongst young citizens, is crying need of the hour. Therefore, the Committee recommend that the expansion plan of the NCC be extended and adequate budgetary and logistic support from the Ministry be provided. The Committee may be apprised of the steps taken in this regard. They also desire that the State Governments should encourage NCC in their respective States and extend resources in this regard.

Reply of the Government

A proposal on future 'Expansion Plan' by way of increasing NCC cadet strength further from 15 lakh to 25 lakh cadets is under consideration with the Government. This expansion plan will considerably reduce the waiting list if not cover all the waitlisted institutions. It is worthwhile to mention that the State Government pay for their share of the expenditure and provide resources as and when the NCC units are raised and allotted to them.

B) RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT AND TO BE COMMENTED UPON

Recommendation (Para No. 4)

During the year 2015-16, the allocation for R&D in the Ordnance Factories at BE stage was Rs. 75 Crore. The allocation at RE stage was Rs. 85 Crore. The allocation at BE stage during the year 2016-17 is Rs. 67.12 Crore. In comparison to BE 2015-16 and BE 2016-17, there is a reduction of Rs.7.88 Crore. Against the allocation of Rs. 370.79 Crore during the 12th Plan period, Ordnance Factories Board has undertaken in-house R&D projects of Rs. 416.79 Crore for development of the products indigenously which are at various stages. The Committee note that some efforts are being made by Ordnance Factories to develop new products through in-house R&D efforts. However, the Committee are dismayed to note that the total allocation towards R&D continues to be on the lower side. The Ministry has furnished the percentage of R&D expenditure and compared with value of production produced during the years. The Committee feel that the allocations of funds should not be linked to the turnover of the Ordnance Factories rather it should be steadily increasing over the years. The Committee also note that while the Ministry is emphasizing on 'Make in India' projects, at the same time the allocations under R&D is not in commensuration with the avowed mission of the Government. Therefore, the Committee strongly recommends that adequate budgetary support should be provided for undertaking R&D activities by the Ordnance Factories.

Reply of the Government

As recommended by the Standing Committee, allocation of funds towards R&D is not linked to the turnover of the Ordnance Factories and it has been steadily increasing over the years. Expenditure on R&D during 2015-16 has been Rs. 85 Crore (i.e. full amount of RE allocation has been used), which is approx. 52% higher than the expenditure on R&D in the year 2014-15 (i.e. Rs.55.82 Crore, all time high till 2014-15).

During 2016-17, although BE allocation is Rs. 67.12 Crore, it is expected that budgetary constraint shall not come in way in achieving targeted R&D expenditure of Rs. 96 Crore by suitable enhancement at RE stage.

For comments of the Committee, please see para no. 13 of Chapter I.

Recommendation (Para No. 6)

The Committee in their 9th report had recommended for constitution of a high-level committee to go into the functioning and organizational structure of Ordnance Factories Board and give its recommendations on restructuring of Ordnance Factories to make them more professional to meet the present day requirements. However, the Committee are concerned to note that there are no known plans for restructuring of Ordnance Factories, hence, no budgetary provisions have been planned for the same. The Committee wish to mention that the Kelkar Committee had emphasized on restructuring of Ordnance Factories. The recommendations of importance as made by the Committee have not been taken into cognizance by the Ministry till date. The Committee deplore such casual approach of the Ministry and strongly recommend that credentials should be accorded to the Kelkar Committee recommendations on restructuring of Ordnance Factories. Action taken in this regard must be intimated to the Committee.

Reply of the Government

The issue of corporatization of Ordnance Factories has been deliberated upon in the past by several Committees set up by the Government. The Kelkar Committee had emphasized on restructuring of Ordnance Factories with the aim that it would enable the OFB to refocus on its areas of operation in a flexible manner so as to respond not only to market but also to strategic interests without compromising the interest of the labor.

In order to achieve the above aim and in order to keep pace with the rapid technological advancement and changing business scenario, OFB's role now includes:

- Focus on In-house R&D including process improvement and design
- Quality Management including Input material inspection
- Customer Diversification
- System Integration of platforms

To achieve the above role, the following activities have been initiated with the aim of providing greater autonomy in functioning to OFB in order to improve efficiency together with accountability:-

Strengthening of in-House R&D - Focus on in-House R&D has been identified. Twelve (12) Ordnance Development Centres have been opened in various locations/divisions for major products and up-gradation activities. To strengthen and consolidate R&D functions, OFB further plans the following:-

- a Upgrade Infrastructure in ODCs
- b Research Assistance from Academic Institutes like IITs etc.
- c Association with DPSU and DRDO – One MoU has been signed with BEL.

Increased outsourcing and vendor development – OFB Procurement Manual is being revised with emphasis on 'Make in India' and facilitating long term procurement.

Quality Management including Input material Inspection – OFB is being entrusted with 1st Party QA functions in addition to existing responsibility for input material inspection, as part of implementation of Raman Puri Committee recommendations on QA functions, in the pilot project mode. This is aimed at making OFB accountable for the Quality of its products with DGQA being responsible for FAI (Final Acceptance Inspection) as in the case of supplies from the private sector.

Adoption of Commercial Format of Accounts to ensure accountability – OFB has started preparing Annual accounts in commercial format and a formal approval of the same is being obtained from C&AG.

The successful implementation of the above mentioned measures will make the OFB more professional, efficient and accountable.

For comments of the Committee, please see Para No. 16 of Chapter I.

Recommendation (Para No. 10)

During the course of deliberations, the representatives of DRDO admitted that the current budgetary allocation will not suffice even for ongoing projects and revenue commitments. Major projects for futuristic technology requirements of tomorrow have been put on hold due to pending allocation of funds and infrastructure activities planned for future need additional funding. Therefore, DRDO require sustained annual commitment of funds year on year for taking up new projects. There is also an imperative need to carry out research and cutting edge technology development for building a strong indigenous technology base. The Committee strongly feel that undertaking these activities requires adequate budgetary support. The Committee are disappointed to view the depletion of budgetary allocation for DRDO which has the effect of jeopardizing the scientific and technological base of Defence forces. The Committee therefore, strongly feel that all possible measures must be taken immediately to meet the budgetary requirements of DRDO.

Reply of the Government

In the light of the Committee recommendation for additional funds for DRDO, it is stated that a case has been initiated to request for additional funds from MoD(Fin) to meet the additional budgetary requirements of DRDO.

For comments of the Committee, please see Para No. 19 of Chapter I.

Recommendation (Para No. 11)

The Committee have been further apprised that for high value projects, DRDO has started the ground work which includes peer review of project proposal as these are of high priority category. The projects would be taken up once the allocation has been secured. The Committee strongly urge the Ministry to provide adequate funds for these high value and high priority projects so that the work already done on these projects does not go waste. The Committee may be apprised of the steps taken in this regard.

Reply of the Government

For high value projects/high priority projects which are awaiting sanction for want to additional funds, DRDO has initiated a case to request for additional funds from MoD(Fin) to meet the additional budgetary requirements of DRDO.

For comments of the Committee, please see Para No. 19 of Chapter I.

Recommendation (Para No. 16)

The Committee, however, feel concerned to note that there has been no review/increase in scientific manpower of DRDO since 2001, though the number of projects as well as technological and tactical Defence requirements have increased manifold. The Ministry has intimated in this regard that the proposal is pending with the Ministry of Finance. The Committee recommend that this matter may be taken up with the Ministry of Finance on top priority so that the manpower requirements of DRDO and India's strategic needs can be taken care of properly. This will further enhance research capability which can be exported and revenue earned thereof can be used for more R&D.

Reply of the Government

The Cabinet Note seeking approval for authorisation of 436 additional posts in the first phase, out of total requirement of 1316 posts was forwarded to Cabinet on 08 Jun 2015. Prime Minister's Office vide PMO ID No. 4221110/Pol/2015 dated 31 Jul 2015 sought for the action taken report on the directions of Cabinet Committee on Security and the same was forwarded by DRDO on 14 Aug 2015 to PMO.

The 1316 additional posts as and when sanctioned are proposed to be filled up in a phased manner in three recruitment years as under:-

S. No.	Year	No. of Scientists	Work Cadre Officers	Total
(i)	First	420	16	436
(ii)	Second	420	20	440
(iii)	Third	420	20	440
Total		1260	56	1316

In the first phase, Scientists will be inducted in the following disciplines as under:-

S. No.	Discipline	Numbers
(i)	Electronics & Communication	122
(ii)	Mechanical Engineering	108
(iii)	Computer Science	75
(iv)	Chemistry / Chemical Engineering	35
(v)	Armaments / Material Science	28
(vi)	Physics	20
(vii)	Aeronautical / Aerospace	19
(viii)	Life Sciences	10
(ix)	Naval Architecture	3
		420
(x)	Critical Immediate requirement of works officers cadre	16
Total		436

Normally, the recruitment process takes 12 months to complete i.e. from notification of vacancy to joining of selected candidates. Thereafter, the selected young scientists are detailed for induction training of the 6 months duration before they are deployed in research projects.

For comments of the Committee, please see para no. 31 of Chapter I.

Recommendation (Para No. 17)

On the requirement of scientists, the Committee note that various steps are being taken by DRDO to generate interest in Defence technologies among school and college students with the aim of encouraging them to take up Defence R&D as a career. While the Committee appreciate the efforts being made in this direction they feel that concerted efforts are needed to attract genuine young talent to opt for Defence R&D as a career. In this regard, the Committee opine that a detailed research of the best practices being followed by the major countries in the world be undertaken and an action plan based on this study drawn up for consideration. The viability of the practices followed internationally vis-à-vis the local scenario may be worked upon and shared with the Committee for their information and consideration and further examination in this regard.

Reply of the Government

Proposal for augmentation of scientific manpower in DRDO is still pending with the Cabinet. In this regard the Action Taken Report sought by the PMO has already been submitted in August 2015.

As regards fellowships programmes, DRDO awards fellowships in a large number of areas of interest of the Organisation pertaining to different Clusters i.e. Armament & Combat Engineering System, Life Sciences, Electronics & Communication System, Missiles & Strategic System, Micro Electronic Device & Computational System, Naval Systems & Materials, and Aeronautical System. As on date, approximate 950 fellowships awarded by the Department are in progress. In the preceding year, the department has awarded as many as 96 fellowships. However, as per the existing recruitment policy and also due to the shortage of vacancies, it is not possible to necessarily absorb the fellows in DRDO. In this regard, they have to compete with other candidates.

As regards performance accountability of personnel, DRDO has a merit based promotion scheme wherein promotions are granted to scientists/technical staff only after a rigorous assessment by subject experts/external members. In the process, non-meritorious scientists/ technical staff do not get promotions and get eliminated. The 7th CPC has also made certain recommendations in this regard which are under consideration of the Central Government. As and when decision of the Central Government is notified in this regard, the department will accordingly develop its mechanism for further dealing with nonperforming personnel.

For comments of the Committee, please see para no. 34 of Chapter I.

Recommendation (Para No. 18)

The Committee express their deep concern on the wasteful expenditure incurred by DRDO on closure of major projects like Airborne Surveillance Platform, Cargo Ammunition, GPS based system as an Alternative to Fire Direction Radar, Development of 30mm Fair Weather Towed AD Gun System, Light towed AD Gun system and 30 mm Light Towed AD Gun System after getting these projects sanctioned. The Committee desire that they be informed of the basis on which these projects were chosen and the specific reasons which forced the Government to close them. The Committee fail to understand as to why, at the initial stage itself, before the projects were sanctioned, the possible constraints and bottlenecks were not foreseen. The Committee opine that the reasons attributed for the closure of various projects like Probable Duration of

Completion(PDC), extension not being approved, one out of two parallel methods being found more feasible, requirement of additional funds, etc. cited by the Ministry could have been tackled better at the initial stage itself through proper planning and following a concurrent engineering and development approach.

Reply of the Government

DRDO has taken the following steps to minimize short closures of projects:-

- While undertaking new projects **pre-project activity** including preliminary design is being given greater focus.
- More stringent review mechanisms have been put in place e.g. various high level committees including, Steering Committees Advisory Committees and Monitoring Boards (Apex Board Executive Boards).
- Involvement of Services and production partners during development process and reviews -To know their views in advance including finalisation of GSQRs.
- Synergy among stakeholders - Quarterly interaction meetings.
- Increase in allocation is made in the next financial year and subsequently in the 13th Five year plan period ahead. Efforts for the same will be made.

For comments of the Committee, please see Para No. 37 of Chapter I.

Recommendation (Para No. 19)

The Committee recommend that in future there should be a scientific, technical and concurrent audit of every ongoing project by an independent agency so that such closures are avoided in future. The Committee also strongly feel that the Ministry should re-evaluate the reasons and also seek expert advice before taking a decision towards closing down any project of DRDO in future so as to avoid wastage of public funds as also help in sustaining the projects, which can prove to be beneficial for the country.

Reply of the Government

Defence Research and Development Organization (DRDO) has already started taking concrete steps to conduct the Project Monitoring Board meetings, which is chaired by Secretary, DR&D and Executive Board which is chaired by cluster DG to minimize slippages at the initial stage itself. This is being done so that projects are not closed down abruptly without achieving the desired goals. To ensure the same, alerts are being sent for reviews due and approaching imminent milestones. Also, every project is monitored through RFD in which annual target is fixed for every project.

In continuation to the efforts to minimize delays, DRDO has revised the 'Procedures for Project Formulation and Management' (PPFM) effective from April 2016 onwards. Some of the major changes brought out in the revised PPFM document include selection of projects based on attribute scale and ongoing workload, greater emphasis on pre-project activity, risk management, linking procurement plan with project sanction to avoid delays, in-depth costing guidelines and stringent review mechanism. Apart from this, increased attention is being given

in the 13th Five Year Plan (FYP) wherein background details are being asked related to proposed new projects.

DRDO has also a mechanism, wherein before the closure of the project, the highest monitoring body reviews the projects, assess the status of completion and gives appropriate directives.

For comments of the Committee, please see para no. 40 of Chapter I.

Recommendation (Para No. 21)

During the course of deliberations, the Defence Secretary acknowledged that DRDO, by itself, is also responsible for delay in its research work. The Committee, in this regard, take note of the problems faced by DRDO in the matter of non-availability of platform for trials. The Committee feel that a better coordination between DRDO and the Services could easily solve this bottleneck and also cut short the time frame in the development and testing of weapon systems. The Committee, therefore, feel that the Ministry should make concerted efforts in this direction so that testing and trial platforms are always available to them for crucial research and development work.

Reply of the Government

'A new category "Mission Mode-User Trials" have been introduced in order to expedite trials of developed systems/products.'

For comments of the Committee, please see Para No. 43 of Chapter I.

Recommendation (Para No. 22)

The Committee note with immense surprise that although an elaborate mechanism is in place which includes adequate financial and administrative powers to Directors General of technology clusters to carry out research and development as per the mandate of DRDO, monitoring of all Cabinet Committee on Security (CCS) projects by the Cabinet Secretariat, etc., the projects are being delayed. The Committee, in this regard, feel that there is some lacuna in the implementation of this system. The Committee, therefore, recommend that more effective efforts are required to be made for ensuring timely completion of each project.

Reply of the Government

DRDO feels that financial powers also need to be delegated down the line to Lab Directors and Programme/Project Directors with adequate checks. Procurement process also needs to be streamlined by cutting down on repeated approval processing which lead to time delays.

Action is being pursued for positioning of Financial Advisors (FAs) in labs and independent IFAs with cluster DGs so as to enable speedy processing of file. Revision of delegation of financial powers is also under process which is expected to improve the functioning.

For comments of the Committee, please see Para No. 46 of Chapter I.

Recommendation (Para No. 23)

The Committee agree with the suggestions of the Defence Secretary and strongly recommend that a mechanism should be developed so that the DRDO, the production agency and the user agency work in tandem right from the conceptualization stage, which it is felt, can result in preventing unnecessary delay in the implementation of various projects of vital importance.

Reply of the Government

We have taken the Services on board this time well ahead of time and involved them in formulating 13th FYP of DRDO. Inputs have been received which are under consideration before finalization of plan document.

For comments of the Committee, please see Para No. 49 of Chapter I.

Recommendation (Para No. 24)

The Committee also recommend that keeping in view the huge public money involved in these projects and the fact that these directly affect the Defence preparedness of the country, accountability must invariably be fixed in case of inordinate delays in executing projects.

Reply of the Government

No enhanced authority has been given to Project Directors till date. Accountability without authority is not fair. Delegation of financial powers, 2010 is getting revised.

For comments of the Committee, please see Para No. 52 of Chapter I.

Recommendation (Para No. 26)

The Committee desire that infrastructure to test aero-engines should also be created within the country so that flying testing of engines can be done in a timely manner without carrying the engine to a foreign country and finding availability of slot testing agency etc.

Reply of the Government

1. The design improvement and validation of aero engine components and modules through testing is a continuous activity to enhance and demonstrate engine performance and reliability. At present, only limited aerodynamic and structural testing can be conducted within the country. Hence, the required component testing facilities at an estimated cost of Rs.1330 crore are planned to be established by DRDO at Rajanakunte, Bengaluru for development of Ghatak engine and all future generation aero engines.
2. The existing Fan & Compressor Test Facility at Gas Turbine Research Establishment (GTRE) has inadequate capacity and has become obsolete. To carry out testing of Fan & Compressor for existing and future generation gas turbine engine programmes of GTRE, it is essential to have a dedicated Fan & Compressor test facility at GTRE. GTRE is working out the budgetary cost of this facility to be established 'on turnkey basis' with an objective to initiate EPC approval by end of Oct 2016.
3. DRDO is planning to establish a twin test cell at GTRE to carry out the performance testing of gas turbine engines upto 130 kN thrust class. The proposed engine test cells will cater for performance and endurance test requirements of the present and future engines. One of the test cell will have the capability of testing engine with thrust vector nozzle. The cost of establishing this test cell (including the building) is estimated to be Rs.300 crore. GTRE has published a Global RFI for setting up of twin test cell in July. Response to RFI is expected by end Aug 2016.
4. Boeing Inc. USA has offered to establish a High Altitude Engine Test Facility (HAETF) of 90kN capacity in India for testing Gas turbine engine as an offset obligation in C17 Globemaster Acquisition Programme of MoD. US Government is requested to issue necessary approval (licence), when M/s. Boeing submits Technical Assistance Agreement (TAA) for HAETF, as Boeing needs to complete the offset credits against the subject programme. For this purpose, DRDO has acquired 100 acres of land at NagarjunaSagar, Telangana.

5. DRDO is studying the indigenous Flying Test Bed (FTB) requirements, for which a Joint Committee consisting of members from DRDO, IAF, HAL and DGAQA will be constituted.

For comments of the Committee, please see Para No. 55 of Chapter I.

Recommendation (Para No. 27)

The Committee appreciate the fact that Defence Research and Development Organisation (DRDO) has a number of achievements to its credit like the development of the strategic Agni class of missiles, a family of radars and sonars for virtually every platform/application, Electronic Warfare (EW) systems, Main Battle Tank (MBT), development of combat aircraft, etc. However, the Committee note that it is also a fact that the country is still heavily dependent on imports to meet its Defence requirements. Given the fact that technologically advanced countries are reluctant to part with their critical technologies with developing countries like India, it becomes all the more essential for our labs to develop each systems, sub-systems, component *ab-initio* including information, infrastructural and testing facilities. The Committee are also of the view that as original research takes a long time, therefore, DRDO may also think of developing a product through reverse engineering. The Committee recommend that the Ministry of Finance should provide adequate budgetary support in this regard so that indigenization of R&D activities can be taken up by DRDO on a war footing. The Committee also feel that there is a need for an increase in the budget for R&D activities of DRDO specifically targeted at reducing dependency on other countries in critical and high technology areas, which can lead to the country becoming self-reliant in Defence Production.

Reply of the Government

'Case has been initiated to request for additional funds form MoD(Fin) to meet the additional budgetary requirements of DRDO.'

For comments of the Committee, please see Para No. 58 of Chapter I.

Recommendation (Para No. 29)

The Committee also feel it to be desirable on the part of DRDO to, at first, develop a product and later keep on improving on it by the way of 'categorizations/markings' viz. Mark I, II, III, IV etc, so that there is continuity in the assigned tasks to some extent. This approach would be preferable instead of aiming to create a 'perfect product' in one go. This will need a proper policy directive as also building the stages of the production systems for the initial and final products.

Reply of the Government

As per recommendation of Standing Committee on Defence, DRDO proposed a Spiral Development Model in line with Mark I, II, III and so on to be included as a part of 'Make DRDO' category during amendment of Defence Procurement Procedure (DPP). DPP-2016 has been issued without inclusion of the same procedure. However, DRDO is still making all efforts to implement the same procedure by approaching Ministry of Defence.

For comments of the Committee, please see Para No. 61 of Chapter I.

CHAPTER III

**RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT
DESIRE TO PURSUE IN VIEW OF THE REPLIES RECEIVED FROM THE
GOVERNMENT**

-NIL-

CHAPTER IV

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE WHICH REQUIRE REITERATION AND COMMENTED UPON

Recommendation (Para No. 1)

The allocation at BE 2015-16 for Directorate General of Ordnance Factories was Rs. 3,644.30 crore. This has been reduced to Rs. 1,752.53 crore at RE stage. The reduction is Rs. 1,891.77 crore. The BE for the year 2016-17 is Rs. 1,953.29 crore. There is Rs. 1,691.01 crore less allocation during the year 2016-17 in comparison to BE 2015-16. In their earlier reports, the Committee have been expressing their concern over wide variations between the projections and actual allocations at the stage of BE and RE. The Committee in their 9th Report had desired that deduction from the Budget Estimate be kept to minimum and only on account of very valid justifiable reasons. The Committee are apprised that due to constraints of funds, Ordnance Factories Board was directed to prioritize its Capital fund requirement. In their 7th Report on Action taken by the Government on the recommendations contained in the 9th Report on Demands for Grants (2015-16) on Ordnance Factories and DRDO, the Committee had observed that the allocations for Ordnance Factories Board were sanctioned late, thereby compelling it to cut short its Committed Liabilities and thereby falling short of the financial targets. This further led to application of cut by the Ministry of Finance. Therefore, the Committee had desired that the timely allocations at BE stage should be provided. During 2015-16, Ordnance Factories Board was considering to increase the supplies in excess of Rs. 11,266 crore on the basis of requirements of Armed Forces. Ordnance Factories Board required an additional budget of Rs. 1,321 crore for an increased supply of Rs. 2,271 crore. However, at RE stage during 2015-16, there was reduction of Rs. 1,891.77 crore. This is a sorry state of affair. The Committee also observe that there is large scale deficiency of equipment in Army due to inadequate production capacity of Ordnance Factories Board. Therefore, there is a strong need to ramp up the capacity of Ordnance Factories Board. The value of production during the year 2015-16 up to Feb, 2016 is Rs. 10,925 crore against the target of Rs. 13,514 crore. The value of production during the year 2015-16 is higher in comparison to that in the year 2012-13, 2013-14 and 2014-15. Against the planned supplies of Rs. 64,870 crore, the actual supplies made during first four years of 12th plan is Rs. 45,387 crore. In view of the above deficiency of Ordnance Factories Board, need to further enhance its capacity to arrest shortage of ammunition and Vehicles of Army, the Committee are of the strong view that due importance should be given to Ordnance Factories Board and adequate budgetary provisions should be provided at the RE stage.

Reply of the Government

The recommendations of the Committee are noted and it is assured that projections/requirements of the Ordnance Factories will be forwarded to Ministry of Finance for consideration at RE stage. In case the funds are not provided as per projections by the Ministry of Finance, the available resources will be optimally utilized based on prioritized requirements of Ordnance Factories.

For comments of the Committee, please see Para No. 7 of Chapter I.

Recommendation (Para No. 2)

The Committee note that there is long delay in completion of projects related to T-72 variants, engines for Armoured Vehicles, spares for T-72 and T-90 tanks, Akash Booster and Sustainer, large caliber weapons, HMX Plant, Pinaka, Ammonium Percolate, MPV and 125 mm FSAPDS. The delay ranges from 3 to 9 years. The major reasons for delay of these projects are due to delay in procurement of plant and machinery and delay in completion of civil works by MES. Against the required investment of Rs.2,394 Cr., the investment made till **February, 2016 is Rs.683.55 Cr.** **The Committee are concerned to note that Rs.1,710.45 Cr. are yet to be allocated.** The important projects have already been delayed considerably. During the course of deliberations with the representatives of Army and Ministry of Defence, the Committee were apprised that due to inadequate production capacity, there is a shortage of Armoured Vehicles with the Army. During examination of Demands for Grants in the year 2015-16, the Committee had observed that due to non-availability of funds as well as absence of commensurate load from Army, expenditure for augmentation of capacity for manufacturing of T-90 tanks from 100 to 140 Nos. was prioritized. The Committee are concerned to note that all this important items approved are nowhere near completion. The construction work of Ordnance Factory at Nalanda has also been carried forward to 12th Plan though it was initiated during the 10th Plan. The Committee also note that Ordnance Factories depend to a large extent on Military Engineering Services (MES) for execution of civil works related to their projects. Delay in completion of Civil Works by MES is one of the major reasons affecting the timely completion of the projects. The Committee view this delay very seriously which is affecting the operational preparedness of Army and other consumers of Ordnance Factories. The Committee feel that proper planning at the initial stage in consultation with all the stakeholders should be undertaken thoroughly deliberating upon the negative factors causing delays and a comprehensive strategy chalked out for timely completion of the projects within a realistic time-frame. The Committee desire that action taken in this regard may be communicated to them.

Reply of the Government

The sanctioned investment, expenditure incurred till March 2016 and future plan of expenditure in respect of Projects related to T-72 variants, engines for armored vehicle, spares for T-72 & T-90 tanks, Augmentation of production capacity of T-90 Tanks, Large Caliber Weapons, HMX Plant are enclosed as **Annexure – Proj.**

Major reasons for delay in procurement of P&M are:

Tendering Stage:

- Limited vendor base since majority of the machine requirement is for customized SPMs/tooled up machine and very few offers are received in spite of repeated Tender Opening Date (TOD) extensions to avoid Single Offers and promote competition.

- Global Tenders for high value and high-tech Plant & Machinery [P&M] (like Forging Plant, Chemical Plants, Metallurgical Plants etc.) and because of financial crisis in Europe during 2011-2013, some of the European suppliers failed to respond to Tender Enquiries (TEs) leading to retendering the cases.
- Till 2013, there was no provision for advance payment. Hence many P&M suppliers, particularly in case of high value P&M did not participate in TEs.
- Restrictions of export licence in respect of European countries, mainly Germany, Italy by their respective Government for supplying P&M to OFB.

Project of Nalanda:

The civil works for O F Nalanda initiated in 10th Plan was shifted to 12th Plan due to following circumstances:-

- ❖ Cancellation of Transfer of Technology (TOT) contract for Bi-Modular Charge System (BMCS) Plant with M/s Denel, South Africa in 2003, firm barred in June 2005. Technology absorption adversely effected.
- ❖ Suspension of project activities during June 05 to July 06 led to retendering of BMCS Process plants.
- ❖ Supply order on M/s IMI, Israel for supply of BMCS Plant put on hold in June 2009 and cancelled in March 2012.
- ❖ The civil works except for BMCS Plant has been completed. Administrative approval for civil works related to BMCS Plant was issued to DRDO for Rs. 226 Crore in January, 2014. Simultaneously, procurement process for BMCS Plant through indigenous sources was being progressed.
- ❖ Efforts for Indigenous procurement of BMCS Plant failed as no offer was technically acceptable. Global tendering (with Approval of Project Monitoring Board) is in progress. As the civil works related to BMCS Plant are required to be in synchronization with the design of BMCS Plant, the same shall be progressed after finalization of contract for BMCS Plant through GTE.

Execution of Civil Works through MES:

In order to execute civil works without time over run, following actions have been put in to place:

- a) General Manager (GM) of factories have been authorized to issue Administrative Approval (AA) for execution of civil works related to MOD/DDP/OFB sanctioned projects to be executed through MES/DRDO/Public Works Organizations. Thus, factory need not refer to OFB for convening the siting board to finalize scope of work, scrutiny of the same and issue of Administrative Approval (AA). This saves considerable processing time.
- b) Standard Operating Procedure (SOP) for civil works has been published in January 2014. Factories have been issued guidelines for measures to be taken while preparing Draft Project Report (DPR) so that variation in the scope of work envisaged in the DPR and to be executed remains minimum and variation between estimated cost and the AA remains within permissible limit.
- c) Financial Powers for execution of civil works departmentally by GMs, have been enhanced from Rs. 25 lakhs to Rs.5 Crore for Production Buildings.
- d) DRDO is also being roped in to execute specialized, high value and time-bound Civil Works. OF Nalanda, OF Korwa and major civil works related to Pinaka project have been assigned to DRDO.

Sanctioned	Likely Total Expenditure *	Expenditure Up to Feb'16	Expenditure Up to	Cumulative Expenditure Plan
-------------------	-----------------------------------	---------------------------------	--------------------------	------------------------------------

investment			Mar'2016	2016-17	2017-18	2018-19
2394	2038.66	683.55	732.83	1096.08	1644.08	2038.66

ANNEXURE – PROJ

(Rs. in Crore)

*** Likely total expenditure is based on actual against the sanction based on estimates**

Major components for the gap between sanctioned and expenditure (Rs. 1661.17 Crore) are:

Sl. No.	Item	Amount (Rs. Crore)	Remarks
1	Difference between estimates and actual on the project cost	355.34	Due to actual costs being lower than estimated costs
2	Engine Augmentation (EFA)	168	Cost of Flexible Machining System (FMS); order already placed in Aug,15; DP: Two years
3	T-90 Tank – 100 to 140 per annum	850	Project put on hold by MOD from Feb,14 to Oct,14. MES has already concluded civil works contract for Rs.281 Crore in Feb,16. P&M under various stages of procurement
4	Large Calibre Weapons	277	Out of Rs.250 Crore of P&M, order already placed for Rs.100 Crore; balance Rs.50 Crore P&M under advance stages of procurement

For comments of the Committee, please see Para No. 10 of Chapter I.

Recommendation (Para No. 12)

Keeping in mind the depletion of allocation for R&D, both in absolute and percentage terms and depletion of the percentage share of R&D activities w.r.t. overall R&D Budget and overall resource crunch of Government of India, the Committee desire that the Ministry should explore the possibility of considering the budget for R&D platform development as a sum of R&D Budget of DRDO, DPSUs and Ordnance Factories as well as the Private Sector. The Committee are of the view that due care should be taken to synergize the R&D activities being undertaken by all these organizations in order to avoid duplication of Research and Development and saving on cost and time. As a consequence thereof, more funds can be made available for undertaking research work. The Committee also note that DRDO's products and systems are being developed with partnership of more than 1000 industries including small and medium enterprises (SEM). In view of limited funds available with DRDO, the Committee are of the view that there is need to re-look at this aspect, as to how the industries will sponsor for manufacturing the products and DRDO will only assist them in design and development assignment, without

spending from its own budget. The Committee desire that DRDO should take necessary steps in this regard under intimation to them.

Reply of the Government

We do agree with the suggestions of the Committee and the same needs to be re-looked as to how the industries will sponsor for manufacturing the products. DRDO has implemented the same in certain cases, examples of these include the case of development of Rustom-II wherein the industry partners are seeding in Rs 300 Cr in design & development activities which is ~20% of the product cost. Also in certain cases, the production contract has been taken up by PSUs which have sought design consultancy from DRDO. A policy regarding the same needs to be framed up.

For comments of the Committee, please see Para No. 22 of Chapter I.

Recommendation (Para No. 13)

The Committee observe that DRDO has developed the following major systems for the Forces viz. Army, Navy and Air force - Army: Prithvi, Agni, Akash, BrahMos, Lakshya Nishant, MBT Arjun Mk-I, AAD Mk-I, AERV, Sarvatra, Pinaka, ROV, Radar-3D TCR, WLR, BFSR, Samyukta EW, DivyaDrishti and Samvahak.

Navy: Dhanush, LRSAM, BrahMos, Sangraha EW, Varuna ESM, Dolphin ESM, Humsa NG, USHUS, TAL, Revathi – Radar, Maareech, Varunasta, Submarines and Escape Set. Air Force: Prithvi, Akash, MRSAM, Lakshya, Eagle EW, LCA Tejas, AEW&C, Rohini, Aslesha, SAR-Radars, Avionics for MiG 29, Su-30, Laser Designator cum TI, Aerial Delivery Systems and CPSS.

For comments of the Committee, please see Para No. 25 of Chapter I.

Recommendation (Para No. 14)

The Committee, while appreciating the work done by DRDO, nevertheless, also feel concerned to note that even after 58 years, there is no clear cut technological road map prepared. DRDO is creating a platform and integrating a number of sub-components. But, R&D is about developing certain key technologies akin to that of ISRO's capability in space which has not been developed by DRDO so far. The Committee are of the view that as the custodian of R&D for national security, while laboratories are expanded, technologies too need to be developed, or else, no useful purpose will be served. Therefore, the Committee feel the need to emphasize on the Ministry that it is high time for DRDO to prepare a technological road map and develop certain key technologies on the lines of ISRO so as to strengthen our Defence base. The Committee further are of the view that DRDO should focus on key high technologies in coordination with DPSUs and the low end technologies can be assigned to capable reputed Private Sector by involving them in the system integration and providing adequate financial support. This will minimize the delay and limitations posed due to financial constraints. This will also further facilitate in creating a R&D network. The Committee desire to be apprised about the action taken in this direction.

Reply of the Government

Initiatives were taken by DRDO after the presentation on Demand for Grants were presented and all the Seven clusters DGs have given a technology roadmap for each of the cluster for the next Ten years. This will be put up to Secretary, DR&D and will be finalized by end July 2016 for implementation.

For comments of the Committee, please see Para No. 25 of Chapter I.

Manpower in DRDO

Recommendation (Para No. 15)

Committee are happy to note that in DRDO, the existing strength of 7863 scientists, is almost equal to the sanctioned strength of 7878. Thus, the shortfall in manpower in the organisation is negligible. Also, the Committee appreciate the fact that from the year 2011 to 2015, the rate of exodus of scientists from the DRDO has decreased. This is a welcome development. The Committee feel in this regard that positive steps such as the 'Incentive Scheme' for Scientists could be initiated in the DRDO so as to minimize the attrition of Scientists from the organization to zero percent.

Reply of the Government

Seventh Central Pay Commission (CPC) has not recommended Performance Related Incentive Scheme (PRIS) for Defence Research and Development Organisation (DRDO) employees as given to Department of Atomic Energy (DAE) and Indian Space Research Organization (ISRO).

For comments of the Committee, please see Para No. 28 of Chapter I.

Public Private Partnership

Recommendation (Para No. 30)

During the deliberations, the Committee pointed out the gigantic gap in the availability of regular arms, ammunition and equipment ranging from 30 to 70 per cent, which adversely affects the ability to the combat our prime adversaries. The Committee stressed on the need for a complete revamp and re-orientation on how the DRDO functions and one of the major initiatives suggested by the Committee in this regard was to facilitate the active involvement of private sector, Universities, Indian Institute of Technologies and Indian Institute of Science which could play a major role in the resurgence of DRDO.

Reply of the Government

DRDO is working in close synchronization with all its stakeholders through its programmes/ projects. Accordingly, it has developed, built and upgraded its industrial partner base. Today, over 1000 private industries and SMEs are vital partners in DRDO's development programmes. This number covers the entire spectrum ranging from Defence Public Sector Undertakings (DPSUs) and Ordnance Factory Board (OFB) to private industries, all of them have played a crucial role in the development programs of DRDO.

In addition, DRDO collaborates with other science & Technology (S&T) Organisation, like Department of Space (DoS), Department of Atomic Energy (DAE) and Council of Scientific & Industrial Research (CSIR) for common requirements and applications. DRDO has set up specialized centres of technology in select academic institutions of repute to work, e.g. IIT Madras Research Park, DRDO has also selectively chosen its global partners and has Memorandum of Undertakings (MoUs) with over 30 countries worldwide for joint collaboration in requisite areas with complementary work share.

For comments of the Committee, please see Para No. 64 of Chapter I.

Recommendation (Para No. 44)

The Committee note that for the year 2016-17, DGQA has been allocated Rs. 1,075.37 crore against the projection of Rs. 1,099.99 crore. However, when asked if any compromises had been made or are likely to be made due to reduced budgetary allocation against the projections made by the DGQA, it replied in negative. The Committee also note that DGQA carries out inspection of defence stores supplied by Ordnance Factories, DPSUs, Trade Firms and ex-import. These inspections are done at various stages of –manufacture and at Final Acceptance stage. On an average, DGQA carries out approx. 18,000 inspections per month. Further, whenever a new system is inducted into the Army, DGQA is an integral part of the process and plays a pivotal role in all stages of induction right from the General Staff Qualitative Requirement (GSQR) formulation stage till the Joint Receipt Inspection of the store. Since DGQA seems to be satisfied with its budgetary allocation, the Committee hope that DGQA would continue in their efforts in taking all actions necessary to ensure that the Arms, Ammunitions, Equipments and Stores being inducted in the Armed Forces are superlative in quality and highly reliable in war/warlike situations.

Reply of the Government

It is confirmed that the DGQA allocation for the year 2016-17 as well as projection thereof are correct.

For comments of the Committee, please see Para No. 67 of Chapter I.

Recommendation (Para No. 45)

The Committee note that DGQA suffered deficiency in manpower because of various cuts during initial stages and recruitment ban, especially in group 'C' and 'D' posts. As per the submission of the Ministry, the ban has been lifted and the process of recruitment has started. The Committee hope that the recent recruitment undertaken by DGQA addresses the problem of shortage of manpower adequately and they be apprised of the tangible outcome thereof.

Reply of the Government

Manpower recruitment for DGQA has been initiated with the concerned authorities to the extent permissible.

For comments of the Committee, please see Para No. 67 of Chapter I.

CHAPTER V

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH GOVERNMENT HAVE FURNISHED INTERIM REPLIES/REPLIES AWAITED

Recommendation (Para No. 43)

The Committee note that a Comprehensive Policy on Procedure for Procurement of Drugs and Consumables for ECHS was issued by Government of India/Ministry of Defence on 25 November, 2003. At present, the financial limits per month, for local purchase of emergent, life saving and essential drugs, of Type A and B Non Military Polyclinics and Military Polyclinics without service Hospitals is Rs. 50,000 and that of Type C and D Non Military Polyclinics and Military Polyclinics without service hospitals is Rs. 30,000. The Committee are concerned to note that even after lapse of 13 years the above mentioned Financial limits have not been reviewed despite the matter being brought into the notice of the Ministry of Defence by the ECHS. Presently, on exhausting this monthly ceiling by Polyclinic, incidence for additional need arising in that month for procurement of emergent, lifesaving and essential drug in not addressed. Therefore, the Committee are of the strong view that due to growth of this scheme and prevailing inflationary trend there is a need to increase the current monthly ceilings. They also desire the Ministry to look into this matter seriously and revise the present ceiling in order to facilitate the officers in charge of Polyclinics to purchase the emergent, life saving and essential drugs.

**NEW DELHI;
16 January, 2017
26 Pausa, 1938 (Saka)**

**MAJ GEN B C KHANDURI, AVSM (RETD),
Chairperson,
Standing Committee on Defence**

STANDING COMMITTEE ON DEFENCE

**MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE
ON DEFENCE (2016-17)**

The Committee sat on Friday, the 16th January, 2017 from 1130 hrs. to 1400 hrs. in Main Committee Room, Parliament House Annexe, New Delhi.

PRESENT

MAJ GEN B C KHANDURI AVSM (RETD) - CHAIRPERSON
Lok Sabha

2. Shri H.D. Devegowda
3. Shri G. Hari
4. Shri Rodmal Nagar
5. Smt Pratyusha Rajeshwari Singh
6. Shri Partha Pratim Ray
7. Smt. Mala Rajya Laxmi Shah
8. Shri Shrirang Appa Barne
9. Col Sonaram Choudhary(Retd)
10. Km Shobha Karandlaje
11. Shri A P Jithender Reddy

Rajya Sabha

12. Shri Harivansh
13. Shri Madhusudan Mistry
14. Smt. Ambika Soni
15. Shri Sanjay Raut

SECRETARIAT

- | | | | |
|---|------------------------|---|---------------------|
| 1 | Smt Kalpana Sharma | - | Joint Secretary |
| 2 | Shri T G Chandrasekhar | - | Director |
| 3 | Smt Jyochnamayi Sinha | - | Additional Director |
| 4 | Shri Rahul Singh | - | Under Secretary |

2. At the outset, the Chairperson welcomed the Members to the Sitting of the Committee and briefed about the Draft reports.

3. The Committee then took up for consideration the following draft Reports on the action taken by the Government on the observations/recommendations contained in the following:

- (i) Nineteenth Report (16th Lok Sabha) on Demands for Grants of the Ministry of Defence(2016-17) on General Defence Budget, Civil Expenditure of Ministry of Defence (Demand No. 20) and Defence Pension(Demand No. 21);
- (ii) Twentieth Report (16th Lok Sabha) on Demands for Grants of the Ministry of Defence (2016-17) on Army, Navy and Air Force (Demand No. 22);
- (iii) Twenty-first Report (16th Lok Sabha) on Demands for Grants of the Ministry of Defence (2016-17) on Ministry of Defence (Miscellaneous) (Demand No. 20); and
- (iv) Twenty-second Report (16th Lok Sabha) on Demands for Grants of the Ministry of Defence (2016-17) on Capital Outlay on Defence Services, Procurement Policy and Defence Planning (Demand No. 23).

4. After deliberation, the Committee adopted the above Reports and authorized the Chairperson to finalize the Reports in the light of the suggestions as may be received from the Members within a week.

5. *

A copy of verbatim record of the proceedings has been kept.

The Committee then adjourned.

* Does not pertain to this Report.

APPENDIX II

ANALYSIS OF THE ACTION TAKEN BY THE GOVERNMENT ON THE OBSERVATIONS/RECOMMENDATIONS CONTAINED IN THE TWENTY FIRST REPORT OF THE STANDING COMMITTEE ON DEFENCE(16TH LOK SABHA) ON 'DEMANDS FOR GRANTS (2016-17) OF THE MINISTRY ON DEFENCE ON ORDNANCE FACTORY BOARD, DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION, EX-SERVICEMEN CONTRIBUTORY HEALTH SCHEME, DIRECTORATE GENERAL QUALITY ASSURANCE AND NATIONAL CADET CORPS (DEMAND NO. 20)'

1. Total number of recommendations 50

2. Observations/Recommendations which have been accepted by the Government (please see Chapter II A):

Recommendation Nos. 3, 5, 20, 25, 28, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 46, 47, 48, 49 and 50

Total : 22
Percentage: 44%

3. Observations/Recommendations which have been accepted by the Government and commented upon (please see Chapter II B):

Recommendation Nos. 4, 6, 7, 8, 9, 10, 11, 16, 17, 18, 19, 21, 22, 23, 24, 26, 27 and 29
Total : 18

Percentage: 36%

4. Observations/Recommendations which the Committee do not desire to pursue in view of the replies received from the Government (please see Chapter III):

Recommendation - NIL

Total : 00
Percentage: 0%

5. Observations/Recommendations in respect of which replies of Government have not been accepted by the Committee which require reiteration and commented upon (please see Chapter IV):
Recommendation Nos. 1, 2, 12, 13, 14, 15, 30, 44 and 45

Total : 09
Percentage: 18%

6. Observations/Recommendations in respect of which Government have furnished interim replies/replies awaited (please see Chapter V):

Recommendation No. 43

Total : 01
Percentage: 2%