

**17**

**STANDING COMMITTEE ON DEFENCE  
(2015-2016)**

**(SEVENTEENTH LOK SABHA)**

**MINISTRY OF DEFENCE**

[Action taken by the Government on the observations / recommendations contained in the Ninth Report of the Committee (Sixteenth Lok Sabha) on Demands for Grants(2015-16) of the Ministry on Defence on Ordnance Factories and Defence Research and Development Organisation (Demand No. 26 & 27)]

**SEVENTEENTH REPORT**



**LOK SABHA SECRETARIAT**

**NEW DELHI**

**February, 2016/ Phalguna, 1937 (Saka)**

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(2015-2016)**

**(SIXTEENTH LOK SABHA)**

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*Presented to Hon'ble Speaker, Lok Sabha on 27.01.2016*

*Presented to Lok Sabha on 26.02.2016*

*Laid in Rajya Sabha on 26.02.2016*



**LOK SABHA SECRETARIAT**

**NEW DELHI**

**February, 2016/ Phalguna, 1937 (Saka)**

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## COMPOSITION OF THE STANDING COMMITTEE ON DEFENCE (2015-16)

**Maj Gen B C Khanduri, AVSM (Retd)** - **Chairperson**

### Members

#### Lok Sabha

2. Shri Suresh C. Angadi
3. Shri Shrirang Appa Barne
4. Shri Dharambir
5. Shri Thupstan Chhewang
6. Col Sonaram Choudhary(Retd)
7. Shri H.D. Devegowda
8. Shri Sher Singh Ghubaya
9. Shri G. Hari
10. Shri Ramesh Jigajinagi
11. Dr. Murli Manohar Joshi
12. Km. Shobha Karandlaje
13. Shri Vinod Khanna
14. Dr. Mriganka Mahato
15. Shri Tapas Paul
16. Shri Ch. Malla Reddy
17. Shri Rajeev Satav
18. Smt. Mala Rajya Lakshmi Shah
19. Capt Amarinder Singh(Retd)
20. Shri A.P. Jithender Reddy
21. Smt. Pratyusha Rajeshwari Singh

#### Rajya Sabha

1. Shri K. R. Arjunan
2. Shri Anand Sharma
3. Shri Rajeev Chandrasekhar
4. Shri A.U. Singh Deo
5. Shri Harivansh
6. Shri Vinay Katiyar
7. Shri Hishey Lachungpa
8. Shri Madhusudan Mistry
9. Smt. Ambika Soni
10. Shri Tarun Vijay

## **SECRETARIAT**

- |    |                         |   |                     |
|----|-------------------------|---|---------------------|
| 1. | Smt. Kalpana Sharma     | - | Joint Secretary     |
| 2. | Shri T.G. Chandrasekhar | - | Director            |
| 3. | Smt. Jyochanamayi Sinha | - | Additional Director |
| 4. | Shri Rahul Singh        | - | Under Secretary     |
| 5. | Shri Rajesh Kumar       | - | Sr. Assistant       |

## INTRODUCTION

I, the Chairperson of the Standing Committee on Defence (2015-16), having been authorised by the Committee to submit the report on their behalf, present this Seventeenth report on Action Taken by the Government on the Observations/Recommendations contained in the Ninth Report of the Standing Committee on Defence (16th Lok Sabha) on 'Demands For Grants (2015-16) of the Ministry of Defence on Ordnance Factories and Defence Research and Development Organisation (Demand No. 26 and 27).

2. The Ninth Report was presented to Lok Sabha / laid on the Table of Rajya Sabha on 27 April, 2015. The Action Taken Notes on the Observations/Recommendations were received from the Ministry of Defence in July 2015.

3. The Committee considered and adopted this Report at their Sitting held on 08 January, 2016.

4. An analysis of action taken by the Government on the Observations/Recommendations contained in the Ninth 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;  
08 January, 2016  
18 Pausa, 1937 (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 Ninth Report (16th Lok Sabha) on `Demands for Grants of the Ministry of Defence for the year 2015-16 on Ordnance Factories and Defence Research and Development Organisation (Demand No. 26 & 27)' which was presented to Lok Sabha and laid in Rajya Sabha on 27 April 2015.

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

<b>Para No.</b>	<b>Subject</b>
1.	Budget Utilization
2.	Budgetary Provisions
3.	Delays in projects
4.	Under spending on Modernization
5.	Research and Development Activities
6.	Indigenization of Defence products
7.	Quality Assurance
8.	Manpower shortage in Ordnance Factories
9.	Re-structuring of Ordnance Factories
10	Budgetary provisions for Defence Research and Development
11,12,13	Manpower in DRDO
14,15	Projects abandoned/closed by DRDO
16.17,18,19,20	Delays in Projects
21	Kaveri Engine
22	Indigenisation of Research and Development Activities
23,24	Quality Control
25,26	Public Private Partnership
27,28,29,30	Collaboration with universities/academic institutions

**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. 4,9, 6,7, 8, 11,15,18,21,23, 24, 25, 26 & 30**

**(14 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. 1, 2, 3, 5, 10, 12, 13,14,16,17,19, 20, 22 & 28**

**(14 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. 27 and 29**

**(02 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. Nil**

**(00 Recommendations)**

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

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

**Para No. Nil**

**(00 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. Budget Utilisation

**Recommendation (Para No.1)**

5. The Committee had recommended as under:

The Committee note that the Budget Estimate allocation under the Capital Expenditure head for the year 2014-15 was Rs. 1207 crore. However, at the Revised Estimates stage it was drastically reduced to Rs. 660 crore. The Ministry expect the Actual Expenditure to be Rs. 765 crore, which is Rs. 105 crore more than the Revised Estimates. This shows a wide variance in the Budget Estimates, Revised Estimates and the actuals under the Capital Expenditure.

The Committee opine that either the demand under this head has been wrongly estimated or there is something that has been taken out of the system due to which this huge gap has emerged in the figures.

The Committee would like to be apprised of the detailed reasons for the same and would recommend that such wide variations in budgetary allocations should not reoccur in future.

The Committee also note that in the next financial year demand, a cut of Rs. 1321 crore has been made which would ultimately affect the value of production and Ordnance Factories would not be able to reach the target as fixed by the Ministry of Rs. 20,000 crore in the next three years. The Committee are of the view that if such high value goals are to be achieved, then a proper infrastructure as well as adequate financial assistance must also be provided. They, therefore, recommend that in future, budgetary allocations must be planned in such a way that no deductions or minimum changes are made at any stage, except for very valid and justifiable reasons.

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

## (A) Capital Expenditure

Even though the requirement projected by OFB in Budgetary Estimates (BE) was quite high but due to funds constraint OFB was directed to prioritize its capital fund requirement. OFB was also directed to review major projects in this regard. Accordingly, OFB reviewed all the projects and prioritized its fund requirement for various Plant & Machinery and Civil Works in 2014-15. Approval for revised BE was given in June 2014. Accordingly till June 2014, no further action for creation of fresh liability against the approved projects was taken. For this reason the actual expenditure upto December, 2014 was only Rs. 373 Crore i.e. 31% of the BE figure of Rs. 1207 Crore. Since the actual expenditure till December was much less than the targeted figure of 67%, OFB's New Capital Budget was revised to Rs. 660 Crore (RE). However, considering the inescapable requirement against commitments already made, OFB projected further additional amount of Rs. 104 Crore, over and above RE. The same was approved by the Ministry to meet the committed liabilities.

Adequate provisions are always made to match the fund requirement of OFB to continue the process of modernization unhindered; however fund constraint sometimes limits the fund availability.

## (B) Budgetary allocation for 2015-16

The initial projection of Budgetary Estimates (BE) for 2015-16 for non-salary expenditure was Rs. 10,335 Crore to enable a Value of Issue (Vol) of Rs. 13537 Crore. However, while considering BE 2015-16, only Rs 9015 crore under Non Salary was allowed by M/o Finance for the financial year 2015-16. Keeping in view the ceiling on Non Salary Budget, OFB worked out the Vol as Rs. 11266 crore. The breakup is as follows:

	BE Projected by OFB(Rs. in Crore)	BE Approved (Rs. in Crore)
	2015-16	
<b>Non Salary</b>	10335.32	9014.59
<b>Reduction from Projection</b>		-1320.73
<b>Supplies</b>		
Supplies to Service	11988.37	9717.57
Non-Defence Supplies	1548.33	1548.33
<b>Total Supplies</b>	13536.70	11265.90
<b>Reduction from Projection</b>		-2271.00

Further increase in supplies beyond Rs. 11266 Crore is being considered on the basis of requirement of Armed forces and existing production capacity of Ordnance Factories. Considering that OFB has initially planned a Vol of Rs. 13536 Crore, as referred in table above, a proportional allocation of additional budget (Rs. 1321

Crore for increased supply of Rs. 2271 Crore) will be required for provisioning of inputs. However this will be subject to an increase in target from the Users, for which OFB has been approaching them. It has been intimated by MOD (Finance/budget) that request for additional funds under first batch of Supplementary Demand for Grand will be sought as and when Ministry of finance announces the same'.

**7. In their earlier recommendation, the Committee had expressed concern over wide variations between the projections and actual allocations at the stage of BE and RE. The Committee in this regard desire that deductions from the Budget and Estimates be kept to the minimum, and only on account of very valid and justifiable reasons. From the action taken replies of the Ministry, the Committee observe that due to constraint of funds, OFB was directed to prioritize its capital fund requirement. Approval for revised BE was given in June 2014. Therefore, no further action for creation of Fresh Liability against the approved projects was taken. On account of this reason the actual expenditure up to December, 2014 was only Rs. 373 crore i.e. 31 percent of the BE figure of Rs. 1207 crore. The Committee further note that the Ministry of Finance reduced the allocations at the stage of RE to Rs. 600 crore because of the expenditure being less than anticipated. However, the Ministry of Finance approved Rs. 104 crore over and above RE to meet the committed liabilities. But the total allocations of Rs. 764 crore is still less than the projected amount of Rs. 1207 crore made initially. The Committee deplore the fact that the allocations for OFB which were sanctioned late thereby compelling it to cut short its committed liabilities and thereby falling short of the Financial target. This further led to application of cut by the Ministry of Finance. Therefore, the Committee desire that the Ministry of Defence should pursue with the Ministry of Finance at the highest level for timely allocations at BE stage so that OFB can take up Fresh liabilities and achieve 100% financial allocations.**

With regard to BE for 2015-16, the Committee are informed that OFB had projected Rs. 10,335 crore at BE to enable a value addition of Rs. 135.37 crore. However, financial constraints led to restricting the amount to Rs. 9015 crore. The OFB is considering to increase the supplies in excess of Rs. 11266 crore on the basis of requirement of Armed Forces. OFB require an additional budget of Rs. 1321

crore for an increased supply of Rs. 2271 crore. Keeping in view the above requirements of Armed Forces and capacity of OFB, the Committee strongly desire the Ministry of Defence to pursue the matter of providing the required allocations at RE stage with the Ministry of Finance.

**B. Budgetary Provision**

**Recommendation (Para No.2)**

8. The Committee had recommended as under:

'In a reply given by Ministry of Defence, it was stated that for augmentation of capacity for manufacturing of T-90 Tanks from 100 to 140 numbers per annum, expenditure was prioritized and restricted to Rs. 186.46 crore due to non-availability of funds as well as the absence of commensurate load from Army during 2014-15. The Committee express their concern over lack of sufficient funds for such an important project and desire that enough funds be provided for this project especially in the light of the fact that the Army has desired for more number of T-90 Tanks. Accordingly, this Committee may be intimated about the steps taken in this regard'.

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

'Army has placed two indents for T-90 tanks on OFB. The first indent is for 300 tanks and deliveries against it are likely to be completed by the first half of 2016. The second indent has been received for 236 tanks and deliveries against it are likely to start in first half of 2016.

At present the available capacity for manufacturing of T-90 tanks at Heavy Vehicle Factory Avadi is 100 nos per annum. The available workload can be completed in less than 3 years beginning from first half of 2016 with the existing manufacturing capacity at HVF Avadi for T-90 tanks.

The proposed project aims at augmenting the manufacturing capacity of T-90 tanks from 100 to 140 nos per annum. The project will require at least another 3 years for its completion i.e. earliest by 2018. Thus the existing workload would be completed by the time augmented capacity becomes available. Accordingly in the absence of any further workload the huge capacity created will go idle.

Army has plans for increased requirement of T-90 tanks but with certain upgradation which are to be decided. In view of the above firm demand in the form of indent shall be available only after the upgraded features required are decided by the Army. The increased requirement is likely to be more than 450 nos. and there

can be a further requirement of another 500 nos. These quantities can make the project viable. Army has been requested to confirm the above requirement.

The capital outlay of OFB in the form of approved BE for the year 2015-16 is Rs. 721 Crore; which is Rs. 61 Crore more than the outlay for the year 2014-15. However, the fund requirement is much higher and it is proposed to raise further demand in RE to the extent of Rs. 1262 Crore for the year as a whole'.

**10. During examination of Demands for Grants (2015-16) the Committee had observed that for augmentation of capacity for manufacturing of T-90 Tanks from 100 to 140 per annum, expenditure was prioritized and restricted to Rs. 186.46 crore due to non-availability of funds as well as the absence of commensurate load from Army during 2014-15. As per the reply of the Ministry, Army had placed two indents for T-90 Tanks on OFB. The proposed project aims at augmenting the manufacturing capacity of T-90 tanks from 100 to 140 Nos. per annum. The project will require at least three years for completion i.e. by 2018. Thus, the existing work load would be completed by the time augmented capacity becomes available. From the above, the Committee strongly feel that in the absence of adequate inflow of funds, the capacity of OFB cannot be enhanced and the timely requirement of T-90 tanks by Army cannot be met. Therefore, the Committee wish to reiterate their earlier recommendation for providing adequate allocations to OFB.**

Further, the Committee note that the Army has plans for increased requirement of T-90 tanks but with certain upgradation. However, the Ministry's reply is silent with regard to the actual order placed by the Army. The Committee would like to know the reasons for not giving firm orders to the Ordnance Factories so that it can plan their modernization and increase its capacity accordingly.

**C. Delay in projects**

**Recommendation (Para No.3)**

11. The Committee had recommended as under:

'The Committee note with concern that there has been a huge delay in different project of the Ordnance Factories resulting in very long gestation periods. Many projects which had started in 2010 such as creation of capacity for manufacturing of T-72 variants @ 50 numbers per annum, augmentation of capacity for manufacturing of armoured Vehicles engines from 353 to 750 per annum, augmentation of capacity for manufacturing of spares required in overhauling of T-72 & T-90 tanks are still nowhere near completion. The construction work of OFB, Nalanda has also been carried forward to the 12th plan though it was initiated in 10th plan.

In its reply, Ministry of Defence has given a number of reasons for delay in implementation of its projects. These include delay in tendering stage like limited vendor base, non-availability of plant and machinery, very limited global sources of explosive plants, etc. as also delays in supply stage like lack of online system for monitoring, financial crisis, etc.

The Committee also note that Ordnance Factories depend to a large extent on Military Engineering Service (MES) for execution of civil works related to their projects which is one of the major causes of delay. The time for completion of civil works from the date of projection of work to MES is approximately 3 years but it seems that in most cases this time limit is not adhered to. The Committee have viewed this very seriously and recommend that norms may be developed to ensure that MES invariably adheres to the time limit of 3 years fixed for the completion of their work.

The Committee feel that with proper planning at the initial stage only in consultation with all the stakeholders, including the Services, by factoring in all these negative factors and then devising a strategy for timely completion of the projects within a realistic time frame can be achieved by the Ordnance Factories. The Committee recommend that a proper system may be developed in this regard as suggested by the Committee and the action taken in this regard may be intimated to the Committee'.

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

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

- (i) GMs of factories have been authorized to issue Admin approval for execution of Civil Works related to MOD/DDP/OFB sanctioned projects to be executed through MES/DRDO/Public Works Organizations. Accordingly

they need not remain dependent on MES alone. Moreover, factories need not refer to OFB for convening the Sitting Board to finalize scope of work, scrutiny of the same and for issue of Admin Approval. This saves considerable processing time.

- (ii) SOP for Civil Works has been published in January 2014. Factories have been issued guidelines for measures to be taken while preparing 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 Admin Approval remains within permissible limit'.

**13. While noting the aspect of long delays in executing different projects of Ordnance Factories, which is on account of excessive dependency on Military Engineering Services(MES), the Committee had recommended that norms be developed so as to impress upon the Military Engineering Services(MES) to adhere to the time frames. The Committee appreciate the steps taken by the Ministry to contain delays in execution of various projects and ensuring completion of works e.g. issuing of administrative approval by General Managers of Factories for execution of civil works related to MOD/DDP/OFBs, sanctioned projects to be executed through MES/DRDO/Public Works Organisation and independence in finalizing the scope of work etc.**

**The Committee desire to be furnished with details of the impact of the above measures taken by the Ordnance Factory Board to minimize the delays while submitting further action taken replies.**

**D. Under spending on Modernisation**

**Recommendation (Para No. 4)**

14. The Committee had recommended as under:

'Indian Ordnance Factories were provided a fund of Rs. 4706.48 crore during the last five years for modernization against which only Rs. 3874.88 crore were spent. Except during the years 2011-12 and 2013-14, where Ordnance Factories Board actually spent more than the outlay provided, the expenditure was nowhere near the BE all these years. Hence, in the five years Rs. 831.60 crore was left unutilized from the budget allocation for modernization. The Committee note with serious concern that this was the case in regard to all the heads viz. Renewal &

Replacement (BE-Rs.2050 crore, Actual Spent-Rs.1859.17 crore), New Capital (Plant & Machinery) (BE-Rs.1565.02 crore, Actual Spent - Rs. 938.54 crore), Capital (Civil Work) (BE- Rs. 1091.46 Crore, Actual Spent - CroreRs. 1077.17 crore). The Committee observe that around 18% of the amount allocated for modernization remained unutilized during the last five years, although the Ordnance Factory Board manages 41 manufacturing units where the amount may have been utilized. The delays in many important projects like Pinaka Rocket System, T-90 tanks etc. have resulted due to the delay in augmentation of the capacity for manufacturing by the Ordnance Factory Board which has not seriously taken up the modernization process.

The Committee express their anguish and conveys their unhappiness, at the underutilization of funds for modernization by the Ordnance Factory Board, which have denied these surplus funds to be allocated to some other Head where it could have been used fruitfully. The Committee opine that optimum utilization should also be given due importance and desire that steps must be taken to ensure optimum utilization of funds for modernization'.

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

- a) Circumstances leading to under expenditure towards modernization are as under:-
  - i) Basically the machines procured by OFB are SPMs (Special Purpose Machines), tooled up and normally not available off the shelf.
  - ii) Vendor base for the above kind of Plant & Machinery is limited.
  - iii) The specific type of Forging Plant, Chemical Plant and Metallurgical Plant required for production of military stores are not available indigenously.
  - iv) Special categories of Explosive Plants have very limited global sources.
  - v) Because of financial crisis, major suppliers in Europe failed to respond to Tender Enquiries resulting in retendering of cases. They also failed to execute the supply timely.
  - vi) Estimated cost at the time of demand preparation was based on the budgetary quotes obtained from the prospective suppliers. The Procurement Manual does not permit advance payment for machines. Hence, many suppliers of such machines, which were cost intensive, were not eager to participate in Tender Enquiries.
  - vii) BE projection is made one year before the year of expenditure, based on the committed liability and potential liability. However due to the reasons cited above, many cases resulted in re-tendering and in turn, the actual expenditure could not be met to the extent of BE projection.



- viii) It is further to add that the modernisation drive has been speeded up and in the first 3 years of XIIth plan (2012-13, 13-14 & 14-15), Rs. 3170 Crore have been spent against BE of Rs. 3198 Crore, even though there was a severe fund crisis in the years 2012-13 due to which OFB had to prioritize its investment plan.

**16. The Committee had *inter alia* recommended for ensuring optimum utilization of funds. The Committee, in this regard note from the Action Taken Reply that in the first three years of XIIth Plan, the modernization expenditure had been optimally utilized. But the circumstances leading to short fall in expenditure towards modernization, as mentioned in the reply are not at all convincing. The Committee desire that the Ministry look into the reasons as specified in the replies seriously and try to develop a vendor base in India so that the work pertaining to modernisation of Ordnance Factories can be speeded up and the concept of 'Make in India' becomes a reality.**

The Committee also do not agree with the reason attributed for under utilisation of funds as being on account of the BE projection having been made one year before the year of expenditure. The projections made at the initial or BE stage are on the basis of committed and potential liability. The Committee desire that the Ministry should aspire to achieve optimum, efficient and justifiable utilisation of allocated funds and contain any sort of wasteful expenditure.

**E. Research and Development Activities**

**Recommendation (Para No. 5)**

17. The Committee had recommended as under:

The Committee opine that in the present scenario, it will be extremely difficult for the Ordnance Factories to compete with internationally renowned companies to manufacture arms and ammunition unless new strategies towards restructuring and in house R&D work are taken up by the Ordnance Factories. The Committee note that some efforts are being made by the Ordnance Factories to develop new products through in-house R&D efforts. However, the Committee are dismayed to note the total allocation towards R&D continues to be on the lower side and in fact they observe that the allocation of R&D has been reduced in 2013-14 as compared to 2012-13, though they understand that the turnover of 2013-14 was lower. However, the Committee feel that the allocation of funds for R&D work should not

be linked to the turnover of the Ordnance Factories and should be steadily increased from year to year. The Committee emphasize that instead of always depending on technology from DRDO or by import, Ordnance Factories should become self-reliant by developing new products through in-house R&D.

The Committee also note that 11 Ordnance Development Centres (ODCs) with identified core technologies have been created wherein Ordnance Factories have taken up product development and product improvement in core product area, which is appreciable. The Committee feel that more such Ordnance Development Centres need to be established for R&D related projects to 'Make in India' a reality.

The Committee also note that the Services are making some contribution towards the Research and Development of high technology Military projects which is a welcome step. However, more serious efforts should be made and methods devised to further enhance the involvement of the Services in the R&D Projects of the Ordnance Factories. This, the Committee feel, will lead to better time management as well as improving the cost effectiveness of the projects by detecting the faults, if any, and solving issues in consultation with the Services at the initial stage only.

The Committee recommend that the Ministry should make all efforts to provide sufficient funds to the Ordnance Factories to undertake high quality in-house R&D activities. The Committee also feel wherever required experts from the private sector as well as from international arena may be involved in the process to benefit from their domain knowledge by the Ordnance Factories'.

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

'During 2014-15, the expenditure on R&D was Rs. 55.85 Crore in comparison to Rs. 42.7 Crore in 2013-14. OFB plans to spend Rs. 70 Crore in the year 2015-16.

Off late OFB has started giving emphasis on in-house R&D and is now working on upgradation of existing products and development of new products. The upgradation of the existing 155mm x 39 caliber gun to 155mm x 45 caliber gun is a recent example of upgrading an existing product. OFB has also developed Multi Grenade Launcher as well as a modified version of 5.56mm INSAS Rifle. OFB has also indigenously developed Rocket 57mm S-5KP (Practice) for the Air Force, Chaff Launcher and anti-submarine Rocket for the Navy. The upgradation/development of the above systems involved active cooperation from the User.

In the year of 2014-15, Board has approved for the creation of 12th Ordnance Development Centre (ODC) at Vehicle Factory Jabalpur'.

- 19. The Committee express happiness on the fact that there has been an increase in expenditure on R&D of OFB, emphasis has been laid on in-house R&D, as also the 12<sup>th</sup> Ordnance Development Centre(ODC) at Vehicle Factory, Jabalpur has been created. However, the Committee would like to see some witness development of**

more innovative products. The Committee would like to know about the action taken on their recommendation for the involvement of the Services in the R&D Projects of the Ordnance Factories; as well as from the private sector and from the international arena. The Committee would also like to be kept apprised of the R&D initiatives taken by the OFB.

**F. Budgetary provisions for Defence Research and Development**

**Recommendation (Para No. 10)**

20. The Committee had recommended as under:

'The Committee note that the Defence Research and Development Organization (DRDO) projected demand of Rs. 19,641.56 crore in 2015-16. However, it has been allocated an amount of Rs.14, 358.49 crore only. The Committee also note that out of the total Defence Budget, the share of DRDO was 6.59% in 2010-11, which was reduced to 5.34% in 2013-14. The share has slightly improved to 6.67% in 2014-15, but again it reduced to 5.82% in 2015-16. The share of defence research and development budget to GDP of the Nation is also declining over the years. It has reduced to 0.11% in 2013-14 from 0.13 per cent in 2009-10. However, this share has slightly improved to 0.12% in 2014-15. The Committee also note that DRDO gives its budgetary projection, based on the ongoing projects/programmes and future requirements and out of which nearly 80% is utilised for Mission Mode Projects with deliverables for Armed Forces, but it has been allocated inadequate amount. The Committee feel that shortfalls in budget affects the pace of technological and infrastructural development since ongoing developmental activities have to be re-prioritized. The need to lay emphasis on indigenization of defence products but it can only be achieved with adequate budgetary support. The Committee, therefore, desire that all possible measures should be taken to meet the budgetary requirements of DRDO'.

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

'During the 2014-15 Government had allocated Rs. 15282.92 Cr at BE stage but the reduction of Rs. 1835.73 Cr was imposed, thus reducing the allocation to Rs. 13447.19 Cr. However, at a later stage, additional amount of Rs. 268.95 Cr was provided by MoD (Finance).

Against the current financial year's allocation, all out efforts would be made to utilize the same in full and additional funds, if required, would be projected at later stage. Though, it would help DRDO, if full allocations are made at BE stage itself to facilitate prioritization of expenditure in various Projects/Programmes'.

22. The Committee had expressed concern over the fact that the allocation made was only Rs. 14358.49 crore as against the projected amount of Rs. 19541.56 crore for the year 2015-16. The Ministry, however, in its Action Taken Reply has not commented on the reasons for the difference, which is substantial. The Committee, therefore would like to have the response of the Ministry on this aspect. Further, the Committee would like to take note of the fact that the Ministry has submitted that if allocations are made in full, at the BE stage itself, it would facilitate DRDO to prioritize the expenditure on various Projects/Programmes. Nevertheless, all out efforts are said to be being made, for utilizing allocations in full and additional funds would be projected at a later stage. The Committee are of the view that adequate funding is a necessity for any organisation to run progressively. Therefore, the Committee wish to reiterate their earlier recommendation for allocating sufficient budget for DRDO so as to fasten its technological and infrastructural development, and thereby achieve indigenization in Defence Production. The Committee may also be apprised of the details of the utilisation of the budget till the date of furnishing of the Action Taken Statement.

**G. Manpower in DRDO**

**Recommendation (Para No. 12)**

23. The Committee had recommended as under:

'The Committee, however, note with dismay 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 a top priority so that the manpower requirements of DRDO and India's strategic needs can be taken care of properly'.

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

'A draft Cabinet Committee on Security (CCS) Note has been initiated for augmentation of manpower of DRDO by 1316 posts in three phases, with 436 posts in the 1<sup>st</sup> phase (420 posts of Scientists and 16 of Works Cadre Officers). The proposal has been approved by the Ministry of Finance on 21<sup>st</sup> January, 2015. The CCS Note, duly approved by the Hon'ble Raksha Mantri, has been forwarded to the Cabinet Secretariat for approval of Cabinet'.

**25. The Committee appreciate that a draft Cabinet Committee on Security (CCS) Note has been initiated for augmenting the manpower of DRDO. However, the Committee would like to be apprised of the details of the same, viz., when the proposal was forwarded to the Cabinet Secretariat for approval, and the follow-up action taken by the Ministry thereon. Additionally, the Committee would also like to be intimated in detail of the three phases of augmentation of manpower as envisaged, including the timeframes and methodologies to be followed for the planned induction.**

#### **Recommendation (Para No. 13)**

26. 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 action plan based on this study taking into consideration. Their viability vis-à-vis the local scenario may be worked upon and be shared with the Committee for their consideration and further examination in this regard'.

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

'As recommended by the Parliamentary Standing Committee on Defence a detailed research of practices being followed by major countries for encouraging students to take up Defence R&D as a career was undertaken. The research showed that there are various programmes, such as Young Investigator Programme (YIP) offered by the three Services in USA to encourage Defence R&D. These programmes offer grant for research in areas of national interest for a fixed duration. Similar programmes are also offered by NASA and Department of Energy in USA and also in Canada.

DRDO earlier used to have similar fellowship programmes in Electronics and Aerospace, where young talents selected from chosen Institutes were nurtured and subsequently absorbed in DRDO. However, due to lack of adequate vacancies, these programmes are not being pursued at present. As explained in the Paragraph No. 12, a case has been taken up for augmentation of Scientific Manpower in DRDO with the Cabinet. As and when the authorisation of additional manpower is approved by the Cabinet, similar programmes for encouraging and nurturing young talent will be reinitiated'.

**28. The Committee appreciate the fact that a detailed research of practices being followed by major countries for encouraging students to take up Defence R&D as a career was undertaken by DRDO. However, the Committee feel that DRDO needs to vigorously pursue the aspect of reviving the fellowship programmes in Electronics and Aerospace for the young talents as this can lay a solid foundation for work on defence technologies in the future. The Committee are also of the view that augmentation of manpower should be linked with performance accountability and DRDO should develop an internal mechanism whereby it can shed off the non-performing personnel periodically and the intake of manpower becomes a continuous process.**

#### **H. Projects abandoned /closed by DRDO**

##### **Recommendation (Para No. 14)**

29. 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 Director 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 about the basis on which these projects were chosen and specific reasons which forced the Government to close them. The Committee are not convinced as to why at the initial stage itself, before the project got sanctioned, all the possible constraints and bottlenecks were not foreseen. The Committee felt that the various reasons like Probable Duration of Completion(PDC), extension not being approved, one out of two parallel methods being found more feasible, requirements of additional funds, etc. cited by the Ministry for the closure of various projects could have been tackled at the initial

stage itself by better planning and following a concurrent engineering and development approach'.

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

'DRDO has been set up with the mandate of developing cutting edge technologies and systems for the Indian Armed Forces through R&D in all technology domains. R&D is not a straightforward process and many unanticipated technological complexities are faced during the time of project execution. Also sometimes lack of availability of critical equipments, special materials (from foreign sources) as well as non-availability of infrastructure and testing facilities within the country/outside adds to the uncertainty in the execution of R&D of any system/sub-system as per stipulated timelines.

Reasons for foreclosure have typically been major change in QRs, need for indigenization vs. foreign collaboration, financial viability, etc. Sometimes, it is in the best interest of the organization to close an unviable project for various reasons rather than continue to spend funds without meaningful output.

It is worth mentioning that DRDO is taking the following steps to minimize such short closures:-

- (i) While undertaking new projects pre-project activity including preliminary design is being given greater focus.
- (ii) 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).
- (iii) Involvement of Services and production partners during development process and reviews – To know their views in advance including finalisation of GSQRs.
- (iv) Synergy among stakeholders – Quarterly interaction meetings'.

**31. The Committee agree that given the nature of work being carried out by DRDO, the closure of some projects may be to some extent justifiable and the Committee are happy to note that some steps have been taken by the DRDO to minimize/close projects. However, the Committee feel that DRDO should take some more steps viz. internal checks and balances, at the initial stage itself, freezing the GSQRs when finalised, fixing of responsibility on concerned individuals etc. which would result in minimizing cases of closure of projects.**

**I. Delays in Projects**

**Recommendation (Para No. 16)**

32. The Committee had recommended as under:

'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, Tejes LCA, etc. The Committee are dismayed to note that out of 46 major ongoing projects (more than Rs. 100 crore), there have been cost revisions and time revisions in 10 and 12 projects, respectively. Besides, 10 projects are more than 5 years old, i.e. sanctioned before 2009. Seventeen major projects (more than Rs. 100 crore) sanctioned during the 11<sup>th</sup> Five Year Plan (April 2002 to March 2007), but none has yet been completed. Moreover, two of these have been under closure. The Committee are perturbed to observe that the projects being undertaken are not executed according to their schedule and inordinate delays in execution of, almost all the projects has become a common phenomenon. While deploring this attitude, the Committee desire that some concrete steps should be taken to put in place a mechanism to oversee the project execution so that they are implemented in stipulated time-frame. Steps, proposed to be taken be intimated to the Committee'.

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

Some of the ongoing projects undertaken by DRDO are delayed due to the following reasons:-

- (i) Ab-initio development of state-of-the-art technologies.
- (ii) Technical/technological complexities.
- (iii) Non-availability of infrastructure/test facilities in the country.
- (iv) Non-availability of critical components/equipment/materials in the country and denial of technologies by the technologically advanced countries.
- (v) Failure of some of the components during trials/testing.
- (vi) Increase in the scope of work during developmental phase.

The following steps have been taken for timely completion of ongoing projects:-

- (i) Consortium approach is being used for design, development and fabrication of critical components.
- (ii) Three-tier project monitoring approach has been instituted in the major projects/programmes.
- (iii) Project Monitoring Review Committee (PMRC) and Project Appraisal and Review Committee (PARC) meetings are held regularly to monitor the progress of ongoing projects / Programmes.
- (iv) Concurrent engineering approach has been adopted in technology intensive projects to minimize time-lag between development and productionisation of the systems.



- (v) Information Technology and modern management techniques are being applied.
- (vi) Encouraging joint funding by users to ensure their commitment towards earliest completion.
- (vii) Promoting synergy and better co-ordination among User Services, DRDO and production agencies through cluster meetings.

**34. The Committee express satisfaction over the fact that quite a few steps have been taken by the DRDO to bring down the number of delayed projects. However, the Committee note that some of the problems being faced by DRDO like technical/technological complexities, non-availability of infrastructure/test facilities in the country and non-availability of critical components/equipment/materials in the country and denial of technologies by the technologically advanced countries etc. are long-term issues which need to be pro-actively taken up by the DRDO within the Ministry so as to facilitate in addressing the same in co-ordination with the Services and other agencies. The Committee feel that such delays in respect of important projects of DRDO, besides being a burden on the public exchequer also create hurdles in the path of Defence related technological development of the country. The Committee desire that DRDO should be more cautious before initiating a project and made an assessment of the problems likely to arise in future.**

#### **Recommendation (Para No. 17)**

35. The Committee had recommended as under:

'During the deliberation, Defence Secretary acknowledged that DRDO is also responsible for delay in its research work itself. The Committee note 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 system. The Committee, therefore, feel that 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'.

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

'DRDO has well established mechanisms (quarterly interaction meetings, synergy meetings, etc.) for regular interaction with the Services for better coordination between DRDO and the Services.

The issue of provision of trial platforms by Services has been repeatedly highlighted at various forums including reviews by Vice Chiefs. It has also been included in the 'Procedure for Make through R&D' which will be circulated to all stakeholders'.

**37. The Committee note that DRDO has established mechanisms for better coordination between DRDO with the Services and the issue of trial platforms is being raised at various fora. The Committee, however, would like to be apprised of the progress made by DRDO in actuality so as to help in analyzing 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 to avoid delays in implementation of projects.**

#### **Recommendation (Para No. 19)**

38. The Committee had recommended as under:

'The Committee agree to 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 should work in tandem right from the conceptualization stage, which it is felt, can result in preventing unnecessary delay in the implementation of various vital projects'.

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

'In the recent past DRDO has initiated a detailed mechanism of regular interaction with the Services to boost up the induction of indigenously developed systems and increase self-reliance of the Armed Forces. Joint reviews of DRDO projects by Secretary, Defence R&D and Vice Chiefs of the respective three Services and Quarterly Interaction Meetings (QIMs) with all line directorates of Indian Army are conducted regularly to remove bottlenecks and provide necessary guidance to the development team. Indian Navy-DRDO (IN-DRDO) synergy meetings for the long-term requirements of Indian Navy had also been recently initiated during the last one year and cluster-wise meetings are being organized regularly. The benefit of these recent initiatives will bear fruit in the years ahead'.

**40. The Committee are happy to note that in pursuance of the suggestions of the Committee and the recommendation made, a detailed mechanism has been put in place, which the Committee hope would help in preventing unnecessary delays in the 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 assess further steps required to be taken in case of any inadequacy that may remain in this regard.**

#### **Recommendation (Para No. 20)**

**41. 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 delay in these projects'.

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

'DRDO agrees with the recommendations of the committee and also feels that accountability be invariably fixed to avoid delay in the projects. This can be achieved by giving additional authority, both financial and administrative to the Programme/Project Directors. It is also felt that the accountability for delays be shared by all in the process chain including technical, administration, finance, management and Users'.

**43. The Committee appreciate that DRDO concurs with their recommendation regarding increasing accountability in case of inordinate delays in Defence projects by way of giving additional authority to the Programme/Project Directors. Besides, the Committee feel that strict internal checks and balances are required to be maintained for monitoring the work of the Programme/Project Directors. The Committee expect that this aspect would be looked into with due seriousness and appropriate measures taken for strengthening the mechanisms of accountability.**

## **J. Indigenization of Research and Development Activities**

### **Recommendation (Para No. 22)**

44. 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, 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'.

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

'In the current financial year (2014-15), the budget of Department of Defence R&D has been raised to 6.7% of Defence budget as compared to 5.3% in the financial year 2013-14. This although an increase, compares very modestly to the R&D expenditure of world leaders with USA at 12% and China at 20%. A major chunk of this funding is for Mission Mode (MM) projects/programmes of DRDO which are basically projects undertaken for system development and focuses on immediate requirement of the Services. This leaves limited funding for other DRDO projects which are: Technology Demonstration (TD) projects for demonstration of specific technology, Science & Technology (S&T) projects which cater to futuristic technology areas and blue sky research undertaken through extramural research. The organization is of the view that these are still not sufficient for futuristic projects and justice towards indigenization can be done only if the budget of DRDO is raised at least to 10% of the Defence Budget. MoD needs to pursue the matter with the Ministry of Finance so that adequate increase in allocation is made in the next financial year and subsequently in the 13<sup>th</sup> five year plan period ahead. Efforts for the same will be made'.

46. From the reply submitted by DRDO, the Committee note that R&D expenditure of DRDO is a mere 6.7% of Defence Budget in comparison to 12% and 20% of USA and China respectively. Further, a major chunk of this funding is for Mission Mode (MM) projects/programmes of DRDO which are basically projects undertaken for system development and which focus on the immediate requirement of the Services. This leaves limited funding for other DRDO projects. DRDO admitted that these are still not sufficient for futuristic projects and justice towards indigenization can be done only if the budget of DRDO is raised to a level of at least 10% of the Defence Budget. Therefore, the budget of DRDO needs to be enhanced to 10% of Defence Budget as demanded by DRDO. However, the Committee desire that DRDO also needs to ensure that its budget estimates are made based on the actual needs and with full justification. Necessary explanations that may be needed in this regard should be given to the Ministry and utilization of funds ensured to the optimum extent.

**K. Collaboration with Universities/Academic Institutions**

**Recommendation (Para No. 28)**

47. The Committee had recommended as under:

'In their earlier report, the Committee had 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'.

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

'DRDO has proposed opening of Advanced Technology Centers at premier Indian academic institutions in the following areas:-

- (i) Aerodynamic Research for Futuristic Vehicles;

- (ii) Robotics and Unmanned Technologies;
- (iii) High Power Directed Energy Technologies;
- (iv) Cyber Security;
- (v) Next Generation propulsion Technology;
- (vi) Advanced Computing and Computational Techniques;
- (vii) Advanced Materials; and
- (viii) Under Water Technologies.

In principle approval of Hon'ble Raksha Mantri has been accorded on the acceptance of necessity for creation of the centers.

DRDO has progressed actions in establishing J.C. Bose Centre of Advanced Technology at Jadavpur University, Kolkata to pursue research in Robotics and Unmanned Technologies, High Energy Laser and Photonics and Cyber Security Technologies. Memorandum of Understanding (MoU) has been finalized.

MOU has signed with IIT-Bombay and IIT-Madras for establishing the Centre of Propulsion Technology at IIT Bombay with note at IIT-Madras to perform advanced research in Aero and Missile Propulsion, Advanced Aerodynamics and Morphing related technologies.

Joint Advanced Technology Centre at IIT-Delhi is planned to pursue research in Advanced Ballistics, Ballistic Protection, Modeling, Terra hertz technology, Brain-Machine Intelligence and Quantum Photonics. MoU is under finalization for this purpose'.

**49. The Committee express satisfaction over the initiatives taken by the DRDO for the establishment of centres of excellence in various parts of the country. The Committee strongly recommend that the work for creation of these centers which have been approved in-principle by Hon'ble Raksha Mantri may be vigorously pursued with the Ministry so as to ensure that these centers are set up at an early date. The Committee desire to be apprised of the outcome in this regard.**

## CHAPTER II

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

#### Recommendation (Para No. 4)

Indian Ordnance Factories were provided a fund of Rs. 4706.48 crore during the last five years for modernization against which only Rs. 3874.88 crore were spent. Except during the years 2011-12 and 2013-14, where Ordnance Factories Board actually spent more than the outlay provided, the expenditure was nowhere near the BE all these years. Hence, in the five years Rs. 831.60 crore was left unutilized from the budget allocation for modernization. The Committee note with serious concern that this was the case in regard to all the heads viz. Renewal & Replacement (BE-Rs.2050 crore, Actual Spent-Rs.1859.17 crore), New Capital (Plant & Machinery) (BE-Rs.1565.02 crore, Actual Spent - Rs. 938.54 crore), Capital (Civil Work) (BE- Rs. 1091.46 Crore, Actual Spent - CroreRs. 1077.17 crore). The Committee observe that around 18% of the amount allocated for modernization remained unutilized during the last five years, although the Ordnance Factory Board manages 41 manufacturing units where the amount may have been utilized. The delays in many important projects like Pinaka Rocket System, T-90 tanks etc. have resulted due to the delay in augmentation of the capacity for manufacturing by the Ordnance Factory Board which has not seriously taken up the modernization process.

The committee express their anguish and conveys their unhappiness, at the underutilization of funds for modernization by the Ordnance Factory Board, which have denied these surplus funds to be allocated to some other Head where it could have been used fruitfully. The Committee opine that optimum utilization should also be given due importance and desire that steps must be taken to ensure optimum utilization of funds for modernization.

#### Reply of the Government

- a) Circumstances leading to under expenditure towards modernization are as under:-
- Basically the machines procured by OFB are SPMs (Special Purpose Machines), tooled up and normally not available off the shelf.
  - Vendor base for the above kind of Plant & Machinery is limited.
  - The specific type of Forging Plant, Chemical Plant and Metallurgical Plant required for production of military stores are not available indigenously.
  - Special categories of Explosive Plants have very limited global sources.
  - Because of financial crisis, major suppliers in Europe failed to respond to Tender Enquiries resulting in retendering of cases. They also failed to execute the supply timely.

- Estimated cost at the time of demand preparation was based on the budgetary quotes obtained from the prospective suppliers. The Procurement Manual does not permit advance payment for machines. Hence, many suppliers of such machines, which were cost intensive, were not eager to participate in Tender Enquiries.
- BE projection is made one year before the year of expenditure, based on the committed liability and potential liability. However due to the reasons cited above, many cases resulted in re-tendering and in turn, the actual expenditure could not be met to the extent of BE projection.

b) It is further to add that the modernisation drive has been speeded up and in the first 3 years of XIIth plan (2012-13, 13-14 & 14-15), Rs. 3170 Crore have been spent against BE of Rs. 3198 Crore, even though there was a severe fund crisis in the years 2012-13 due to which OFB had to prioritize its investment plan.

### **Recommendation (Para No. 6)**

The Committee note with concern that although the Value of issue has consistently dropped from 2011-12 to 2013-14 the Import Content has not shown a similar drop; in fact it has risen from Rs. 1462 crore in 2012-13 which was 12.20% in 2012-13 of the Value of Issue, to Rs. 1685 crore which was 15.15% of the total Value of Issue in 2013-14. The Committee recommend that all efforts may be made by the Ordnance Factories towards indigenization of its Defence products so that the dependency on foreign imports is reduced.

The Committee would like to be apprised of the steps taken in bringing down the import content in the Ordnance Factories products.

### **Reply of the Government**

Indigenization is a major thrust area of OFB and is being monitored at the highest level. The amount of importation vis-a-vis the value of issues during last five year is given as under:-

(Rs. in Crore)

Financial Year	Value of Issue	Value of importation	Percentage (9%)
2010-2011	11215	2052	18.30%
2011-2012	12391	1745	14.07%
2012-2013	11975	1462	12.20%
2013-2014	11123	1685	15.15%
2014-2015 (prov.)	11414	1017	8.91%

It is stated that delay in complete indigenization sometimes occurs due to:-

- (i) Incomplete technology.



- (ii) Delayed receipt of documents leading to delay in execution.
- (iii) Lack of support from foreign vendors.
- (iv) Delay in placement of Indent for indigenous production.

Importation of components/subassemblies sometimes becomes necessary, despite indigenization, on account of:-

- (i) Uneven demand.
- (ii) Capacity constraint with reference to spurt demand
- (iii) Quality of products from indigenous sources.
- (iv) Economic Order Quantity for viable investment return.

The steps taken to bring down the import content in OFB products are given below:-

- (i) To progress indigenization and TOT absorption in a time bound manner, dedicated Task Forces have been constituted in factories and progress is being reviewed regularly at the highest level of OFB.
- (ii) To boost indigenization and enhance outsourcing, list of 'A' and 'B' category of import items is being made available on OFB internet website.
- (iii) OFB Procurement Manual is also being revised with enabling clauses to facilitate development of quality vendors capable of undertaking development of high value, high technology and low volume items so as to avoid dependence on ex import sources for these items.

### **Recommendation (Para No. 7)**

The Committee feel that while adhering to time limits for production by the Ordnance Factories are vital, it is equally important that the products should be of excellent quality too and for that the Ordnance Factories need an efficient and effective Quality Assurance system. During the deliberations, it was revealed that in the last three years, 429 types of defence equipments worth Rs. 449 crore have been sent back to Ordnance Factories due to quality issues. The Committee feel that this is an avoidable wastage of public money which can be easily checked by developing a good quality assurance system in the Ordnance Factories. The representatives of the Ministry of Defence cited manufacturing deficiencies, reliability of design, deficiency in maintenance of weapon system, deficiency in handling and storage in ammunition depots as the major factors which mainly lead to quality maintenance issues and the new initiatives being taken up by them. The Committee feel that a system for zero defect in products manufactured by Ordnance Factories should be developed by the Ordnance Factories and every effort be made to ensure that strict quality checks of all the Defence products are carried out at different levels before the products are actually delivered to the Armed Forces. The Ordnance Factories should also pro-actively take steps to provide training to the end-users (the Service Personnel) so that no quality related issues arise due to mishandling or faulty storage at their end. The Committee also feel that a proper system needs to be developed to fix accountability in case of any defects found in the products which can surely result in drastic reduction in poor quality related issues.

## Reply of the Government

It is not true that 429 types of defence equipments worth Rs. 449.40 Crore have been sent back to Ordnance Factories. In fact this is the cost of rectification/rejection during manufacturing process before the stores are issued to the User. During any manufacturing process some deviations do take place at various stages due to unavoidable reasons; which need rectification/rejection. Total cost of such rectification/rejection is 449.4 Crore for three years i.e. 2011-12, 2012-13 and 2013-14, which includes all the rectification/rejection during manufacturing process as well as at final stage before issue to the User. The total cost of rectification/rejection during three years i.e. Rs. 449.4 Crore is 1.2% of total value of production of Rs. 35,309 Crore over the same period. This rectification/rejection cost is within estimated unavoidable rejection limit.

Items being manufactured in Ordnance Factories are inspected by Quality Control wing of factory during manufacturing process, followed by DGQA inspection. If any deviation is noticed during these inspections, same are corrected by the factory. Only those items meeting the specified quality parameters are only issued to the User through the above mentioned two tier inspection process.

Ordnance Factories have got well established mechanism of Quality Control to ensure quality of its products. The main features of the Quality Control mechanism of OFs are as follows:-

- (i) **Exclusive QC set up:-** Each Ordnance Factory has got exclusive Quality Control department having examiners, staff & officers and is being headed by SAG/JAG level Officer. This set up is dedicated to look after all the Quality function of the factory.
- (ii) **Quality Management System(QMS) and Test Facilities:-** All the OFs are having ISO 9000 certified QMS. OFs are also having elaborate arrangement for testing with NABL accredited labs as per their requirement.
- (iii) **Quality Audit Group(QAG):-** In order to monitor and ensure adherence of the production process to the laid down QA plans, Ordnance Factory Board has set up an Independent authority in the form 10 QAG centres headed by SAG level officer. These groups have been mandated to carry out the audit of existing Quality Control System in respect of input material, manufacturing process, and adherence to specified acceptance criterion etc. and report directly to OFB.
- (iv) **Audit of manufacturing process:-** At factory level, to check any deviation from the standards, process audits are being carried out on a regular basis by factory. Processes are also audited by QAG of Ordnance Factories and surveillance audit is being carried out by DGQA. Implementation is being monitored.
- (v) **Liasioning meeting with DGQA Rep.:-**Liasioning meetings are organized every month with DGQA Representative at factory level to discuss/resolve

any specific observation of DGQA during their inspection. Efforts required for further improvement/quality control are also reviewed.

- (vi) **Introduction of NQDBMS (Network Quality Data Base Management System):-** For better communication & transparency, NQDBMS has been implemented in all Ordnance Factories. Matters related with NQDBMS are reviewed every month with DGQA Representative.
- (vii) **System of Customer feedback:-** Representatives from factories are visiting the field units to get first hand feedback about the products supplied by OFB and Users of all ranks from field units are also invited to visit the factories for corrective actions/feedback/ improvement and training.
- (viii) **Other activities:-** Apart from the above, other activities like regular training & awareness programmes on Quality aspects for workmen, staffs & officers and quality awareness programmes for vendors are being carried out as a measure to further strengthen the Quality set up in Ordnance Factories.

### **Recommendation (Para No. 8)**

The Committee note the Ordnance Factories are suffering from acute shortage of manpower. The Committee found that against a sanctioned strength of 1,25,126 Technical Personnel in various Ordnance Factories, the actual strength of these personnel is only 74,634 as in January 2015. This shows that there is a huge gap, of almost 40% between the sanctioned and actual strength of Technical Personnel. The existing strength of non- technical staff is only 16,081 as against the sanctioned strength of 23,214, which is a significant shortfall in this category of staff also. Similarly, whereas the sanctioned strength of Group 'A' Officers is 2000, the actual strength is just 1630. Thus, the Committee note with deep concern the shortage of manpower in the Ordnance Factories, particularly, in the Technical Category which has a major impact on manufacturing and improvement of products. The Committee recommend that immediate steps should be taken in this regard to bridge the huge gap between the sanctioned and the actual strength of personnel in various categories in the Ordnance Factories so that the overall efficiency and working of these Factories are not affected to any extent. It may be noted that any Lapse in this regard greatly affects the general preparedness of our Armed Forces as they are dependent on these Ordnance Factories for their deliverables.

### **Reply of the Government**

The manpower strength in both technical & Non-technical cadre has reduced over the years as a result of modernization, increase in productivity and outsourcing. Adequate measures are taken to ensure that optimal manpower exists in terms of discharging of current load position. Marginal recruitment is undertaken to cope up with the wastages arising out of superannuation and recruitment of manpower needed for core activities.

Ordnance Factory Board intends to operate with the most optimum strength of workmen and officers, as per strategy mentioned, so as to remain a lean & thin as well as an efficient organization.

### **Recommendation (Para No. 9)**

The Committee note that Ordnance Factory Board (OFB) was constituted long ago, in order to ensure cohesiveness and coordinated approach in the working of Ordnance Factories. In this regard Committee feel that in view of the rapid technological advancement taking place the world over in Defence sector and export potential of the Defence equipment, there is a need to redefine the role of Ordnance Factory Board to enable it to keep pace with the changing requirement to tap the vast export market. There is also a need to restructure OFB by including therein experts with proven records in marketing and internal trade who may give an export orientation to the indigenously manufactured defence products and make effective strategy. The Committee, therefore, recommend that a high level Committee should be constituted to go into the functioning and the organizational structure of Ordnance Factory Board and give its recommendations on re-structuring of Ordnance Factories to make them more professional and dynamic body responsive to the present day needs.

The Committee also recommend that the performance of the Ordnance Factories should be periodically/ annually reviewed by the Ordnance Factory Board and the recommendations of Kelkar Committee on restructuring of Ordnance Factories should be implemented at the earliest.

### **Reply of the Government**

OFB structure was re-organized in January, 1979 with the following role:-

- (i) Dedicated manufacturing base for military hardware
- (ii) Indigenization and ToT absorption
- (iii) Maintenance of 'war reserve' capacity
- (iv) Life cycle support

To keep pace the rapid technological advancement and changing business scenario, OFB's new role now includes:-

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

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

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

Attaining zero defect production systems – Quality Council of India (QCI) will conduct audit of select Ordnance Factories from June to August, 15.

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 planned from C&AG.

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.

The performance of Ordnance Factories is reviewed periodically at the level of Ordnance Factory Board as well as the Ministry.

There is no proposal at present to corporatize the Ordnance Factories in the country.

### **Recommendation (Para No. 11)**

The Committee are happy to note that in DRDO, the existing strength of 7864 scientists, is almost equal to the sanctioned strength of 7878 and the shortfall in manpower in this regard is minimal. Also, the Committee appreciate the fact that from 2010 to 2014, the rate of exodus of scientists from the DRDO has decreased. This is a welcome step and the Committee feel that positive steps like the Incentive Scheme for DRDO Scientists may be initiated in the organisation to achieve zero per cent attrition of Scientists from the organization.

### **Reply of the Government**

The Organisation at present gives the following incentives to attract and retain the scientists:-

(a) **Financial Incentives:**

- **Additional Increments.** Two additional increments are given to Scientists 'C', 'D', 'E' & 'F' in Grade Pay of Rs. 6600/-, Rs. 7600/-, Rs. 8700/- & Rs. 8900/-, respectively.

- **Professional Update Allowance.** Scientists 'B', 'C' & 'D' are granted Rs. 12500/- p.a., Scientists 'E' & 'F' Rs. 25000/- p.a. and Scientists 'G' & above Rs. 37500/- p.a. as Professional Update Allowance.
- **Variable Increments.** Up to the maximum of six increments are granted to deserving Scientists at the time of promotion.

(b) **Growth Related Incentives:**

For better promotional avenues of Scientists in DRDO, a merit based Flexible Complementing Scheme (FCS) is provided in the Defence Research Development Services (DRDS) Rules, wherein promotions are based purely on merit without any linkage to availability of vacancies. Under the FCS, Scientists recruited at the level of Scientist 'B' in Pay Band – 3 with the Grade Pay of Rs. 5400, can move up to the level of Scientist 'H' in HAG Scale (Rs. 67000 – 79000/-) and thereafter up to the level of Distinguished Scientist in the HAG+ Scale of Rs. 75500 – 80000/- on personal upgradation basis.

In addition to the above, in its recommendations to the 7<sup>th</sup> Central Pay Commission (CPC), the Organisation has proposed the following incentives for Scientists:-

- (i) Grant of 20% Organisation Performance Related Incentive Scheme (PRIS) and 10% Group PRIS for DRDO at par with Department of Space and Department of Atomic Energy.
- (ii) Grant of a separate pay component at the rate of 25% of the Basic Pay to Scientists at all levels as 'Scientific Pay' to be counted for allowances and pension/pensionary benefits.

### **Recommendation (Para No. 15)**

The Committee recommend that in future there should be a scientific, technical and concurrent audit of every ongoing project from 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 to avoid waste of public funds as well to help sustain the project which can prove to be extremely beneficial for the country. The Committee also endorse the findings of CAG as mentioned in para 5.3 of V and VI of Annual Report of the Ministry 204-15 regarding wasteful expenditure.

### **Reply of the Government**

DRDO has been reviewed/audited by a number of independent committees in the recent past as listed below:-

- (i) Kelkar Committee – suggestions have been implemented.
- (ii) Rama Rao Committee (RRC) – suggestions under the purview of DRDO has been implemented. The others have been forwarded to the Government for approval.

- (iii) Economic assessment conducted through NCAER.
- (iv) Performance audit of DRDO labs is being done on case-to-case basis by audit authorities during the last few years.

DRDO also has multi-tier 'Programme Management Boards (PMBs)' for all major programmes/projects, with representation from the Services, academic institutions and other national research laboratories (outside experts). These outside experts are also involved during the peer review stage (pre-sanction stage) to assess the feasibility of the project.

### **Recommendation (Para No. 18)**

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 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 timely completion of each project.

### **Reply of the Government**

Creation of DG (Clusters) and vesting of considerable financial & administrative powers with DGs has taken place very recently and this system has now started delivering good results.

Projects are monitored at different hierarchical levels at different intervals. Project status reports are submitted by the labs to different hierarchical authorities as mandated by DRDO HQrs.

The delays in projects are generally attributable to technology complexity and preparedness of Indian industry for product realization.

Point is noted and utmost care will be taken by strict monitoring the progress of the project to complete in time i.e. within Probable Date of Completion (PDC).

### **Recommendation (Para No. 21)**

During the deliberations, the Committee expressed their apprehension over the perpetual delay in the development of the indigenous Kaveri engine to meet the LCA requirement, 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. The Committee desire that infrastructure to test aero-engines should also be created within the country so that flying testing of engine be achieved and time be saved in carrying the engine to foreign country and finding availability of slot testing agency etc.

### **Reply of the Government**

Necessary test facilities for component level, systems level and whole engine are proposed to be established at an estimated cost of Rs. 1500 Cr. 26 acres of land near Bangalore Airport is allotted for this purpose. Gas Turbine Research Establishment (GTRE) functioning under DRDO is studying the Flying Test Bed (FTB) requirement, thereafter a potential platforms will be concluded.

### **Recommendation (Para No. 23)**

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. Also, 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 long time. In this way, there is 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.

Defence Research and Development Organisation (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 Defence Procurement Policy (DPP):-

- (a) The User trials and DGQA trials procedures need to be evolved at the beginning itself along with formulation of PSQR. DRDO will define technical and environmental specifications based on the PSQR. This would help in design 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 Service will be removed and a reliable and safe product/system can be inducted .

### **Recommendation (Para No. 24)**

The Committee desire that instead of making a perfect product, DRDO should develop a product and later keep on improving it as Mark I, II, III, IV or so on, so that the Services have some product to carry their assigned tasks to some extent, at that point of time and does not wait eternally for a perfect product to come. This will need a proper policy directive as also the stages of building up the production systems for the initial and final products.

### **Reply of the Government**

DRDO is proposing a Spiral Development Model in line with Mark I, II, III and so on as suggested by the Standing Committee on Defence to be included as a part of '**Make DRDO**' category during amendment of Defence Procurement Policy (DPP), which is under process. Indigenous system development by DRDO will be undertaken based on the essential capability requirement, achievement of 80% of the capability requirement, the product may be termed as MK I and inducted. Based on the exploitation and experience gained, MK II development will be undertaken to further improve on the performance and reliability of the system/product.

Further, due to frequent change of Qualitative Requirement (QR) by User, the project development gets delayed leading to cost overrun. Hence, once Acceptance of Necessity (AoN) is accepted by Defence Acquisition Council (DAC), no QR change may normally be accepted.

### **Recommendation (Para No. 25)**

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 brings the combat ratio against our prime adversaries at an all time low. 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 was 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) Organisations, 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 centers 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 Understandings (MoUs) with over 30 countries worldwide for joint collaboration in requisite areas with complementary work share.

### **Recommendation (Para No. 26)**

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 may be provided to the Indian Private Industry and they may be allowed to tie up with foreign manufactures to develop certain equipment based on the requirement of users.

### **Reply of the Government**

The Transfer of Technology (ToT) Guidelines has been approved by the Government. These Guidelines provide level playing field to both public and private sector Industries to acquire ToT from DRDO. It also allows for the Industries to value add on the ToT received.

Under "Buy & Make (Indian)" Category, Indian Industries are allowed to tie up with Foreign OEMs to develop system required by the Services.

### **Recommendation (Para No. 30)**

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**

The following corrective measures have been taken to mitigate all the observations pointed out by CAG.

- (i) All the Research Boards (RBs) and Extramural Research (ER) & Intellectual Property Right (IPR) have been brought under the aegis of Chief Controller (Research & Development) (Technology Management) & follow the similar guidelines for sanctioning grant-in-aid projects, which are in consonance with the General Financial Rule (GFR).
- (ii) New Standard Operating Procedure (SOP) for Grants-in-aid scheme for ER&IPR and RBs has been made and it under approval of competent authority.
- (iii) Better and stringent review and monitoring system has been introduced & outcome is being published as compendium which is circulated to all DRDO labs/Estt.

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

**Recommendation (Para No.1)**

The Committee note that the Budget Estimate allocation under the Capital Expenditure head for the year 2014-15 was Rs. 1207 crore. However, at the Revised Estimates stage it was drastically reduced to Rs. 660 crore. The Ministry expect the Actual Expenditure to be Rs. 765 crore, which is Rs. 105 crore more than the Revised Estimates. This shows a wide variance in the Budget Estimates, Revised Estimates and the actuals under the Capital Expenditure.

The Committee opine that either the demand under this head has been wrongly estimated or there is something that has been taken out of the system due to which this huge gap has emerged in the figures.

The Committee would like to be apprised of the detailed reasons for the same and would recommend that such wide variations in budgetary allocations should not reoccur in future.

The Committee also note that in the next financial year demand, a cut of Rs. 1321 crore has been made which would ultimately affect the value of production and Ordnance Factories would not be able to reach the target as fixed by the Ministry of Rs. 20,000 crore in the next three years. The Committee are of the view that if such high value goals are to be achieved, then a proper infrastructure as well as adequate financial assistance must also be provided. They, therefore, recommend that in future, budgetary allocations must be planned in such a way that no deductions or minimum changes are made at any stage, except for very valid and justifiable reasons.

**Reply of the Government**

**(B)Capital Expenditure**

Even though the requirement projected by OFB in Budgetary Estimates (BE) was quite high but due to funds constraint OFB was directed to prioritize its capital fund requirement. OFB was also directed to review major projects in this regard. Accordingly, OFB reviewed all the projects and prioritized its fund requirement for various Plant & Machinery and Civil Works in 2014-15. Approval for revised BE was given in June 2014. Accordingly till June 2014, no further action for creation of fresh liability against the approved projects was taken. For this reason the actual expenditure upto December, 2014 was only Rs. 373 Crore i.e. 31% of the BE figure of Rs. 1207 Crore. Since the actual

expenditure till December was much less than the targeted figure of 67%, OFB's New Capital Budget was revised to Rs. 660 Crore (RE). However, considering the inescapable requirement against commitments already made, OFB projected further additional amount of Rs. 104 Crore, over and above RE. The same was approved by the Ministry to meet the committed liabilities.

Adequate provisions are always made to match the fund requirement of OFB to continue the process of modernization unhindered; however fund constraint sometimes limits the fund availability.

### **(B) Budgetary allocation for 2015-16**

The initial projection of Budgetary Estimates (BE) for 2015-16 for non-salary expenditure was Rs. 10,335 Crore to enable a Value of Issue (Vol) of Rs. 13537 Crore. However, while considering BE 2015-16, only Rs 9015 crore under Non Salary was allowed by M/o Finance for the financial year 2015-16. Keeping in view the ceiling on Non Salary Budget, OFB worked out the Vol as Rs. 11266 crore. The breakup is as follows:

	BE Projected by OFB(Rs. in Crore)	BE Approved (Rs. in Crore)
	2015-16	
<b>Non Salary</b>	10335.32	9014.59
<b>Reduction from Projection</b>		-1320.73
<b>Supplies</b>		
Supplies to Service	11988.37	9717.57
Non-Defence Supplies	1548.33	1548.33
<b>Total Supplies</b>	13536.70	11265.90
<b>Reduction from Projection</b>		-2271.00

Further increase in supplies beyond Rs. 11266 Crore is being considered on the basis of requirement of Armed forces and existing production capacity of Ordnance Factories. Considering that OFB has initially planned a Vol of Rs. 13536 Crore, as referred in table above, a proportional allocation of additional budget (Rs. 1321 Crore for increased supply of Rs. 2271 Crore) will be required for provisioning of inputs. However this will be subject to an increase in target from the Users, for which OFB has been approaching them. It has been intimated by MOD (Finance/budget) that request for additional funds under first batch of Supplementary Demand for Grand will be sought as and when Ministry of finance announces the same.

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

## **Recommendation (Para No.2)**

In a reply given by Ministry of Defence, it was stated that for augmentation of capacity for manufacturing of T-90 Tanks from 100 to 140 numbers per annum, expenditure was prioritized and restricted to Rs. 186.46 crore due to non-availability of funds as well as the absence of commensurate load from Army during 2014-15. The Committee express their concern over lack of sufficient funds for such an important project and desire that enough funds be provided for this project especially in the light of the fact that the Army has desired for more number of T-90 Tanks. Accordingly, this Committee may be intimated about the steps taken in this regard.

## **Reply of the Government**

Army has placed two indents for T-90 tanks on OFB. The first indent is for 300 tanks and deliveries against it are likely to be completed by the first half of 2016. The second indent has been received for 236 tanks and deliveries against it are likely to start in first half of 2016.

At present the available capacity for manufacturing of T-90 tanks at Heavy Vehicle Factory Avadi is 100 nos per annum. The available workload can be completed in less than 3 years beginning from first half of 2016 with the existing manufacturing capacity at HVF Avadi for T-90 tanks.

The proposed project aims at augmenting the manufacturing capacity of T-90 tanks from 100 to 140 nos per annum. The project will require at least another 3 years for its completion i.e. earliest by 2018. Thus the existing workload would be completed by the time augmented capacity becomes available. Accordingly in the absence of any further workload the huge capacity created will go idle.

Army has plans for increased requirement of T-90 tanks but with certain upgradation which are to be decided. In view of the above firm demand in the form of indent shall be available only after the upgraded features required are decided by the Army. The increased requirement is likely to be more than 450 nos. and there can be a further requirement of another 500 nos. These quantities can make the project viable. Army has been requested to confirm the above requirement.

The capital outlay of OFB in the form of approved BE for the year 2015-16 is Rs. 721 Crore; which is Rs. 61 Crore more than the outlay for the year 2014-15. However, the fund requirement is much higher and it is proposed to raise further demand in RE to the extent of Rs. 1262 Crore for the year as a whole.

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

### **Recommendation (Para No.3)**

The Committee note with concern that there has been a huge delay in different project of the Ordnance Factories resulting in very long gestation periods. Many projects which had started in 2010 such as creation of capacity for manufacturing of T-72 variants @ 50 numbers per annum, augmentation of capacity for manufacturing of armoured Vehicles engines from 353 to 750 per annum, augmentation of capacity for manufacturing of spares required in overhauling of T-72 & T-90 tanks are still nowhere near completion. The construction work of OFB, Nalanda has also been carried forward to the 12th plan though it was initiated in 10th plan.

In its reply, Ministry of Defence has given a number of reasons for delay in implementation of its projects. These include delay in tendering stage like limited vendor base, non-availability of plant and machinery, very limited global sources of explosive plants, etc. as also delays in supply stage like lack of online system for monitoring, financial crisis, etc.

The Committee also note that Ordnance Factories depend to a large extent on Military Engineering Service (MES) for execution of civil works related to their projects which is one of the major causes of delay. The time for completion of civil works from the date of projection of work to MES is approximately 3 years but it seems that in most cases this time limit is not adhered to. The Committee have viewed this very seriously and recommend that norms may be developed to ensure that MES invariably adheres to the time limit of 3 years fixed for the completion of their work.

The Committee feel that with proper planning at the initial stage only in consultation with all the stakeholders, including the Services, by factoring in all these negative factors and then devising a strategy for timely completion of the projects within a realistic time frame can be achieved by the Ordnance Factories. The Committee recommend that a proper system may be developed in this regard as suggested by the Committee and the action taken in this regard may be intimated to the Committee.

### **Reply of the Government**

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

- (i) GMs of factories have been authorized to issue Admin approval for execution of Civil Works related to MOD/DDP/OFB sanctioned projects to be executed through MES/DRDO/Public Works Organizations. Accordingly they need not remain dependent on MES alone. Moreover, factories need not refer to OFB for convening the Siting Board to finalize scope of work, scrutiny of the same and for issue of Admin Approval. This saves considerable processing time.

- (ii) SOP for Civil Works has been published in Jan, 2014. Factories have been issued guidelines for measures to be taken while preparing 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 Admin Approval remains within permissible limit.

**For comments of the Committee please see Para No. 13 of Chapter- I.**

**Recommendation (Para No. 5)**

The Committee opine that in the present scenario, it will be extremely difficult for the Ordnance Factories to compete with internationally renowned companies to manufacture arms and ammunition unless new strategies towards restructuring and in house R&D work are taken up by the Ordnance Factories. The Committee note that some efforts are being made by the Ordnance Factories to develop new products through in-house R&D efforts. However, the Committee are dismayed to note the total allocation towards R&D continues to be on the lower side and in fact they observe that the allocation of R&D has been reduced in 2013-14 as compared to 2012-13, though they understand that the turnover of 2013-14 was lower. However, the Committee feel that the allocation of funds for R&D work should not be linked to the turnover of the Ordnance Factories and should be steadily increased from year to year. The Committee emphasize that instead of always depending on technology from DRDO or by import, Ordnance Factories should become self-reliant by developing new products through in-house R&D.

The Committee also note that 11 Ordnance Development Centres (ODCs) with identified core technologies have been created wherein Ordnance Factories have taken up product development and product improvement in core product area, which is appreciable. The Committee feel that more such Ordnance Development Centres need to be established for R&D related projects to 'Make in India' a reality.

The Committee also note that the Services are making some contribution towards the Research and Development of high technology Military projects which is a welcome step. However, more serious efforts should be made and methods devised to further enhance the involvement of the Services in the R&D Projects of the Ordnance Factories. This, the Committee feel, will lead to better time management as well as improving the cost effectiveness of the projects by detecting the faults, if any, and solving issues in consultation with the Services at the initial stage only.

The Committee recommend that the Ministry should make all efforts to provide sufficient funds to the Ordnance Factories to undertake high quality in-house R&D activities. The Committee also feel wherever required experts from the private sector as well as from international arena may be involved in the process to benefit from their domain knowledge by the Ordnance Factories.



### **Reply of the Government**

During 2014-15, the expenditure on R&D was Rs. 55.85 Crore in comparison to Rs. 42.7 Crore in 2013-14. OFB plans to spend Rs. 70 Crore in the year 2015-16.

Off late OFB has started giving emphasis on in-house R&D and is now working on upgradation of existing products and development of new products. The upgradation of the existing 155mm x 39 caliber gun to 155mm x 45 caliber gun is a recent example of upgrading an existing product. OFB has also developed Multi Grenade Launcher as well as a modified version of 5.56mm INSAS Rifle. OFB has also indigenously developed Rocket 57mm S-5KP (Practice) for the Air Force, Chaff Launcher and anti-submarine Rocket for the Navy. The upgradation/development of the above systems involved active cooperation from the User.

In the year of 2014-15, Board has approved for the creation of 12th Ordnance Development Centre (ODC) at Vehicle Factory Jabalpur.

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

### **Recommendation (Para No. 10)**

The Committee notes that the Defence Research and Development Organization (DRDO) projected demand of Rs. 19,641.56 crore in 2015-16. However, it has been allocated an amount of Rs.14, 358.49 crore only. The Committee also note that out of the total Defence Budget, the share of DRDO was 6.59% in 2010-11, which was reduced to 5.34% in 2013-14. The share has slightly improved to 6.67% in 2014-15, but again it reduced to 5.82% in 2015-16. The share of defence research and development budget to GDP of the Nation is also declining over the years. It has reduced to 0.11% in 2013-14 from 0.13 per cent in 2009-10. However, this share has slightly improved to 0.12% in 2014-15. The Committee also note that DRDO gives its budgetary projection, based on the ongoing projects/programmes and future requirements and out of which nearly 80% is utilised for Mission Mode Projects with deliverables for Armed Forces, but it has been allocated inadequate amount. The Committee feel that shortfalls in budget affects the pace of technological and infrastructural development since ongoing developmental activities have to be re-prioritized. The need to lay emphasis on indigenization of defence products but it can only be achieved with adequate budgetary support. The Committee, therefore, desire that all possible measures should be taken to meet the budgetary requirements of DRDO.

### **Reply of the Government**

During the 2014-15 Government had allocated Rs. 15282.92 Cr at BE stage but the reduction of Rs. 1835.73 Cr was imposed, thus reducing the allocation to Rs. 13447.19 Cr. However, at a later stage, additional amount of Rs. 268.95 Cr was provided by MoD (Finance).

Against the current financial year's allocation, all out efforts would be made to utilize the same in full and additional funds, if required, would be projected at later stage. Though, it would help DRDO, if full allocations are made at BE stage itself to facilitate prioritization of expenditure in various Projects/Programmes.

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

#### **Recommendation (Para No. 12)**

The Committee, however, note with dismay 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 a top priority so that the manpower requirements of DRDO and India's strategic needs can be taken care of properly.

#### **Reply of the Government**

A draft Cabinet Committee on Security (CCS) Note has been initiated for augmentation of manpower of DRDO by 1316 posts in three phases, with 436 posts in the 1<sup>st</sup> phase (420 posts of Scientists and 16 of Works Cadre Officers). The proposal has been approved by the Ministry of Finance on 21<sup>st</sup> January, 2015. The CCS Note, duly approved by the Hon'ble Raksha Mantri, has been forwarded to the Cabinet Secretariat for approval of Cabinet.

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

#### **Recommendation (Para No. 13)**

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 action plan based on this study taking into consideration. Their viability vis-à-vis the local scenario may be worked upon and be shared with the Committee for their consideration and further examination in this regard.

## **Reply of the Government**

As recommended by the Parliamentary Standing Committee on Defence a detailed research of practices being followed by major countries for encouraging students to take up Defence R&D as a career was undertaken. The research showed that there are various programmes, such as Young Investigator Programme (YIP) offered by the three Services in USA to encourage Defence R&D. These programmes offer grant for research in areas of national interest for a fixed duration. Similar programmes are also offered by NASA and Department of Energy in USA and also in Canada.

DRDO earlier used to have similar fellowship programmes in Electronics and Aerospace, where young talents selected from chosen Institutes were nurtured and subsequently absorbed in DRDO. However, due to lack of adequate vacancies, these programmes are not being pursued at present. As explained in the Paragraph No. 12, a case has been taken up for augmentation of Scientific Manpower in DRDO with the Cabinet. As and when the authorisation of additional manpower is approved by the Cabinet, similar programmes for encouraging and nurturing young talent will be reinitiated.

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

## **Recommendation (Para No. 14)**

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 Director 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 about the basis on which these projects were chosen and specific reasons which forced the Government to close them. The Committee are not convinced as to why at the initial stage itself, before the project got sanctioned, all the possible constraints and bottlenecks were not foreseen. The Committee felt that the various reasons like Probable Duration of Completion(PDC), extension not being approved, one out of two parallel methods being found more feasible, requirements of additional funds, etc. cited by the Ministry for the closure of various projects could have been tackled at the initial stage itself by better planning and following a concurrent engineering and development approach.

## **Reply of the Government**

DRDO has been set up with the mandate of developing cutting edge technologies and systems for the Indian Armed Forces through R&D in all technology domains. R&D is not a straightforward process and many unanticipated technological complexities are faced during the time of project execution. Also sometimes lack of availability of critical equipments, special materials (from foreign sources) as well as non-availability of

infrastructure and testing facilities within the country/outside adds to the uncertainty in the execution of R&D of any system/sub-system as per stipulated timelines.

Reasons for foreclosure have typically been major change in QRs, need for indigenization vs. foreign collaboration, financial viability, etc. Sometimes, it is in the best interest of the organization to close an unviable project for various reasons rather than continue to spend funds without meaningful output.

It is worth mentioning that DRDO is taking the following steps to minimize such short closures:-

- (i) While undertaking new projects **pre-project activity** including preliminary design is being given greater focus.
- (ii) 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).
- (iii) Involvement of Services and production partners during development process and reviews – To know their views in advance including finalisation of GSQRs.
- (iv) Synergy among stakeholders – Quarterly interaction meetings.

**For comments of the Committee please see Para No. 31 of Chapter- I.**

### **Recommendation (Para No. 16)**

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, Tejes LCA, etc. The Committee are dismayed to note that out of 46 major ongoing projects (more than Rs. 100 crore), there have been cost revisions and time revisions in 10 and 12 projects, respectively. Besides, 10 projects are more than 5 years old, i.e. sanctioned before 2009. Seventeen major projects (more than Rs. 100 crore) sanctioned during the 11<sup>th</sup> Five Year Plan (April 2002 to March 2007), but none has yet been completed. Moreover, two of these have been under closure. The Committee are perturbed to observe that the projects being undertaken are not executed according to their schedule and inordinate delays in execution of, almost all the has become a common phenomenon. While deploring this attitude, the Committee desire that some concrete steps should be taken to put in place a mechanism to oversee the project execution so that they are implemented in stipulated time-frame. Steps, proposed to be taken be intimated to the Committee.

### **Reply of the Government**

Some of the ongoing projects undertaken by DRDO are delayed due to the following reasons:-

- (i) Ab-initio development of state-of-the-art technologies.
- (ii) Technical/technological complexities.

- (iii) Non-availability of infrastructure/test facilities in the country.
- (iv) Non-availability of critical components/equipment/materials in the country and denial of technologies by the technologically advanced countries.
- (v) Failure of some of the components during trials/testing.
- (vi) Increase in the scope of work during developmental phase.

**For comments of the Committee please see Para No. 34 of Chapter- I.**

The following steps have been taken for timely completion of ongoing projects:-

- (i) Consortium approach is being used for design, development and fabrication of critical components.
- (ii) Three-tier project monitoring approach has been instituted in the major projects/programmes.
- (iii) Project Monitoring Review Committee (PMRC) and Project Appraisal and Review Committee (PARC) meetings are held regularly to monitor the progress of ongoing projects / Programmes.
- (iv) Concurrent engineering approach has been adopted in technology intensive projects to minimize time-lag between development and productionisation of the systems.
- (v) Information Technology and modern management techniques are being applied.
- (vi) Encouraging joint funding by users to ensure their commitment towards earliest completion.
- (vii) Promoting synergy and better co-ordination among User Services, DRDO and production agencies through cluster meetings.

**Recommendation (Para No. 17)**

During the deliberation, Defence Secretary acknowledged that DRDO is also responsible for delay in its research work itself. The Committee note 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 system. The Committee, therefore, feel that 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**

DRDO has well established mechanisms (quarterly interaction meetings, synergy meetings, etc.) for regular interaction with the Services for better coordination between DRDO and the Services.

The issue of provision of trial platforms by Services has been repeatedly highlighted at various forums including reviews by Vice Chiefs. It has also been included in the 'Procedure for Make through R&D' which will be circulated to all stakeholders.

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

#### **Recommendation (Para No. 19)**

The Committee agree to 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 should work in tandem right from the conceptualization stage, which it is felt, can result in preventing unnecessary delay in the implementation of various vital projects.

#### **Reply of the Government**

In the recent past DRDO has initiated a detailed mechanism of regular interaction with the Services to boost up the induction of indigenously developed systems and increase self-reliance of the Armed Forces. Joint reviews of DRDO projects by Secretary, Defence R&D and Vice Chiefs of the respective three Services and Quarterly Interaction Meetings (QIMs) with all line directorates of Indian Army are conducted regularly to remove bottlenecks and provide necessary guidance to the development team. Indian Navy-DRDO (IN-DRDO) synergy meetings for the long-term requirements of Indian Navy had also been recently initiated during the last one year and cluster-wise meetings are being organized regularly. The benefit of these recent initiatives will bear fruit in the years ahead.

**For comments of the Committee please see Para No. 40 of Chapter- I.**

#### **Recommendation (Para No. 20)**

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 delay in these projects.

## **Reply of the Government**

DRDO agrees with the recommendations of the committee and also feels that accountability be invariably fixed to avoid delay in the projects. This can be achieved by giving additional authority, both financial and administrative to the Programme/Project Directors. It is also felt that the accountability for delays be shared by all in the process chain including technical, administration, finance, management and Users.

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

### **Recommendation (Para No. 22)**

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, 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**

In the current financial year (2014-15), the budget of Department of Defence R&D has been raised to 6.7% of Defence budget as compared to 5.3% in the financial year 2013-14. This although an increase, compares very modestly to the R&D expenditure of world leaders with USA at 12% and China at 20%. A major chunk of this funding is for Mission Mode (MM) projects/programmes of DRDO which are basically projects undertaken for system development and focuses on immediate requirement of the Services. This leaves limited funding for other DRDO projects which are: Technology Demonstration (TD) projects for demonstration of specific technology, Science & Technology (S&T) projects which cater to futuristic technology areas and blue sky

research undertaken through extramural research. The organization is of the view that these are still not sufficient for futuristic projects and justice towards indigenization can be done only if the budget of DRDO is raised at least to 10% of the Defence Budget. MoD needs to pursue the matter with the Ministry of Finance so that adequate increase in allocation is made in the next financial year and subsequently in the 13<sup>th</sup> five year plan period ahead. Efforts for the same will be made.

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

### **Recommendation (Para No. 28)**

In their earlier report, the Committee had 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 proposed opening of Advanced Technology Centers at premier Indian academic institutions in the following areas:-

- (i) Aerodynamic Research for Futuristic Vehicles;
- (ii) Robotics and Unmanned Technologies;
- (iii) High Power Directed Energy Technologies;
- (iv) Cyber Security;
- (i) Next Generation propulsion Technology;
- (ii) Advanced Computing and Computational Techniques;
- (iii) Advanced Materials; and
- (iv) Under Water Technologies.

In principle approval of Hon'ble Raksha Mantri has been accorded on the acceptance of necessity for creation of the centers.

DRDO has progressed actions in establishing J.C. Bose Centre of Advanced Technology at Jadavpur University, Kolkata to pursue research in Robotics and Unmanned Technologies, High Energy Laser and Photonics and Cyber Security Technologies. Memorandum of Understanding (MoU) has been finalized.

MOU has been signed with IIT-Bombay and IIT-Madras for establishing the Centre of Propulsion Technology at IIT Bombay with note at IIT-Madras to perform advanced



research in Aero and Missile Propulsion, Advanced Aerodynamics and Morphing related technologies.

Joint Advanced Technology Centre at IIT-Delhi is planned to pursue research in Advanced Ballistics, Ballistic Protection, Modeling, Terra hertz technology, Brain-Machine Intelligence and Quantum Photonics. MoU is under finalization for this purpose.

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

### **CHAPTER III**

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

##### **Recommendation No. 27**

The Committee note that the budgetary provision to the Universities (under Extramural Research) have shown a decrease in the range of 30% to 40% in 2014-15 (Allotment-Rs 40.63 crores, Released Grant-Rs. 38.9100 crores) as compared to the provision in 2013-14 (Allotment – Rs.60.00 crores, Released Grant-Rs.57.5998 crores) which has been viewed negatively by the Committee.

##### **Reply of the Government**

During the year, receipt, processing and sanction of extramural projects were temporarily withheld for four months due to the implementation of Rama Rao Committee recommendations. Therefore, the money spent during the year was for eight months only.

##### **Recommendation No. 29**

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 under intimation to this Committee.

##### **Reply of the Government**

DRDO is committed to establish and run the centres for specific research objectives. For this, necessary budgetary provisions have been made by DRDO. It is estimated that approximately Rs. 250 Cr. will be spent in establishing three proposed advanced technology centres at IIT- Bombay, IIT-Madras, IIT-Delhi and Jadavpur University, Kolkata.

#### **CHAPTER IV**

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

**- Nil -**

## **CHAPTER V**

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

**-Nil-**

**NEW DELHI;  
08 January, 2016  
18 Pausa, 1937 (Saka)**

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

**STANDING COMMITTEE ON DEFENCE (2015-16)**

**MINUTES OF THE SEVENTH SITTING OF THE STANDING COMMITTEE  
ON DEFENCE (2015-16)**

The Committee sat on Friday, the 08th January, 2016 from 1430 hrs. to 1700 hrs. in Main Committee Room, Parliament House Annexe, New Delhi.

**PRESENT**

**Maj Gen B C Khanduri, AVSM (Retd) - Chairperson**

**LOK SABHA**

2. Shri Dharambir
3. Shri Thupstan Chhewang
4. Col Sonaram Choudhary(Retd)
5. Shri Sher Singh Ghubaya
6. Shri G Hari
7. Shri Ramesh Jigajinagi
8. Shri Tapas Paul
9. Shri A P Jithender Reddy
10. Smt Pratyusha Rajeshwari Singh

**RAJYA SABHA**

11. Shri Anand Sharma
12. Shri Harivansh
13. Shri Vinay Katiyar
14. Shri Madhusudan Mistry
15. Smt Ambika Soni
16. Shri Tarun Vijay

**SECRETARIAT**

1. Smt Kalpana Sharma - Joint Secretary
2. Smt J M Sinha - Additional Director
3. Shri Rahul Singh - Under Secretary

## WITNESSES

### REPRESENTATIVES OF THE MINISTRY OF DEFENCE

S No	Name	Designation
1.	Shri Ashok Kumar Gupta	Secretary(DP)
2.	Smt Surina Rajan	AS(DP)
3.	Lt Gen MMS Rai	VCOAS
4.	Air Marshal B S Dhanoa	VCAS
5.	Lt Gen Ravi Thodge	MGO
6.	Lt Gen A K Ahuja	DCIDS (PP&FD)
7.	Dr S Christopher	Secretary (R&D)
8.	Smt Bharat Khera	JS(NS)
9.	Smt Kusum Singh	JS(P&C)
10.	Shri K K Pant	JS(Aero)
11.	Shri Sanjay Prasad	JS(LS)
12.	Shri V Udaya Bhaskar	CMD, BDL
13.	Dr T Suvarna Raju	CMD, HAL
14.	Shri S K Sharma	CMD, BEL
15.	RAdm LV Sarat Babu(Retd)	CMD, HSL
16.	Shri P Dwarakanath	CMD, BEML
17.	RAdm Shekhar Mital(Retd)	CMD, GSL
18.	RAdm A K Verma(Retd)	CMD; GRSE
19.	Dr. D K Likhi	CMD, MIDHANI
20.	RAdm R K Shrawat (Retd)	CMD, MDL
21.	AVM BR Krishna	ACAS (Proj)
22.	RAdm Dinesh K Tripathi	ACNS (P&P)
23.	Dr Sudershan Kumar	Chief Controller (PC and SI)
24.	Shri G S Mallik	Chief Controller (R&M and Imp)
25.	Dr G Athithan	Chief Controller (SAM)
26.	Dr C P Ramanarayanan	Director General (ACE)
27.	Dr J P Singh	Director, Parliamentary Affairs

2. At the outset, the Chairperson welcomed the Members of the Committee and informed them about the agenda for the sitting.

3. The Committee then took up for consideration the following draft reports:-

- (i) Action Taken by the Government on the Observations/Recommendations contained in the Second Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2014-15) of the Ministry on Defence on General Defence Budget (Demand Nos. 20, 21 and 27)';
- (ii) Action Taken by the Government on the Observations/Recommendations contained in the Sixth Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2015-16) of the Ministry of Defence on

'Civil Expenditure of the Ministry of Defence and Capital Outlay on Defence Services ( Demand Nos. 21, 22 and 28)';

- (iii) Action Taken by the Government on the Observations/Recommendations contained in the Eighth Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2015-16) of the Ministry of Defence on Navy and Air Force (Demand Nos. 24 and 25)'; and
- (iv) Action Taken by the Government on the Observations/Recommendations contained in the Ninth Report of the Standing Committee on Defence(16th Lok Sabha) on 'Demands for Grants (2015-16) of the Ministry of Defence on 'Defence on Ordnance Factories and Defence Research and Development Organisation (Demand Nos. 26 And 27)'.

4. After deliberations, the Committee adopted the above Reports without any modifications. The Committee, then, authorised the Chairperson to present the reports to Hon'ble Speaker under Direction 71(A) of directions by the Speaker and subsequently present the same to Parliament during the coming Budget Session.

5. The Committee then invited representatives of the Ministry of Defence, Defence Public Sector Undertakings and Defence Research and Development Organisation. After welcoming the representatives to the Sitting of the Committee, the Chairperson drew their attention to Directions 55(1) and 58 of the Directions by the Speaker, Lok Sabha regarding confidentiality of proceedings.

6. After the witness introduced themselves, the representatives of the Ministry of Defence made Power Point Presentation and briefed the Committee on the main issues viz. value of production of all the DPSUs from 2012-13 to 2014-15 and profit thereof, total expenditure on R&D, saving in foreign exchange because of inputs substitution, saving because of outsourcing, R&D set up and salient features, major R&D products, future plans and initiatives taken to promote import substitution by all the DPSUs.

The Chairperson and Members of the Committee raised several issues/points as briefly mentioned below:

- i. Steps taken to encourage DPSUs to come out with their R&D Policy;
- ii. Need to develop and construct/produce helicopters, Aircraft, Submarines and Ships to maintain supremacy of the Forces;
- iii. Quantum and category of items indigenized by DPSUs for the Forces;
- iv. Need to enhance production of defence equipments leading to import substitution by DPSUs;
- v. Progress of the 'Make in India' initiative and impact on the Defence Industry;
- vi. Time taken from conceptualization stage to actual production;
- vii. Fulfilling the requirement of the Forces by the Indian Defence Industry including DPSUs;
- viii. Non-availability of Bullet Proof Jackets (BPJs);
- ix. Cut in licensing list to the tune of 70 percent;
- x. Reasons for withdrawal of special dispensation given to the DPSUs like Nomination facility, excise duty, import duty, custom duty etc.;
- xi. Reasons for inexplicable delay in construction of Scorpene submarines;
- xii. Reasons for non-satisfaction by the Army of the product 'Arjun Tank' and 'Dhruv' Helicopters etc.

7. The representatives of the Ministry of the Defence then responded to the queries raised by the Members. The Chairperson directed the representatives of the Ministry to furnish written replies/information on the points raised by the Members at an early date, which was assured by the representatives.

**The witnesses then withdrew**

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

**The Committee then adjourned.**



## APPENDIX II

### ANALYSIS OF THE ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS/OBSERVATIONS CONTAINED IN THE NINTH REPORT (FIFTEENTH LOK SABHA) ON `DEMANDS FOR GRANTS OF THE MINISTRY OF DEFENCE FOR THE YEAR 2015-16 ON ORDNANCE FACTORIES AND DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION(DEMAND NO. 26 & 27)'

1. Total number of recommendations **30**
  
2. Recommendations/Observations which have been accepted by the Government (please see Chapter II):  
  
**Para Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28 & 30**  
  
**(28 Recommendations)**  
**Percentage: 93%**
  
3. Recommendations/Observations which the Committee do not desire to pursue in view of the replies received from the Government (please see Chapter III):  
  
**Para Nos. 27 and 29**  
  
**Total : 02**  
**Percentage: 7%**
  
4. Recommendations/Observations in respect of which replies of Government have not been accepted by the Committee which require reiteration and commented upon (please see Chapter IV):  
  
**-Nil-**  
  
**Total : Nil**  
**Percentage: 0%**
  
5. Recommendations/Observations in respect of which Government have furnished interim replies (please see Chapter V):  
  
**-Nil-**  
  
**Total : Nil**  
**Percentage: 0%**