

**STANDING COMMITTEE ON DEFENCE
(2018-19)**

(SIXTEENTH LOK SABHA)

MINISTRY OF DEFENCE

[Action Taken by the Government on the Observations/Recommendations contained in the Forty-third Report (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2018-19 pertaining to Revenue Budget of Ordnance Factories, Defence Research and Development Organisation, DGQA and NCC (Demand No. 20).']

FORTY-NINTH REPORT



LOK SABHA SECRETARIAT

NEW DELHI

January, 2019/Pausa, 1940(Saka)

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Presented to Lok Sabha on 7.1.2019

Laid in Rajya Sabha on 7.1.2019



LOK SABHA SECRETARIAT

NEW DELHI

January, 2019/Pausa, 1940(Saka)

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(2017-18)

COMPOSITION OF THE STANDING COMMITTEE ON DEFENCE (2018-19)

SHRI KALRAJ MISHRA - CHAIRPERSON

Lok Sabha

2. Shri Deepak Adhikari (Dev)
3. Shri Suresh Chanabasappa Angadi
4. Shri Shrirang Appa Barne
5. Col Sona Ram Chaudhary VSM (Retd)
6. Shri H D Devegowda
7. Shri Jayadev Galla
8. Shri Sher Singh Ghubaya
9. Shri Gaurav Gogoi
10. Dr Murli Manohar Joshi
11. Km Shobha Karandlaje
12. Dr Mriganka Mahato
13. Shri Rodmal Nagar
14. Shri Partha Pratim Ray
15. Shri A P Jithender Reddy
16. Shri B Senguttuvan
17. Smt Mala Rajya Laxmi Shah
18. Shri Dharambir Singh
19. Smt Pratyusha Rajeshwari Singh
20. Shri Rakesh Singh

Rajya Sabha

21. Shri K R Arjunan
22. Dr Ashok Bajpai
23. Shri Joginipally Santosh Kumar
24. Shri Madhusudan Mistry
25. Shri Soumya R Patnaik
26. Shri G V L Narasimha Rao
27. Shri Sanjay Raut
28. Smt Ambika Soni
29. Shri Ram Nath Thakur
30. Lt. Gen. Dr D P Vats

* Shri Thupstan Chhewang resigned w.e.f. 13.12.2018

SECRETARIAT

- | | | | |
|----|------------------------|---|------------------------|
| 1. | Smt. Kalpana Sharma | - | Joint Secretary |
| 2. | Shri Srinivasulu Gunda | - | Director |
| 3. | Smt. Jyochnamayi Sinha | - | Additional Director |
| 4. | Shri Rajesh Kumar | - | Sr. Executive Assitant |

INTRODUCTION

I, the Chairperson of the Standing Committee on Defence (2018-19), having been authorised by the Committee, present this Forty-ninth Report on 'Action Taken by the Government on the recommendations/observations contained in the Forty-third Report of Standing Committee on Defence (Sixteenth Lok Sabha) on Demands for Grants 2018-19 of the Ministry of Defence pertaining to Revenue Budget of Ordnance Factories, Defence Research and Development Organisation, Directorate General Of Quality Assurance And National Cadet Corps (Demand No. 20)'.

2. The Forty-third Report was presented to Lok Sabha and laid in Rajya Sabha on 13.03.2018. It contained 34 Observations/Recommendations. The Ministry of Defence furnished Action Taken Replies on all the Observations/Recommendations in July 2018.

3. The Report was considered and adopted by the Committee at their Sitting held on 04.01.2019.

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

5. An analysis of Action Taken by the Government on the Observations/Recommendations contained in the Forty-third Report of Standing Committee on Defence (16th Lok Sabha) is given in Appendix II.

**New Delhi;
4 January, 2019
14 Pausa, 1940 (Saka)**

**Kalraj Mishra,
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 Forty-third Report of Standing Committee on Defence (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2018-19 on Ordnance Factory, Defence Research and Development Organisation, Directorate General of Quality Assurance (DGQA) and National Cadet Corps (NCC) (Demand No. 20)' which was presented to Lok Sabha and laid in Rajya Sabha on 13 March, 2018.

2. The Committee's Forty-third Report (16th Lok Sabha) contained 34 Observations/Recommendations on the following aspects:-

Para No.	Subject
<u>ORDNANCE FACTORY BOARD</u>	
1 and 2	Budgetary provisions
3 and 4	Budget for Modernization
5	Expenditure on Research & Development
6 and 7	Delay in projects
8 and 9	Quality of Products of Ordnance Factories
10	Cost Cutting of Ordnance Factory Products
11	Exporting of Ordnance Factory Products
<u>DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION</u>	
12-17,	Budgetary provisions
18 - 20	Projects abandoned closed by DRDO
21-22	Delay in Projects
23	Indigenisation
24	Quality Control
25	Nuclear, Biological and Chemical(NBC) Research
26 and 27	Collaboration with Universities/Academic Institutions
<u>DIRECTORATE GENERAL QUALITY ASSURANCE</u>	
28	Budget 2018-19
29	Quality Check
30	Training upgradation
<u>NATIONAL CADET CORPS</u>	
31, 32, 33 and 34	Budget

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 categorized as follows:-

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

Para Nos. 6, 7, 8, 9, 10, 17, 18, 19, 20, 23, 24, 25, 26, 27, 30, 31, 32, 33 and 34

(19 Recommendations)

These are included in Chapter II (A) of the Draft Report.

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

Para Nos. 28

(01 Recommendations)

These are included in Chapter II (B) 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 No. 29

(01 Recommendations)

These are mentioned 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. 3, 4, 5, 11, 12, 21 & 22

(07 Recommendations)

These are included in Chapter IV of the Draft Report.

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

Para No. 1,2, 13, 14, 15 & 16

(06 Recommendations)

These are included in Chapter V of the Draft Report.

4. The Committee desire that the Ministry's response to their comments made in Chapter I and final replies to the Observations/Recommendations for which only interim replies have been given by the Government should be furnished to them at the earliest and in any case not later than six months of the presentation of this Report.

A. Budget for Modernization

Recommendation (Para No. 3 and 4)

5. The Committee had recommended as under:

“Modernisation of Ordnance Factories is a continuous process. To keep pace with the contemporary manufacturing technologies, OFB prepares a long term planning spread over a period of 5 years which started from 2007-08. Ordnance Factories have been adopting three pronged approach for modernisation viz. (a) Renewal and Replacement (RR) of P&M which are beyond economical repair, with machineries of state of the art technologies. (b) Acquisition of P&M under New Capital (NC) for additional capacity, (C) higher productivity, enhanced quality, focus on use of renewable energy and to address environmental issues etc. (d) Corresponding Civil Works (CW) infrastructure development etc.

The key technology intensive areas identified for modernisation of Ordnance Factories were:

- (i) Chemical Process Plants
- (ii) Small arms ammunition Production
- (iii) Ammunition filling and assembly
- (iv) Foundry and extrusion
- (v) Metal forming, machining and fabrication
- (vi) Quality control and assurance

Under the Capital segment, the allocation was Rs. 5345.22crore against projection of Rs 6027.63 crore. The allocations for Research and Development work for Ordnance Factories at the BE stage of Rs 2017-18 was Rs. 105.00 crore. It was reduced to Rs 100.00 crore at RE stage. The allocation at BE 2018-19 was Rs 105.00 crore. The Committee were disappointed to note that there was no increase in the allocations for R&D of Ordnance Factories. Also, the inflation rate was not factored into. With this allocation, the Committee were apprehensive whether the key technological intensive areas as mentioned above were going to be materialised or not. Ordnance Factories play a significant role in 'Make in India' drive of the Government of India at least in Defence Sector. Howe ever, it was of utmost importance that the products being manufactured in Ordnance Factories were of global standards so that they could compete with private players also who are now joining the Defence Sector. To reach this objective it was imperative that the production related infrastructure and capacity in OFs are enhanced up to

required standards. Therefore, the Committee desired that essential steps should be taken towards modernization of OFs in a planned manner and essential budget for the same should also be provided by Ministry of Defence and appropriately spent by OFB”.

6. The Ministry in its action taken reply has stated as under:-

“OFB’s modernization programme is primarily focused on introduction of State-of-the-Art machines to manufacture quality product with cost effectiveness, taking into account the current and long term future requirements of its customers. A structured mechanism exists to ensure that OFB’s infrastructure is modernized with the latest manufacturing technologies and machineries in the identified areas. Status of budget provided to OFB during the year 2017-18 and expenditure is given below:

(Rs in Crore)

	Renewal & Replacement (RR)	New Capital (NC)	Civil Works (CW)	Total
Approved Modified Appropriation (MA)	460.00	801.00	204.85	1465.85
Expenditure (Tentative up to March,2018)	400.96	825.25	204.75	1430.96

7. As the allocation for Research & Development(R&D) of Ordnance Factories at RE stage of 2017-18 and at BE of 2018-19 was almost the same i.e. Rs. 100 crore and Rs. 105 crore respectively, the Committee had expressed their disappointment over the meager allocation to R&D which may have affected adversely the modernization of Ordnance factories in key technology areas. While allocating funds at BE 2018-19, the Committee noticed that even the inflation rate seems to have not been factored into. Further, this meager allocation, the Committee had felt, has not been in tune with the significant role envisaged for Ordnance factories in ‘Make in India’ Initiative of the Government in Defense Sector. The Committee, therefore, had desired to take essential steps for modernization and to allocate necessary amounts commensurate with the modernization programme.

The Ministry in the action taken reply has submitted *inter alia* that Ordnance Factory Board’s modernization programme is focused on introduction of State-of-the-Art machines to manufacture quality product with cost effectiveness, taking into account the current and long term future requirements of its customers. However, the reply is conspicuously silent as to the allocation of adequate funds for R&D as

desired by the Committee. Further as apprehended by the Committee, the Ministry while responding to the recommendations at Sl. nos. 6 & 7 admitted *inter alia* that due to budgetary constraints Ordnance Factory Board (OFB) was forced to prioritize civil works for various projects. Thus, the Committee believe that funds crunch appears to impact adversely various projects including R&D. The Committee, therefore, reiterating their recommendation, suggest that inadequacy of resources may not be allowed to hinder R&D efforts of OFB.

B. Expenditure on Research & Development

Recommendation (Para No. 5)

8. The Committee had recommended as under:

“The Committee viewed that R&D had to be an integral component of all the production units. The same holds true for OFs also. In this connection, the Committee were informed that OFB has taken up in house R&D projects for design & Development & product upgrade of Armament, Ammunition and equipment. OFB had developed 122 Armaments & ammunition so far, out of which 61 items have been designed and developed by Ordnance factories through in-house R&D. In all, 25% of the output value of OFB was from in-house R&D, and R&D under foreign Transfer of Technology (ToT) & R&D with Defence Research & Development Organisation. The Committee noted that design centers have been established in each of the OFs to carry out R&D and collaborative R&D projects were also taken up. However, while glancing at the percentage of expenditure in R&D to overall allocation during last five years, the Committee had found that it was 0.40% in 2012-13, 0.38% in 2013-14, 0.50% in 2014-15, 0.67% in 2015-16 & 0.40% in the year 2016-17. The Committee were of the view that the data is indicative of a somewhat apathetic attitude towards the R&D drive of OFB. On this account, the Committee would like to observe that considerable attention & emphasis should be given to R&D activities by OFB and the Committee be intimated of the measures taken in this regard”.

9. The Ministry in its action taken reply has stated as under:-

“OFB noted the same for compliance”.

10. The Committee in their 43rd report had desired that considerable attention and emphasis should be given to R&D activities by OFB and the Committee be intimated of the measures taken in this regard. In their reply, the Ministry of Defence had merely stated that OFB noted the Committee's view for compliance. There is no mention to the various measures taken or ought to be taken thereto. The

Committee, therefore, wish to reiterate that they shall be intimated about the concrete steps taken to increase R&D activities.

C. Exporting of Ordnance Factory Products

Recommendation (Para No. 11)

11. The Committee had recommended as under:

“From the data supplied to the Committee, it was noted that in the year 2013-14, Ordnance Factories exported Rs 20.24 crore worth of arms and ammunition. This figure remained static till 2016-17, with the exception of the year 2015-16, where it went down to Rs 6.51 crore. The Committee viewed that improvement in technical & financial qualifications would not only be helpful in providing quality products to our Defence Forces but also boost export of products being manufactured at OFs. This would also help OFB to shift gear from being merely dependent of our Armed Forces for order book. During the course of evidence, the Committee also found that OFs needed orders to keep their machines running. OFB had to strive to make use of their infrastructure optimally and financial propriety had to be observed in manufacturing process”.

12. The Ministry in its action taken reply stated that “OFB noted the same for compliance”.

13. During the examination of Demands for Grants 2018-19, the Committee had observed that Ordnance factories need orders to keep their machines running. Further the data pertaining to export showed that from 2013-14 to 2016-17, their exports have either remained static or declined. At the same time their main customer, the Armed forces seems to have not been giving sufficient orders to ensure utilization of the production capacity. The Committee, therefore, had recommended that OFB should strive to make use of their infrastructure optimally while observing financial propriety.

The Committee take a serious note of the routine nature of the reply of the Ministry wherein it has stated that “Ordnance Factories Board had noted the recommendations of the Committee for compliance”. The Ministry has not furnished the ways and means for optimum utilization of their infrastructure by exports or by domestic sales. The Committee, therefore, desire the Ministry to furnish the same in their further action taken replies.

D. Budgetary Provisions

Recommendation (Para No. 12)

14. The Committee had recommended as under:

“The Committee found that there has been shortfall in budget provided to DRDO. The budgetary allocation projected, and actually allocated in each of the years since 2013-14 is shown in the table below

S. No.	Year	Projection (Rs in crore)	Allocation (Rs in crore)
1.	2013-14	16,483.28	10,934.17
2.	2014-15	18,495.46	13,716.14
3.	2015-16	19,641.56	13,540.11
4.	2016-17	18,782.86	13,593.78
5.	2017-18	22,203.74	14,818.74

The Committee noted from the afore-mentioned table that there had been a considerable shortfall in budgetary allocation over the years.”

15. The Ministry in its action taken reply has stated as under:-

“The requisite information in respect of Dept. of Defence R&D is as follows

	Defence* Expenditure (Rs in crore)	Projection (Rs in crore)	Budget allocated to R&D (actuals)(Rs in crore)	% of Defence Expenditure
2014-15	218694.18	18495.46	13257.98	6.06
2015-16	225922.98	19641.56	13317.12	5.89
2016-17	225899.59	18782.86	13382.05	5.92
2017-18 (BE)	274114.00	19935.60	14818.74	5.41
2018-19 (BE)	295511.41	22203.74	17861.19	6.04

Yes, it is a fact that budgetary allocations are much less than the projections made by the Deptt of Defence R&D. However, the Deptt is managing within the allocations by re-prioritising the project activities.”

16. The Committee view that R&D expenditure needs emphasis and the percentage of Defence expenditure on R&D requires upward revision. The growth and capability enhancement of Defence sector depends immensely on the sustained R&D activities, the success of which alone can make India self-sufficient thus reducing our dependency on costly imports and leading to considerable savings in the overall defence expenditure in the long run. Therefore, the Committee opine that appropriate emphasis may be given to this area and funds should not act as a hindrance in any manner. Appropriate action taken/proposed to be taken in this regard may be furnished to the Committee.

E. Delay in Projects

Recommendation (Para No. 21)

17. The Committee had recommended as under:

“.... delays in completion of projects were a part and parcel of DRDOs functioning. For instance, Light Combat Aircraft (LCA) was supposed to have been completed in 2008 but the revised date of completion is June, 2019. In the case of Aero engine, Kaveri, the original date of completion was 1996 but was revised to December, 2009. Further revision of the completion schedule continues to be under process. Similar was the case with LCA-Navy, Airborne Early Warning and Control (AEW&C) System, Air to Air Missile system-Astra, Long Range surface to Air Missile etc. to name a few. The extent of delay in the execution of above mentioned projects varies from project to project. Although various reasons have been attributed for project delays by the representatives of DRDO, the Committee took very serious note of this unwarranted and unsavoury phenomenon. These delays not only place a burden of unnecessary cost implications but also deprive the Services of critical capabilities. The Committee wished to be kept apprised on the progress made in regard to each of the above mentioned projects”.

... accountability has to be bestowed at some level for the continued delays. Such a dismal scenario cannot be allowed to go on perpetually and wastage of resources cannot be taken for granted as a routine phenomenon. The Committee have also been informed that various measures are being taken to curb delays that are a regular feature. However, the Committee would like to emphasise that the efforts should bear the desired results. Therefore, an inherent system needs to be

developed where specific roles and responsibilities are demarcated and specified within the organizational structure of DRDO. The progress made in the direction may be brought to the knowledge of the Committee.

18. The Ministry in its action taken reply has stated as under:-

“DRDO acknowledges that there have been delays in some of the projects. DRDO has issued fresh guidelines to tighten and streamline the process for completion of the project within PDC.

- a) All reviews i.e. Apex Boards (AB), Executive Boards (EB) and Project Monitoring & Review Committees (PMRC) be scheduled at specified intervals with advance notice sent to all members. Postponement of reviews be avoided to the extent possible. Reviews should focus on issues affecting project timelines.
- b) Frequency of reviews i.e. EBs/PMRCs may be tightened for unusual delayed projects.
- c) New cases of project sanction may please project realistic timeframes keeping in mind current procedures. Necessary levels of pre-project activity including design/configuration reviews & procurement plan to be finalized before moving the case for sanction.

Recommendation (Para No. 22)

19. The Committee had recommended as under:

"... accountability has to be bestowed at some level for the continued delays. Such a dismal scenario cannot be allowed to go on perpetually and wastage of resources cannot be taken for granted as a routine phenomenon. The Committee have also been informed that various measures are being taken to curb delays that are a regular feature. However, the Committee would like to emphasise that the efforts should bear the desired results. Therefore, an inherent system needs to be developed where specific roles and responsibilities are demarcated and specified within the organizational structure of DRDO. The progress made in the direction may be brought to the knowledge of the Committee”.

20. The Ministry in its action taken reply has stated as under:-

“Project Directors are responsible for project execution. The projects are reviewed by DGs/Secretary. Only those delayed projects are granted PDC extension in which the delay is due to certain unforeseen factors beyond control of DRDO like technological bottlenecks, procurements/integration/manufacturing delay by industry, delay in international contracts/MoU, denial of license by certain countries, dependence on trial platforms to be provided by services, QR changes etc.

However it may be noted that research and development is an area of uncertainty where certain unknowns are explored. In addition to taking of design projects where the sub-systems are already matured, DRDO also has to undertake technology projects and science and technology projects where the technology readiness level worldwide may be at intermediate and low level respectively increasing the risk of delays. Certain high risk and high pay off projects and blue-sky research has also to be undertaken where there are extremely high chance not only of delays but also failures.

It is submitted that, it is difficult to fix accountability solely on DRDO as our projects are dependent on number of external agencies including Users, Production/QA agencies, Certification agencies etc.”

21. While agreeing with the view that research is an open end activity, the Committee still desire that DRDO streamlines the envisaged targets, deadlines of the processes and other milestones defined in the project. In the reply, the Ministry has submitted that guidelines have been issued to ensure that new cases of project sanction may be project realistic timeframes. The Committee feel that the earlier approach has led to inordinate delays, in some cases as mentioned above more than a decade. This Committee believe might have resulted in manifold increase in cost of the project / product. The Committee feel that accountability at the level of project directors be invariably fixed for inordinate delays which leads to cost escalation of the product / project. In addition, such delays also deprive the services of the critical equipment which probably might have been met through costly imports. The Committee, therefore while reiterating their earlier recommendations suggest that all out efforts be made to complete the ongoing projects critical to the services performance be completed without further delay.

Directorate General of Quality Assurance

F. Budget 2018-19

Recommendation (Para No. 28)

22. The Committee had recommended as under:

“During the year 2018-19, against the projection of Rs.1322.81 crore the allocation for DGQA is Rs.1146.98 crore. This accounts to a shortfall of Rs.175.83 crore. The Committee viewed that DGQA plays a significant part in ensuring the quality of products being supplied to the Defence Forces. DGQA carries out inspection of Defence stores supplied by Ordnance Factories, Defence Public Sector

Undertakings and Industry. These inspections were done at various stages. The Committee came to know that on an average DGQA carries out approx. 18,000 inspections per month. Considering the significance that DGQA holds in ensuring qualitative value of equipments including arms and ammunition, the Committee desired that adequate funds are provided to them for mandatory sustenance and operational requirements”.

23. The Ministry in its action taken reply has stated as under:-

“The projections made by the Services, including DGQA, are forwarded to Ministry of Finance for favourable consideration. If Ministry of Finance conveys reduced allocation, the same is required to be passed on to the Services. It is agreed that due to reduced allocations, certain adjustments may be made but not to the extent that it affects operational preparedness.

The Committee may be assured that all efforts will be made to obtain additional requirements projected by DGQA at Supplementary/RE stage. It may be further added that all efforts will be made to ensure that sustenance and operational requirements of DGQA do not suffer due to want of funds”.

24. The Committee have expressed their concern about the shortfall in the allocation to DGQA in their report. While acknowledging the critical role played by DGQA in ensuring the quality of equipments supplied by the Defence production agencies, the Committee had desired that DGQA might be provided with adequate funds. The Committee note that the Ministry would make all out efforts to obtain additional requirement as projected by DGQA at supplementary RE stage. The Committee wish to be apprised about the additional funds provided to DGQA at supplementary/RE stage as well as the projects affected due to reduced allocations during the Financial Year 2018-19.

CHAPTER II

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

DELAY IN PROJECTS

Recommendation (Para No. 6)

From the reply submitted by the Ministry, the Committee note that various projects of OFB have been delayed. The OFB has given many reasons for delays including those relating to procurement of plants and machinery and delay in completion of civil works by MES. The Committee note in this regard that both OFB and MES function under the control of Ministry of Defence. Therefore, Ministry of Defence should direct both the organisations to co-ordinate and plan all the procedures with complete sync amongst the organizations.

Recommendation (Para No. 7)

At the same time, the Committee would like to emphasize that OFB has to introduce stringent discipline in project execution which seems to be lacking. Efforts at shifting the blame to the other organizations or citing procedural aspects as a cause for delays do not augur well.

Reply of the Government

Civil works for on-going projects at OFB have already been completed or on the verge of completion, barring a few projects, viz Pinaka @2500, Akash Booster and Sustainer (PDC for Civil works- Jul'18) and BMCS plant at OFN, which is a turnkey project. However, the following factors causing delay were beyond control of OFB:

- i) Due to budgetary constraints, OFB was forced to prioritise Civil Works of various projects.
- ii) Due to late receipt of clearance for deforestation from MoEF, Civil Works pertaining to Augmentation of Pinaka rockets and Akash Booster and Sustainer projects were delayed.
- iii) Due to non-finalization of weapon by Army, progress of Small Arms Factory at Korwa has been held up.
- iv) Due to financial crisis in Europe, some foreign firms failed to execute the supply of critical machines in time as committed, thereby delaying the completion of some projects viz. T-72 Variants and Augmentation of Spares for overhaul of T-72 and T-90 Tanks. Opening of many of the tenders were postponed due to non/poor participation by potential vendors causing delay in finalization of orders.
- v) Explosive plants have very limited global sources, so acquiring technology indigenously or globally is very difficult.

Following measures have been taken to closely monitor the projects and ensure timely progress of projects:-

- i) As a measure for improvement, OFB has roped in DRDO, who has been entrusted with the responsibility of Civil works in Pinaka @2500 project, refraining sole dependence on MES, thus creating an alternate source.
- ii) In projects such as Akash Booster and Sustainer, where MES has been entrusted with the responsibility of CW, a mechanism has been established at factory level for monitoring and Co-ordinating with MES, so that further delay in completion of Civil Works can be avoided. At OFB level interaction in the form of Progress Review meeting is regularly being done and monitored so that issues causing delay may be addressed.
- iii) Progress of the projects is now being regularly reviewed at MoD at the level Secretary DP. Necessary directives have been subsequently issued by MoD.

QUALITY OF PRODUCTS

Recommendation (Para No. 8)

One more aspect that has come to the notice of the Committee while examining the Demands for Grants of the Ministry of Defence for the year 2018-19 pertains to quality of products being manufactured by OFB. As regards Assault Rifles being manufactured for Indian Army, the Committee have found that despite providing prescribed GQSR, OFB could not deliver Assault Rifles to Army. The Committee are distressed to note that the assault Rifle developed has failed at the trial stage.

Recommendation (Para No. 9)

The Committee are of the view that OFB should find out the reasons for failure and take all measures to improve the quality of weapons for the satisfaction of the User. The Committee feel that OFB should strive towards manufacturing of products which qualitatively qualify for induction in the Defence Forces. At the same time, OFB should ensure financial priority in manufacturing procedures. The steps taken in this direction may be brought to the knowledge of the Committee.

Reply of the Government

The last Indent for 5.56 mm INSAS Rifle was received from the Indian Army in the year 2010. The Indian Army wanted to replace the INSAS weapon with an Assault Rifle. Therefore, Army tried to procure Assault Rifle globally and issued RFP in the year 2011 for Multi Caliber Assault Rifle having capability to exploit 5.56x45mm and 7.62x39mm ammunitions through change of magazines and barrels. The RFP did not fructify & was finally retracted in Feb'2016.

Thereafter, Indian Army in close interaction with OFB along with DRDO and DGQA was looking to develop an indigenous Assault Rifle which could meet revised requirement of Army. OFB in association with DG/Infantry led Task Force has successfully developed 5.56 x 45mm Assault Rifle for the Army. The Rifle could meet the required parameters including reliability in 2400 rounds which is comparable to international standards. However the Army has now changed their philosophy and is looking for 7.62x51mm Calibre.

In a meeting held in Sept'2016, Hon'ble Raksha Mantri directed OFB to develop 7.62 x 51mm Assault Rifle & a Project Monitoring Team(PMT) was constituted under the Chairmanship of DG-INF with members from OFB, DRDO & DGQA. Accordingly, an in-house R&D project has been undertaken at Rifle Factory Ishapore, OFB in association with ARDE. OFB is developing the Rifle under the guidance of PMT. Under the aegis of above PMT, initial prototypes of 7.62 x 51mm Assault Rifle was realised in May'2017. Based on the decision of 6th PMT OFB has made a batch of prototypes as per the Army's GSQR. By and large GSQR is being met by the weapon prototype developed by OFB. 30 nos Assault Rifles will be offered to 7th PMT for next evaluation.

Apart from above, to improve the quality of OFB products, following steps have been taken by OFB:

- a) Exclusive QC set up: To look after the quality area, Officer of the rank of SAG/JAG has been nominated as Quality Control Officer in each Ordnance Factory.
- b) Creation of Test Facilities for input material inspection and NABL accreditation of labs: All the OFs are having ISO 9001 certified QMS. 35 Ordnance Factories have NABL accredited labs as per factory requirement.
- c) Quality Audit Group (QAG): In order to monitor and ensure adherence of the production process to the laid down QA plans, 10 QAG centers, each headed by an SAG level Officer has been set up.
- d) Audit of manufacturing processes: To check any deviation from the standards, process audits are carried out by QAG of Ordnance Factories and surveillance audit is being carried out by DGQA.
- e) Introduction of NQDBMS (Networked Quality Data base Management System): For better communication & transparency, NQDBMS has been implemented in all OFs and are reviewed periodically with DGQA Representative.
- f) Introduction of accountability documents for operators/supervisors: To make the operators/supervisors accountable, accountability documents has been introduced, to ensure improved quality products.
- g) Failure Review Board: To review and analyse the causes of defects observed during manufacturing, final acceptance inspection and to suggest remedial measures, Failure Review Board (FRB) has been constituted in each factory with DGQA representative.

- h) Liaison Meeting with DGQA Rep: To discuss/resolve any specific observation of DGQA during inspection, Liaison meeting with DGQA representative is organized every month at factory level.
- i) System of Customer feedback: Representatives from Factories visit 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.

Other activities like regular training & awareness programmes on Quality aspects for workmen, staff & officers and quality awareness programmes for vendors are being carried out as a measure to further strengthen the Quality set up in Ordnance Factories.

COST CUTTING

Recommendation (Para No. 10)

Along with quality, OFB shall also work towards cost cutting measures so that the products of OFB are capable of countering financial competition as well. The Committee have found that the cost of products being manufactured at OFs are not competitive with the same GSQR products manufactured in private sector or international market. Therefore, the Committee feel that in order to sustain the competitive environment OFB must leave no stone unturned to achieve an edge over the rival competitors or private players operating in the market.

Reply of the Government

During price fixation exercise of OFB products for 2018-19, overall price for Army, Navy and Air Force has been decreased over last year price i.e. of 2017-18. Price fixation is a detailed and extensive exercise wherein elements of Cost of Production of each factory is examined and scrutinized. Every effort is being made to reduce the cost of items. Unavoidable Rejection (UAR) and Standard Man-Hour (SMH) of items to be produced have been reduced due to the installation of state-of-the-art machines(like CNC Machines). As a result, Labour estimates have been revised by the Ordnance Factories. This has resulted in lower cost of production and the benefit of the same in the form of reduced price is being passed on to the Services.

Recommendation (Para No. 17)

At the same time, it is equally important that disciplined expenditure pattern and stringent financial propriety be observed by DRDO in project execution and research activities. DRDO needs to endeavour towards curtailing the extraneous expenditure to the extent possible. The Committee may be kept apprised of the steps taken in this direction.

Reply of the Government

Following steps have been taken by DRDO to curtail the extraneous expenditure for the projects.

- a) As a part of pre-project activity, a stringent requirement is finalisation of cost by Project Cost Estimation Committee which is chaired by Senior Scientist and estimates are based on the last purchase price, existing rate contract, budgetary cost etc. This committee comprises of technical expert from other labs and finance representative.
- b) All projects are being reviewed by various levels of committees wherein overall review of expenditure is carried out along with plan for next six months.

Stringent financial propriety is being observed in DRDO project execution and research activities. DRDO has its own procurement manual PM-2016 which is being strictly adhered. Besides above, various instructions are being issued from time to time by DRDO HQrs.

PROJECTS ABANDONED/ CLOSED BY DRDO

Recommendation (Para No. 18)

While going through the details submitted by the Ministry, the Committee noted that there are many projects which get closed following a few years of operation. This results in immense financial burden with no eventual fruitful results. Such wastage of exchequer's money needs to be checked. Defence Research and Development Organisation, therefore, needs to undertake research oriented programmes with great concern and care. The Committee desire that at the initial stage itself, before the project is sanctioned, all the possible constraints and bottlenecks that are likely to arise needs to be assessed with care.

Reply of the Government

Following steps are taken by DRDO before project is sanctioned.

- a) Detailed Feasibility Report is being prepared to realistically assess the probability of success of the project with respect to internal and external factors, identifying critical elements contributing to low success probability, techno-managerial constraints and cost benefit analysis.
- b) All Project proposals are first considered in the Cluster Council, before initiation to avoid duplication of work in the cluster.
- c) Cluster Council accords 'in principle' clearance to project proposals based on need and lab competence.
- d) Thereafter the project is subjected to peer review by national level technical experts for robustness of design and development methodology.

- e) The proposal is then presented in DRDO Management Council (DMC) for Acceptance of Necessity (AoN) with respect to user requirements and DRDO partners.
- f) Project proposals (cleared 'in principle' by Cluster Council and/or DMC) are then initiated by the concerned lab after cost vetting by Cost Estimation Committee having a finance rep for approval of CFA on file.

Hence it can be seen that due diligence is adopted before sanction of project.

Recommendation (Para No. 19)

The Committee express their deep concern on the wasteful expenditure incurred by DRDO on account of closure of major projects. The Committee understand that research activity is an open end programme and closing a project midway is a possibility. Nevertheless, it needs to be ensured that closure of projects before culmination should not be allowed to become a regular practice.

Reply of the Government

A sanctioned DRDO project may be closed before its Probable Date of Completion(PDC) with or without achieving its objective under the following conditions:

Cancelled Project: The project has been approved and project no. allotted but the work on the project has not commenced and no expenditure has been incurred.

Short Closed Project: Where the work on a project has already commenced and certain amount of expenditure has been incurred but for certain reasons (to be specified) it is decided to short close the project.

Stage Closed Project: Pre-mature closure of project is where considerable effort and funds have been spent yet no concrete results have been achieved. Stage closing of a project is only resorted into extra-ordinary circumstances

For short/stage closure of the project, the highest review/monitoring board has to recommend for short closure of the projects during its last held meeting after due justification is provided by the project team.

Further, all the projects which are short closed (before PDC or attainment of its objectives) have to be duly approved by Secretary DD R&D for short closure even if the approving authority for the project is Director or Cluster DG.

In the last 03 years, 192 projects were sanctioned, 144 projects were completed and only 12 projects have been short closed/stage closed/cancelled. A project is closed based on the recommendations of the highest project monitoring committee. However, as per parliamentary

committee's directives, every care will be taken by DRDO to minimise the stage closure and cancellation of projects.

Recommendation (Para No. 20)

The Committee recommend that it would be preferable to have a scientific, technical and concurrent audit of every ongoing project carried out preferably by an independent agency so that such midway closure of projects is avoided in future. The Committee also strongly feel that the Ministry should re-evaluate the reasons and also seek expert advice before taking a decision towards closing down any project of DRDO in future so as to avoid wastage of public funds and to help in sustaining the project(s), which can possibly prove to be beneficial to the country.

Reply of the Government

Technical audit of every project is carried out as per following:-

- a) **Peer Review:-** To provide recommendations for i) Scope/Goals of the project, ii) Identifying design alternatives and selection of suitable design, iii) Realisation methodology, iv) Risk factors /grey areas and mitigation strategy, v) PDC and category of project, vi) Linking of milestones with financial outlay and timelines, vii) QA/Testing Plan, viii) Cost Estimation
- b) **Preliminary Design Review:** To review requirement as well as concept design of the project.
- c) **Detailed Design Review:** To review finalised design methodology and detailed design.
- d) **Critical Design Review:** To critically analyse detail design w.r.t performance and engineering requirement.

Peer Review, Preliminary Design Review (PDR) and Critical Design Review (CDR) are carried out for projects at various stages of project cycle which are chaired by technical experts preferably from outside DRDO and also comprise members from academia, Dept. of Space (DoS), Dept. of Atomic Energy (DAE) as members. These reviews also provide clearance to proceed to the next stage.

In addition to above, DRDO projects are also being reviewed by Apex Boards, Executive Boards, Project Monitoring & Review Committees at scheduled intervals by all stakeholders including Services. As per the committee directives every effort will be taken to ensure that systematic process of reviewing projects will be followed meticulously for every project.

INDIGENISATION OF RESEARCH AND DEVELOPMENT ACTIVITIES

Recommendation (Para No. 23)

The Committee observe that even today the country is 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 system, sub-systems, components etc. 'ab-initio' including information, infrastructural and testing facilities. The Committee are also of the view that as undertaking original research is a lengthy and time consuming process, DRDO may also think of developing products through the process of reverse engineering. The Committee recommend that the Ministry of Finance provide adequate budgetary support in this regard so that indigenization of R&D activities can be taken up by DRDO on a war footing.

Reply of the Government

Details of Expenditure of DRDO, Total Defence Expenditure, and Expenditure of DRDO as %age of Total Defence Expenditure from 2011-12 onwards are as under:-

(Rs. in crore)

Year	Expenditure of DRDO	Total Defence Expenditure	Expenditure of DRDO as %age of Total Defence Expenditure
2011-12	9,893.84	1,70,913.28	5.79
2012-13	9,794.80	1,81,775.78	5.39
2013-14	10,868.89	2,03,499.35	5.34
2014-15	13,257.98	2,18,694.18	6.06
2015-16	13,289.28	2,25,894.85	5.88
2016-17	13,382.05	2,51,780.73	5.31
2017-18 (RE)	15,463.25	2,63,003.85	5.88
2018-19 (BE)	17, 861.19	2,79,305.32	6.39

It may be seen from the above table that the Budget Expenditure of DRDO has been consistently increasing in real terms since 2011-12 in comparison to previous year (except in FY 2012-13). It may be seen that in RE allocation for the FY 2017-18 and BE 2018-19 the share of DRDO has gone up to 5.88% and 6.39% respectively of Defence Expenditure. Every effort is made to ensure that adequate funds are available to meet the critical requirements of the DRDO.

Recommendation (Para No. 24)

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 and made available for a specific project. So is the case of the extent of the end users involvement in the conceptualization stage of the project so that defects, if any, may be rectified during production stage itself and delivery of the product to the user may not get delayed for a long time. In this way, there 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 the GSQR stipulations. The Committee desires that instead of aiming for perfection in developing a project from the very beginning, DRDO should, at first, develop a product and later on, keep improving on the same by categorizing them as Mark I, II, III, IV or so on. This would enable the Services in having some products at hand to carry on with their assigned tasks without waiting endlessly for perfection in the products.

Reply of the Government

The user (Army, Navy & Air force) projects Preliminary Staff Qualitative Requirements (PSQRs) in a draft form as an initial concept based on the available knowledge on the Product/System to be Designed and Developed by DRDO. On receipt of PSQR, Feasibility Study is undertaken by DRDO to establish, whether it is practicable to meet the User requirement.

Thereafter, Scientific/technical requests are identified and time required to complete the project assessed accordingly.

The suggestion/recommendation of the standing Committee in providing the Services (Army, Navy & Air force) the DRDO Products on time without resorting to perfection would enable the Services having some DRDO product available for deployment and meeting their assigned tasks . Based on User's requirement DRDO may undertake Concurrent approach towards improving the product as Mark I, II and so on as suggested by Standing Committee.

NUCLEAR, BIOLOGICAL AND CHEMICAL (NBC) RESEARCH

Recommendation (Para No. 25)

The Committee are aware of the threats of nuclear, biological and chemical warfare in the current times. In this connection, the Committee have discovered that DRDO, through its R&D effort, over the last two decades, has developed several products for NBC detection, protection, decontamination and medical management to continue the sustainment of the indigenous NBC defence capabilities. The Committee appreciate the initiatives taken in this connection and desire that pro-active exercises on the issue shall be continued

Reply of the Government

DRDO had undertaken a Cabinet committee on Security (CCS) approved Programme on "NBC Defence Technologies" in 2010 to develop products and technologies to continue the sustainment of the indigenous NBC defence capabilities and close the technology gap vis-à-vis the developed countries.

This CCS approved project is completed on time in 2015 with 35% lesser budget and twenty products were developed for NBC detection, protection and decontamination. Out of these, NBC suit MK V is under production for Army (50,000 no.) and other have been cleared/are being taken up for User trials. Due to these developments, no NBC item has been imported by the services from last 7 years. To further strengthen the NBC development capabilities and bring

it at par with developed countries, new NBC projects are being taken up by DRDO laboratories to bring out next generation NBC products for detection, protection, decontamination and medical management in the field of NBC defence to maintain continuity of technology development and retain our nation's technological capability edge.

COLLABORATION WITH UNIVERSITIES/ ACADEMIC INSTITUTIONS

Recommendation (Para No. 26)

The Committee have learnt that DRDO conducts many research programmes in collaboration with different universities/institutions. In this connection, they have further been informed that during the 12th plan, 683 projects costing Rs. 496 crore were sponsored to various universities and academic institutions. This has accrued benefits to DRDO's research programmes. The Committee also note in this regard that universities and academic institutions are full of budding talent. Therefore, more such collaborations need to be encouraged with a view to advancing research in the country.

Reply of the Government

The observations/recommendations of the Committee have been noted and the same would be pursued in future.

Recommendation (Para No. 27)

In this regard, the Committee also found that DRDO has established 6 centers of excellence viz, Center of Propulsion Technology at IIT Bombay (CoPT), Joint Advance Technology Center at IIT Delhi (JATC), Jagdish Chandra Bose Center for Advanced Technology (JCBCAT) at Jadavpur University, Kolkata, Research Innovation Center (RIC) IIT Madras, Advanced Center for Research in High Energy Materials (ACRHEM), University of Hyderabad and DRDO- BU Center of Life Sciences at Bharatiyar University. The Committee wish that more such centers to be established in the future and fruitful research efforts may be used for the benefit of Defence Services and the country.

Reply of the Government

As recommended by the Committee, DRDO will take all necessary steps to establish more centres of advanced technology & research in the country.

TRAINING UPGRADATION

Recommendation (Para No. 30)

The Committee found that with the evolutionary processes in manufacturing sector, the plants machinery also 'move forward'. Also, production rate is increasing. To carry out testing and quality check, the officials of DGQA need to be trained accordingly. In this regard, the Committee have been informed by the representatives of DGQA that there are training schools and institutes where training on quality aspects is given. The Committee feel that with

change in new requirements of production commensurate modifications in training of officials in DGQA has to be incorporated. The changes incorporated in training curriculum shall be brought to the knowledge of the Committee.

Reply of the Government

Change in technology and manufacturing techniques are ever evolving. So also is the requirement of incorporating such changes in the training curriculum. Keeping this in view under direction and guidance of MoD changes have been undertaken in the course calendar of 2017-18 of Defence Institute of Quality Assurance for training of officials in DGQA. Hence following additional courses have been incorporated in the training curriculum:-

SI No.	Course Name
(a)	Refresher Course for Officers from Senior Quality Assurance Establishments & Authority Holding Sealed Particulars
(b)	Orientation Course for Assistant Engineers & Junior Engineers
(c)	Basic Metallurgy course
(d)	Basic Explosive Course
(e)	National Aerospace and Defence Contractor Accreditation Programme
(f)	Information Security Management System
(g)	Basic Quality Management Course has been re-deigned and bifurcated into Tech and Adm phase for insure focus on technical aspects to address the aspects of quality during manufacturing and Administrative phase being run separately.

NATIONAL CADET CORPS

Recommendation (Para No. 31)

National Cadet Corps (NCC) was established under the NCC Act, 1948. NCC aims at developing character, comradeship, discipline, a secular outlook, the spirit of adventure and ideals of selfless service amongst young citizens. Further, it aims at creating a pool of organized, trained and motivated youth with leadership qualities in all walks of life, so that they become useful citizens and serve the Nation with all their might regardless of the career they choose. Needless to say, the NCC also provides an environment conducive to motivating young Indians to join the armed forces.

Recommendation (Para No. 32)

In BE 2018-19, NCC projected an amount of Rs. 1910.42 crore but was allocated Rs.1584.21 crore, including the Revenue and Capital funds. The Committee has been given to understand that NCC is enhancing its footprints in 710 districts, which is seven more than the previous year. There is a waitlisting of 8948 schools & colleges for NCC. The Committee also found that Government has sanctioned additional 2 lakh cadets for NCC. The expansion

programme of NCC would require infusion of adequate funds. The Committee express the hope that the expansion programme does not come at the cost of compromising quality of training and infrastructure. Therefore, it is necessary that the Government make requisite allocations to NCC during the upcoming financial year.

Recommendation (Para No. 33)

While examining the subject, the Committee found that in July 2017 the Government has approved clothing for NCC Cadets. The Committee feel that this is a positive step and would be beneficial in attracting cadets. However, provision of uniforms and expansion of NCC's footprints would indeed require infusion of adequate funds. During the course of oral evidence, the representatives of NCC confided to the Committee that shortage of uniforms has been a problem. The Committee desire that the issue of shortage of uniforms be taken up at the level of Ministry of Defence with due concern and priority. The Committee desire that provision of sufficient funds to NCC be ensured by the Ministry of Defence and the Committee kept apprised.

Reply of the Government

The projections made by the Services, including NCC, are forwarded to Ministry of Finance for consideration as it is the nodal Ministry for providing funds. If Ministry of Finance conveys reduced allocation, the same is passed on to the Services. It is agreed that due to reduced allocations, certain adjustments may be made but not to the extent that it affects operational preparedness.

The Committee may be assured that all efforts will be made to obtain additional requirements projected by NCC at Supplementary/RE stage.

Recommendation (Para No. 34)

The Committee wish that a system of receiving feedback from cadets of NCC is developed so that first hand and realistic opinions on improvement in institutions and operations of NCC can be received by the higher authorities. The methodology developed in this regard shall be brought to the information of the Committee.

Reply of the Government

The recommendation of the Committee at Para 34 pertaining to HQ DG NCC has been noted for compliance. In this regard an internal Committee has been constituted with the approval of DG NCC to develop a methodology for receiving the feedback from the cadets as recommended by the Committee.

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

DIRECTORATE GENERAL OF QUALITY ASSURANCE

Budget 2018-19

Recommendation (Para No. 28)

During the year 2018-19, against the projection of Rs.1322.81 crore the allocation for DGQA is Rs.1146.98 crore. This accounts to a shortfall of Rs.175.83 crore. The Committee view that DGQA plays a significant part in ensuring the quality of products being supplied to the Defence Forces. DGQA carries out inspection of Defence stores supplied by Ordnance Factories, Defence Public Sector Undertakings and Industry. These inspections are done at various stages. The Committee came to know that on an average DGQA carries out approx. 18,000 inspections per month. Considering the significance that DGQA holds in ensuring qualitative value of equipments including arms and ammunition, the Committee desire that adequate funds are provided to them for mandatory sustenance and operational requirements.

Reply of the Government

The projections made by the Services, including DGQA, are forwarded to Ministry of Finance for favourable consideration. If Ministry of Finance conveys reduced allocation, the same is required to be passed on to the Services. It is agreed that due to reduced allocations, certain adjustments may be made but not to the extent that it affects operational preparedness.

The Committee may be assured that all efforts will be made to obtain additional requirements projected by DGQA at Supplementary/RE stage. It may be further added that all efforts will be made to ensure that sustenance and operational requirements of DGQA do not suffer due to want of funds.

(For comments of the Committee, please refer to Para No. 24 of Chapter – I of the Report)

CHAPTER III

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

Recommendation (Para No. 29)

The Committee are concerned about the fact that despite checking at DGQA, some ammunition or other equipment reaching out to Defence Services turns out to be faulty. In this connection, the Committee found that sample testing is carried out by DGQA and the whole lot of material may not be unflawed. Further, on this aspect the committee found that DGQA mainly conducts process audit and product audit is very little. In this context, the Committee would like to recommend that DGQA carry out some random sample testing also so that the quality of products can be ensured to the maximum possible extent.

Reply of the Government

DGQA carries out quality Assurance activities by conducting in process inspection & final acceptance inspection in ammunition & other equipment. Based on observation while coming on the above activities and feedback received from users, surveillance, process audit & quality audit are also carried out to ensure quality of the equipment/Ammunition. The quality of the equipment is also affected by the input material, the responsibility of which has been transferred to OFB since Apr 2005. It is brought out that system is already in place for conducting random sampling. However in case of failure statistical quality control technique are offered and the suspect lot is put through enhanced random sampling checks.

CHAPTER IV

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

Recommendation (Para No. 3)

Modernisation of Ordnance Factories is a continuous process. To keep pace with the contemporary manufacturing technologies, OFB prepares a long term planning spread over a period of 5 years which started from 2007-08. Ordnance Factories have been adopting three pronged approach for modernisation viz. (a) Renewal and Replacement (RR) of P&M which are beyond economical repair, with machineries of state of the art technologies. (b) Acquisition of P&M under New Capital (NC) for additional capacity, (C) higher productivity, enhanced quality, focus on use of renewable energy and to address environmental issues etc. (d) Corresponding Civil Works (CW) infrastructure development etc.

The key technology intensive areas which have been identified for modernisation of Ordnance Factories are:

- (i) Chemical Process Plants
- (ii) Small arms ammunition Production
- (iii) Ammunition filling and assembly
- (iv) Foundry and extrusion
- (v) Metal forming, machining and fabrication
- (vi) Quality control and assurance

(For comments of the Committee, please refer to Para No. 7 of Chapter – I of the Report)

Recommendation (Para No. 4)

Under the Capital segment, the allocation is Rs. 5345.22crore against projection of Rs 6027.63 crore. The allocations for Research and Development work for Ordnance Factories at the BE stage of Rs 2017-18 was Rs. 105.00 crore. It was reduced to Rs 100.00 crore at RE stage. The allocation at BE 2018-19 is Rs 105.00 crore. The Committee is disappointed to note that there is no increase in the allocations for R&D of Ordnance Factories. Also, the inflation rate has not been factored into. With this allocation, the Committee are apprehensive whether the key technological intensive areas as mentioned above are going to be materialised or not. Ordnance Factories play a significant role in 'Make in India' drive of the Government of India at least in Defence Sector. Howe ever, it is of utmost importance that the products being manufactured in Ordnance Factories are of global standards so that they can compete with private players also who are now joining the Defence Sector. To reach this objective it is imperative that the production related infrastructure and capacity in OFs are enhanced up to required standards.

Therefore, the Committee desires that essential steps should be taken towards modernization of OFs in a planned manner and essential budget for the same shall also be provided by Ministry of Defence and appropriately spent by OFB.

Reply of the Government

OFB's modernization programme is primarily focused on introduction of State-of-the-Art machines to manufacture quality product with cost effectiveness, taking into account the current and long term future requirements of its customers. A structured mechanism exists to ensure that OFB's infrastructure is modernized with the latest manufacturing technologies and machineries in the identified areas. Status of budget provided to OFB during the year 2017-18 and expenditure is given below:

(Rs in Crore)

	Renewal & Replacement (RR)	New Capital (NC)	Civil Works (CW)	Total
Approved Modified Appropriation(MA)	460.00	801.00	204.85	1465.85
Expenditure (Tentative up to March,2018)	400.96	825.25	204.75	1430.96

(For comments of the Committee, please refer to Para No. 7 of Chapter – I of the Report)

RESEARCH & DEVELOPMENT

Recommendation (Para No. 5)

The Committee view that R&D has to be an integral component of all the production units. The same holds true for OFs also. In this connection, the Committee were informed that OFB has taken up in house R&D projects for design & Development & product upgrade of Armament, Ammunition and equipment. OFB has developed 122 Armaments & ammunition so far, out of which 61 items have been designed and developed by Ordnance factories through in-house R&D. In all, 25% of the output value of OFB is from in-house R&D, and R&D under foreign Transfer of Technology (ToT) & R&D with Defence Research & Development Organisation. The Committee note that design centers have been established in each of the OFs to carry out R&D and collaborative R&D projects are also taken up. However, while glancing at the percentage of expenditure in R&D to overall allocation during last five years, the Committee have found that it was 0.40% in 2012-13, 0.38% in 2013-14, 0.50% in 2014-15, 0.67% in 2015-16 & 0.40% in the year 2016-17. The Committee are of the view that the data is indicative of a somewhat apathetic attitude towards the R&D drive of OFB. On this account, the Committee would like to observe that considerable attention & emphasis should be given to R&D activities by OFB and the Committee be intimated of the measures taken in this regard.

Reply of the Government

OFB noted the same for compliance.

(For comments of the Committee, please refer to Para No. 10 of Chapter – I of the Report)

EXPORT

Recommendation (Para No. 11)

From the data supplied to the Committee, it is noted that in the year 2013-14, Ordnance Factories exported Rs 20.24 crore worth of arms and ammunition. This figure remained static till 2016-17, with the exception of the year 2015-16, where it went down to Rs 6.51 crore. The Committee view that improvement in technical & financial qualifications will not only be helpful in providing quality products to our Defence Forces but also boost export of products being manufactured at OFs. This will also help OFB to shift gear from being merely dependent of our Armed Forces for order book. During the course of evidence, the Committee also found that OFs need orders to keep their machines running. OFB has to strive to make use of their infrastructure optimally and financial property has to be observed in manufacturing process.

Reply of the Government

OFB noted the same for compliance.

(For comments of the Committee, please refer to Para No. 13 of Chapter – I of the Report)

BUDGETARY PROVISIONS

Recommendation (Para No. 12)

The Committee found that there has been shortfall in budget provided to DRDO. The budgetary allocation projected, and actually allocated in each of the years since 2013-14 is shown in the table below:

S. No.	Year	Projection (Rs in crore)	Allocation (Rs in crore)
1.	2013-14	16,483.28	10,934.17
2.	2014-15	18,495.46	13,716.14
3.	2015-16	19,641.56	13,540.11
4.	2016-17	18,782.86	13,593.78
5.	2017-18	22,203.74	14,818.74

The Committee note from the afore-mentioned table that there has been a considerable shortfall in budgetary allocation over the years.

Reply of the Government

The requisite information in respect of Dept. of Defence R&D is as follows

Year	Defence* Expenditure (Rs in crore)	Projection(Rs in crore)	Budget allocated to R&D (actuals) (Rs in crore)	% of Defence Expenditure
2014-15	218694.18	18495.46	13257.98	6.06
2015-16	225922.98	19641.56	13317.12	5.89
2016-17	225899.59	18782.86	13382.05	5.92
2017-18 (BE)	274114.00	19935.60	14818.74	5.41
2018-19 (BE)	295511.41	22203.74	17861.19	6.04

Yes, it is a fact that budgetary allocations are much less than the projections made by the Deptt of Defence R&D. However, the Deptt is managing within the allocations by re-prioritising the project activities

(For comments of the Committee, please refer to Para No. 16 of Chapter – I of the Report)

DELAY IN PROJECTS

Recommendation (Para No. 21)

The Committee, while examining the Demands for Grants, discovered that delays in completion of projects is a part and parcel of DRDOs functioning. For instance, Light Combat Aircraft (LCA) was supposed to be completed in 2008 but the revised date of completion is June, 2019. In the case of Aero engine, Kaveri, the original date of completion was 1996 but was revised to December, 2009. Further revision of the completion schedule continues to be under process. Similar is the case with LCA-Navy, Airborne Early Warning and Control (AEW&C) System, Air to Air Missile system-Astra, Long Range surface to Air Missile etc. to name a few. The extent of delay in the execution of above mentioned projects varies from project to project. Although various reasons have been attributed for project delays by the representatives of DRDO, the Committee take very serious note of this unwarranted and unsavoury phenomenon. These delays not only place a burden of unnecessary cost implications but also deprive the Services of critical capabilities. The Committee wish to be kept apprised on the progress made in regard to each of the above mentioned projects.

Reply of the Government

DRDO acknowledges that there have been delays in some of the projects. DRDO has issued fresh guidelines to tighten and streamline the process for completion of the project within PDC.

- a) All reviews i.e. Apex Boards (AB), Executive Boards (EB) and Project Monitoring & Review Committees (PMRC) be scheduled at specified intervals with advance notice sent to all members. Postponement of reviews be avoided to the extent possible. Reviews should focus on issues affecting project timelines.
- b) Frequency of reviews i.e. EBs/PMRCs may be tightened for unusual delayed projects.
- c) New cases of project sanction may please project realistic timeframes keeping in mind current procedures. Necessary levels of pre-project activity including design/configuration reviews & procurement plan to be finalized before moving the case for sanction.

(For comments of the Committee, please refer to Para No. 21 of Chapter – I of the Report)

Recommendation (Para No. 22)

In view of the above, the Committee opine that accountability has to be bestowed at some level for the continued delays. Such a dismal scenario cannot be allowed to go on perpetually and wastage of resources cannot be taken for granted as a routine phenomenon. The Committee have also been informed that various measures are being taken to curb delays that are a regular feature. However, the Committee would like to emphasise that the efforts should bear the desired results. Therefore, an inherent system needs to be developed where specific roles and responsibilities are demarcated and specified within the organizational structure of DRDO. The progress made in the direction may be brought to the knowledge of the Committee.

Reply of the Government

Project Directors are responsible for project execution. The projects are reviewed by DGs/Secretary. Only those delayed projects are granted PDC extension in which the delay is due to certain unforeseen factors beyond control of DRDO like technological bottlenecks, procurements/integration/manufacturing delay by industry, delay in international contracts/MoU, denial of license by certain countries, dependence on trial platforms to be provided by services, QR changes etc.

However it may be noted that research and development is an area of uncertainty where certain unknowns are explored. In addition to taking of design projects where the sub-systems are already matured, DRDO also has to undertake technology projects and science and technology projects where the technology readiness level worldwide may be at intermediate and low level respectively increasing the risk of delays. Certain high risk and high pay off projects and blue-sky research has also to be undertaken where there are extremely high chance not only of delays but also failures.

It is submitted that, it is difficult to fix accountability solely on DRDO as our projects are dependent on number of external agencies including Users, Production/QA agencies, Certification agencies etc.

(For comments of the Committee, please refer to Para No. 21 of Chapter – I of the Report)

CHAPTER V

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

Recommendation (Para No. 1)

The committee note from the data supplied by the Ministry that in BE 2018-19, against the projected allocation of Rs8844.79 crore, Rs 6397.20 crore has been allocated under the Revenue Head for Ordnance Factory Board. Under the Capital segment, the allocation is Rs.5345.22 crore against the projection of Rs 6027.63 crore. The total allocation is Rs 11,742.42 crore against a projection of Rs 14,872.42 crore (excluding GST).

Recommendation (Para No. 2)

The Committee note that the Ordnance Factory Board plays a very crucial role in indigenous production of arms, ammunition, vehicles etc for the Services through its 41 manufacturing units. To match the growing requirement of Armed Forces of arm, ammunition and vehicles of International Standards, this would require regular up-gradation of Infrastructure and induction of state-of-the-art technologies. Therefore, the committee desire that essential funds shall be provided to OFB for maintenance, overhaul, capacity enhancement and upgrading of Ordnance Factories.

Reply of the Government

Matter has been taken up with the concerned authorities through a D.O. letter from Secretary (DP).

Recommendation (Para No. 13)

Further, on this issue, the Committee, during the deliberations on Demands for Grants discovered that out of the total DRDO budget, keeping aside obligatory expenses like pay & allowances and other non-salary revenue expenditure, the amount left for R&D activities is less than Rs. 9,000 crore. Out of the remaining amount, Rs. 5000 crore is dedicated for strategic schemes and another Rs. 1,000 crore for top priority CCS programmes there by leaving merely Rs. 1,400 crore for Science & Technology, Technological Demonstration and other Mission Mode projects(TD&ST). The Technological Demonstration and other Mission Mode projects(TD&ST) constitutes 'blue sky research' and involves futuristic technology which ideally is the bed rock for any R&D Organisation. In view of the facts mentioned above, DRDO would need additional funds to taken up futuristic projects.

Reply of the Government

DRDO thanks the Committee for the recommendations. DRDO has sought additional Rs 1800 cr. and is hoped that this will be soon available for current development initiative.

Recommendation (Para No. 14)

The Committee also found that for the current year, 2018-19, DRDO has received a 20 per cent jump in their budget as compared to the previous year. This is a welcome step. However, it has also been observed that owing to the LCA programme that is underway, which is funded by the way of grant-in-aid, the DRDO would require additional funding to the tune of Rs. 800 crore.

Reply of the Government

Comparison of Budgetary provisions under Revenue and Capital head for 2017-18 and 2018-19 is as under :

(Rs in crore)

	2017-18 (BE)	2017-18 (RE)	2018-19 (BE)	% Variation w.r.t	
				BE	RE
Revenue Head	7266.42	7910.93	8126.74	11.84%	2.74%
Capital Head	7552.32	7552.32	9734.45	27.54%	28.89%
TOTAL (Net)	14818.74	15463.25	17861.19	20.53%	15.51%

Additional amount of Rs. 800 crore was projected by DRDO for LCA program and the same was recommended by Standing Committee of Defence (SCOD).

MoD (Fin) may consider allocation of the same at the earliest.

Recommendation (Para No. 15)

Like-wise, for some other strategic programmes, there is a requirement of another Rs. 500 crore as a part of civil capital account. In addition to this, the Committee have also been intimated that Rs. 500 crore is an additional requirement for the revenue requirement of the stores.

Reply of the Government

Additional amount of Rs. 500 crore was sought for Civil works and Rs. 500 crore for Projects store by DRDO. MoD (Fin) may consider allocation of additional funds over and above the BE provision for Financial Year 2018-19 as per recommendation of the Standing Committee.

Recommendation (Para No. 16)

The Committee recognize the significance that Research and development holds for the welfare and progress of the Defence Forces. Therefore, the Committee wish that requisite funds be given to DRDO for their research activities.

Reply of the Government

DRDO thanks the Committee for the recommendations. DRDO has sought additional Rs 1800 crore and is hoped that this will be soon available for current development initiative.

New Delhi;
4 January, 2019
14 Pausa, 1940 (Saka)

Kalraj Mishra,
Chairperson,
Standing Committee on Defence

STANDING COMMITTEE ON DEFENCE

MINUTES OF THE THIRD SITTING OF THE STANDING COMMITTEE ON DEFENCE (2018-19)

The Committee sat on Friday, the 4th January, 2019 from 1500 hrs. to 1645 hrs. in Committee Room No. 'C', Parliament House Annexe, New Delhi.

PRESENT

Shri Kalraj Mishra - Chairperson

MEMBERS

LOK SABHA

- 2 Km Shobha Karandlaje
- 3 Smt Mala Rajya Laxmi Shah
- 4 Shri Dharambir Singh
- 5 Smt Pratyusha Rajeshwari Singh

RAJYA SABHA

- 6 Dr Ashok Bajpai
- 7 Shri Madhusudan Mistry
- 8 Shri Soumya R Patnaik
- 9 Shri G V L Narasimha Rao
- 10 Shri Ram Nath Thakur
- 11 Lt. Gen. Dr D P Vats

SECRETARIAT

- 1. Smt. Kalpana Sharma - Joint Secretary
- 2. Shri Srinivasulu Gunda - Director
- 3. Shri Rahul Singh - Deputy Secretary

2. At the outset, the Chairperson welcomed the Members of the Committee and informed them about the agenda for the Sitting. The Committee then took up the following draft Reports for consideration and adoption:

- (i) Action Taken by the Government on the Observations/Recommendations contained in the Fortieth Report (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2018-19 on General Defence Budget, Border Roads Organisation, Indian Coast Guard, Military Engineer Services, Directorate General Defence Estates, Defence Public

Sector Undertakings, Welfare of Ex-Servicemen, Defence Pensions, Ex-Servicemen Contributory Health Scheme (Demand Nos. 19 and 22);

- (ii) Action Taken by the Government on the Observations/Recommendations contained in the Forty-first Report (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2018-19 on Army, Navy and Air Force (Demand No. 20)';
- (iii) Action Taken by the Government on the Observations/ Recommendations contained in the Forty-second Report (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2018-19 on Capital Outlay on Defence Services, Procurement Policy and Defence Planning (Demand No. 21)'; and
- (iv) Action Taken by the Government on the Observations/ Recommendations contained in the Forty-third Report (16th Lok Sabha) on 'Demands for Grants of the Ministry of Defence for the year 2018-19 pertaining to Revenue Budget of Ordnance Factories, Defence Research and Development Organisation, DGQA and NCC (Demand No. 20)'.

3. After deliberation, the Committee adopted the above Reports and authorized the Chairperson to finalize and present the Reports to Parliament on a convenient date alongwith the Reports on Action Taken by the Government on the Observations/ Recommendations contained in the Thirty-second Report (16th Lok Sabha) on 'Creation of Non-Lapsable Capital Fund Account, instead of the present system' and Action Taken by the Government on the Observations/ Recommendations contained in the Thirty-third Report (16th Lok Sabha) on 'Resettlement of Ex-Servicemen', which were already adopted by the Committee on 14.11.2018.

4. *****

The Committee then adjourned.

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

****Does not pertain to the Reports.

APPENDIX II

ANALYSIS OF THE ACTION TAKEN BY THE GOVERNMENT ON THE OBSERVATIONS/ RECOMMENDATIONS CONTAINED IN THE FORTY-THIRD REPORT OF STANDING COMMITTEE ON DEFENCE (16TH LOK SABHA) ON 'DEMANDS FOR GRANTS OF THE MINISTRY OF DEFENCE FOR THE YEAR 2018-19 ON ORDNANCE FACTORY, DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION, DIRECTORATE GENERAL OF QUALITY ASSURANCE (DGQA) AND NATIONAL CADET CORPS (NCC) (DEMAND NO. 20)'

1. Total number of recommendations 34

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

Recommendation Nos. 6, 7, 8, 9, 10, 17, 18, 19, 20, 23, 24, 25, 26, 27, 30, 31, 32, 33 and 34

**Total : 19
Percentage: 55.8%**

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

Recommendation Nos. 28

**Total : 01
Percentage: 2.9%**

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

Recommendation No. 29

**Total : 01
Percentage: 2.9 %**

5. Observations/Recommendations in respect of which replies of Government have not been accepted by the Committee which require reiteration and to be commented upon (please see Chapter IV):

Recommendation Nos. 3, 4, 5, 11, 12, 21 & 22

**Total : 07
Percentage: 20.5%**

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

Recommendation Nos. 1, 2, 13, 14, 15 & 16

**Total : 06
Percentage: 17.6%**