

INDIGENOUS CONSTRUCTION OF INDIAN NAVAL WARSHIPS

MINISTRY OF DEFENCE

**PUBLIC ACCOUNTS COMMITTEE
(2016-17)**

FIFTY NINTH REPORT

SIXTEENTH LOK SABHA



**LOK SABHA SECRETARIAT
NEW DELHI**

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PUBLIC ACCOUNTS COMMITTEE
(2016-17)

(SIXTEENTH LOK SABHA)

**INDIGENOUS CONSTRUCTION OF
INDIAN NAVAL WARSHIPS**

[Action Taken by the Government on the Observations/ Recommendations of the Committee contained in their Thirty Second Report (16th Lok Sabha)]

MINISTRY OF DEFENCE



Presented to Lok Sabha on:

Laid in Rajya Sabha on: 2 NOV 2016

LOK SABHA SECRETARIAT
NEW DELHI

November, 2016 / Kartika, 1938 (Saka)

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* Not appended in the Report

**COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE
(2016-17)**

Prof. K.V. Thomas - Chairperson

MEMBERS

LOK SABHA

2. Shri Sudip Bandyopadhyay
3. Shri Prem Singh Chandumajra
4. Shri Nishikant Dubey
5. Prof. Richard Hay
6. Shri Gajanan Chandrakant Kirtikar
7. Shri Bhartruhari Mahtab
8. Smt. Riti Pathak
9. Shri Neiphiu Rio
10. Shri Janardan Singh Sigriwal
11. Shri Abhishek Singh
12. Dr. Kirit Somaiya
13. Shri Anurag Singh Thakur
14. Shri Shivkumar Udasi
15. Dr. P. Venugopal

RAJYA SABHA

16. Shri Naresh Agrawal
17. Shri Satyavrat Chaturvedi
18. Shri Bhupender Yadav
19. Shri Bhubaneswar Kalita
20. Shri Shantaram Naik
21. Shri Sukhendu Sekhar Roy
22. Shri Ajay Sancheti

SECRETARIAT

1. Shri A.K. Singh - Additional Secretary
2. Shri S.C Chaudhary - Joint Secretary
3. Shri Tirthankar Das - Additional Director
4. Shri Deepankar Kamble - Executive Officer

* Elected w.e.f. 09.08.2016 *vice* Shri Vijay Goel, MP appointed as Minister of State w.e.f. 05.07.2016.

INTRODUCTION

I, the Chairperson, Public Accounts Committee (2016-17), having been authorized by the Committee, do present this Fifty Ninth Report (Sixteenth Lok Sabha) on Action Taken by the Government on the Observations/Recommendations of the Committee contained in their Thirty Second Report (Sixteenth Lok Sabha) on 'Indigenous Construction of Indian Naval Warships' based on the C&AG's Report No.32 of 2010-11 relating to Ministry of Defence.

2. The Thirty Second Report was presented to Lok Sabha on 22 December, 2015 and laid in Rajya Sabha on 23 December, 2015. Replies of the Government to all the Observations/Recommendations contained in the Report were received. The Public Accounts Committee considered and adopted the Fifty Ninth Report at their sitting held on 10 November, 2016. Minutes of the sitting are given at Appendix I.

3. For facility of reference and convenience, the Observations and Recommendations of the Committee have been printed in thick type in the body of the Report.

4. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

5. An analysis of the action taken by the Government on the Observations/Recommendations contained in the Thirty Second Report (Sixteenth Lok Sabha) is given at *Appendix-II*.

NEW DELHI;
16 November, 2016
25 Kartika, 1938(Saka)

PROF. K.V. THOMAS,
Chairperson,
Public Accounts Committee.

CHAPTER – I REPORT

This Report of the Public Accounts Committee deals with Action Taken by the Government on the Observations/Recommendations of the Committee contained in their Thirty-second Report (Sixteenth Lok Sabha) on "Indigenous Construction of Indian Naval Warships" based on the C&AG's Report No. 32 of 2010-11 relating to the Ministry of Defence.

2. The Thirty-second Report (Sixteenth Lok Sabha), which was presented to Lok Sabha on 22nd December, 2015 and laid in Rajya Sabha on 23rd December, 2015, contained 12 Observations/Recommendations. Action Taken Notes in respect of all the Observations/Recommendations have been received from the Ministry of Defence and these have been categorized as under:

- (i) Observations/Recommendations that have been accepted by the Government:

Paragraph Nos. 1, 2, 5, 6, 7, 10, 11 and 12

Total: 08
Chapter- II

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

Paragraph Nos. 4 and 9

Total:02
Chapter- III

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

Paragraph Nos. 3 and 8

Total:02
Chapter- IV

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

Paragraph No. Nil

Total:Nil
Chapter- V

3. The Action Taken Notes furnished by the Ministry of Defence on the Observations/Recommendations of the Committee contained in their Thirty-second Report (Sixteenth Lok Sabha) have been reproduced in the relevant Chapters of this Report. In the succeeding paragraphs, the Committee have dealt with the Action Taken by the Government on some of their Observations/Recommendations which either need reiteration or merit comments.

1. **Warship Building**
(Recommendation Para No. 2)

4. The Committee found that Naval Ship-building, being a complex multi disciplinary engineering activity, requires significantly higher shipyard effort and dependence on a large number of agencies. A ship construction programme has a number of agencies which interact with each other, including feasibility studies, design issues, system interaction, construction, test and trials. The Committee also found that besides being a multi disciplinary engineering activity, construction and monitoring of ship-building involves various Directorates. What is more important to note is that at Naval Headquarters itself, the activities of construction and monitoring are separated in two wings. The Committee found that there are multiple responsibility centres in the Integrated Headquarters, depending upon their role and responsibility towards ship building but without a single control point which would enforce co-ordination and overall control. The Committee felt that although India has credibly demonstrated the capability in indigenous construction of naval warships and is one of the few Navies in the world capable of designing and building warships, yet, performance in this area needs to be improved as the operational preparedness of Indian Navy depends on an efficient and effectively managed warships construction projects. The Committee, therefore, recommended that single point accountability for ship building project should be fixed after taking due care of all the aspects related to ship building. They felt that such an unity of command would ensure better span of control and would result in effective management of ship building processes and procedures. They recommended that enquiry be ordered against officials responsible for all the irregularities pointed out by Audit in naval warship building.

5. The Ministry in their Action Taken Notes have stated as under:

"(a) **Single Point Accountability.** As brought out in the PAC report, Naval warship-building is one of the most complex engineering activity involving multiple agencies. Even within the

NHQ there are various directorates which are involved in this complex multi disciplinary activity. Besides NHQ and the shipyards there are various agencies like DRDO, OFB / other PSUs, private vendors, foreign Governments / OEMs etc who are involved in warship building in our context. Whilst various agencies as mentioned above perform their respective roles, the Controller of Warship Production and Acquisition (CWP&A), at NHQ is the single point authority to monitor the design and production activities related to warship building.

(b) Enquiry for irregularities. Comments / action taken has been given at para 1(a) above. It is submitted that delays and cost escalation in each of the aforesaid cases was examined by the Ministry and re-casting of timelines and revision of cost has been accorded by the CFA / CCS after ascertaining the reasons / attributability in each case. Accordingly, both MDL and GRSE have been levied LD by the Ministry as per Defence Procurement Procedure / contractual provisions for delays attributable to them in P-17, P-15A, and P-28 respectively."

6. The Committee note that the existing Controller of Warship Production and Acquisition (CWP&A) at the Naval Headquarter is merely a monitoring authority without any accountability, as result of which it was difficult perhaps to fix responsibility for the lapses pointed out by the Audit. The Committee feel that for preventing delays in the execution of ship building projects, accountability is a primary requirement apart from monitoring in order to ensure timely completion of such projects. The Committee therefore desire that CWP&A may be made more accountable and may also be given the mandate to ensure strict compliance by the multiple agencies involved in the design and production activities related to warship building. The Committee are disturbed to note that on their recommendation for conducting enquiry against the officials responsible for the irregularities, Ministry is silent on the issue. It seems that the Ministry is contented with the fact that both MDL and GRSE have been levied LD as per Defence Procurement Procedure/Contractual provisions for delays attributable to them in P-17, P-15A and P-28 respectively. The Committee feel that delays in warship building should not only be viewed

from the angle of Defence Procurement Procedure or contractual provisions, the component of human error or irregularities committed by the then officials should also be viewed seriously as building of naval warships caters to the vital economic and security interest of a major maritime nation like India. They, therefore, reiterate their earlier recommendation for ordering enquiry against officials responsible for the irregularities pointed out by Audit in naval warship building so that similar irregularities may not recur in future.

II. Cost Estimates and Revision in Costs (Recommendation Para No. 3)

7. The Committee were dismayed to note that estimation of costs in the case of P-15A, P-17 and P-28 ships had been done as a formality for obtaining approvals to ship building projects from the Government rather than as a professional and meaningful exercise. The Committee noted that in case of P-15A ships, the cost was calculated with 1999 as the base year leading to an increase of 226% in the initial estimate. In the case of P-17 ships, the Committee noted that cost estimate was based on the year 1994. The steep rise in the rate was due to erratic supplies from Russia, modernization of Mazagaon Docks and cost of B&D spares. Due to this the build period escalated from 60 months to 78 months. For P-28 ships, the cost escalated from ₹ 3051.27 crore to ₹ 7852.39 crore. The production was to start in March 2003 but it commenced only in March 2006. The Committee also noted that non-availability of warship quality steel and other supplies also affected the time schedule. From the above, the Committee were of the considered view that since warship production directly affects the security preparedness of any country, the Committee found that accurate initial estimate was affected due to lack of accurate inputs necessary for forecasting cost and delivery of a warship. They, therefore, desired the Ministry to take punitive action against officials responsible for preparing inaccurate estimates. The Committee, also, exhorted the Ministry to make all out efforts to ensure calculation of accurate cost of a warship which would also determine the delivery time. To supplement this, there should be an institutionalized mechanism in NHQ and the Ministry to verify the correctness of budgetary costs submitted by DPSU shipyards. Besides, the Committee expected the NHQ and the Ministry to

conduct independent cost estimation by using internationally accepted best practices so that cost becomes competitive and the warships get completed within the approved budget and get delivered within the stipulated time.

8. The Ministry in their Action Taken Notes have stated as under:

- "(a) Action against officials for inaccurate estimates. The Committee has acknowledged that accurate initial estimate was affected due to lack of accurate inputs necessary for forecasting cost and delivery period of the warship. Cost estimates for long gestation complex projects is a formidable challenge due to non availability of accurate data for major equipment during the initial estimates (especially concerning weapons and sensors). The detailed explanation has been given by the Ministry at para 26 of Part I of the said PAC report. Feedback at para 2(b) and 1(a) above also refers.
- (b) Need to have accurate estimates. Warship projects are now being progressed as fixed cost projects. Variable component is only allowed wherein uncertainties in costing exist especially in developmental equipment (i.e. certain weapons and sensors). Accordingly, based on past experience, from P-15A onwards, the yard effort costs have been fixed with variable component allowed in certain equipment as mentioned above. Warship building projects awarded in the recent past for example P-15B and P-17A have been fixed cost projects having only few major weapons and sensors which are variable cost in nature. CCS sanction for major warship projects are obtained in two stages. The 2nd stage CFA/CCS sanction caters for the variable component in the project. The 2nd stage sanction is obtained within the stipulated period after firming up the details/cost of the variable component/equipment. First stage CCS sanction for P-15B and P-17A projects have been obtained on the same lines and firm costs will be arrived before obtaining the 2nd stage sanction. The accuracy of cost estimation for warships in our context is expected to improve with the acquired experience and expertise in due course.
- (c) Institutionalised Mechanism for Costing. The Contract Negotiation Committee (CNC) for shipbuilding projects *inter-alia* include members from NHQ, Acquisition Wing and MoD (Finance). The CNC carries out considerable scrutiny of the budgetary quote submitted by the shipyards *vis-a-vis* the extant and international benchmarks. In the NHQ, the Directorate of Contract and Cost Management looks in to these aspects."

9. The Committee note that the action taken by the Government are not in consonance with the spirit of the recommendation made by them in their

original report. The Committee not only observed regarding preparation of inaccurate initial cost estimates and absence of adequate mechanism at NHQ to verify the correctness of the budgetary cost, but also exhorted the Ministry to make all out efforts to ensure calculation of accurate cost of a warship which would also determine the delivery schedule. But they are dismayed to note that instead of taking any concrete steps in this regard, the Ministry have preferred to give a hypothetical reply by stating that the accuracy of the cost estimation is expected to improve with the acquired experience and expertise. Therefore, the Committee not only deprecate this lackadaisical attitude on the part of Ministry but also desire them to be cautious while sending such hypothetical reply in response to the recommendation of the Public Accounts Committee. The Committee also note that although Contract Negotiation Committee (CNC) carries out considerable scrutiny relating to ship building projects, yet, it has not been able to ensure preparation of accurate cost estimate. The Committee further note that although the Directorate of Contract and Cost Management (DCCM) is mandated to look into these aspects in the NHQ, it has not been able to verify the correctness of budgetary cost as recommended by the Committee. The Committee feel that the existing institutional mechanism for costing such as CNC and DCCM are not adequate enough to ensure accurate cost estimation and cost management. They, therefore, desire that the existing institutional mechanism be strengthened to be more effective in the preparation of accurate cost estimates as also to verify the correctness of the budgetary cost. Action taken in this regard be brought to the notice of the Committee.

III. Nomination and Readiness of Shipyards

(Recommendation Para No. 8)

10. The Committee have been informed about the India Navy's 15 year ship building plan to augment force levels by 2017. The Committee were dismayed to note that the different class of ships were in parallel production at Mazagaon Dock Limited, Mumbai viz. P-17 and P-15. As a result, construction of P-17 commenced late by 17 months. Similarly, construction of P-28 warships commenced after a delay of three years from the date of sanctioning. What was more disturbing for the Committee to note was that while the project costs were now estimated at more than double of the original estimate, progress of ship building itself was very slow. The Committee, therefore, desired that the Ministry may revisit its policy of getting its warships built only through DPSUs and should think of including capable shipyards either in public or private sector also. They also urged upon the Ministry to be more judicious in selecting shipyards that possessed adequate capacity and infrastructure, keeping in view the features of the ships to be built and ensure adherence to timelines and costs. The Committee felt that had the selection of shipyard been done by taking into it's preparedness, the delay and the increase in cost would not have been that high. The Committee, therefore, urged upon the Ministry to fix responsibility for such lapses of the officials under intimation to the Committee.

11. The Ministry in their Action Taken Notes have submitted as under:

"Selection of Shipyards/Capacity Assessment. Shipbuilding projects are awarded to shipyards (DPSU/PSUs as well as private sector shipyards) based on capacity assessment/qualification carried out by IN/Acquisition Wing (as mandated by the DPP). Private Shipyards are also now participating in warship building projects."

12. Although the Ministry have claimed that ship building projects are awarded to shipyards based on the capacity assessment/qualification carried out by IN/Acquisition Wing, the Committee are perplexed to note the time and cost overrun that have taken place in the case of different class of ships such as P-17 and P-28. The Committee once again reiterate their view that had the selection of shipyard been done by taking into account it's preparedness, the

delay and the increase in cost would not have been that high. Moreover, the replies of the Ministry is silent on the issue of fixing responsibility on officials responsible for the lapses. Therefore, the Committee reiterate their earlier recommendation and desire that the selection of Shipyards be made in future in a judicious manner which can ensure strict timeliness and cost as recommended by the Competent Authority in this regard.

**IV. Slippages in Delivery
(Recommendation Para No. 10)**

13. Slippages in delivery is yet another issue of concern for the Committee. The Committee were given to understand that delivery period of the warships as envisaged were extended viz. for P-15A target was of 78 months but was extended to 129 months. The Committee noted that the extended time was almost double of the originally envisaged timeline. The Committee found this unacceptable as the shipyards' efficiency has not improved though the claims of the Ministry in this regard state otherwise. The Committee also noted with displeasure the Ministry's repeated claims regarding the causes for delays. The Committee were of the view that shipyards engaged in production of naval warships haven't been upgraded to the desired level as they seem to be unfamiliar with new technologies and processes being acquired and implemented across the world. Therefore, the Committee desired that the Ministry try to expand their domestic vendor base so that dependency on international suppliers would gradually reduce thereby automatically arresting delays and protracted negotiations. The Committee felt that in keeping with modern notion that a warship is built around weapons and sensors, emphasis should be given to timely selection and finalization of weapons and sensors. Moreover, a ship building project should be seen with definite timelines and milestones with deadlines for all stakeholders for fulfilling their respective obligations. The Committee, therefore, urged upon the Ministry to fix responsibility in case of non-performance/delay under intimation to this Committee.

14. The Ministry in their Action Taken Notes have submitted as under:

(a) Upgradation of Shipyards / New Technologies and Processes. As brought out at para 9 above shipyards are continuously being upgraded. As regards, incorporating

technologies and processes, a performance benchmark study of DPSU shipyards vis-à-vis international shipyards / standards and best practices have been carried out by a reputed consultant. The recommendations emerging out of the benchmarking study are being implemented by the respective shipyards. Further, MDL and GRSE have entered into a contract with an international 'know-how provider' for adopting 'Integrated / Modular Construction' in P-17A. Industry best practices, procedures and state-of-the art methodology is envisaged to be imbibed through the ongoing construction of P-17A. In addition, GSL would be collaborating with an international shipyard for acquiring Mine Counter Measure Vessel (MCMV) technology.

(b) Expansion of vendor base. Explained at para 4(h) above. All DPSU shipyards are expanding their vendor base and are also resorting to outsourcing.

(c) Timely selection and finalisation of weapons and sensors. As per the extant shipbuilding procedure the weapons and sensor package have to be finalised prior to taking the 2nd stage CFA / CCS sanction. The timeline for taking 2nd stage sanction is also decided at the time of taking initial /1st stage sanction.

(d) Monitoring of milestones / Responsibility. Definite milestones are enumerated in shipbuilding projects as stipulated in DPP and are duly captured in the contracts alongwith their timelines. The payment to shipyard is released based on the confirmation of each milestone by the 'Overseer' /IN. There is a mechanism in place for monitoring shipbuilding projects w.r.t. definite milestones / timelines."

15. The Committee find that although the observation made by them regarding slippages in delivery of the ships has been addressed by the Ministry, yet their reply is conspicuously silent on the issue of fixing responsibility for non-performance and delay. While vetting the reply of the Ministry, when Audit pointed out the same, the Ministry furnished the counter comments by stating that penalty has been levied on concerned shipyards for slippages in delivery. The Committee feel that India being a major maritime nation with vital economic and security interest linked to the sea, it is imperative for the Indian Navy to be equipped with requisite number of ships in a timely manner to meet multifarious challenges. The Committee are of the

opinion that mere imposition of penalty may not act as a deterrent.

not to repeat the same mistake again. They, therefore, impress upon Ministry to fix responsibility on shipyards and also by taking into account the component of human error involved in the matter and inform the Committee accordingly.

V. Monitoring Mechanism

(Recommendation No. 11)

16. The Committee noted that construction of warship is a complex task involving multiple agencies which require close coordination and constant monitoring. The Committee had been informed that review meetings are held every six months to review on-going projects. The Committee were also happy to note that Naval Warship Overseeing Team of the Indian Navy is stationed at the shipyards for close scrutiny of the projects. The Committee observed that taking cognizance of anticipated and unanticipated factors affecting cost and time overruns in the warship building industry, a more realistic assessment for the production of warships needs to be done. For this, the Committee desired that special experts in the field be roped in so that the delivery schedules may be more accurately assessed and used effectively for monitoring parameters. The Committee noted with concern that Apex level Committee Meetings were not held in the year 2010. The Ministry in this regard submitted that henceforth, the meetings would be held periodically as stipulated in DPP-2011. The Committee desired that since Apex level Committee Meetings were crucial for reviewing and monitoring warship production, they be held regularly so that any anomalies as noticed could be immediately brought to notice and be rectified as early as possible.

17. The Ministry in their Action Taken Notes have submitted as under:

"(a) Assessment of warship production by experts. The benchmarking study of DPSU shipyards vis-à-vis international standards has been carried out by a reputed consultant, as explained at para 10(a) above. Further IN has also developed requisite expertise and experience to assess warship delivery schedules more accurately now.

(b) Apex meeting are being held regularly. The details of Apex Meeting held in the last four years are as follows:-

YEAR	DATE	DATE
2013	16 Apr'13	5 Nov'13
2014	21 Jan'14	8 May'14
2015	20 Jan'15	5 Aug'15
2016	10 Feb'16	

18. The Committee note that although Apex meetings are being held regularly, yet the Ministry have not informed as to how these meetings have helped ensuring a robust monitoring mechanism. It is not even clear whether contentious issues such as delay in warship building, inaccurate cost estimation, delay in signing of contract, nomination and readiness of shipyards, cost and time overrun etc. have ever surfaced for discussion before the Apex Committee and if such discussions have taken place, the Committee would like to be informed of the specific guidance given by the Apex Committee on these issues. The Committee feel that if the Apex Committee would have deliberated on the issues pointed out by Audit, perhaps all these deficiencies would have been avoided. The Committee, therefore, urge the Ministry to ensure that not only the Apex Committee meetings are held regularly, but contentious issues are also discussed and proper guidance is given so that the anomalies are removed before surfacing as big problems in the way of warship building exercise of the Indian Navy.

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16 November, 2016
25 Kartika, 1938 (Saka)

PROF. K.V. THOMAS
Chairperson
Public Accounts Committee

APPENDIX-II
(Vide Paragraph 5 of Introduction)

**ANALYSIS OF THE ACTION TAKEN BY THE GOVERNMENT ON THE
OBSERVATIONS/RECOMMENDATIONS OF THE PUBLIC ACCOUNTS COMMITTEE
CONTAINED IN THEIR THIRTY-SECOND REPORT (SIXTEENTH LOK SABHA)**

(i)	Total number of Observations/Recommendations	12
(ii)	Observations/Recommendations of the Committee which have been accepted by the Government: Para Nos. 1, 2, 5 to 7 & 10 to 12	Total : 08 Percentage: 66.67%
(iii)	Observations/Recommendations which the Committee do not desire to pursue in view of the reply of the Government: Para Nos. 4, 9	Total : 02 Percentage: 16.67%
(iv)	Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration: Para Nos. 3, 8	Total : 02 Percentage: 16.67%
(v)	Observations/Recommendations in respect of which the Government have furnished interim replies: Para Nos. - Nil	Total : 0 Percentage: 0%