

EXECUTIVE SUMMARY

This Report of the Comptroller and Auditor General of India (C&AG) relates to matters arising from compliance and performance audit of government departments and autonomous bodies of the Government of Maharashtra falling under the jurisdiction of Accountant General (Audit-II), Maharashtra, Nagpur.

The primary purpose of this Report is to bring important results of audit to the notice of the State Legislature. The findings of audit are expected to enable the executive to take corrective actions and also, to frame policies and directives that will lead to improved operational efficiency and financial management of the organisation, thus contributing to better governance.

This Report consists of one Performance Audit on ‘Improvement of Roads in Maharashtra through Hybrid Annuity Model’, one Subject Specific Compliance Audit on Role of Maharashtra Pollution Control Board in issuance of consent and monitoring of compliance of consent conditions for prevention, control and abatement of water pollution in Maharashtra and two draft paragraphs.

Performance Audit on ‘Improvement of Roads in Maharashtra through Hybrid Annuity Model’

Prior to Execution of Hybrid Annuity Model (HAM), Government of Maharashtra (GoM) was taking up road development through contractors for which entire payment was to be made from government funds. It was decided (November 2017) to cover the road length of 10,576 km out of 90,608 km road length under HAM with an estimated investment of around ₹ 30,000 crore (average ₹ three crore per km) in which government equity share was to be ₹ 18,000 crore (60 *per cent*) and private equity share was ₹ 12,000 crore (40 *per cent*).

The concessionaire was supposed to be repaid in 10 years, after the completion of the construction work in the form of annuity along with interest @ three *per cent* over and above the bank rate. The concessionaire was responsible for the maintenance of the project till the end of the annuity period for which Operation and Maintenance (O&M) cost was payable. As on February 2025, 80 *per cent* packages were completed (Road length 7188.21 km) and 20 *per cent* were ongoing (Road length 1823.09 km).

The Performance Audit was taken up on ‘Improvement of Roads in Maharashtra through Hybrid Annuity Model’ during July 2023 to February 2024 covering the period from 2018-19 to 2022-23 to assess i) whether Terms and conditions of the agreements were designed to safeguard the interest of the Department and selection of individual packages under the model was appropriate, ii) Individual packages were executed as per norms, guidelines and concession agreements, iii) Terms and conditions for payment to the concessionaire outlined in the concession agreement were strictly followed and iv) The mechanism for monitoring and evaluation of the road quality was adequate and effective.

Some of the significant audit findings are mentioned below:

Audit observed that at the time of preparing DPR, the consultant did not prepare component-wise estimates for utility shifting and only lumpsum provision was made. Inclusion of incorrect clause in the RFP for appointment of DPR consultants with respect to payment for the land acquisition component, which

was not actually done by the consultants has resulted in unwarranted expenditure. 78 DPRs were prepared covering 195 works at a cost of ₹ 217.40 crore. In these 78 DPRs, provision of ₹ 5.55 crore was made on the land acquisition activities which were not required at all.

In three out of 42 packages, it was observed that a major part of the road stretch which was to be widened from single lane (3.5 meter to 3.75 meter) to double lane (7 meter) was passing through the forest area, which required forest clearance for execution of works. However, execution of these packages was started without obtaining forest clearance due to which the work was later de-scoped or could not be executed.

Unrealistic loading of insurance charges and patrolling expenses was noticed in the O&M cost of the packages. Audit observed that insurance charges were included as 0.15 *per cent* of the Estimated Project Cost (EPC) in the estimates instead of actual premium payable. The concessionaire obtained insurance policies at a cost ranging from ₹ 0.50 lakh to ₹ 9.07 lakh per year against the inclusion of insurance charges ranging from ₹ 10.34 lakh to ₹ 46.13 lakh in the Estimated Project cost. This has resulted in inclusion of excess insurance charges in O&M cost to the tune of ₹ 34.56 crore in respect of 17 out of selected 42 packages. A lumpsum provision of ₹ 10 lakh per year was provided for each package for patrolling expenses irrespective of the road length required to be covered.

Higher specification for crust thickness of flexible pavement was provided than required as per the projected MSA in DPRs resulting in unwarranted cost of ₹ 297.97 crore in 18 packages. Audit observed in PW Region, Chhatrapati Sambhajinagar that while awarding multiple packages to single bidder the departmental authorities did not consider the earlier awarded works while evaluating the bidder's financial capacity. The work of three out of 42 sampled packages was completed, however these roads were not fully utilized due to non-coverage of narrow minor bridges, reconstruction of weak bridges and incomplete bridge in between. Audit had conducted joint physical inspection of created assets to assess the execution and maintenance of roads and noticed instances of poor/non-maintenance during the O&M period.

Audit observed in three out of 42 selected HAM packages, that the implementing PW divisions failed to make payment for milestone and annuity to the respective concessionaires within the prescribed time limit due to short/delay in release of funds by GoM. As a result, the interest of ₹ 4.65 crore for delayed payment was claimed by the concessionaires and paid by the PW divisions. In three out of 42 selected packages, consideration of incorrect completion cost, short adjustment of payment made during construction and application of incorrect rate of interest resulted in excess payment to the concessionaires. Delays in submission of performance security, execution of escrow agreement and achievement of physical progress of work within the prescribed time were noticed.

Audit observed significant shortfall in inspection by Vigilance and Quality Control Circles as against prescribed by Department. Targets for inspection of HAM packages were not fixed at CE/SE/EE levels. There were significant delays in appointment of Independent Engineers (in 20 out of 42 sampled packages) and Safety consultants (in 29 out of 42 sampled packages). Further,

the department did not appoint any IE for monitoring of projects during the O&M periods of HAM works.

Good Practices

Ashta-vinayak darshan is pilgrimage to the eight temples of Lord Ganesha in Maharashtra situated at Morgaon, Sidhhatek, Ranjangaon, Ozar, Lenyadri, Theur, Pali and Mahad covering a total distance of 606 km which usually took almost 2-3 days to complete. After execution of the HAM packages (PN 31, 32, 33, 34 and 35), the travel time for Ashta-vinayak darshan is reduced to 13 hours and 30 minutes.

Based on audit observation audit recommends that:

- *Detailed Project Reports should be prepared thoroughly, with realistic assessments of site-specific constraints to avoid unwarranted costs and ensure accurate scope of work.*
- *Operation and Maintenance (O&M) costs should be estimated based on actual and justifiable parameters such as realistic insurance charges, need-based patrolling requirements.*
- *Timely financial allocations may be ensured to avoid interest payments to concessionaire due to delayed payment.*
- *The payment to the concessionaires may be made after ensuring correct calculation of payments due, including balance completion costs, price escalation etc.*
- *O&M costs should be paid only after ensuring that the maintenance of roads is carried out by the concessionaire as per the provisions of the CA through efficient monitoring.*

Subject Specific Compliance Audit on Role of MPCB in issuance of consent and monitoring of compliance of consent conditions for prevention, control and abatement of water pollution in Maharashtra

Maharashtra Pollution Control Board (MPCB) plays regulatory role over industries and Local Bodies through a structured consent mechanism, ensuring environmental compliance and prevention of water pollution. MPCB issues consent to establish, operate and renewal to the industries and Local Bodies which are likely to discharge sewage or trade effluent. MPCB monitors compliance of consent conditions prescribed and is empowered to issue notices, forfeit bank guarantee and even issue of closure directions.

Subject Specific Compliance Audit on Role of MPCB in issuance of consent and monitoring of compliance of consent conditions for prevention, control and abatement of water pollution in Maharashtra was conducted during June to November 2022 covering period 2017-18 to 2021-22.

Audit scrutiny was conducted at the office of the Principal Secretary, DECC, Maharashtra (PS, DECC) and head office of MPCB including six out of 12 regional offices as well as joint physical verification of 158 industries.

The audit observed that despite the existence of statutory provisions requiring industries to obtain consent to establish and operate, a significant number of industries were functioning without obtaining the necessary consents thereby weakening the compliance to environmental regulations.

The effectiveness of MPCB's monitoring efforts was constrained by a shortage of manpower, which led to fewer inspections and insufficient oversight of compliance with consent conditions. During joint physical verifications, several instances of non-compliance with prescribed consent conditions were noticed. These included the discharge of polluted effluents and untreated sewage into water bodies, non-functional effluent treatment plants (ETPs), and failure to install online continuous emission monitoring systems (OCEMS). These lapses highlight weaknesses in enforcement and monitoring mechanisms.

Further, there were irregularities in the assessment and collection of consent fees, as these were not consistently based on the industries Balance Sheets and Ready Reckoner (RR) rates, leading to short charging of consent fee. Additionally, in cases of non-compliance, MPCB did not obtain or verify bank guarantees and did not initiate forfeiture where warranted, reducing the deterrent effect of financial penalties.

Audit observed that there was a shortfall in the range of 53.50 *per cent* to 68.35 *per cent* in the number of visits actually carried out to the industries with respect to the scheduled visits during the period 2017-18 to 2022-23. Similarly, there was substantial shortfall in visits to highly polluting industries such as Sugar, Paper and Pharmaceutical industries in the range of 58 to 84 *per cent*.

Cases of non-compliance to consent conditions and non-observance of specific standards of parameters in respect of Sugar/Distillery industries, Paper industries and Pharmaceutical industries were observed.

During joint physical verification of seven sugar industries, samples of treated effluents were collected at the outlet of ETP and tested to check compliance with the consent conditions which revealed that effluent exceeded the permissible limit as prescribed for various parameters.

Audit observed that in five CETPs, the parameters actually checked during the period 2021-22 were in the range of 6 to 23 as against prescribed range of 12 to 53.

The six sampled ROs (15 CETPs) analyzed by audit revealed that during 2017-18 to 2021-22 out of 12319 samples, 5033 samples were non-complying against the prescribed standard fixed for CETPs.

Test results of 14 industries connected to CETPs discharged effluent beyond prescribed standards of parameters in the range of 5 to 37 months. However, ROs did not initiate any action against these 14 defaulting industries.

Based on audit observation audit recommends that:

- *MPCB should proactively coordinate with other government departments to ensure that all operational industries are brought under the consent regime.*
- *The Government must review the existing manpower structure and take timely action to fill up all sanctioned posts at various levels to strengthen MPCB's field presence.*
- *MPCB must ensure strict enforcement of consent conditions through regular and effective monitoring, particularly focusing on industries identified as high polluters.*

Other Compliance Audit Observations

Public Works Department

- Non-completion of bridgework due to non-availability of the required land resulted in expenditure of ₹ 9.64 crore as idle.

Water Supply and Sanitation Department

- Unfruitful expenditure of ₹ 17.80 crore on construction of underground sewerage scheme for Beed city under Atal Mission for Rejuvenation and Urban Transformation.