

Chapter-3

Audit framework

3.1 *Audit objectives*

The Performance Audit was conducted to assess whether,

- the system for enforcement of the provisions of the Air (Prevention and Control of Pollution) Act, 1981 was efficient and effective,
- convergence of various schemes, initiatives, and efforts of different line departments of the GoG for abatement of air pollution was adequate; and
- human resources were adequate in the GPCB to regulate and monitor air pollution.

3.2 *Audit criteria*

The pollution control measures implemented by the GoG were assessed against the following criteria: -

- Air (Prevention and Control of Pollution) Act, 1981 and rules made thereunder.
- Noise Pollution (Regulation and Control) Rules, 2000.
- Air Quality Index developed by the Ministry of Environment, Forests & Climate Change.
- Comprehensive Environmental Pollution Index developed by the Indian Institute of Technology, Delhi.
- Standards/ norms notified for various types of activities under Environment (Protection) Act, 1986 by the Ministry.
- Environment Impact Assessment (EIA) Act, 2006.
- National Environment Policy, 2006.
- Guidelines, norms, notification, circulars issued by the CPCB and the GPCB for regulation of emissions.
- Directions issued by the Courts and National Green Tribunal to the GoG/ GPCB.
- Motor Vehicles Rules, 1989 notified under Motor Vehicles Act, 1988 (59 of 1988).
- Study Reports prepared by the CPCB and technical institutions like the Indian Institute of Technology, National Environmental Engineering Research Institute and Gujarat Environment Management Institute.

3.3 *Audit scope*

The Performance Audit was conducted between March 2019 and November 2019 and was further updated to cover the period from 2014-15 to 2020-21. The

audit examined records of the Forests and Environment Department, GPCB, Commissioner of Transport and collected required data, information, and records from other offices relevant for the accomplishment of this performance audit.

3.4 Audit methodology

The Entry conferences were held with the Additional Chief Secretary, Agriculture, Farmers Welfare and Cooperation Department; Principal Secretary, Port and Transport; and Additional Chief Secretary, Forests and Environment Department (FED) in August 2019. During the conferences the audit objectives, scope, criteria, and samples selected were explained. The audit methodology involved interaction with the personnel of auditee units, scrutiny/examination of relevant records, joint site visits to the selected samples and raising of audit queries based on the scrutiny of records.

An Exit conference was held with Additional Chief Secretary to Government of Gujarat, FED, and officials of the GPCB on 03 January 2022 wherein the findings of the Performance Audit were discussed. The reply of the Government was furnished on 08 January 2022 which have been suitably incorporated in the Report.

3.5 Sampling

For sampling, categorization of polluting activities was kept in view. GPCB has identified 440 activities for categorization based on degree of pollution caused by them. Based on the Pollution Index Score¹, (designed and developed by the CPCB) the GPCB has categorized these activities in Red, Orange, Green, and White category as shown in **Table 4** below:

Table 4: - Categorization of polluting activities

Pollution Index score	Category	Types of polluting activities falling under the category proposed by the CPCB	Type of polluting activities falling under the category proposed by the GPCB	Total CCA issued by the GPCB up to March 2021 under all the applicable Acts and Rules ² .
60 and above	Red	60	85	18,526
41 to 59	Orange	83	103	15,230
21 to 40	Green	63	79	8,194
Up to 20	White	36	173	Not Applicable

(Source: Online database of the GPCB for the year 2018-19)

¹ A function of the Emissions (Air Pollutants), Effluents (Water Pollutants) and Hazardous waste generated and consumption of resources.

² The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of pollution) Act, 1981, and the Hazardous and Other Wastes (Management and trans-boundary Movement) Rules, 2016.

As per CPCB guidelines (March 2016), Consent to Establish³ (CTE) and Consolidated Consent and Authorization⁴ (CCA) is not required for activities falling under white category. In Gujarat there are 267 types of activities under Red, Orange, and Green category which required CTE and CCA. Till March 2021, under the Air Act, GPCB has issued 32,967 CCA to Red, Orange, and Green category units⁵.

The Ministry has further classified highly polluting (water, air and hazardous) industries⁶ as 17 category units (out of red category units). Under this category, 541 units were operating in Gujarat as of September 2018. These units were required to ensure stricter compliance to environmental norms such as installation of online continuous emission and effluent monitoring system and environment audit by the GPCB.

Out of 32,967 units, Audit randomly selected 55 units from 17 category units (**Appendix I**) and 34 units⁷ from red and orange categories (**Appendix II**) for checking compliance with CCA issued by the GPCB. For audit of PUC management, audit examined records of CoT and two⁸ Regional Transport Offices (RTOs). Audit also examined role of other departments, offices, and municipal corporations in controlling air pollution (**Appendix III**).

3.6. *Expert opinion*

To understand the subject matter of the performance audit, three workshops were organized (January and April 2019). The subject matter experts from (i) The Energy and Resources Institute (TERI), New Delhi (ii) Centre for Environment Education, Ahmedabad and (iii) Indian Institute of Public Health, Gandhinagar and (iv) Civil Hospital, Ahmedabad attended these workshops and provided guidance.

3.7 *Acknowledgment*

Audit acknowledges the cooperation and assistance extended by the State Government, Gujarat Pollution Control Board, Commissioner of Transport, R&B Department, Office of the Directorate of Civil Supply and Gujarat Maritime Board while conducting the performance audit.

³ CTE is the primary clearance. Once the Industry, Plant, or Process being established according to mandatory pollution control systems, the units are required to obtain consent to operate.

⁴ CCA is required to be obtained at the time of starting of the operation/ production at the industrial plant.

⁵ As on March 2021, total numbers of the CCA issued by the GPCB under Red, Orange, and Green category was 41,950 under the Water, Air and Hazardous Waste Act.

⁶ Aluminium smelter, Cement, Chloro Alkali, Copper smelter, Distillery, Dyes and Dye -intermediates, Fertilizer, Iron and steel, Oil Refinery, Pesticides, Petrochemicals, Pharmaceuticals, Pulp and paper, Sugar, Thermal Power Plants, Zinc Smelter and Tanneries.

⁷ Thirty units from red and orange categories (three red and three orange from five ROs and two red and two orange from the GPCB HQ office).

⁸ Assistant Regional Transport Office, Gandhinagar and Bavla.

3.8 *Audit findings*

The performance audit revealed the status of air quality in the state, activities contributing to air pollution, adequacy of planning and regulatory interventions and sufficiency of coordination among various departments for control and abatement of air pollution. The audit findings are brought out in the succeeding chapters.